

2020

SUSTAINABILITY REPORT

Shared value creation and
stakeholder involvement: the story
of a company committed to leave its
mark – but not its footprint

Consolidated non-financial reporting

drawn up pursuant to Articles 3 and 4 of Italian Legislative Decree No. 254/2016

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Letter to stakeholders

[102-14]

Sustainability reporting, if understood as a true driver of change instead of simply respecting legal obligations, certainly cannot rest on its laurels. In particular, talking about the numbers that describe a world – our world – is no longer sufficient. What we must do, above all, is **to give a world to these numbers**, which is what this report intends to do by providing a wider and more meaningful context for Hera Group’s results, commitments, goals and vision. We aim at offering our readers, in all their diversity, an increasingly clear and inclusive report, so that each of them can understand – with reference to their own area of competence – the current relevance and urgency of the challenges that orient our work as a company every day and that can inspire our individual behaviour. While it is true that **we can only improve what we measure**, it is equally true that no measurement reveals its very importance unless we recognise its deeper meaning.

We have always been convinced of this, but we have recently doubled our efforts, most of all by introducing a strategic approach aimed at **creating shared value**, which we quantify every year by measuring the amount of Ebitda deriving from business activities capable of reaching the goals of the Global Agenda and the policies introduced over time on a local and European scale. This indicator has increased compared to 2019, **reaching 420.0 million euro in 2020**, equivalent to 37.4% of overall Ebitda, bolstered by improvements in all target parameters in three key areas: Energy, Environment, and Local territory (and Business). This trend – confirmed by last three years of our work – reassures us as it provides a clear picture of our progress and how we have honed our ability, year after year, to read the external context and project paths that have now become essential.

It is no accident that Hera is the first Italian multi-utility to become part of the **Dow Jones Sustainability Index (DJSI)**. This achievement is even more significant when considering that we have been simultaneously included in both the World and European indices, and, above all, ranked as “Industry leader” among the 3,500 companies with the highest capitalisation in the world evaluated. This latest recognition takes now place alongside other international rankings, confirming the quality and the nature of the path we have taken.

The social and economic consequences of the current health emergency, moreover, have ultimately made an even more rewarding orientation towards resilience. This direction has been followed by the Group through increasingly effective enterprise risk management policies, accompanied – as for their effects – by a constant infrastructural consolidation and continuous improvement in our organisational assets. In particular, the reactive resilience with which Hera has proved to be able to absorb the short-term impacts coming from specific shocks is now flanked by an increasing emphasis on adaptive resilience. Owing to far-sighted planning, new technologies and stakeholder involvement, this latter form of resilience has put our Company at the centre of a system that is increasingly sensitive to and performing as for the environmental, economic and social trends of our time. After all, these are precisely the factors underlying the Group’s ability to play a providential and perhaps even countercyclical stabilising role in 2020, contributing to the overall resilience of our local territory’s ecosystem and distributing a **gross added value coming to 1,670 million euro** to our stakeholders. In such context, our initiatives aimed at supporting the most vulnerable groups clearly proved to be very timely.

The Group has furthermore reinforced its commitment concerning **climate** and **environment**, thus consolidating our process of alignment with the recommendations provided by the Task force on Climate-related Financial Disclosures (TCFD). Compared to 2019, in particular, **Hera has reduced by 5,4% the CO₂ emitted directly or indirectly**, and can thus be confident about the future path – both inside and outside the company – **that will allow it to reduce total emissions by 33% within 2030**. This latter goal, calculated according to the “Science-Based Target initiative” methods, is particularly challenging, above all considering that we are the only Italian multi-utility that has currently defined its

own policies according to the “well below 2 degrees” scenario, making an effort to reduce the emissions involved in our own infrastructural activities as well as those related to the energy consumed by our customers.

After all, given that our business is essential for the lives of citizens and businesses, the context in which it develops – consisting in an indivisible combination of human, economic, social and natural resources – is no less fundamental. This is why, in pursuing the creation of a value shared by many, Hera intends to work on an underlying balance between three large areas, well represented today by an equal number of “Ps”, **Planet, People and Prosperity**, to be conceived and developed together.

Tomaso Tommasi di Vignano

Executive Chairman

Stefano Venier

CEO

Methodological guide to the Report

[102-32] [102-50]

This sustainability report represents the **Consolidated non-financial reporting** (CNFR) of the Hera Group (the Group). It reports – to the extent necessary to ensure understanding of Hera’s business activities – on its performance, its results and the impact it has on the issues considered relevant and referred to in Art. 3 and 4 of Italian Legislative Decree 254/16 with reference to the year 2020 (from 1 January 2020 to 31 December 2020). In order to define the aspects relevant to the Group and its stakeholders, a structured **materiality analysis** process was carried out which is described in the paragraph “The materiality analysis and definition of contents” of this Methodological guide to the Report.

As established by Art. 5 of Italian Legislative Decree no. 254/16, this document forms a separate report and is marked with specific wording in order to connect it to the Non-Financial Reporting required by law.

The Hera Group considers the Non-Financial Reporting to be its **sustainability report**, a primary tool for managing and reporting its activities and results in the **economic, environmental and social fields**, as well as a fundamental tool for providing **information to and dialoguing** with its stakeholders.

[102-51] [102-52]

The Sustainability Report has been drawn up and published yearly since 2002. Since 2007, it has been **approved by the Board of Directors of Hera Spa** when the annual and consolidated financial statements are approved and has been submitted to the Shareholders’ Meeting. The most recent sustainability report was published in April 2020. This edition was approved by the Board of Directors of Hera Spa on 24 March 2021. This aspect demonstrates the **central role** of sustainability and corporate social responsibility in Hera Group’s planning and control system, which brought forward the obligations introduced by the European directive on non-financial reporting by more than ten years.

The document is widely disseminated to all of the Group’s stakeholders through publication on the company’s website and distribution and presentation to all Group workers.

In addition to the performances and goals achieved, the sustainability report provides the principles which guide Hera Group’s actions, the future objectives, the results of its dialogue with stakeholders and its **existing** initiatives. Special focus was given to **case studies**: projects that particularly demonstrate the Group’s commitment towards sustainability and the creation of shared value and the relative results achieved in these spheres.

The structure of the sustainability report is the direct consequence of the **strategic approach** aimed at **creating shared value** that Hera Group has adopted since 2016 to respond more effectively to the challenges of sustainable economic development at global and local level, and to make the value generated through the local area more tangible.

The **glossary** in the appendix explains the technical terms used, while the **analytical list of contents** makes it easier to read the document.

The scope of reporting

[102-5] [102-45]

The scope of the **economic and financial** data and information is the same as Hera Group’s consolidated financial statements as at 31 December 2020. The scope of the **social and environmental** data and information includes all the companies consolidated using the line-by-line method in the Group’s consolidated financial statements, as reported below.

Companies included in the scope of reporting

 HERA	 HERAcomm	 HERAmbiente	 AcegasApsAmga	 marche multiservizi
<ul style="list-style-type: none"> • Hera Spa • Acantho Spa • HERAtech Srl • Hera Trading Srl • Inrete Distribuzione Energia Spa • Uniflotte Srl 	<ul style="list-style-type: none"> • Hera Comm Spa • Amgas Blu Srl • Estenergy Spa - Ascopiave Energie Spa - Ascotrade Spa - Blue Meta Spa - Etra Energia Srl - Hera Comm Nordest Srl • Hera Comm Marche Srl • Wolmann Spa 	<ul style="list-style-type: none"> • Herambiente Spa • Aliplast Spa - Aliplast France - Aliplast Iberia - Aliplast Polska • ASA Scpa • Feronia Srl • Frullo Energia Ambiente Srl • Herambiente Servizi Industriali Srl • Hestambiente Srl 	<ul style="list-style-type: none"> • AcegasApsAmga Spa • AcegasApsAmga Servizi Energetici Spa - Hera Servizi Energia Srl - Tri-Generazione Scarl • Aresgas EAD - Aresenergy Eood - Black Sea Gas Company Eood • Hera Luce Srl 	<ul style="list-style-type: none"> • Marche Multiservizi Spa • Marche Multiservizi Falconara Srl

[102-10]

These changes were made to the 2019 scope:

- **Wolmann Spa**, a company specialised in creating ad hoc solutions for those who wish to invest in solar energy as an energy source for their house or company, was acquired by Hera Comm Spa and consolidated line-by-line starting 31 December 2020;
- **Alimpet Srl** was merged to be incorporated in Aliplast Spa, effective as of 1 January 2020;
- **A Tutta Rete Srl** was merged to be incorporated with Inrete Distribuzione Energia Spa, effective as of 1 January 2020;
- **Cosea Ambiente Spa** was liquidated, with sale of its "Fleet and container management" branch to Uniflotte Srl and its "Environmental Services" branch to Hera Spa;
- **Pistoia Ambiente Srl** was merged to be incorporated in Herambiente Spa, backdated for accounting purposes to 1 January 2020;
- **Sviluppo Ambiente Toscana Srl** was liquidated and demerged.

Even if not included in the scope of consolidation, information relating to the company **Enomondo Srl** (in which Herambiente holds a 50% interest) which manages a biomass plant, has been reported. This information includes the aspects linked to atmospheric emissions, energy generation and waste disposal.

In order to compare data over time and to assess the performance of the Group's activities, the comparative data relating to the two previous years has been included, if available. Furthermore, to ensure that the Group's performance is correctly represented and that the figures are reliable, estimates have been used as little as possible. When using estimates, they are based on the best available and appropriately reported methodologies. Any changes to the scope indicated above are appropriately reported in the document and, where present, do not compromise the proper representation of the business activity.

The reporting standards

[102-12] [102-54]

This sustainability report/CNFR has been drawn up in compliance with the "Global Reporting Initiative Sustainability Reporting Standards" defined by the Global Reporting Initiative (GRI) according to the "In accordance" – Core option.

For the definition of value added and its distribution to stakeholders the “**Standard GBS 2013 - Principles for drawing up sustainability reports**” defined by Gruppo di studio per il Bilancio Sociale (GBS) was also used.

Furthermore, as a result of the commitments undertaken by the Group in relation to the **Global Compact (United Nations)**, the report represents the yearly **Communication on Progress** that is submitted to this institution.



During 2020, the Hera Group made progress in its alignment with the **Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)**, published in 2017 by the Financial Stability Board, and the **Guidelines of the European Union on the communication of the information relating to the climate**. This report states the process of adhering to and aligning with the recommendations of the Task Force, approved by the Management Review Committee in December 2020 and that saw the involvement of a designated interdepartmental team comprised of the Shared Value and Sustainability, Risk Management, Strategic Planning, Energy Management, and Administration, Finance and Control departments. Important information has already been included in the report in line with the TCFD Recommendations, such as an overview of the Group's total emissions by supply chain, the fine-tuning of the Scope 3 indirect emissions inventory, a table with the main GHG targets and indicators in the appendix, the description of the bonus system linked to climate objectives, the description of the governance processes regarding climate-related risk supervision and management, and lastly, some initiatives identified to reduce risks and anticipate the opportunities arising from climate change (see chapter Climate change mitigation).

Structure of the report

The Hera Group adopts a strategic approach to corporate social responsibility and sustainability based on the theory of **Shared Value** (Csv, “Creating shared value”), which highlights how a company can enhance its competitiveness while at the same time generating a **positive impact** on society, **meeting the needs of a social and environmental nature** of the communities and local areas where the company operates.

The sustainability report reflects this approach also in the very layout of the contents. In addition to quantifying the **shared value EBITDA**, introduced for the first time for the purpose of drafting the 2016 sustainability report, this report also focuses on the activities, results, case studies and **investments** related to shared value creation.

The CSV approach turned into a model (CSV model) which was constructed through the **analysis of the global and local scenario**, identifying **three drivers** and **nine impact areas** of interest to the Hera Group. Each driver was associated with the main **Sustainable Development Goals (SDGs)**, defined by the 2030 Agenda of the United Nations, which the Group intends to meet. Over the course of 2020, the CSV model underwent **updating**, which is shown in the section "Shared value", which saw the introduction of some new aspects in the stage of analysis of the scenario.

The sustainability report is divided up into **three main sections**: Sustainable strategy and shared value; Shared value; Bases and organisational levers.

The “**Sustainability strategy and shared value**” section contains the introduction chapter (About us) and references with regard to sustainability management ("Hera Group for the planet, people and prosperity" chapter) and shared value ("Shared value" chapter).

The “**Shared value**” section contains for each defined impact area, the present and future scenario (status indicators, policies, targets and megatrends) and the Group's responses: improvement objectives,

performance indicators and case studies. The impact areas are divided up respectively in these chapters: Pursuing carbon neutrality; Regenerating resources and closing the loop; Enabling resilience and innovating.

Lastly, the “**Bases and the organisational levers**” section contains all relevant corporate social responsibility aspects, but doesn't directly answer the challenges and goals to the creation of shared value: Governance and creation of value; Quality, cost and safety of customer services; People; Suppliers. These must be considered as the basis for generating shared value and, at the same time, as organisational levers through which value can be increased over time.

The reporting process

In addition to the previously listed guidelines, the sustainability report was drawn up in compliance with a specific Group **internal procedure** issued in 2012, later updated in 2015 and 2019. This procedure describes the activities required for planning, achieving, approving, disclosing and presenting the report, as well as the associated roles and responsibilities.

The **social and environmental sustainability** objectives set out in the sustainability report were defined with reference to the planning and control instruments used by the Group: 2020-2024 business plan, 2021 budget and 2021 balanced scorecard. These interconnected instruments contain sustainability objectives which have an impact on stakeholders. In particular, the business plan includes sustainability-related indicators for which quantitative targets have been defined.

The **collation** and the **consolidation** of the information and data presented in the sustainability report took place by means of the use of dedicated software: data and information were directly communicated via the software by the contact individuals and were subsequently validated by the designated managers in the internal procedure.

[102-48]

Any **changes in calculations** compared to previous years are properly listed in the notes to the tables.

The Management Review Committee and the work group

[102-53]

The sustainability report was drawn up by the **Shared Value and Sustainability Department** of Hera Spa (bs@gruppohera.it), with the participation of numerous contact individuals, both in terms of data collection and for the descriptions and comments. The preparation and supervision of the work, as well as the approval of the improvement objectives and of the document to be submitted to the Board of Directors was carried out by the Management Review Committee, made up of the Chairman, the CEO and 16 Group directors.

Thanks to all the 209 persons involved in the preparation of this Sustainability Report.

Auditing of the report

[102-56]

The Consolidated non-financial reporting is subject to a limited audit (“limited assurance engagement” in accordance with the criteria indicated by the ISAE standard 3000, Revised version) by the **independent auditing firm** Audirevi Spa. These activities concluded with the issue of the “Independent auditors’ report” presented at the end of this document.

It should be noted that the quantitative information contained in the Non-Financial Reporting, which does not refer to the indicators reported in the "GRI Contents reference table", has not been specifically examined by Audirevi Spa. This information has been presented voluntarily, also on the basis of the

materiality analysis, to supplement that required by Italian Legislative Decree no. 254/16 and by the reporting standards adopted by the Hera Group.

The stakeholders and the materiality analysis

Hera's stakeholders

[102-21] [102-40] [102-42] [102-43] [102-44]

Hera Group's stakeholder map has been defined starting off from a survey of its stakeholders. Each category of stakeholders identified presents particular interests and priority topics and is listened to through specific dialogue and involvement initiatives.

The materiality analysis and definition of the contents

[102-46]

Non-financial and sustainability reporting is preceded annually by the **analysis and identification of material topics** for the Hera Group and its stakeholders. Specifically, the relevant aspects are selected according to the size of the impacts (positive and negative) generated and the repercussion they may have on stakeholders' decisions. The process for defining the material topics is based on the **analysis of internal and external documents** which brings to light the most relevant topics related to the shared value and sustainability, which the reporting must focus on.

To identify the topics linked to the Hera Group's activities with an economic, social and environmental impact, the **business plan** and **risk analysis** were analysed. Thanks to these two documents, it was possible to comprehend the strategic priorities and the main risks monitored and how these can affect the shared value and sustainability dimension.

In order to understand the material topics for stakeholders, the **external scenario** relating to the three drivers of shared value, the main **regulatory changes**, the **press review**, the issues raised during the **HeraLABs** and the main issues arising from other **engagement activities** (including the internal climate survey and the customer satisfaction survey) were taken into account.

So the external context concerning the **three drivers identified for the creation of shared value** was then analysed: pursuing carbon neutrality, regenerating resources and closing the loop, enabling resilience and innovating. For each of the three drivers, global, European, national and local **policies** were analysed in-depth to define the priorities for change towards sustainability; this involved 89 policies, including the 2030 UN Agenda, in relation to which the commitments and the most significant quantitative targets for Hera's activities were considered. This set of policies was joined by nine new policies analysed in 2020.

Regarding the **press review**, the presence of information regarding the Hera Group was analysed in the leading national, regional and local newspapers by highlighting the topics that showed greater visibility in more than one local area (articles and topics with overall negative visibility index above one thousand points or positive visibility index above 5 thousand points were selected).

The **HeraLABs** were then considered, encounters with stakeholders which have the purpose of proposing initiatives for involving the reference area and improving the sustainability of the services offered, periodically checking their effectiveness. During the various LAB meetings, aspects of interest to the categories of stakeholders which take part in them are proposed and analysed, and improvement initiatives are identified which are jointly planned by Hera and the LAB itself.

Lastly, the **annual customer satisfaction survey** assesses the quality of services offered and customers' satisfaction with the Group, also highlighting the aspects that are of particular importance in determining customers' overall satisfaction. **The biennial employee satisfaction survey**, dialogue activities with **consumer associations** and the **Area Managers'** activities also contributed to the definition of material topics.

The material topics identified as a result of this analysis are submitted to the Management Review Committee, which approves selection so that they can then be added to the full list of the material topics.

[102-47] [102-49]

Based on the materiality analysis on the topics presented in the 2019 sustainability report, contents and data relating to the **TCFD Recommendations** and the strategy and results of the Group in terms of **resilience and adjustment** to outside risks (climate change, health emergency, water stress) were reported and examined.

The material topics identified after the most recent materiality analysis are listed below, **in order of importance** to the Group and to its stakeholders:

- Transition to a circular economy;
- Resilience and adjustment;
- Promotion of energy efficiency and spreading renewable energy;
- Digitalisation, innovation, data analytics, artificial intelligence, cyber security;
- Sustainable management of water resources;
- Occupational Health and Safety;
- Air and soil quality;
- Reduction of greenhouse gas emissions (climate change);
- Integration of climate change in the governance, the strategy and the analysis of the risks;
- Safety and continuity of the service provided to customers;
- Environmental impact of waste treatment plants;
- Local development of the area, indirect economic impacts and social inclusion;
- Quality, costs of waste collection and city integrity service;
- Training and professional development, remuneration and incentives;
- Compliance with environmental and social regulations;
- Economic value for stakeholders;
- Management of the supply chain;
- Diversity;
- Quality and consumption of the mains water;
- Commercial relations with customers through branches, call centres and the web;
- Anti-corruption activities.

Breakdown of the information required by Italian Legislative Decree no. 254/2016 and relevant aspects

[103-1]

Each sphere of Italian Legislative Decree no. 254/16 has been reported on within this report, in accordance with current legislation. There are various material topics identified in the above-mentioned analysis are consistent with the Decree on the non-financial information.

The following table summarises the material topics (listed in order of importance) and their link with aspects of Italian Legislative Decree no. 254/16, the reason why the topic is relevant, the Green bond and GRI reference standard, the scope of the impact and the reference stakeholders.

Material topic	Area	Description	Indicators	Scope of the impact	
	It. Leg. Dec. no. 254/16			Internal	External
<i>Transition towards a circular</i>	Environmental topics Art. 3.2, paragraphs a, b, c)	In its capacity as waste management services operator, the Hera Group is committed to the development of a	GRI 306-2	Group companies which manage	Local community

Material topic	Area		Description	Indicators	Scope of the impact	
	It. Leg. Dec. no.	254/16			Internal	External
<i>economy</i>			business model increasingly oriented towards the circular economy. In fact, Hera is committed to increasing recycling and recovery (of material and energy), decreasing conferring material to landfills, promoting waste prevention initiatives and improving internal circularity.	GB7 GB8	waste management services and waste treatment plants	
<i>Resilience and adjustment</i>	Environmental topics	Art. 3.2, paragraphs a, b, c)	As operator of water services and gas and electricity distribution services, the Hera Group has to handle the management of the water and energy networks following a rationale of resilience and adjustment to outside events.	*	Group companies that manage water and energy services	Local community
<i>Promotion of energy efficiency and spreading renewable energy</i>	Environmental topics	Art. 3.2, paragraphs a, b, c)	The Hera Group, as an energy services provider, is committed to reducing internal and customer energy consumption, offering solutions aimed at energy efficiency and decarbonisation. Hera also fosters more widespread use of renewable energy, which it produces mainly by exploiting the organic media of waste (e.g.: biomethane) and which it offers to its customers by means of dedicated offers.	GRI 302-1 GRI 302-2 GRI 302-3 GRI 302-4 GRI 302-5 GB1	Group	Customers
<i>Innovation, digitalisation, data analytics, artificial intelligence, cyber security</i>	Social topics	Art. 3.2, paragraph d)	The Hera Group, through the Innovation Department, develops innovative projects within the context of digitalisation, data analytics and business intelligence, committed to innovating and digitalising internal processes and external services, in order to make its business more efficient, reliable, secure and circular.	GRI 203-1 GRI 418-1 GB9	Group	Local community
<i>Sustainable management of water resources</i>	Environmental topics	Art.3.2, paragraph a, b, c)	The Hera Group, being an operator of water services, undertakes to guarantee its customers the perfect quality of the water together with all the technical services indispensable for maintaining the continuity of the supply. Furthermore, Hera is involved in water management activities (for its own consumption and that of its customers), along with sewage and wastewater treatment sector upgrade and network resilience activities.	GRI 303-1 GRI 303-2 GRI 303-3 GB2 GB3 GB4		Customers Local community
<i>Occupational Health and Safety</i>	Aspects regarding HR management	Art. 3.2, paragraphs c, d)	The Hera Group safeguards a healthy and safe work environment, committing itself to measures to reconcile the work-life balance, as well as to maintaining a consistently low lost time injury rate. Furthermore, Hera considers possession of the Iso 45001 certification to be a social criteria in the process for the identification, selection and monitoring of suppliers, and monitors the main lost time injury indices for the main suppliers of goods and services.	GRI 403-1 GRI 403-2 GRI 403-3 GRI 403-4 GRI 403-5 GRI 403-6 GRI 403-7 GRI 403-8	Employees	Suppliers

Material topic	Area It. Leg. Dec. no. 254/16	Description	Indicators	Scope of the impact	
				Internal	External
<i>customers</i>		undertakes to guarantee a safe and reliable service, limiting interruptions. The Group is committed to ensuring the resilience of its electricity grids and water networks, with a view to adaptation to the climate change.	GB10		
<i>Environmental impact of waste treatment plants (NIMBY syndrome)</i>	Environmental topics Art. 3.2, paragraphs a, b, c)	When managing the waste treatment plants also close to urban contexts, the Hera Group is particularly careful not to create inconveniences for the reference community. Hera carries out environmental impact assessment and screening procedures aimed at assessing the effects of the works (both at construction site level and in the project stage), on the environment and on human health and well-being.	GRI 305-7	Group companies which manage waste management services and waste treatment plants	Local community
<i>Local development of the area, indirect economic impacts and social inclusion</i>	Social topics Art. 3.2, paragraph d)	The activities managed by the Hera Group (water, waste management and energy services) generate significant indirect impacts on the reference area. These include the distribution of value added to the various categories of stakeholders, the lead-on employment of the suppliers, social responsibility in tenders with the social clause.	GRI 201-1 GRI 201-4 GRI 203-1 GRI 203-2 GRI 204-1 GRI 401-1 GRI 413-1	Group	Suppliers Shareholders Local community Public Administration
<i>Quality, costs of waste collection and city integrity service</i>	Social topics Art. 3.2, paragraph d)	The Hera Group manages municipal waste collection services in the area served and, in order to guarantee the quality of the service provided, commits itself to observing minimum standards.	GRI 417-1 GRI 417-2 GRI 417-3	Group	Local community Public Administration
<i>Training and professional development, remuneration and incentives</i>	Aspects regarding HR management Art. 3.2, paragraphs c, d)	The Hera Group considers the training and professional development of its employees to be fundamental, and demonstrates this through the average per capita training hours for its employees, the numerous training activities organised at HerAcademy, the leadership model and the development process, which assesses over 5 thousand employees each year. Furthermore, Hera defines and applies a remuneration and incentive policy aimed at attracting, motivating and retaining its human resources.	GRI 404-1 GRI 404-2 GRI 404-3	Employees	
<i>Compliance with environmental and social regulations</i>	Environmental topics Art. 3.2, paragraphs a, b, c)	When handling the services provided and managing its plants, the Hera Group observes the environmental and social legislation, also in the event of outsourced activities. From an environmental standpoint (emission limits and water quality), Hera sets itself more challenging objectives than those envisaged by the law, carrying out period checks care of its plants.	GRI 307-1 GRI 419-1	Group	Employees

Material topic	Area		Description	Indicators	Scope of the impact	
	It. Leg. Dec. no. 254/16				Internal	External
<i>Economic value for the stakeholders</i>	Social topics Art. 3.2, paragraph d)		The activities managed (water, waste management and energy services) generate economic value which the Hera Group distributes to the reference stakeholders. The main stakeholder categories affected are: suppliers (local supplies), employees (remuneration), shareholders (dividend distribution), local community (sponsorship and donations) and the Public Administration (taxes, levies, fees).	GRI 201-1	Group Employees	Suppliers Shareholders Local community Public Administration
<i>Management of the supply chain</i>	Social topics Art. 3.2, paragraph d)		The activities managed by the Hera Group (water, waste management and energy services) generate significant indirect impacts on the reference area.	GRI 204-1 GRI 307-1 GRI 308-1 GRI 414-1 GRI 419-1		Suppliers
<i>Diversity</i>	Aspects regarding HR management Art. 3.2, paragraphs c, d)		The Hera Group protects the rights of all the employees, undertaking to guarantee equal opportunities and to value diversity. In 2009 Hera signed the Equal Opportunities Charter and in 2011 established a Diversity manager who, together with a work group, defines projects, activities and initiatives concerning diversity and inclusion.	GRI 401-1 GRI 401-3 GRI 405-1 GRI 405-2	Employees	
<i>Quality and consumption of the mains water</i>	Social topics Art. 3.2, paragraph d)		The Hera Group manages water services and has wastewater treatment and purification plants. Therefore, it is committed to ensuring high levels of wastewater treatment and purification, including through the planning of improvement measures for plants and networks.	GRI 416-1 GRI 416-2 GRI 417-1 GRI 417-2 GRI 417-3	Group	Customers Local community
<i>Commercial relations with customers through branches, call centres and the web</i>	Social topics Art. 3.2, paragraph d)		The Hera Group manages essential services for customers and the local community, and believes it is fundamental to ensure a quality service, also with regard to assistance via physical and web channels. In fact, Hera is constantly committed to reducing the waiting time at branches and call centres.	*	Group	Customers Local community
<i>Anti-corruption activities</i>	Fight against corruption Art. 3.2, paragraph f)		The topic is transversal to all the businesses managed and is material especially in the purchasing and tenders sphere and in the dealings with the institutions; the majority of Hera Group's supplies are in fact handled by means of tenders, important supply contracts and the like.	GRI 205-1 GRI 205-2 GRI 205-3	Group	Suppliers
<i>Respect for human rights (non-material)</i>	Respect for human rights Art. 3.2, paragraph e)		The issue of respect for human rights is not regarded as material because the Group's operational offices are located mainly in Italy or in countries in which a significant risk from this point of view has not been noted. This assessment also takes into account the aspects indicated in the chapter "Innovation and contribution to development" (section: "The impact of supplies on the areas") where the origin of foreign supplies is highlighted. Supplier audits on social responsibility did not reveal any critical issues in this sphere (see "Suppliers" section).			

*Specific GRI indicators are not available for certain material topics. Despite this, their reporting is carried out by means of other indicators and information relating to the same within the following sections: "Resilience and adjustment", "Customer relations" and "Risk management".

With regard to tax transparency, Hera Group operates essentially on the Italian territory and, in line with the principles defined by the Code of Ethics, adopts principles of transparency for the purposes of compliance with tax legislation, fulfilling its obligations regarding direct and indirect taxes. Tax aspects are assessed and managed in accordance with applicable tax regulations. The management of relations with the tax authorities is delegated to relevant Group functions. Hera guarantees transparency and fairness in relations with the tax authorities with which relations are maintained; in order to resolve any dispute, in a collaborative spirit, Hera undertakes to provide to national and local authorities all the information requested, in a complete, correct, adequate and timely manner.

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The main **management models** (Art. 3.1, paragraph a) of Italian Legislative Decree no. 254/16) adopted by the Group, relating to the aspects of Italian Legislative Decree no. 254/16, are:

- Organisational model for corporate crime prevention (Italian Legislative Decree no. 231/2001)
- Management system for corporate social responsibility or supplier audit system which is based on criteria similar to that of the Sa 8000
- Iso 14001 environmental certification
- Iso 9001 quality certification
- Iso 50001 Energy efficiency certification
- Iso 45001 occupational safety certification
- Iso 37001 corruption prevention certification.

The **company policies** (Art. 3.1, paragraph b) of Italian Legislative Decree no. 254/16), again with regard to these aspects, are the following (published on the Group's website):

- Code of Ethics and related implementing systems (Ethics and Sustainability Committee and its functioning regulations)
- Quality and sustainability policy
- Data protection policy
- Remuneration policy
- Corruption prevention model.

The Hera Group has also signed the following commitment declarations:

- Charter for equal opportunities and equality in the workplace (furthered by the Italian Ministry of Employment and the Italian Ministry for Equal Opportunities, Sodalitas Foundation, Impronta Etica, AIDAF, AIDDA and UCID)
- Manifesto Valore D, for female employment
- Patto Utilitalia for inclusion in the company
- CEOs call of Csr Europe "a New Deal for Europe"
- Women's Empowerment Principles (WEPIs) of UN Global Compact and UN Women
- UN CEO Water Mandate
- New Plastics Economy Global Commitment of the Ellen Mac Arthur Foundation
- European strategy for plastics - voluntary pledges

it complies with the following organisations/programmes of international importance:

- UN Global Compact (Hera is a founding member of the Global Compact Network Italia Foundation)
- Ellen MacArthur Foundation

and supports the Task force on Climate-related Financial Disclosure (TCFD) set up by the Financial Stability Board.

Hera's **risk management model** (Art. 3.1, paragraph b) of Italian Legislative Decree no. 254/16) is also supplemented by environmental and social aspects, as described in the section "Sustainability and risk management".

Sustainable strategy and Shared value

About us

[102-1] [102-3] [102-4]

The Hera Group is one of the major multi-utility companies in Italy: it offers the sustainable management of several public services to over 4.2 million citizens in 311 municipalities spread over five Italian regions (Emilia-Romagna, Veneto, Friuli-Venezia Giulia, Marche and Tuscany). Aresgas, an AcegasApsAmga subsidiary, deals with the distribution and sale services of natural gas to around 23 thousand customers in Bulgaria. The group also operates in other European countries through its subsidiary Aliplast with its own plastic recycling plants.

[102-2]

The Hera Group provides energy (distribution and sale of gas and electricity), water (aqueduct, sewage and wastewater treatment) and waste management (waste collection, recycling and treatment) services to citizens and Group enterprises.

The Group's strengths lie in:

- the **balance of its services**, comprised of services managed according to free market criteria (sale of gas and electricity, and waste recycling and treatment) and regulated services (gas and electricity distribution, integrated water services and waste collection, recycling and treatment);
- **strong roots in the local area** in which it operates and **deep focus on sustainability**;
- a **widespread shareholding structure** with around 20 thousand shareholders.

Main awards in 2020

The Hera Group's process of expansion is also marked by the awards received. Among the most recent awards, the main ones are:

- **Dow Jones Sustainability Index (DJSI)**: Hera is the first Italian multi-utility to be included in the DJSI, the most authoritative international stock index evaluating social responsibility, managed by S&P Global;
- **Gold Medal from S&P Global 2021**, the highest recognition reserved for companies included in the Dow Jones Sustainability Index (DJSI), for the best environmental, economic and governance performances;
- **Webranking by Lundquist** for communication of listed companies: Hera placed 6th in Italy and for the first time has entered the European Ranking (Top 500) where we are among the Top 100;
- Hera Group included in the **Bloomberg Gender-Equality Index 2021**, which awards companies that invest in gender equality and in the protection of diversity and inclusion;
- Hera among the best global companies in the **Diversity&Inclusion Index of Refinitiv**;
- **Top Employers 2021** award for Hera's strategy focused on people, with investments in welfare, training and diversity, with an organisation promoting agility in work and digitalisation;
- **Index Future Respect**: Hera's sustainability report has been included among the 44 most appreciated reports by Consumers according to ConsumerLab;
- **i/d italiadecide**: special mention for the Sant'Agata Bolognese plant, which transforms waste from separate waste collection into biomethane to power public and private transport serving the community.

Hera confirmed among the top performers in all sectors in Italy

The **Hera Group** confirmed its leading position in Italy in all businesses in which it operates and obtained the following ranking, compared to other listed companies:

1st operator in the environmental sector for treated waste

2nd operator in the water cycle sector for volumes of water supplied

3rd operator in the distribution of gas for volumes supplied

3rd operator in the sale of gas and electricity for number of customers

4th operator in the public lighting sector for number of light points managed

5th operator in the electricity distribution sector for volumes distributed.

Internally processed using 2019 public data (Source: Arera and reports of main multi-utilities)

Services provided

[102-6] [102-7]

Hera's growth has developed with a strong focus on the aspects of sustainability with regard to regulated services (distribution of gas and electricity, water service and waste collection) and services managed according to free market criteria (hazardous waste disposal, sale of gas and electricity). Development was balanced across the sectors, creating shared value for the local area and placing sustainability and quality at the core of the services it manages.

	Energy services Sale and distribution of gas and electricity, district heating, heat management and public lighting	Integrated water service Civil and industrial aqueduct, sewage and wastewater treatment	Waste management services Collection, recovery, treatment and disposal of municipal and special waste
Customers	Gas: 2.1 million Electricity: 1.3 million District heating: 13 thousand	Water: 1.4 million	
Municipalities served	Gas distribution: 222 Electricity distribution: 26 District heating: 16 Public lighting: 188	Aqueduct: 226 Sewage and wastewater treatment: 227	Waste collection: 187
Residents served	3.4 million	3.6 million	3.2 million
Volumes	Gas sold: 13.2 billion cubic metres Electricity sold: 12.8 TWh	Water sold: 285.9 million cubic metres	Waste collected: 2.2 million tonnes Waste treated: 6.6 million tonnes

Customers and municipalities served in the local areas (regulated services)

Local area	Company	Energy services	Water services	Waste management services	At least one service
Bologna	Hera	831 thousand (94%)	866 thousand (98%)	776 thousand (87%)	866 thousand (98%)
Ferrara	Hera	291 thousand (85%)	248 thousand (72%)	133 thousand (39%)	304 thousand (88%)
Forlì-Cesena	Hera	325 thousand (82%)	395 thousand (100%)	215 thousand (54%)	395 thousand (100%)
Imola-Faenza	Hera	194 thousand (76%)	256 thousand (100%)	256 thousand (100%)	256 thousand (100%)
Modena	Hera	480 thousand (68%)	472 thousand (67%)	500 thousand (71%)	503 thousand (71%)
Padua	AcegasApsAmga	210 thousand (22%)	300 thousand (32%)	270 thousand (29%)	340 thousand (36%)
Pesaro-Urbino	Marche Multiservizi	242 thousand (60%)	275 thousand (69%)	264 thousand (66%)	321 thousand (80%)
Ravenna	Hera	238 thousand (87%)	275 thousand (100%)	275 thousand (100%)	275 thousand (100%)
Rimini	Hera	35 thousand (10%)	336 thousand (100%)	320 thousand (95%)	336 thousand (100%)
Trieste	AcegasApsAmga	219 thousand (94%)	229 thousand (99%)	202 thousand (87%)	231 thousand (100%)
Udine and Gorizia	AcegasApsAmga	394 thousand (59%)	-	-	394 thousand (59%)
Hera Group		3.4 million (64%), 226 municipalities	3.6 million (67%), 227 municipalities	3.2 million (59%), 187 municipalities	4.2 million, (78%), 311 municipalities

Number of municipalities, residents and percentage compared to total residents in the province or in the reference area (as at 1 January 2020, source: Istat) in which Hera manages at least one energy service (distribution of gas, electricity or district heating), water service (aqueduct, sewage or wastewater treatment) and waste management service (separate or non-separate waste collection, or sweeping). The local area of Imola-Faenza includes three municipalities belonging to the Province of Florence in which Hera manages energy, water and waste management services. The Padua area includes one municipality from the Province of Venice in which AcegasApsAmga manages water services. The area of Pesaro-Urbino includes six municipalities belonging to the Province of Ancona in which Marche Multiservizi, through the subsidiary company Marche Multiservizi Falconara, manages the waste management services.

Mission and values

[102-16]

The mission

Hera's goal is to be the best multi-utility in Italy for its customers, workforce and shareholders. It aims to achieve this through further development of an original corporate model capable of innovation and of forging strong links with the areas in which it operates by respecting the local environment.

For Hera, being the best means inspiring the pride and trust of:

- **customers** who, thanks to Hera's responsiveness to their needs, receive quality services that satisfy their expectations;

- **women and men** who work at Hera, whose skills, engagement and passion are the foundation of the company's success;
- **shareholders**, confident that the economic value of the company will continue to be generated, in full respect of the principles of social responsibility;
- **reference area**, where economic, social and environmental wealth represent the promise of a sustainable future;
- **suppliers**, key elements in the value chain and partners for growth.

The values

Integrity, proud to belong to a Group of people known for their honest and upright conduct

Transparency, sincere, clear messages for all stakeholders

Personal responsibility, shared commitment to the good of the company

Consistency, living up to our Mission and Values.

Company operational principles

Creation of value and social and environmental responsibility: to be a company that is built to last, and to improve society and the environment for future generations

Service quality and excellence: putting customers first, as a trustworthy provider of services and safety

Efficiency: promoting the value of available resources, never wasting them

Innovation and ongoing improvement: feeling you are part of a team that generates ideas and improvement

Engagement and optimisation of personnel: sharing knowledge for self-improvement and improvement

Empowerment to choose: selecting the optimal solution for growth

The company's Mission, Charter of Values and Operational Principles were created with the participation of the Hera Group's entire workforce and were approved by the Board of Directors of Hera Spa. They are set forth and detailed on the Group's website, on the corporate intranet and in the Code of Ethics, which is reviewed every three years and was updated in 2019.

Hera Group for the Planet, People and Prosperity

Giving a world to numbers

Planet, People and Prosperity: the world that Hera wishes to "give" to its numbers consists of these three P's - projected towards the horizon of its business as the very reason for its existence.

This is why they are not simply letters.

Each of these P's shapes a dimension that enters into a dynamic and circular relationship with the Group, representing at the same time a goal and a tool, and as this goal is gradually achieved, it becomes strategic to the company.

Exactly by taking care of the planet and protecting its stability, regeneration and biodiversity, Hera can in fact encourage the rebalanced use of the natural resources on which the very services it provides depend.

PLANET: FOR THE REGENERATION OF A NEW BALANCE

It is exactly by focusing on people and promoting their rights, dignity and prospects, that the Group can strengthen a wide range of motivated stakeholders so that they may also play an active and conducive role in regenerating this new balance.

PEOPLE: WORKING FOR THE WHOLE ALSO MEANS WORKING TOGETHER

By contributing to the prosperity, fairness and harmony of the system in which it operates, Hera can at last look with confidence towards a social and economic context that will also be favourable to the medium- and long-term growth and development of its businesses, in a perspective that will continue to guide it towards the creation of shared value among many.

PROSPERITY: FROM DRAWING VALUE FOR FEW PEOPLE TO CREATING SHARED VALUE AMONG MANY

At the heart of the agenda of the G20 chaired by Italy, the requests underlying "Planet, People and Prosperity" well respond to the **demands that have globally emerged from crises of various kinds**, definitively dismissing the possibility of planning the well-being of society in watertight compartments. They also provide a comprehensive summary of the value-related horizon common to the most significant new business and development models that are currently being developed, and which were best expressed in the 2020 World Economic Forum.

These are important cornerstones which focus on the central role played by stakeholder value and on the driving role of the company's social purpose, issues **broadly anticipated by Hera**. For this reason, Hera is today able to include in these three P's the many results it has attained over the years, the historical evolution of its **approach to sustainability**, its **mission** and, ultimately, its very **purpose**.

The **balanced scorecard system**, which has been virtuously guiding the actions and goals of the entire management team for fifteen years now, and the **Code of Ethics** are also part of this framework. Introduced in 2007 and then revised every three years, the purpose of this document is to reaffirm and update the strategic and cultural horizon based on which the **business plan** is drawn up each year. It is no coincidence that this plan, even in its most recent edition, seeks to combine industrial growth and sustainable development, with initiatives aimed at carbon neutrality, resource regeneration and resilience.

LEAVING A MARK, NOT A FOOTPRINT

Combined together, these elements outline the framework within which Hera has been undertaking for some time now **clear public commitments in various fields**, and has indeed already embarked on the **road to climate neutrality by 2050 mapped out by the European Union**. Yet there is more: the Group's operations are fully in line with the transition designed by the **sustainable development goals that the United Nations Agenda sets for 2030**: six of these particularly involve business planning and management, but Hera also contributes - more indirectly - to five further targets.

These range from the reduction of climate-changing emissions to the promotion of renewable energies, from the sustainable use of water resources and the development of a circular economy and recycling of plastics, through to protocols on human rights, diversity and inclusion. Very different challenges, which are however linked to each other - like pearls on a string - by the common thread of a commitment that runs through them all: leaving a mark, not a footprint.

The **reporting of shared value** generated by Hera through its businesses was adopted in 2016 to achieve a step change in the **integration of sustainability in the Group's strategy** and became even more relevant in 2020. Fitting into a broader perspective, it blends operationally with the **interpretation introduced by previous editions of the report** and cannot be regarded as the mere qualification of EBITDA. The very mechanism based on which shared value is created is both essential and delicate, and needs to be safeguarded by all the players involved.

And so, in updating the drivers for the creation of shared value, which in the meantime has reached Euro 420 million and 37.4% of overall EBITDA, this report also gives a new account of the **stakeholder company** that Hera has never ceased to be, further confirming its business model based on values and operating principles that the fifth and most recent edition of the **Code of Ethics** brings together in an accomplished manner. What emerges is a heritage made up firstly of relationships and then of assets. Relationships are probably the Group's most important asset; they are essential for overcoming the many challenges of a transition that will continue to have meaning inasmuch as it takes on a human dimension.

Some acknowledgements in this respect confirm the correct road embarked on by the Group, the first Italian multi-utility to be included in the Dow Jones Sustainability Index (DJSI). The DJSI is one of the world's most authoritative stock indices evaluating social responsibility. It selects the world's leading companies on the basis of the best sustainability performance in all ESG (environment, social, governance) dimensions: in the ranking announced in November 2020, Hera achieved an overall score of 87/100, making it the best multi-utility at global level.

How we do what we do

[102-26]

In order to achieve the many targets that the three P's entail, Hera unfolds all its potential, making full use of the economic, social and environmental impact of the primary services it provides. All this translates into a wide range of coherent actions, detailed in the chapters that follow. The positive effects of the relation with stakeholders are thus linked to those generated by the creation of shared value, whose focus on the challenges of our time is guaranteed by continual analysis of the external environment. Hera uses this analysis to continue to map and benefit from the shifting links between Global Agenda, European goals and corporate strategy.

Planet

All of the drivers of change with which Hera creates shared value act directly in the interests of an increasingly hot and arid planet, whose climate balance has been affected and natural resources have been compromised by development models that are taking too much time to move away from the linear paradigm:

- Hence companies like Hera, where working on "**energy**", not surprisingly, means first and foremost "**pursuing carbon neutrality**", feel the urgent need to contain climate change, with actions that involve both the Group's assets and processes as well as customers, suppliers, Public Administration and partner companies and that, overall, range from promoting energy efficiency to energy transition and renewables.
- No less challenging is the general issue of the "**environment**", a front line Hera is working on to "**regenerate natural resources and close the loop**" for a more effective use of resources and a better balance between consumption and regeneration. This commitment undertaken both inside and outside the Group involves many issues ranging from the transition to a circular economy and the sustainable management of water resources, through to the protection of air, soil and biodiversity.
- The planet, after all, is nothing more than the amplified projection of our own "**local area**", at the service of which Hera works to "**enable resilience and innovation**". The logic it uses is designed to guarantee continuity of service and availability of resources, strengthens the infrastructure of the areas served with smart systems and sensitive networks, and also pursues widespread digitalisation to lighten the overall environmental footprint of many activities carried out not only by Hera but also by other parties.

People

Hera also believes in the core value of people and uses its range of action to promote an active role for individuals, both inside and outside the company:

- A part of its business activities, linked to economic development and social inclusion, but also to the development of employment and new skills, directly contributes to the generation of shared value EBITDA, filling the driver of change entitled “**local area (and business)**” with further content.
- Hera's commitment to managing relations with two special categories is fundamental: **workforce** and **suppliers**. Crucial players for winning key challenges, these stakeholders are involved by the Group in many projects aimed at promoting health, safety and diversity management, not to mention the transparency, quality and sustainability of partner companies, public tenders and contracts awarded. In this respect, the topics of corporate welfare and, even more so, of training are decisive. Thanks to these issues, Hera has risen to a challenge launched above all by the new generations, who are asking for opportunities rather than certainties, tools rather than income, and knowledge rather than titles.
- Added to these categories, we must also consider the category of **customers**. Hera seeks to involve them in many crucial battles on recycling, saving and efficient use of resources, enhancing their status as citizens and effectively interpreting the evolution of a society that is steering the notion of citizenship on issues that can be implemented through people's behaviour.

Prosperity

Lastly, all the impact areas involved in creating shared value, and the entire system of relations with stakeholders - which goes beyond the logic of profit only for the few - contribute in various ways to **fair and widespread prosperity**, addressing the parties that interact with the company and also the interests of future generations.

The initiatives carried out are necessarily geared towards a long-term time horizon, and therefore involve all of the Group's business lines. Thus, the services provided by the company build together a network capable of guaranteeing favourable conditions for the lasting, balanced and sustainable growth of Hera and the social and economic fabric that surrounds it.

Everything reported in this report is therefore closely related to the commitment made in this direction, including any actions carried out for customers regarding the quality, cost and safety of services, with particular reference to the protection provided - even going beyond legal obligations - for most vulnerable users and, as such, most exposed to the effects of the currently complicated economic situation.

Lastly, we cannot forget the fundamental relation with shareholders and financial institutions, based on trust, vision and planning, and included in a governance model capable of transferring wealth (gross added value) totalling Euro 1,670 million to all stakeholders in 2020 alone.

Shared value

Objectives and performance

What we said we would do	What we have done	SDGs	Progress*	Geographic Scope**
• Euro 751 million of shared value investments in the 2020–2023 period (35% of the total net of the investments for gas tenders).	• Euro 297.4 million in investments in 2020 alone (55.5% of the total)			ER T M

What we said we would do	What we have done	SDGs	Progress*	Geographic Scope**
<ul style="list-style-type: none"> 42% of the total. Shared value EBITDA of over Euro 525 million by 2023 (around Euro +150 million compared to 2018). 	<ul style="list-style-type: none"> Shared value EBITDA of Euro 420 million in 2020, equal to 37.4% of the total. In 2019, shared value EBITDA, aligned with the new calculation criteria defined in 2020, was 36.1% of the total. 		●	ER T M

* ● Result achieved or in line with plans. ● Result with moderate deviation from planning.

** Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

What we will do	SDGs	Geographic scope*
<ul style="list-style-type: none"> Euro 1,568 million of shared value investments in the 2021–2024 period (62.5% of the total). 		
<ul style="list-style-type: none"> 50% of the total, shared value EBITDA of over Euro 648 million by 2024 (around Euro +256 million compared to 2019). 		

Our approach to shared value

For Hera, the creation of shared value is the result of all those business activities and projects that generate operating margins and meet the Global Agenda drivers, i.e. those “calls to action” for change in the direction of sustainability and for Hera’s spheres of competence, specified by European, national and local policies and megatrends.

This definition of Creating shared value (CSV) is the result of the path inspired by the indications of Porter and Kramer. Started in 2016, it led to the identification of Hera’s approach to the creation of shared value as a new source of direction for future strategy, in line with the UN 2030 Agenda goals.

This approach also led to **renewing the Sustainability Report** and to enriching it with new views and perspectives, among which quantification of **EBITDA generated by "shared value" activities and projects (CSV EBITDA)**, and of investments made in this area stand out. These new views allowed us to include projects and activities in the CSV areas and calculate their **contribution to the generation of EBITDA and their influence on the Group's overall investments**.

What shared value means and the perspective of Hera

In their famous article of 2011 - “The big idea: Creating shared value” - Porter and Kramer identify the concept of shared value in the ability of corporate policies and practices to create a value that at the same time generates **greater competitiveness for the company**, while responding to the needs of the communities and to the challenges of the society in which the company operates. Hera’s multi-utility activities are, by nature, highly integrated with the social and economic fabric of the local area, benefiting from a ten-year long integration of prospective sustainability within the Group's strategy.

The value added to EBITDA is the portion of industrial income attributable to activities that **meet the need to change direction and steer towards sustainability** as specified in the "Global Agenda". These activities, therefore, produce value for the company while responding to the problems and challenges of the communities in which Hera operates.

The method for calculating CSV EBITDA requires **specific calculation criteria**. A study of all the activities managed by the Hera Group identifies the activities that are consistent with the drivers as well as the impact areas of shared value, and calculates the respective EBITDA generated. Starting from 2019, CSV EBITDA started to be **audited by an external company**. For details regarding the method, see the specific report available at bs.gruppohera.it and the related audit certificate issued by the auditing firm.

The relationship between Corporate social responsibility (CSR) and Creating shared value (CSV) according to Hera

Since 2016, Hera's approach to CSR and sustainability has merged the CSV prospect with the integration of sustainability (already envisaged since the Group's establishment) into its strategy and business activities.

Ever since 2016, the Hera Group's approach has therefore embraced activities and projects that:

- improve its environmental and social sustainability performances mainly related to the businesses it manages (also, but not exclusively, in relation to the law and sector regulations) (CSR);
- generate operating margins that are consistent with the "Global Agenda" priorities (CSV).

This latter point is a major development in Hera Group's original approach to CSR, which will **increase the shared value generated** by overlapping business and "Global Agenda" priorities.

How we identify the "Global Agenda" priorities and CSV areas

The needs for change in the direction of sustainability set out in the "Global Agenda" represent calls to action and, at the same time, **challenges and opportunities** for the Hera Group. Understanding this scenario is essential not only to make the Group's sustainability reporting more up-to-date, but above all to **direct the strategy and operating processes towards addressing change, thus contributing to the Company's competitiveness**.

In **2020, three years after its creation, the CSV framework underwent a review and was updated given the new challenges of the global scenario**. The analysis of global megatrends and the internal listening process, conducted through individual interviews and focus groups, were the main new aspects. In keeping with the past, sustainable development goals and policy analysis were also considered, including the European Taxonomy for Sustainable Finance that is currently being developed.

Global megatrends were an important addition to the analysis of the 98 European, national and local policies implemented over the past five years, and of the 2030 UN Agenda. On the basis of a dozen or so international studies, it was possible to identify nine global megatrends of potential relevance to the Hera Group. Of these, three were considered more closely linked to the business and having a direct impact on company activities, and were therefore given priority in updating the framework: the fragile planet, technological disruption and accelerated urbanisation. Two other trends were highlighted, because although they are more distant from Hera's business activities, they closely affect the communities and local areas in which Hera operates and lead to indirect impacts on the company in social terms: knowledge-based society and growing inequalities. Finally, the following were considered less relevant and more distant from Hera's business activities: geopolitical instability, re-imagined healthcare, globalisation and interdependence, and diverging demographic trends.

The **internal listening** process made it possible to receive many important suggestions for updating the framework, which in many cases proved to be perfectly in line with the new aspects drawn from the policy analysis. Seven top management representatives were interviewed, Directors/Chief Executive Officers of the most significant Departments/Companies for the creation of shared value. An interview was also conducted with the external member of the Group's Ethics and Sustainability Committee. In addition, a dedicated focus group was set up, involving a group of workers from various company organisational areas.

In 2020, 9 additional policies were added to the previous set of 89 policies. The additional policies increased and enriched the sustainability scenario with new elements and brought out new key issues. In particular:

- **plastic pollution**, re-launched through publication of the new action plan for circular economy (COM 2020/98);

- **circularity in the management of water resources**, promoted by the new action plan for the circular economy (COM 2020/98) and by the new rules for the re-use of waste water defined by the European Parliament through Regulation 2020/741;
- **the quality of drinking water**, on which the European Union wanted to place further emphasis by repealing previous Directive 98/83/EC on the quality of water intended for human consumption through publication of the new Directive 2020/2184, which introduced more stringent thresholds for certain contaminants, so as to make drinking water even safer;
- **biodiversity**, to which Europe, in its new Biodiversity Strategy 2030 (COM 2020/380), accords the status of "key ally in the fight against climate change";
- **resilience and adaptation to climate change**, also taken into account in the new regulation on Taxonomy for Sustainable Finance (Regulation 5639/20) and in the Nex Generation EU, which envisages the strengthening of strategic programmes to draw lessons from the crisis and make the single market stronger and more resilient and to speed up the dual green and digital transition.

Policy analysis was particularly aimed at identifying the need for change set out in policies and the most **significant** quantitative **targets** for Hera's business.

At the end of this process, a proposal was outlined for updating the drivers (or priorities) of change and the respective impact areas of interest to Hera, which was approved and validated by top management. The **new framework is made up of three drivers**:

- Energy - Pursuing carbon neutrality,
- Environment - Regenerating resources and closing the loop,
- Local area (and Business) - Enabling resilience and innovating.

The three drivers of change and the relevant nine impact areas are linked to the 11 2030 UN Agenda goals to which the Group contributes, seven of which are identified as priorities, and which include the 52 "What we will do..." (objectives for the future) detailed in this Sustainability Report.

The **priority SDGs** for the Hera Group are goals that are more **directly related to its business activities** and on which the Group has a **direct impact**. Goal 17 is one of the priority SDGs, since **partnerships are essential** to achieve the important sustainability goals set. The detail of the priority SDGs follows: goal 6, clean water and sanitation services; goal 7, clean and accessible energy; goal 9, companies, innovation and infrastructure; goal 11, sustainable cities and communities; goal 12, accountable consumption and production; goal 13, combating climate change and goal 17, partnerships for the goals.

The **other SDGs of significance** for the Hera Group are goals on which the Group has an **indirect impact through internal processes** (e.g. human resources management) or **business activities** (e.g. protection of vulnerable users). Details of the other important SDGs are as follows: goal 4, quality education; goal 5, gender equality; goal 8, decent work and economic growth and goal 14, life under water.

The areas for creation of shared value for Hera: the drivers of change, the impact areas and the 2030 UN Agenda goals of interest to Hera

"Shared value" EBITDA (CSV EBITDA)

In 2020, refinements were made to the criteria for calculating CSV EBITDA for certain activities of the Hera Group; some of these were the result of changes in the regulations governing or affecting the services managed. The main refinements regarded:

- the **contribution of waste-to-energy plants**, considered only for the share of energy from renewable sources (51%);
- **optimisation of the wastewater purification service through the construction of a new indicator** defined in proportion to the users served by aqueduct systems "covered" by the **Water Safety Plans** in the local area managed by the Group (aligned with Resolution 917/17 regulating the technical quality of the Arera integrated water services);
- **optimisation of the sewerage and wastewater treatment service** through the construction of a new composite indicator resulting from the proportion of **reusable waste water** (the effect of which is accounted for in the transition to the circular economy impact area) and from the percentage of **compliance with European and national regulations** on the treatment of waste water from **urban agglomerations >2,000 inhabitants equivalent**;
- efficient use of the **actual volumes of renewable electricity sold with Guarantee of Origin (GO) and natural gas with CO₂ emission offsetting** against the total volumes sold (which in the 2019 sustainability report were made on the basis of estimates).

As a result of this, in the 2021-2024 Business Plan the evolution of the Mol CSV was represented using the new criteria and taking the new CSV framework as a reference. For better comparability, both in the Business Plan as well as in the 2020 Sustainability Report, the Mol CSV 2019 has been recalculated using the new criteria.

CSV EBITDA for 2020 amounted to Euro 420.0 million (37.4% of the Group's total EBITDA), a 7.2% increase compared to 2019 CSV EBITDA. This result is in line with the 2020-2024 business plan, created so that approximately 50% of 2024 EBITDA will derive from business activities that respond to the priorities of the "Global Agenda" for sustainability.

A roughly 7% increase in "shared value" EBITDA is recorded against a 3.5% increase in the Group's overall EBITDA (equal to Euro 1,132.0 million) compared to the previous year. 74% of the growth in the Group's overall EBITDA regards CSV areas.

The prevailing contribution derives from activities and projects related to the Environment driver which seek to regenerate resources and close the loop (Euro 239.8 million), followed by those related to the Energy driver which instead aim at pursuing carbon neutrality (approximately Euro 136.6 million). The projects and activities related to the Local Area (and Business) driver aim at enabling resilience and innovation, accounting for Euro 74.5 million in 2020.

As pointed out in the graph, the "shared value" EBITDA generated in 2020 is mainly the result of activities and projects that meet the "calls to action" of the "Global Agenda" for the Environment driver (around 57% of total "shared value" EBITDA). As regards the "impact area", the key role played by the Group in creating value with activities related to the **transition to a circular economy** and to the **sustainable management of water resources emerges**. In the area of "air and soil protection", the most significant share of CSV EBITDA comes from the district heating service (for the share of heat generated by cogeneration and by energy recovery from the combustion of municipal and industrial waste).

Approximately 31% of "shared value" EBITDA is instead achieved through activities in the areas aimed at "pursuing carbon neutrality". 66% of this share of EBITDA is the result of measures aimed at **promoting energy efficiency**, through (i) commercial offers to energy customers including services and tools to reduce consumption, (ii) energy efficiency services for the Public Administration, businesses and condominiums, (iii) industrial cogeneration, (iv) gradual energy efficiency of the public lighting service (with particular reference to extending the number of municipalities in which only electricity from renewable sources is used, where electricity consumption per inhabitant equivalent is less than 50 kWh/inhabitant, and where all lighting points managed are LED). The remaining percentage (34%) of EBITDA from activities aimed at "pursuing carbon neutrality" is related to **energy transition and renewables**. In this area, the margins are

calculated from: (i) the sale of renewable electricity with Guarantee of Origin (GO) and natural gas with CO₂ emission offsetting, (ii) district heating (for the share of heat generated from geothermal sources), (iii) the generation of renewable electricity from biogas deriving from landfills and from the anaerobic digestion of waste, (iv) biomethane production.

Lastly, the Hera Group generates about 12% of CSV EBITDA with reference to **innovation, digitalisation and its contribution to inclusive development focused on the environment and stakeholders**. In the area of "innovation and digitalisation", the "shared value" EBITDA is pursued through the sale of telecommunication services, by means of Acantho, and through the development of projects and investments aimed at digitalising operational processes, services offered and cities. In the area of "economic development and social inclusion" a share of CSV EBITDA is achieved thanks to the outsourcing of municipal waste collection services to social cooperatives which employ disadvantaged people with ensuing economic benefits for the Public Administration (lower welfare costs).

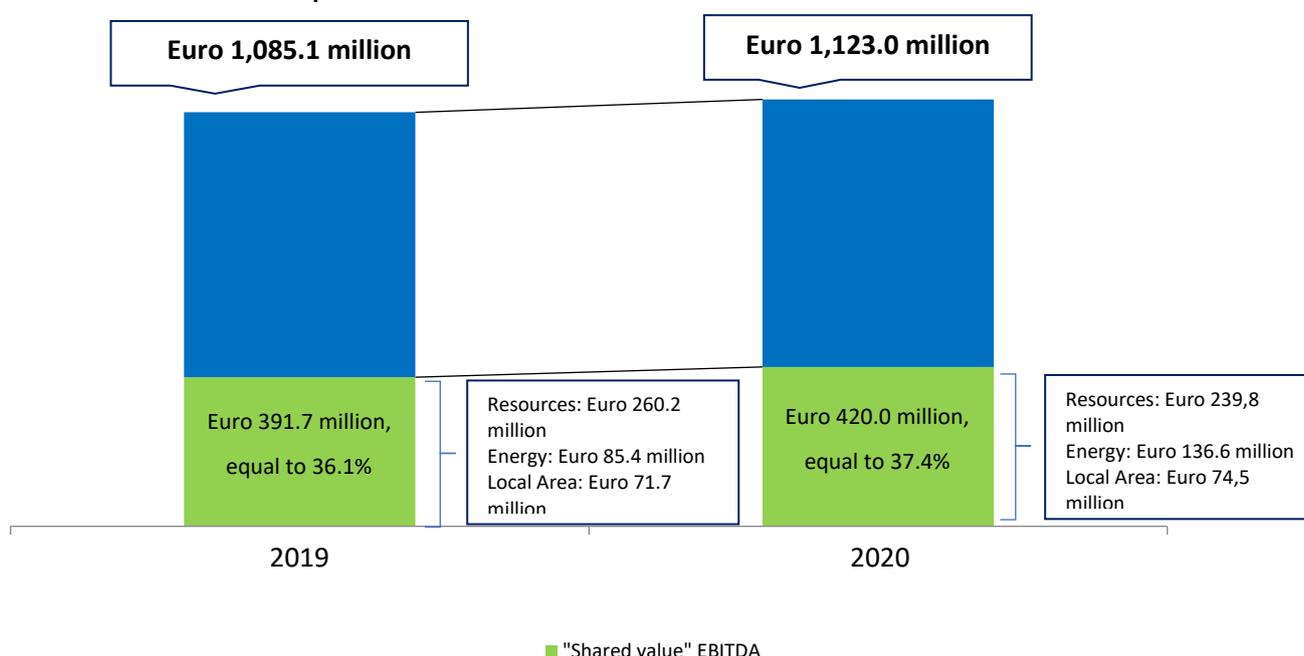
CSV EBITDA growth in 2020: Euro +28.3 million (+7.2%) compared to 2019

CSV Drivers	Impact Area	2020 main results and changes with respect to 2019
ENERGY Pursuing decarbonisation: Euro +46.3 million	Promotion of energy efficiency: Euro +32.8 million	<ul style="list-style-type: none"> • Increase in gas and electricity contracts with energy efficiency services and solutions (20.2% in 2020 compared to 19.9% in 2019) which did not include the companies acquired with the "Ascopiave transaction" • Increase in volumes of activity related to energy efficiency for public administration, condominiums and businesses • Increase in municipalities where: only electricity from renewable sources is used (41.9% compared to 40% in 2019); electricity consumption per inhabitant equivalent is less than 50 kWh/inhabitant (33.5% compared to 26.2% in 2019); all lighting points managed are LED (6.3% compared to 5.3% in 2019)
	Energy transition and renewables: +13.5 million euros	<ul style="list-style-type: none"> • Increase in volumes of gas sold with CO₂ emission offsetting (4.4% against 0.8% in 2019) and electricity from renewable sources with GO (32.2% against 29.1% in 2019) • Start of biomethane production from the biodigestion of organic waste (7.8 mln of m3 compared to 6.5 in 2019)
	Transition towards a circular economy: Euro -10.7 million	<ul style="list-style-type: none"> • Reduction in margins from municipal sanitation services (-14% compared to 2019) • Reduction in volumes of industrial waste (-36.5% compared to 2019) and recycled plastic (-5.4%)
ENVIRONMENT Regenerating resources and closing the loop: Euro -20.0 million	Sustainable management of water resources: Euro -6.8 million	<ul style="list-style-type: none"> • Adjustment process in urban areas >2000 P.E. adjusted to sewage and wastewater treatment regulations basically stable (rising from 97.3% in 2019 to 97.6% in 2020 in terms of P.E.)
	Air, soil and biodiversity protection: Euro -2.5 million	<ul style="list-style-type: none"> • Reduction in margins from district heating (-24% compared to 2019) due to the reduction in volumes sold (-3.7% compared to 2019)

CSV Drivers	Impact Area	2020 main results and changes with respect to 2019
LOCAL AREA (AND BUSINESS)	Economic development and social inclusion: Euro -4.1 million	<ul style="list-style-type: none"> Slight decrease in the number of instalments requested by customers (-6.6% compared to 2019) amounting to 109.2 thousand instalments compared to 116.9 thousand in 2019
Enabling resilience and innovating: Euro +2.0 million	Innovation and digitalisation: Euro +6.1 million	<ul style="list-style-type: none"> Investments of Euro 86 million in innovation in 2020; increase in electronic gas meters installed at the end of 2020 (64.7% compared to 43.1% in 2019) Increase in margins from telecommunication and digitalisation services provided by Acantho (+13.2% compared to 2019)

The comparison was made by aligning the 2019 CSV EBITDA with the new calculation criteria defined in 2020.

"Shared value" EBITDA compared to total EBITDA



The total shared value EBITDA does not correspond to the sum of the single drivers, due to activities that affect several components. The CSV EBITDA was aligned with the new calculation criteria defined in 2020.

"Shared value" EBITDA growth in the 2020-2024 business plan

The 2020-2024 Group business plan targets a 2024 "shared value" EBITDA of Euro 648 million, equal to +65% increase compared to 2019, and will be equal to around 50% of the Group's overall EBITDA.

The growth in shared value EBITDA during the time interval of the plan period compared to 2019 (256 million) is higher than the growth of the Group's overall margins (215 million) thanks to the significant contribution generated by the development of activities in the CSV drivers: "pursuing carbon neutrality" (Euro +86 million), "regenerating resources and closing the loop" (Euro +142 million) and "enabling resilience and innovating" (Euro +28 million).

CSV Drivers	Main actions and targets
Pursuing carbon neutrality: Euro +86 million	<ul style="list-style-type: none"> • Further development of commercial offers with energy efficiency solutions for gas customers (customers joining this offer: around 39.9% by 2024) • Further development of commercial offers with energy efficiency solutions for electricity customers (customers joining these offers: around 39.8% by 2024) • Further development of energy efficiency business (industrial cogeneration, heat management etc.) for Public Administrations, companies and condominiums • Gradual increase in municipalities where: only electricity from renewable sources is used (50.2% by 2024); electricity consumption per inhabitant equivalent is less than 50 kWh/inhabitant (40.6% by 2024); all lighting points managed are LED (15.8% by 2024). • Increase in gas volumes sold with CO₂ offsetting: 17% of total volumes by 2024 • Increase in volumes of electricity from renewable sources: 33% of total volumes by 2024 • Increase in the production of biomethane from the biodigestion of organic waste (more than 15 million cubic metres by 2024)
Regenerating resources and closing the loop: Euro +142 million	<ul style="list-style-type: none"> • Completion of process for the adjustment of urban areas >2,000 P.E. in the local area served in line with EU directives (100% urban area >2,000 P.E. adjusted by 2023) • Gradual increase in users served in areas with Water Safety Plans: 77% by 2024 • Development of Aliplast activity (+52% recycled plastic sold in 2024 compared to 2017) • Increase in the volumes of waste sent for energy and material recovery at HASI plants: 35% by 2024 • Development of district heating and increase in volume sold (+12% by 2024)
Enabling resilience and innovating: Euro +28 million	<ul style="list-style-type: none"> • Innovation and digitalisation: investments in digital transformation with a view to optimising operational processes and management; increase in installed electronic gas meters (9) • Innovation and digitalisation: Acantho business development (telecommunications and connectivity)

"Shared value" investments

[203-1]

In 2020, the Hera Group invested around **Euro 297.4 million** in initiatives and projects aimed at creating shared value. These investments represent **55.5% of the total investments** made by the Hera Group. "Shared value" investments are substantially stable (+0.3%) compared to 2019 (aligned with the calculation criteria consistent with the changes introduced by the new CSV framework)

The changes introduced by the updated CSV framework, especially the topics related to drinking water quality and resilience, have led to a breakdown of investments in the three CSV areas unlike previous years.

The main investments in 2020 for **"pursuing carbon neutrality"** regarded:

- investments in anaerobic biodigestion and waste composting plants (about Euro 4.7 million) - "Energy transition and renewables" impact area;
- upgrading of public lighting and energy efficiency systems in the Public Administration buildings as well as energy efficiency measures in condominiums and enterprises, also through the implementation of industrial cogeneration plants. These projects were carried out by Hera Luce, Hera Servizi Energia and AcegasApsAmga Servizi Energetici (around Euro 18.5 million - "Promotion of energy efficiency" impact area).

With regard to **"regenerating resources and closing the loop"**, the main investment items concerned:

- investments for the development of waste recovery and recycling activities, carried out by Aliplast, Hasi and by the Herambiente selecting plants (approximately Euro 16.7 million) - "Transition to a circular economy" impact area;
- investments in assets for the municipal sanitation service, specifically for the purchase of containers, bins and bell-shaped containers for separate waste collection (Euro 11.5 million) - "Transition to a circular economy" impact area;

- adjustment operations in the sewage and wastewater treatment sector in order to ensure higher quality standards for water resources in municipal and rural areas (around Euro 51.7 million) - "Sustainable management of water resources" impact area. It should be noted that a significant part of the investments related to adjustments in the sewerage and wastewater treatment sector are also related to the "Resilience and adaptation" impact area;
- maintenance and reclamation works on the distribution networks of the aqueduct service (approximately Euro 62.8 million) - "Sustainable management of water resources" impact area. It should be noted that a significant part of the investments related to the aqueduct service are also related to the "Resilience and adaptation" impact area;
- interventions for the development of the district heating service and for the purchase of vehicles with a lower environmental impact (approximately Euro 9.7 million) - "Air, soil and biodiversity protection" impact area.

Finally, with regard to the "**enabling resilience and innovating**" driver, investments were mainly aimed at disseminating innovative technologies related to energy transition, the circular economy and digital transformation (about Euro 86.0 million) - "Innovation and digitalisation" impact area.

The investments outlined in the 2020-2024 business plan aimed at creating shared value amount to a total of approximately Euro 1.8 billion a significantly higher volume (around +40%) than the average of the last three years and equal to 60.4% of the total. More than Euro 1 billion regard interventions associated with the "Enabling resilience and innovating" driver, Euro 656 million regard interventions in the "Regenerating resources and closing the loop" area while the remainder (Euro 148 million) are related to investments in "pursuing carbon neutrality".

Integrating sustainability in the Group strategy

In the business plan covering the period 2020-2024, the Hera Group set out its strategy in line with the guidelines of the **European policy** and, at the same time, maintaining coherence with the **2030 UN Agenda**, which has been guiding the Group's commitment towards fully sustainable development throughout the years.

More specifically, the new plan covers three dimensions: environmental, social and economic, and innovation.

The **environmental dimension** includes initiatives aimed at effectively contributing to the reduction in climate-changing emissions, through solutions based on saving energy and resources, and projects capable of promoting an increasingly widespread use of renewable energy vectors, such as **biomethane** and **hydrogen**. It also includes actions seeking to increase the **resilience** of the Group's activities against all exogenous threats, as well as initiatives addressing the issue of resource regeneration.

The **social and economic dimension** covers activities aimed at creating **shared value** for stakeholders and local areas, leveraging physical and commercial assets, through new value-added services for customers, collaborations with external partners and projects for listening to local and social needs, but also as a result of tenders for the assignment of regulated services.

Lastly, the area concerning **innovation**, embraces the opportunities associated with technological evolution, digitalisation, artificial intelligence and data analysis, for the purpose of increasing the efficiency and quality of services. Initiatives will also be introduced to consolidate new ways of working and new customs capable of speeding up the search for agile solutions, while maintaining the right balance between people and technology.

Based on this **business strategy**, the Group's EBITDA is expected to grow by Euro 215 million (compared to the 2019 final figure), reaching Euro 1.3 billion by 2024. Development will move along a sturdy, balanced

and sustainable path, fuelled by both organic and external components, in line with Hera's history and its industrial evolution over the years. Furthermore, investments of approximately Euro 3.2 billion over five years are planned. This amount is significantly higher (approximately +40%) than the average of the last five years and has also increased compared to the previous business plan. The margins generated during the time interval of the plan period will make it possible to address the significant volume of investments allocated, while maintaining a financial balance that will reduce the ratio of net financial debt to EBITDA to 2.8x by 2024.

It should be noted that around 60% of the investments will be earmarked for projects that are fully consistent with European policies: 42% will be allocated to activities in line with the **Green Deal**, for the reduction of emissions, resilience and the circular economy, and the remaining 18% to technological development.

These investments will lead to increased margins attributable to these projects of around Euro 190 million between 2019 and 2024, equivalent to 88% of the overall margin growth during the time interval of the plan period.

To effectively address the long-term goals and better define the contribution to the pursuit of European policies and UN recommendations, the Group has extended its perspective and defined a number of 2030 business targets. Among the most important of these is the Group's greenhouse gas emissions target, calculated according to the criteria of the **Science Based Target Initiative**, which aims to reduce greenhouse gas emissions into the atmosphere by 15% by 2024 and 33% by 2030 (compared to 2019).

Other important targets regard the Group's commitment to the **circular economy**, with Aliplast increasing the amount of recycled plastic by 150% (compared to 2017), with an increased packaging recycling rate reaching over 75% and with an increase in the municipal waste recycling rate rising to 67%.

The 2030 Agenda for sustainable development ratified at the UN summit in September 2015 by 193 countries includes 17 goals regarding sustainable development (**Sustainable Development Goals** or **SDGs**), divided into 169 targets. The SDGs are regarded as the continuation of the Millennium Development Goals, already defined in 2000 by the United Nations.

In 2018, **an in-depth analysis of the SDGs of the 2030 UN Agenda** was carried out by analysing the **169 targets** and identifying the activities, projects or policies of the Group that contribute to their achievement. Contribution was classified as high, medium or low. Goals were considered to be relevant only if one target which Hera contributes to had a medium or high level. The analysis **confirmed the ten goals** already identified in 2017, and **target 17 was added**. During the triennial review of the model in 2020, **seven out of these eleven goals were identified as "key" for Hera**.

The **priority SDGs** for the Hera Group are goals that are more **directly related to its business activities** and on which the Group has a **direct impact**. Goal 17 is one of the priority SDGs, since **partnerships are essential** to achieve the important sustainability goals set. The detail of the priority SDGs follows: goal 6, clean water and sanitation services; goal 7, clean and accessible energy; goal 9, companies, innovation and infrastructure; goal 11, sustainable cities and communities; goal 12, accountable consumption and production; goal 13, combating climate change and goal 17, partnerships for the goals.

The **other SDGs of significance** for the Hera Group are goals on which the Group has an **indirect impact through internal processes** (e.g. human resources management) or **business activities** (e.g. protection of vulnerable users). Details of the other important SDGs are as follows: goal 4, quality education; goal 5, gender equality; goal 8, decent work and economic growth and goal 14, life under water.

Hera's contribution to the Sustainable Development Goals of the 2030 UN Agenda

As reported in the table below, **Hera's contribution by number of "What we will do..."** (considering the SDGs affected by ten or more targets) is predominant in six goals: Clean and accessible energy; Decent

work and economic growth; Companies, innovation and infrastructure; Sustainable cities and communities; Accountable consumption and production; Combating climate change.

What we will do... 2030 UN Agenda targets

SUSTAINABLE DEVELOPMENT GOALS											
	4	5	6	7	8	9	11	12	13	14	17
Shared value	2	2	2	2	2	2	2	2	2	2	2
Pursuing carbon neutrality				7	1	4	2	1	8		1
Regenerating resources and closing the loop			7	1	5		5	5	1	4	3
Enabling resilience and innovating	1	1	2		3	3	3	4	2		4
Governance and creation of value			1		2		1		1		1
Quality, cost, and safety of customer services						2					
People	2				2	1					1
Suppliers					4			2			
Total	5	3	12	10	19	12	13	14	14	6	12

Sustainability integrated into the management bonus system

The balanced scorecard approach enables us to assign “balanced” objectives to our management team in four areas (development, quality and corporate social responsibility, organisational integration and efficiency upgrading) and provides a methodology for defining strategy and turning it into daily activities and goals. The innovation of this approach consists of considering the achievement of objectives of social and environmental sustainability as a condition for the achievement of the economic and financial objectives over the medium and long term.

What is the balanced scorecard?

The balanced scorecard is a strategic control system which is based on the connection between strategy and the day-to-day running of the company. It was devised in the early Nineties by the American academics R. Kaplan and D. Norton. It has generated an immense following among leading corporations in the USA and is now being taken up by major European players.

The **Strategic Map** is updated every year based on the contents of the business plan: it provides a **summary of the Group’s strategic objectives** and its commitments to stakeholders set forth in the sustainability report.

During the 2020 budget process, **38 priority projects** were defined to achieve the **28 strategic objectives** set out in the 2020-2023 Strategic Map aimed at creating long-term value for the company and the stakeholders. Out of the 38 priority projects assigned during the year to the members of the Management Review Committee, **25** belonged to areas regarding the **creation of shared value** for the company, according to the CSV drivers defined in 2016 Specifically, ten projects belonged to the **Efficient use of resources** area, four projects in the **Smart use of energy** area, five projects in the **Innovation and**

contribution to development area, and six projects which were connected to the three CSV drivers but contributed indirectly to the creation of shared value.

In December 2020, the 2021-2024 Group Strategic Map was defined in line with the priorities detailed in the new 2020-2024 business plan. The Map incorporates the new drivers for the creation of shared value set out in the updated CSV framework and described in the section of this report regarding the Group's approach to shared value.

All of the projects planned within the 2020 balanced scorecard system were assigned to a manager and included in the bonus system for Group managers and middle managers.

Each project identified:

- the process and result indicators with goals in line with the budget of the Group and the corporate departments responsible for their achievement
- the key action plan for achievement of the project objectives in terms of time and cost.

The objective projects identified were monitored on a quarterly basis by the Hera Spa Management Review Committee and in the individual budget units.

The definition of **objective projects** and the relevant **quarterly monitoring system** of the project elements are a significant management instrument that ensures:

- integration of the several perspectives for the evaluation of corporate performance, in addition to traditional economic and financial measurements
- integration of business plan objectives into the daily management of managers and middle managers
- implementation of a continuous improvement process for strategic objectives and the relative projects and indicators
- formalisation and tracking of both actions and sub-objectives required to achieve the targeted results
- highlighting and analysis of critical situations and the definition of speedy corrective actions.

The commitments to stakeholders listed in this report (“What we will do...”) are contained in the Hera balanced scorecard. This guarantees consistency among the various instruments used for managing and achieving the Group strategy: business plan, sustainability report, management reporting, bonus system.

Our commitment to sustainability in national and international networks

[102-13]

Hera’s commitment to sustainability has taken shape over the past years by joining leading international networks.

The Hera Group was the second Italian company to become a *member* of the **Ellen MacArthur Foundation**, a world reference in circular economy, which aims to promote awareness of aspects related to this issue, exchange experiences, initiate projects in partnerships and cooperate in the field of research and development. 2020 was the second consecutive year of reporting on the **New Plastics Economy Global Commitment**, an initiative set up by the Foundation to make the plastic sector more circular, and joined by the Group in 2018 with challenging goals. Furthermore, in March 2020, the Hera Group - through Hera Luce - provided a submission to "**Circulytics V.1**", a digital tool developed for measuring circularity. The tool allows companies to understand, measure and keep track of their circular economy performance in order to create new opportunities and solutions for some of the world’s most urgent challenges, such as climate change and resource regeneration. In October of the same year, the Foundation launched the new release of the tool, "**Circulytics V.2**", to which the Hera Group intends to provide a new submission in 2021.

In 2020, Hera was one of the first companies to support the **Business Call for a UN Treaty on Plastic Pollution** promoted by the Ellen MacArthur Foundation, the World Wide Fund for Nature (WWF) and the consulting firm Boston Consulting Group. This call to action is designed to provide a coordinated global response in the form of a UN treaty to help governments and businesses tackle plastic pollution.

Hera is also among the promoters of the **Circular Economy Network (CEN)**, a project promoted by the **Sustainable Development Foundation** and by a group of companies and associations involved in the transition to a new model of circular economy. The second Report on the Circular Economy in Italy, drawn up together with ENEA, was presented online during the second edition of the National Conference on the Circular Economy by CEN President Edo Ronchi and the Director of ENEA's Territorial and Production Systems Sustainability Department, Roberto Morabito, on 19 March 2020. Again at national level, Hera is a member of **ICESP** (Italian Circular Economy Stakeholder Platform), the Italian platform coordinated by ENEA that groups the main national players in the circular economy.

The Hera Group joined the Global Compact in 2004, and in July 2017 it was included in the **Global Compact Network Italia Foundation**, the Italian network set up in 2013 which has been currently joined by over 50 businesses and non-businesses. In 2020, following the Italian Business and SDGs Annual Forum, a call to action was launched for Italian companies that were members of the UN Global Compact to participate in a working group (in which Hera took part) aimed at developing Circular Procurement Guidelines for the promotion of the circular economy in procurement processes. The guidelines were drawn up in cooperation with the Management Institute of Pisa's Scuola Sant'Anna.

Also within the Global Compact, Hera joined the **CEO Water Mandate**, the United Nations Global Compact initiative promoted to re-launch commitment by companies in the sustainable management of water resources.

Hera is also a member of **Impronta Etica**, an organisation that promotes corporate social responsibility and is part of the **CSREurope** network and **CSR Manager Network Italia**, the Italian network of sustainability professionals.

CSV and sustainability KPIs

2005	2018	2019	2020	2024	2030
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Shared value

Shared value EBITDA (millions of Euro)	-	-	391.7 ¹	420.0	648	-
Shared value EBITDA (% of total)	-	-	36.1% ¹	37.4%	50%	-
Shared value investments (millions of Euro)	-	-	296.6 ¹	297.4	392 ²	-
Shared value investments (% of total)	-	-	58.3% ¹	55.5%	63% ²	-

Shared value: Pursuing carbon neutrality

Iso 50001 energy saving measures (% of savings compared to 2013 consumption) ³	-	4.4%	5.1%	6.2%	7%	10%
Contracts at year-end with electricity energy efficiency solutions (% of total contracts, excluding safeguard, default and last resort supply contracts) ⁴	0%	14.6%	20.1%	20.2%	42%	>45%
Renewable electricity sold (% of total excluding safeguard) ⁴	-	25.6%	29.1%	32.2%	33%	>40%
Natural gas sold with CO ₂ offsetting (% of volumes sold excluding wholesalers, default service and last resort supply) ⁴	0%	0%	0.8%	4.4%	17%	>20%
Biomethane produced by FORSU (million m3)	-	-	6.5	7.8	>15	>30
Reduction in CO ₂ emissions compared to 2019 with SBTi calculation method ⁵ (%)	-	-	-	-5.4%	-15%	-33%

Shared value: Regenerating resources and closing the loop

Separate waste collection (%)	28.9%	62.5%	64.6%	65.3%	75%	80%
Plastic recycled by Aliplast (thousands of tonnes)	-	63.7	72.8	68.8	90.6	148.9
Reusable treated waste water (% of total treated waste water) ⁶	-	1%	3.4%	5.2%	9%	15%
Non-invoiced water (physical and administrative losses from the domestic aqueduct) - m3/km of network/day	-	10.5	10.2	-	10.1	9.4
Reduction rate of internal water consumption compared to 2017 (%) ⁷	-	-	-5.5%	-11.9%	-17%	-25%
Aqueduct users served in areas with a Water Safety Plan (% of total aqueduct users)	-	4.2%	11.5%	12.8%	77%	100%
Urban areas >2,000 population equivalents adjusted to wastewater treatment regulations (% of population equivalents)	-	92.2%	97.3%	97.6%	100%	100%
Waste-to-energy plant emission levels vs. regulatory limits (real concentrations/regulatory limits: optimal value <100%)	22.4%	13.8%	14.1%	13.8%	<20%	<20%
Land reuse in infrastructure design and construction (%) ⁸	-	68%	77%	87%	66%	>80%

Shared value: Enabling resilience and innovating

Value of supplies from local suppliers (% of total)	62% ⁹	69%	69%	65%	-	-
Open-ended contract employees (average annual % of total workforce)	95.5%	96.2%	96.6%	96.6%	98%	98%
Women holding roles of responsibility (%) ¹⁰	19.9%	29.6%	29.9%	29.9%	>31%	>33%
Employees with digital proficiency (% of total employees)	-	23%	44%	44%	60%	90%

2005	2018	2019	2020	2024	2030
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Bases and organisational levers

Value added distributed to stakeholders (millions of Euro)	722.1	1,540.8	1,734.5	1,670.0	~1.900	-
Average training hours per capita (number)	18.5	29.8	28.6	26.0	25.2	>25
Lost time injury frequency index (number of lost time injuries/hours worked x 1,000,000)	49.6	15.7	14.1	12.6	10.6	<10
Internal climate index (score 0-100)	50	-	68	-	≥68	70
Index of customer satisfaction for residential customers (score 0-100) ¹¹	67	71	73	73	>72	>72
Tender awards adopting the most economically advantageous bid method: sustainability score (% of total)	-	32	34	41	>40	>40

¹ Aligned with the new calculation criteria introduced by the new CSV framework ² 2021-2024 average ³ Data referring to Hera spa, Inrete, AcegasApsAmga, and Marche Multiservizi ⁴ The figure reported in 2020 is the Group figure; the recently acquired companies (Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra) have been excluded to make the figure comparable to previous years: Contracts at year-end with energy efficiency solutions = 27.4%; Renewable electricity sold = 31.9%; Natural gas sold with CO₂ offsetting = 5.2% ⁵ Scopes 1+2+3 sale of electricity and gas downstream ⁶ Figure referring to Hera Spa ⁷ Figure referred to the consumption of water from civil and industrial aqueducts of the most "water demanding" Group business units served by Hera Spa in Emilia-Romagna ⁸ 2021-2024 average; intended both as surface area occupied and reuse of excavated material ⁹ 2007 figure ¹⁰ Managers and middle managers ¹¹ Marche Multiservizi not included

Shared value

Energy - Pursuing carbon neutrality

Objectives and performance

What we said we would do	What we have done	SDGs	Progress*	Geographic scope**
Promotion of energy efficiency				
<ul style="list-style-type: none"> Reduce the energy consumption of Hera, AAA and MMS by 6.5% by 2023, compared to 2013. 	<ul style="list-style-type: none"> Consumption is down 6.2% at end 2020 (compared to 2013), thanks to measures we have implemented. (See page 45) 	7, 13		ER T M
<ul style="list-style-type: none"> Save 648 toe of energy by 2020 due to public lighting measures including replacing luminaires with LED lamps (40% by 2023). 	<ul style="list-style-type: none"> We saved 851 toe thanks to public lighting measures implemented in 2020, including replacing luminaires with LED lamps (35% in 2020 compared to 27.5% in 2019). (See page 52) 	7, 13		ER T M
<ul style="list-style-type: none"> Achieve 22% of customers by 2023 with gas, electricity and district heating offers, with energy efficiency services and with the Diario dei consumi (Consumption Diary). 	<ul style="list-style-type: none"> By 2020, on a like-for-like basis, 27.4% of our customers have signed up for offers with energy efficiency or received the Diario dei consumi (Consumption Diary), 20.2% of the Group total (20.1% in 2019). The Hera ContaWatt, Hera Thermo, Hera Ecomove, Hera Led and Hera Led Business offers were promoted and updated again in 2020, as was the new Diario dei consumi (Consumption Diary) which helps customers monitor and reduce their consumption. (See page 48) 	7, 13		
<ul style="list-style-type: none"> Build 3 new industrial cogeneration plants in 2020; promote energy efficiency solutions for condominiums (increase the condominiums portfolio thanks to the offers for "energy services", "solar thermal", "thermal insulation", "tax credit assignment offer", and "heat metering system"). 	<ul style="list-style-type: none"> We built 3 new industrial cogeneration plants in 2020; condominiums to which we provide "energy services", "solar thermal", "thermal insulation", "tax credit assignment offer", or "heat metering system" are up 6.5%. (See page 50) 	7, 9, 13		ER T
Energy transition and renewables				
<ul style="list-style-type: none"> Start the permitting phase during 2020 for the construction of two new biomethane production plants (Lugo (RA) and Enomondo). 	<ul style="list-style-type: none"> The permitting phases for the conversion of the anaerobic digestion plant in Lugo (RA) and for the construction of the plant in Spilamberto (MO) managed by Enomondo started in 2020. (See page 80) 	7, 8, 9, 11, 13		ER

What we said we would do	What we have done	SDGs	Progress*	Geographic scope**
<ul style="list-style-type: none"> Achieve 58% of customers using electricity from renewable sources, and with natural gas with CO₂ offsetting, by 2023. 	<ul style="list-style-type: none"> 21.6% of our customers use electricity from renewable sources and with natural gas with CO₂ offsetting as of 2020 (11.7% in 2019). (See page 62) 	7, 9, 13		
Climate change mitigation				
<ul style="list-style-type: none"> Reduce the carbon intensity index of energy production by 26% by 2023, compared to 2013 (kg CO₂/MWh). 	<ul style="list-style-type: none"> We reduced the carbon intensity index of energy production by 22% as of 2020, compared to 2013 (kg CO₂/MWh). (See page 77) 	7, 13		ER T M
<ul style="list-style-type: none"> Align our annual reporting with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and the European Commission's Guidelines on reporting climate-related information. 	<ul style="list-style-type: none"> This report includes the "Hera for Climate" section, the outcome of a project that was designed to align with the TCFD Recommendations and that involved all of Hera Group's business units. (See page 66) 	7, 13		

*  Result achieved or in line with plans.  Result with moderate deviation from planning.

** Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

What we will do	SDGs	Geographic scope*
Promotion of energy efficiency		
<ul style="list-style-type: none"> Reduce the Group's energy consumption by 7% by 2024 and by 10% by 2030 compared to 2013. 	7, 13	ER T M
<ul style="list-style-type: none"> Achieve 42% of customers by 2024 and 45% by 2030 with gas, electricity and district heating offers, with energy efficiency services or that use the Diario dei consumi (Consumption Diary). Continue to promote energy efficiency solutions for condominiums. 	7, 13	
<ul style="list-style-type: none"> Continue to implement energy-saving measures in public lighting, including replacing luminaires with LED lamps (>65% by 2024). 	7, 13	
Energy transition and renewables		
<ul style="list-style-type: none"> >40% of energy from renewable sources in 2030 (excluding safeguard) (32.2% in 2020). >20% natural gas sold with CO₂ emissions offset by 2030 (excluding wholesalers, last resort supply and default service) (4.4% in 2020). 	7, 9, 13	
<ul style="list-style-type: none"> Launch initiatives to develop hydrogen as an energy vector, including: <ul style="list-style-type: none"> Experimental injection into the gas distribution network of a mixture of hydrogen and methane Identification of possible technological solutions for energy intensive industries Construction of a power-to-gas plant in Bologna (start of permitting phase in 2021) Assessment of the technological, economic and regulatory feasibility of "green" hydrogen production in Ferrara, partnering with Yara 	7, 9, 13, 17	ER
<ul style="list-style-type: none"> Produce >15 million cubic metres of biomethane by 2024 and >30 million cubic metres by 2030 through new anaerobic digestion plants of the organic fraction of separately collected waste. 	7, 8, 9, 11, 12, 13	ER M

What we will do	SDGs	Geographic scope*
<ul style="list-style-type: none"> Supplement our commercial offers with the sales and installation of photovoltaic panels and further develop commercial offers with energy efficiency improvement solutions (air conditioners with heat pumps, efficient boilers, etc.). 	7, 9, 13	
Climate change mitigation		
<ul style="list-style-type: none"> Reduce our Scope 1 and Scope 2 CO₂ emissions by 28% and our Scope 3 emissions (from downstream electricity and gas sales) by 33% by 2030 using the SBTi method, compared to our 2019 emissions. 	11, 13	

* Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

Promotion of energy efficiency

Primary energy consumption of the Hera Group

Hera's energy consumption reflects the Group's multi-business nature. Hera mainly operates:

- **cogeneration plants** which produce thermal and electrical energy for sales to customers for district heating, and to meet internal consumption requirements;
- **waste-to-energy plants** that dispose of waste with energy recovery;
- **turboexpanders** that take advantage of pressure differentials in the natural gas distribution stations in the local networks it operates;
- low enthalpy geothermal heat recovery systems in the Ferrara district heating plant.

Thanks to constant measures, Hera pursues a policy aimed at increasing energy efficiency throughout its operations. As part of the implementation of this energy policy we have obtained ISO 50001 energy certification for the Group companies with the highest energy consumption (76% of the Group's energy consumption is for companies with ISO 50001 energy certification).

Primary energy consumption is calculated based on data gathered mainly from measurements and using calculation and conversion methods defined to apply the regulations of Italian Law 10/91 (MISE Circular of 18 December 2014).

Primary energy consumption, by type

toe	2018	2019	2020
Energy carriers for production (methane, geothermal energy, biogas, others)	204,893	217,776	187,247
Waste-to-energy treatment	320,942	319,389	322,159
Total energy consumed in electricity or thermal energy production plants	525,835	537,165	509,406
Electricity excluding public lighting	109,522	111,118	107,205
Electricity for public lighting	30,947	29,514	30,158
Natural gas and other energy carriers for heating our offices	2,819	2,852	2,775
Fuel for vehicles	9,889	9,377	9,899
Total energy consumed for uses other than the production of electricity or thermal energy	153,177	152,861	150,037
Total	679,012	690,026	659,443

The data refer to energy consumption by Hera Spa, Acantho, AcegasApsAmga, AcegasApsAmga Servizi Energetici, Aliplast, Aresgas Group, Fea, Feronia, Hasi, Hera Comm, Herambiente, Hera Luce, Hera Servizi Energia, Hera Trading, Heratech, Hestambiente, Inrete Distribuzione Energia, Marche Multiservizi, Marche Multiservizi Falconara, and Uniflotte. The figures for electricity concern the tonnes of oil equivalent used to produce the electricity we consumed. The conversion coefficients set out in the MISE Circular 18 December 2014 were used for all energy carriers except for waste, for which the calorific value was estimated.

In 2020, **primary energy consumption** was 659,443 toe, **down 4.4%** compared to 2019 levels mainly as a result of the health emergency period, technical problems affecting some of the Group's major plants (including the Imola cogeneration plant), and due to the warmer winter climate compared to the previous year. This mainly affected the consumption of energy carriers for production purposes (-14.0%), electricity for uses other than public lighting (-3.5%) and energy carriers for heating our offices (-2.7%). On the other hand, consumption of electricity for public lighting increased (+2.2%), as a result of the increase in the number of lighting points we operate, and of fuel for vehicles (+5.6%), due to a greater number of municipalities served by the waste collection service in the metropolitan city of Bologna as a result of the acquisition in 2019 of Cosea Ambiente, which is reflected in the figures for a full year in 2020.

The table below shows the **organisation's internal energy consumption** calculated in terajoules in compliance with the Global Reporting Initiative Sustainability Reporting Standard. The figures are from data gathered mainly from meters and based on the calculation and conversion methods defined for application of the regulatory provisions of Italian Law 10/1991 (MISE Circular of 18 December 2014). The following items were taken into account in the calculation:

- **energy consumption from non-renewable fuels** (diesel, petrol, LPG, natural gas and the 49% non-renewable share of waste-to-energy);
- **energy consumption from renewable fuels** (biogas and the renewable share of 51% of waste-to-energy);
- **consumption of purchased energy carriers** (grid electricity and solar thermal energy);
- **self-produced energy not involving the consumption of other energy sources** (self-consumed photovoltaic electricity, self-consumed solar thermal energy, self-consumed geothermal thermal energy, landfill biogas, and biomethane from organic waste).

The **share of energy produced and sold** (electricity fed into the grid, thermal energy sold through district heating and energy services, landfill biogas, biomethane from organic waste) are then subtracted from these items to obtain the net share of **energy consumed within the organisation**.

Energy consumption within the organisation [302-1]

TJ	2018	2019	2020
Waste processed by waste-to-energy plants (49% non-renewable share)	6,583	6,551	6,608
Methane	6,292	6,673	5,790
Diesel fuel for motor vehicles	363	359	382
Diesel fuel	92	73	62
Methane for motor vehicles	11	13	13
Petrol for motor vehicles	12	11	12
LPG for motor vehicles	8	8	7
LPG	5	2	3
Total non-renewable fuels consumed	(+) 13,367	(+) 13,692	(+) 12,877
Waste processed by waste-to-energy plants (51% renewables share)	6,852	6,818	6,878
Landfill biogas, digesters and treatment plants	1,430	1,441	1,118
Total renewable fuels consumed	(+) 8,282	(+) 8,260	(+) 7,996
Electricity from grid	5,713	5,880	5,752
Thermal energy from solar thermal	2	2	2
Total energy carriers purchased for consumption	(+) 5,716	(+) 5,882	(+) 5,754
Biomethane from organic waste	0	214	254
Thermal energy from geothermal plants (self-consumption)	326	291	206
Landfill biogas	0	0	179
Electricity from photovoltaic plants (self-consumption)	13	17	15
Thermal energy from solar thermal plants (self-consumption)	1	1	1
Total self-produced energy not through consumption of other energy sources	(+) 340	(+) 523	(+) 655
Electricity sold to the grid	8,458	8,483	7,743
Thermal energy sold	2,638	2,581	2,347
Biomethane from organic waste sold	0	214	254
Landfill biogas sold to third parties	0	0	179
Total self-produced energy sold/sold to third parties	(-) 11,096	(-) 11,278	(-) 10,523
Total energy consumption within the organisation	16,608	17,078	16,759

The conversion coefficients have been changed compared to the 2019 financial statements: the conversion coefficients set out in the MISE Circular of 18 December 2014 were used for all energy carriers except for waste, for which the calorific value was estimated.

The energy consumed within the organisation in 2020 is 16,759 terajoules, down 2% from the previous year. The lower energy consumption compared to 2019 is largely due to the health emergency period, technical problems affecting the Imola cogeneration plant and the Ferrara geothermal wells, and a milder climate in 2020 compared to the previous year. This impacted the consumption of natural gas (-13.2%), biogas (-22.4%, also due to the transfer to third parties of biogas generated by landfills by Marche Multiservizi), and geothermal heat (-29.3%) in the plants, and therefore the volumes of electricity we sold to the grid (-8.7%) and the thermal energy we sold (-9.1%). There was also an increase in the production of biomethane (+18.6%) from the Sant'Agata Bolognese plant as a result of the first full year of operation at full capacity; this energy vector is generated from the organic fraction of separately collected waste and then completely sold as automotive fuel.

The Group's energy performance can be represented by several indicators that express its development and prospective targets and illustrate the company's savings strategies. Comparing energy consumption with certain production and operating indicators can provide **consumption intensity indices** that reflect the improvements achieved by efficiency improvement measures and by corporate energy management.

Consumption intensity and energy efficiency indices [302-3]

	2018	2019	2020
Water treatment: energy consumption (kWh) / volume of water purified (m3)	0.41	0.41	0.42
Water network: energy consumption (kWh)/volume of water fed into the network (m3)	0.46	0.44	0.44
District heating: primary energy consumption (toe)/thermal energy fed into the network (GWh)	173.6	181.6	158.0
Waste-to-energy plants: net energy production (kWh _{eq}) /volume of waste treated (t)	544.6	545.3	559.5
Offices: primary energy consumed (toe) / area of offices (thousands of m ²)	26.6	26.2	25.3
Public lighting: energy consumption (kWh)/light points (no.)	336.4	303.8	297.7

The data concern the energy consumption of Hera Spa, AcegasApsAmga, Fea, Gruppo AcegasApsAmga Servizi Energetici, Gruppo Aresgas, Hera Luce, Herambiente, Hestambiente, and Marche Multiservizi. The data refer to the consumption of electricity, natural gas, diesel fuel, LPG, petrol, and waste. For district heating we used the conversion coefficients set out in the MISE Circular of 18 December 2014.

In 2020, the indicators for the **water sector** were substantially unchanged compared to the previous year, both for depuration and the water network, despite a lower volume purified (-5.2%) and fed into the network (-2.1%). It should be emphasised that energy consumption in this type of plant is, by its very nature, substantially unchanged even in the face of a change in volumes.

The **district heating** indicator improved compared to the previous year (-13%), mainly due to reduced operation of the Imola cogeneration plant during the year and lower volumes sold during the health emergency period, which led to a 16.4% reduction in primary energy consumption.

The energy efficiency of **waste-to-energy plants** improved (+2.6%) as a result of greater electricity production (+3.5%) despite the substantial stability of the volumes of waste treated (+0.9%).

The specific energy consumption within the **offices** also decreased (-3.3%): while the total surface area did not change compared to the previous year, less energy was consumed (-3.2%), mainly due to energy efficiency measures carried out during the year and the health emergency period that increased the use of remote work.

Lastly, the **public lighting** index also continued to improve (-2% compared to 2020). The number of lighting points we operate increased by more than 4%. Thanks to the ongoing energy efficiency measures carried out in this area we consumed less electricity per light point (+2% in absolute terms).

[302-2]

Considering the energy consumption that occurs outside the organisation but is related to the products or services provided by the Group, we can quantify the **energy consumed outside the organisation**. This calculation includes the consumption of natural gas and electricity by customers, the consumption of fuel in vehicles used for waste collection and transport and the consumption of fuel in power plants in which the Group has a minority stake.

Energy consumed outside the organisation in 2020 amounted to 196,754 terajoules (down 2.6% compared to the previous year) and consists for 97% of energy consumed by customers as natural gas and electricity sold by the Group.

Energy efficiency within the Hera Group

[302-4]

The Group's focus on energy efficiency is reflected by its **ISO 50001** certification for energy management systems for **nine of the Group's companies**: Hera Spa, AcegasApsAmga, AcegasApsAmga Servizi Energetici, Aresgas, Hera Luce, Hera Servizi Energia, Herambiente (obtained in 2020), Inrete Distribuzione Energia, and Marche Multiservizi. Overall, ISO 50001-certified companies consumed 76% of the Group's total primary energy in 2020.

The energy improvement plans drawn up since 2014 as part of **ISO 50001** energy management systems envisaged reducing energy consumption by 3% (compared to 2013 consumption) by 2017. As a consequence of the positive results it has achieved, Hera has set increasingly challenging targets: the Group's business plan envisages that **by 2030**, we will implement measures that enable us to achieve **savings equal to 10% of our 2013 consumption** (7% by 2024). The objective is calculated as the average of the objectives that Hera Spa companies, Inrete Distribuzione Energia, AcegasApsAmga, and Marche Multiservizi have defined within their certification schemes.

To date, we have achieved significant energy savings in the **water cycle**, testifying to the Group's great attention to the sector. In several cases this involves optimisation of the depuration plants, which have been the target of considerable investment in recent years. Inrete Distribuzione's savings are mainly concentrated in the **distribution of natural gas**, and are due to both technological measures (turboexpanders, innovative control devices) and behavioural measures. Hera Luce and Marche Multiservizi, on the other hand, have focused on **public lighting**, replacing many light points and traffic lights with lamps and technologies that consume less energy and are more efficient. In **district heating**, the focus is on maximising heat recovery from existing cogenerators, including innovative solutions such as the installation of heat pumps. Concerning the efficiency of the **company's offices**, over the last two years, we have implemented several measures to replace the lighting fixtures in outdoor areas, leading to saving over 200 megawatt hours per year.

Energy improvement plans of Hera Spa, Inrete Distribuzione Energia, AcegasApsAmga e Marche Multiservizi (2014–2020)

Type of measure	Measures implemented or to be implemented	Savings per year due to measures implemented or to be implemented (toe)	Of which measures implemented by end 2020	Of which savings achieved by end 2020 (toe)	Company
Integrated water service	235	8,204	187	7,291	H-A-M
District heating	54	4,218	49	3,502	H
Energy networks	21	724	20	722	H-A-M
Vehicles and waste management services	19	688	18	687	H-A-M
Offices	77	620	67	529	H-A-M
Public lighting	22	1,041	20	1,014	A-M
Total	428	15,495	361	13,745	
	<i>7.0% of 2013 consumption (140% of the reduction target of 5% by 2020)</i>		<i>6.2% of 2013 consumption (124% of the reduction target of 5% by 2020)</i>		

The data refer to Hera Spa, Inrete Distribuzione, AcegasApsAmga, and Marche Multiservizi. For AcegasApsAmga the baseline is the consumption for the year 2014.

The 360 or so interventions carried out by the end of 2020 and included in the Energy Improvement Plan since 2014 have resulted in savings of around 13,800 toe, equivalent to 6.2% of our 2013 consumption, **far exceeding the 5% target set for 2020**. The more than 428 measures overall identified to date and that at 31

December 2020 are included in the improvement plans of Hera Spa, AcegasApsAmga, Inrete Distribuzione and Marche Multiservizi will reduce energy consumption by about 15,500 toe, and therefore achieve the objective set for 2024 (7% reduction compared to 2013 consumption levels). The measures identified in the action plan focus mainly on the water cycle where more than half the measures are planned, to achieve more than 53% of overall energy saving.

Energy efficiency measures by AcegasApsAmga Servizi Energetici, Hera Servizi Energia, Hera Luce, and Herambiente

Type of measure	Measures implemented or to be implemented	Savings per year due to measures implemented or to be implemented (toe)	Of which measures implemented by end 2020	Of which savings achieved by end 2020 (toe)
Measures on waste-to-energy plants and landfills	35	3,003	31	2,193
Measures on businesses, condominiums and other buildings	358	9,573	209	7,635
Measures on public lighting systems	71	10,133	30	2,423
Total	464	22,709	270	12,251

In addition to the initiatives of the Energy Improvement Plan, we must also consider 464 more energy efficiency measures planned (270 of which have already been completed as of 2020 and others are in progress) by **Herambiente, AcegasApsAmga Servizi Energetici, Hera Servizi Energia** and **Hera Luce** on waste disposal plants, condominiums or other buildings, for cogeneration plants and public lighting systems. These measures will save 22,709 toe per year (12,251 of which already achieved). In several cases, Herambiente's interventions concern its waste-to-energy plants, which are undoubtedly a fundamental part of the Group's plant fleet, and consist of solutions to maximise heat recovery, and other initiatives aimed at increasing the plants' energy production.

The following table shows an overall summary of the actions taken and the savings achieved as a result of the ISO 50001 improvement plans, and additional energy-saving initiatives. Overall, the Group's energy efficiency measures implemented from 2013 to date have resulted in 631 measures carried out, which have led to a saving of 26,090 toe per year; considering the measures already planned, the saving rises to 38,298 toe with 892 measures.

Energy efficiency measures in the Hera Group

	2018	2019	2020
Total number of measures implemented and to be implemented (no.)	372	643	892
<i>of which implemented by year-end (no.)</i>	<i>299</i>	<i>431</i>	<i>631</i>
Total savings per year due to measures implemented or to be implemented (toe)	24,410	35,615	38,204
<i>of which achieved by year-end (toe)</i>	<i>19,505</i>	<i>24,920</i>	<i>25,996</i>

The Energy Efficiency Credits (EEC) or **White certificates** mechanism was created in Italy in 2005 as an incentive tool for energy efficiency. It is based on the concept of tradable emission permits to which an economic value is attributed. These certificates are obtained by implementing measures that provide **certified and measurable energy savings**. The system envisages a supply and demand mechanism with savings obligations for gas and electricity distributors, who are assigned annual targets to achieve. Italian Ministerial Decrees 11/01/2017 and 10/05/2018 changed the procedures for accessing the white certificates mechanism and redefined the obligations of distributors for the 2017/2020 period. These

changes have significantly impacted the system, where uncertainty remains concerning the ability to generate sufficient credits to meet obligations. The market value of the credits has been curbed at Euro 250/EEC, due a shortage of supply over the past few years.

In order to fulfil its obligations, Inrete Distribuzione Energia, the Group company that distributes gas and electricity, relies on Hera Spa as an **Energy saving company (ESCO)**, which continues to deal with the procurement of white certificates as it has been doing for over a decade. During 2020, Hera Spa presented the Italian energy services manager (Gestore dei Servizi Energetici – GSE) with **nine new initiatives** for energy-efficiency metered baseline projects, under the provisions of the Italian Ministerial Decree of 11 January 2017. These initiatives are mainly located in the territories served by the Group and, among those that concern the Group itself, there are efficiency improvements on district heating systems and wastewater purifiers. As far as public lighting is concerned, AcegasApsAmga presented **four new projects** on the redevelopment works implemented by Hera Luce in the municipalities it serves.

White certificate objectives

toe	2018	2019	2020
Gas distribution	326,025	355,199	409,426
Electricity distribution	33,489	37,018	42,956
Total	359,514	392,217	452,382

In 2020, the Hera Group submitted to the GSE projects for energy efficiency certificates amounting to 15,237 toe. In the same year, the GSE approved projects submitted by the Group totalling 14,098 toe.

As part of its **energy efficiency promotion initiatives**, Hera Spa has continued the cooperation started in 2019 with a team of researchers from the **Politecnico di Milano**, made up of experts in behavioural psychology and statistical sciences which, in addition to providing a useful contribution to design the initiatives, has the skills necessary to develop scientifically valid programs to measure and verify savings. The collaboration involves the **validation**, from the point of view of the savings obtained, of **energy optimisation measures** in homes, in industrial plants, in the tertiary sector, and in public administration, due not to replacing or implementing technologies, but to **inducing virtuous behaviours** obtained with methodologies inspired by behavioural sciences. Specifically among the initiatives designed to increase customer awareness of the energy impact of their behaviour, 2020 was the first year of implementation of Hera Comm’s Diario dei consumi (Consumption Diary) service, free of charge for electricity, gas, and district heating customers who choose to join. The results are being validated and will be available in 2021. Please refer to the case study "Diario dei consumi (Consumption Diary)" at the end of this chapter for more details.

Hera Group’s measures to increase energy efficiency continue both inside and outside the Group; on the one hand, by implementing and improving its ISO 50001-certified Energy Management System and, on the other, by **taking part in industry events and conventions**.

Moreover, to confirm the Group’s commitment in this area, since 2015 Hera has been publishing the “**Valore all’energia**” (“Value to Energy”) thematic report, entirely dedicated to energy efficiency and subsequently extended to AcegasApsAmga and Marche Multiservizi, and submitted to third-party auditing.

Energy efficiency for families

In 2020, Hera Comm group confirmed its commitment to energy efficiency by offering various value-added services that enabled household customers to **monitor and reduce their consumption**.

All free-market customers can request **free** activation of the **Diario dei consumi (Consumption Diary)**, a digital service that sends them **personalised reports** to help them compare their consumption not only

with that of the previous year but also with that of a similar households in terms of size, type of house, province, and energy use. All the data is also accessible on the platform and in the dedicated section of the MyHera app. Please refer to the case study "Diario dei consumi (Consumption Diary)" at the end of this chapter for more details.

The **Hera Led** option can be combined with many of Hera Comm's free market offers, for both new and existing customers, and offers customers up to **two sets of ten LED bulbs** each per contract at a 30% discount on their market value. Replacing an incandescent bulb with a high-efficiency LED bulb can **save up to 80% of the energy used**. The technical specifications of the products show that a 9 W LED bulb can replace a 60 W incandescent bulb. So if we consider an average daily use of 4 hours, a LED bulb consumes about 13 kWh/year compared to the 88 kWh/year of an equivalent incandescent bulb, clearly reducing one's bill and benefiting the environment.

The **Hera Thermo** option lets customers **control the gas consumption of their home** by installing a smart, remotely controllable thermostat. Using it leads to greater attention to how the gas is used: in fact, the mobile app makes it easy to check the temperature set in the house and check the operation of the boiler at any time. This ease of control increases awareness and reduces waste, such as by decreasing the temperature set during certain time ranges and by optimising the system's on/off cycles. Research shows that a 1 °C temperature reduction in a house leads to saving **5–10%** of gas during the winter season (Source: Enea).

Hera ContaWatt is an option that helps residential and business customers **monitor electricity consumption**: the easy-to-install device connects to the electricity meter via a sensor so that users can check their electricity consumption through a dedicated app on a mobile device or on a PC. A **summary of the consumption details** is also sent by email every week. The ContaWatt device independently connects to a data transfer platform, can **send real-time anomaly alerts** to the app or via email, and installation does not require specialists.

In the final months of 2020, we also launched the **Hera Caldaia** and **Hera Scaldacqua** options, offering the sales and "turnkey" installation of condensing boilers with access to tax deductions via a discount directly in the invoice and high-efficiency gas and electric water heaters.

Concerning energy efficiency solutions, in 2021 we will increase our marketing of heat pump air conditioners for room air conditioning, providing customers with a "turnkey" solution to their specific needs (site inspection, supply and installation, management of any required tax paperwork). We will also continue to offer high-efficiency condensing boilers, including an indoor and outdoor range with several different power ratings, in order to address our customers' diverse system requirements, which will include expert installation fitting thermostatic valves and a smart thermostat to maximise energy savings.

Contracts at year-end with energy efficiency solutions

qty	2018	2019	2020 pro forma	2020
Electricity contracts at year-end with electricity energy efficiency solutions	159,048	235,299	318,041	318,041
Electricity contracts at year-end with electricity energy efficiency solutions (% of total gas contracts, excluding contracts with safeguard clauses)	18.8%	23.1%	29.9%	26.1%
Gas contracts at year-end with electricity energy efficiency solutions	147,811	227,755	323,158	323,158
Gas contracts at year-end with energy efficiency solutions (% of total electricity contracts, excluding default and last resort contracts)	11.7%	17.7%	25.4%	16.5%
Contracts at year-end with energy efficiency solutions	306,859	463,054	641,199	641,199
Contracts at year-end with energy efficiency solutions (% of total contracts excluding safeguard, default and last resort contracts)	14.6%	20.1%	27.4%	20.2%

The "2020 pro forma" excludes data relating to the companies Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera on 31/12/2019 and is therefore comparable with previous years.

On a like-for-like basis with previous years, at the end of 2020 energy efficiency service contracts account for **27.4% of the total**, and by more than 7 percentage points compared to 2019. Specifically, energy efficiency services linked to **electricity contracts account for 29.9%** (+6.8 percentage points), while those linked to **gas contracts account for 25.4%** (+7.7 percentage points). The energy efficiency contracts taken into account include Diario dei consumi (Consumption Diary) and the Hera Led, Hera Led business, Hera Contawatt and Hera thermo offers. The indicator was calculated excluding safeguard, default and last resort contracts since, by their very nature, it is not possible to market offers in line with the Group's commercial strategy in these markets.

However, considering the recent **inclusion of new sales companies in the reporting scope**, customers with energy efficiency services amount to 20.2% of the total. Energy efficiency services in electricity contracts account for 26.1% and in gas contracts for 16.5%. Including contracts in the safeguard, default and last resort markets, 19.3% of energy contracts include energy efficiency solutions (25.2% of electricity contracts and 15.8% of gas contracts).

Over the next few years, we will continue to increase our energy efficiency offers and solutions for customers, also by extending Hera Comm's main "sustainable" solutions to Estenergy and to the recently acquired sales companies.

Energy efficiency for condominiums

Through its subsidiaries **Hera Servizi Energia (HSE)** and **AcegasApsAmga Servizi Energetici (ASE)**, the Hera Group operates actively in the energy efficiency sector providing a broad range of services, targeting mainly condominiums, large industrial customers, and public administration bodies.

HSE and ASE manage and develop **temperature control and heat metering systems** in the condominiums in our portfolio, so as to transparently and unambiguously identify the consumption of **each individual user**. Concurrently with its individual heat metering business, HSE is **replacing old central heating boilers** with high efficiency models that, combined with the temperature control systems, significantly reduce gas consumption for condominiums. These condominiums can also access a complete heat management service under the "Servizio Energia" contract. At end 2020, 34 condominiums are using the energy service

(down compared to 76 in 2019 as a result of the natural termination of contracts entered into in previous years) and the savings achieved by its integrated measures are about **27% of the total gas consumption**.

Condominiums that carried out several energy refurbishment measures at the same time, individual metering and a heating plant upgrade, achieved **savings of 20% to 40% of their consumption**. Moreover, by assigning state incentive credit to the contractor and entering into a contract for energy provision, the measures did not involve any disbursement for the customers at the end of the work. The commercial solutions, in fact, are **combined with assigning the state incentive credit to the contractor** for the energy efficiency and seismic upgrade tax incentives for buildings, letting condo owners independently choose the one that best suits their available funds. Customers can choose whether to bear the cost of the work done and later deduct the amount on their tax return, or assign the tax deduction and pay the excess at the end of the work, or choose the solution that requires no disbursement at the end of the work adding to the state incentive credit the financing of the remaining portion, even combined with an energy supply service that ensures energy savings and thus reduces heating costs.

The professionalism and experience of HSE and ASE have resulted in a total **portfolio of 971 condominiums** at the end of 2020, up **6.5%** on the previous year (there were 912 in 2019).

Regarding the **savings** achieved by installing fuel metering systems in buildings, we can consider an average of **8.3%** reduction in fuel consumption.

Energy efficiency for companies

In the **industrial cogeneration** sector, Hera offers multi-year energy supply contracts that involve building and operating **combined energy production plants** designed to meet all the primary energy needs of customers. **Cogeneration** and **trigeneration** can produce electricity and heating/cooling energy in a single plant, saving primary energy compared to traditional consumption methods, reducing emissions, achieving a greater energy efficiency, and reducing supply costs. The main product sectors in which this type of service is particularly effective are plastics, food, pharmaceuticals, ceramics, and large-scale services such as museums, shopping centres, spas, and condominiums. **Hera Servizi Energia (HSE) offers a full range of all energy carriers**, making it easy for customers to manage and less expensive. According to the customer's specific energy requirements, HSE identifies the characteristics of the technological plant required, handles the preparation of all the permitting documents, and operates and manages the plant.

At the end of 2020, **22 cogeneration plants run by HSE** were live (four more than in 2019), of which six are trigeneration plants. The **environmental benefits** achieved in 2020 by these plants include 15,228 tonnes **lower CO₂** emissions and **primary energy savings of about 6,513 toe**.

Furthermore, Hera Spa has entered into **agreements with trade associations** in the areas it serves, collaborating with companies within the scope of the requirements of Legislative Decree 102/14 on Energy Audits.

Energy Efficiency for the Public Administration

Hera Servizi Energia (HSE) and AcegasApsAmga Servizi Energetici (ASE) use concessions or public-private partnership instruments in the **public administration** customer market. Also for this particular type of contract, the Group companies propose significant investments both for **heat generation** by installing new condensing boilers and heat pumps, and **insulating building envelopes** by installing thermal insulation and replacing windows and doors with better-performing types. A modern **energy management service** completes the offer, provided under an "Energy Service" contract. Under this service, energy efficiency measures can be financed with the energy savings provided by those same measures, and if possible, without increasing the current expense level of the recipient of the measures.

In 2020, as a result of the tenders it won, ASE (the Hera Group company dedicated to public administration tenders for energy service, facility management, operation, and maintenance), **invested more than Euro 11 million in energy efficiency improvement projects.**

Implementing multiple measures can achieve savings of **8 to 18%**, depending on consumption and previous measures on the envelopes, and can be combined with the seismic upgrading of the buildings. The environmental benefits achieved in 2020 for major energy upgrades on new contracts avoided the release of **650 tonnes of CO₂.**

Energy efficiency in public lighting

Two Hera Group companies, **Hera Luce** and **Marche Multiservizi**, operate more than **570 thousand light points** (+4% compared to 2019), ensuring the proper operation of the public lighting service in **188 municipalities** in 11 regions: Emilia-Romagna, Umbria, Lombardy, Marche, Lazio, Tuscany, Piedmont, Veneto, Friuli-Venezia Giulia, Abruzzo, and Sardinia. In some areas they also manage a total of about **10,450 traffic lights.**

Light points and traffic lights operated

	2018	2019	2020
No. of municipalities served	176	181	188
Light points at 31/12	534,486	549,009	571,264
<i>of which low-power (%)</i>	<i>34.5%</i>	<i>32.9%</i>	<i>37.7%</i>
<i>of which LED (%)</i>	<i>14.9%</i>	<i>27.5%</i>	<i>34.9%</i>
<i>of which fitted with consumption optimisation systems (reduction of brightness, partial switching off, etc.) (%)</i>	<i>51.2%</i>	<i>53.3%</i>	<i>54.2%</i>
Traffic lights	10,523	10,496	10,454
<i>of which LED (%)</i>	<i>62.0%</i>	<i>62.1%</i>	<i>66.5%</i>

In **34,9%** of the light points the companies operate, **LED lamps** are now used, up over 7 percentage points compared to 2019, when the figure stood at 27,5%. **Consumption optimisation systems** (brightness reduction, partial shut-down, etc.) control **54.2%** of the light points the companies operate. **Energy-saving light bulbs** (i.e. not mercury-vapour lamps which, according to the energy qualification system developed by Hera Luce on the basis of the Minimum Environmental Criteria belong to class G) are used by **37.7%** of the light points we operate.

Considering the 158 municipalities for which Hera Luce operated the public lighting service from January to December 2020:

- 93 municipalities **only use electricity from renewable sources**; electricity consumption in these municipalities is 41.9% of total consumption;
- in 72 municipalities, the electricity consumption per inhabitant equivalent is **less than 50 kWh/inhabitant** (calculated considering residents and tourists). These municipalities account for 33.5% of the total electricity consumed;
- in 23 municipalities **all the lighting points we operate use LED lamps** (6.3% of total consumption).

In total, 118 of the municipalities feature one or more of these three good environmental practices (use of renewable sources, low power consumption, LED lamps) with a consumption of 65.2% of the total.

As part of our 2020 shared value EBITDA accounting, we refined the criteria used for Hera Luce and took into account the share of energy consumed in municipalities that meet at least one of the three criteria mentioned above.

During 2020, Hera Luce's commercial efforts were aimed at consolidating its service area and expanding its area of influence, offering potential customers smart solutions for their respective cities. Among these proposals, the commitment to energy efficiency achieved by installing **low-consumption systems** and, above all, **latest-technology LEDs**, is particularly notable.

Moreover, in 2020 Hera Luce worked on finalizing several public private partnership projects using the Project Finance provisions of Art. 183(15) of Italian Legislative Decree No. 50/2016. The projects submitted involve **reducing the energy consumption** and **improving the safety** of public lighting installations, to comply with the Minimum Environmental Criteria (MEC) **for lighting equipment** which came into force in 2017 and with those **for public lighting services** that came into force in 2018). Among the criteria used to award the contracts, **references to the circular economy and to presenting the material balance are increasingly frequent**. Hera Luce has submitted project financing proposals for which it has been appointed promoter in the municipalities of Montiano, Muggia, Farindola, Vanzago, Mamoiada, Sorisole, Alà dei Sardi, Pontecorvo, and Adro.

During 2020, work was completed in 12 municipalities (Bernate Ticino, Boltiere, Carbognano, Colonnella, Endine Gaiano, Longiano, Paliano, Pedrengo, Romans d'Isonzo, Roncadelle, Roncofreddo, and Talmassons) and work started in another 15 municipalities. Overall, the measures carried out in 2020 in the municipalities specified above will save **4,554 MWh of electricity each year**, which amounts to **851 tonnes of oil equivalent**. Considering as 2,700 kWh per year the average electricity consumption of a household of four people, the amount of energy that can be saved each year with the measures implemented by Hera Luce in 2020 is equal to the annual consumption of 1,686 households. Lower electricity consumption results in **over 1,835 tonnes of carbon dioxide emissions being avoided each year**.

In 2020, Hera Luce was awarded the contract for the assignment and management of the works to improve the efficiency of public lighting systems in the municipalities of Lovere (BG), Adro (BS), Alzano Lombardo (BG), Sorisole (BG), Pontecorvo (FR), Alà dei Sardi (SS), San Michele al Tagliamento (VE), Limbiate (MB), Montiano (FC), Besana in Brianza (MB), Vanzago (MI), Cordenons (PN) and Lesmo (MB). The environmental impact in terms of energy savings for the measures planned for 2021 is **870 toe**.

We also paid special attention to **energy-saving measures at the Hera Group offices**: external lighting efficiency improvements were carried out at the headquarters in Viale Berti Pichat in Bologna (including architectural lighting, as done for the office building and for the Hera monument), the Frullo and Cristina Campo offices in Bologna, in Via Terrapieno and Consolare in Rimini, in via Spinelli in Cesena, in via Casalegno and Molino Rosso in Imola, in via Balzella in Forlì, in via Romea Nord in Ravenna, and renovation started at the offices in via Cesare Diana in Ferrara and at the offices of Marche Multiservizi in Pesaro.

Hera Luce continues the **development work** on several actions and partnerships launched in previous years concerning:

- update of the Minimum Environmental Criteria (MEC) for public lighting and definition of the new MEC for lighting services, as a member of the specific workgroup created by the Italian Ministry for the Environment, Land and Sea Protection;
- dissemination of the culture of light;
- lighting device performance monitoring system in line with the Minimum Environmental Criteria, together with the Ministry for the Environment, Land and Sea Protection;
- the development of models designed to provide local authorities with tools that enable them to understand the process of analysing and assessing energy efficiency improvement activities, obtain information on the activities to undertake for an energy renovation programme, and attain an initial estimate of the costs of the measures and the benefits that can be obtained;
- analysis of new lighting technologies, assessing costs/benefits and future development options, in association with several universities;

- the creation of projects designed to advance public lighting towards the development of smart cities using the public lighting infrastructure;
- development of the circular economy project, by studying a practical case applied to a public lighting system, drafting the material balance for the projects presented in the tender, using a tool that measures the circularity of materials.

Energy transition and renewables

Renewable energy production plants and total production

The Herambiente Group produces heat and electricity from **burning waste**, in its nine waste-to-energy plants with an overall installed electrical capacity of 128 MW. Eight of these waste-to-energy plants are used for municipal waste and as described in greater detail below, the energy they produce is considered to be **51% from renewable sources** (the biodegradable share of the waste used). Three of these waste-to-energy plants, moreover, recover thermal energy to supply nearby **district heating** networks.

The Ferrara district heating plant is joined, in the production of thermal energy, by **geothermal wells** located in the Casaglia district, thanks to which heat is drawn from underground: in this case, geothermal energy is the primary source of the district heating system, in addition to that provided by a waste-to-energy plant.

The Herambiente Group owns the **biodigesters** in Rimini, Lugo (RA), and Cesena, where there are biogas cogeneration plants with an electrical power of about one MW each. In addition, some the biogas exploitation plants at ten landfills are still active, as is the biomass plant operated in Faenza by Enomondo, in which Herambiente has a 50% stake. The integrated water system also includes four cogeneration plants located at wastewater depuration plants operated by the Group (Bologna, Cesena, Forlì, and Savignano sul Rubicone), where the biogas produced by the treatment of wastewater **treatment sludge** is used to produce electricity typically for self-consumption at such sites.

In the gas distribution field, Inrete Distribuzione Energia and AcegasApsAmga operate seven **turboexpanders**, located in Bologna, Ferrara, Forlì, Padua, Ravenna and Trieste which generate electricity by exploiting the gas pressure differentials in the distribution network.

The **photovoltaic plants** installed at Hera's offices and the Herambiente facilities of Granarolo dell'Emilia (BO), Lugo (RA), Mordano (BO), Pozzilli (IS) and Rimini add a total of 4.5 MW more, besides those installed at the AcegasApsAmga plants of Trieste for a further 100 kW in total.

The Sant'Agata Bolognese anaerobic digestion plant became fully operational in 2020. The **biomethane** it produces from the organic fraction of separately collected waste is fed into the local distribution network and used to power motor vehicles.

In addition to the above renewable energy production plants, the Hera Group also operates other plants that efficiently generate energy, among which the 82 MW **Imola cogeneration plant** as well as 28 other smaller **cogeneration and trigeneration plants**, for an additional total installed capacity of 54.5 MW of electricity.

Nominal installed power (2020)

MW	2020	%
Electric power from renewable sources	92	29%
Electric power cogeneration + turboexpansion	154	50%
Electric power from other sources	65	21%
Total electric power	311	100%
Thermal power from renewable sources	54	7%
Thermal power from cogeneration	134	18%
Thermal power from other sources	544	74%
Total thermal power	732	100%
Total biomethane power	10	100%

Electric power: renewable electric power includes 51% from waste-to-energy plants (the share considered renewable), biogas, and photovoltaic; other sources include 49% from waste-to-energy plants (the share considered

non-renewable). Thermal power: renewable thermal power includes 51% from waste-to-energy plants (the share considered renewable), biogas, and geothermal power; other sources include 49% from waste-to-energy plants (the share considered non-renewable) and thermoelectric power stations.

Overall, electrical power from renewable sources and from cogeneration and turboexpansion was 246 MW (79% of the total), while thermal power from renewables and cogeneration was 188 MW, 25% of the total.

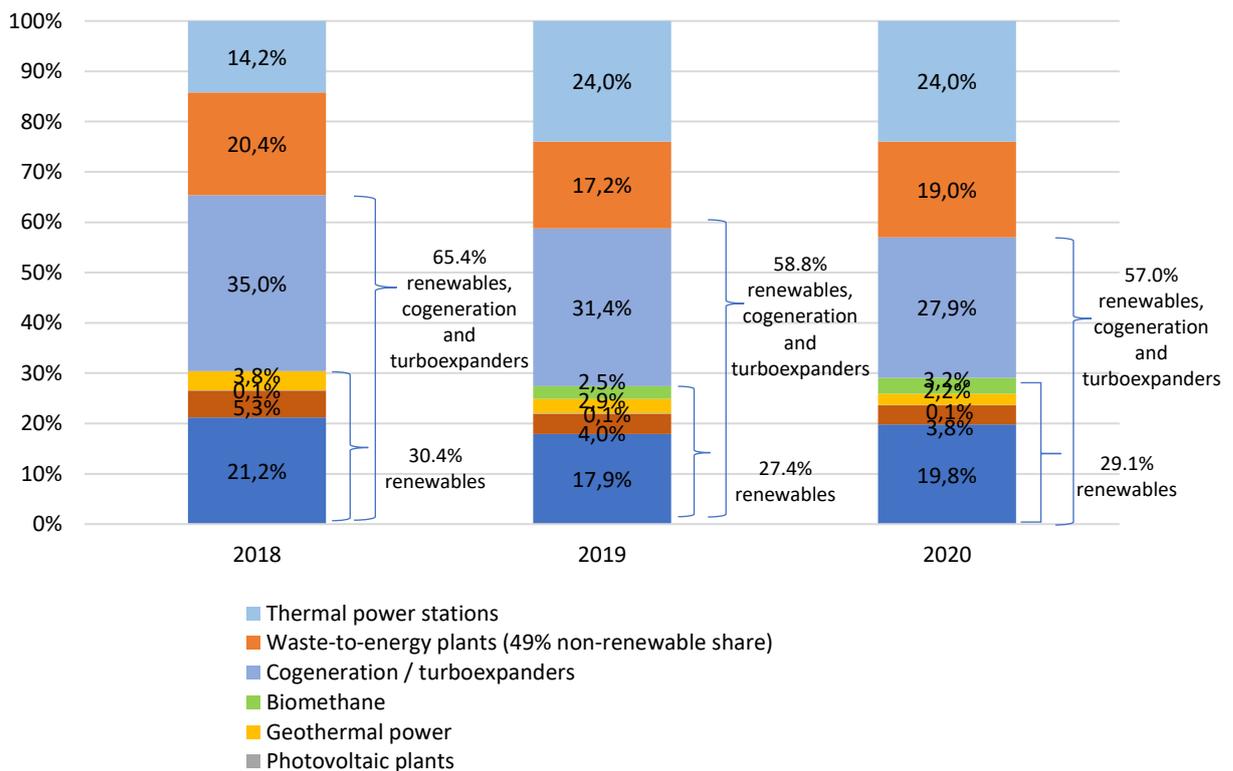
Hera Group's energy production plants by area (2020)

Province	Photovoltaic	Geothermal power	Biogas	Biomethane	Cogeneration	Turboexpansion
Bologna	2 plants (3.1 MW)	-	6 plants (9.6 MW)	1 plant (10.0 MW)	11 plants (197.3 MW)	2 plants (1.6 MW)
Ferrara	-	1 plant (14.0 MW)	-	-	-	1 plant (2.4 MW)
Forli-Cesena	-	-	5 plants (2.9 MW)	-	8 plants (25.6 MW)	1 plant (1.5 MW)
Modena	-	-	1 plant (0.6 MW)	-	4 plants (12.2 MW)	-
Padua	-	-	-	-	-	1 plant (2.3 MW)
Pesaro-Urbino	-	-	1 plant (2.0 MW)	-	-	-
Ravenna	2 plants (0.7 MW)	-	2 plants (3.9 MW)	-	4 plants (12.9 MW)	1 plant (1.0 MW)
Rimini	2 plants (0.2 MW)	-	1 plant (1.0 MW)	-	-	-
Trieste	2 plants (0.1 MW)	-	-	-	-	1 plant (1.5 MW)
Other provinces	1 plant (0.5 MW)	-	1 plant (1.3 MW)	-	2 plants (17.8 MW)	-
Total	9 plants (4.6 MW)	1 plant (14.0 MW)	17 plants (21.3 MW)	1 plant (10.0 MW)	29 plants (265.8 MW)	7 plants (10.3 MW)

Total energy produced

MWh	2018	2019	2020
Waste-to-energy plants (51% renewables share)	418,712	420,571	434,517
Combustion of landfill biogas	56,373	47,714	40,752
Combustion of landfill biogas in third-party plants	12,922	11,020	7,772
Combustion of digester biogas	22,309	22,466	22,362
Combustion of depuration plant biogas	12,947	12,550	13,697
Photovoltaic energy	1,714	1,858	1,937
Geothermal power	75,382	67,415	47,680
Biomethane	0	59,215	71,058
Total renewable sources	600,358	642,808	639,775
Cogeneration	475,347	492,862	364,325
Industrial cogeneration at third party facilities	208,542	236,488	243,224
Turboexpanders	5,725	8,804	5,933
Total cogeneration + turboexpansion	689,614	738,154	613,482
Waste-to-energy plants (49% non-renewables share)	402,292	404,078	417,477
Thermoelectric power stations	280,361	564,691	528,632
Total traditional sources	682,653	968,769	946,109
Total energy produced	1,972,625	2,349,732	2,199,366

The total energy generated by the Group's plants in 2020 was **2,199.4 GWh**, down 6% from the previous year. **57%** comes from **renewable sources** and from **cogeneration and turboexpansion plants**.

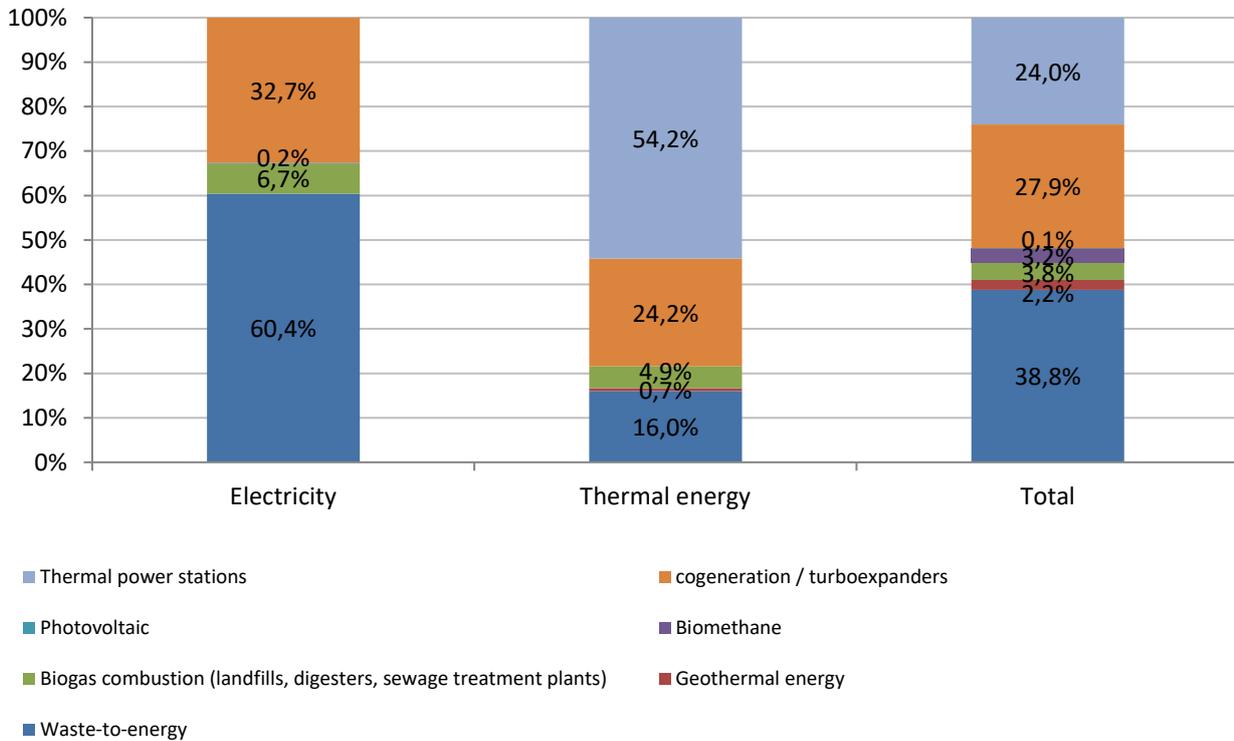


In detail, **the energy generated from renewable sources** in 2020 was 639.8 GWh, accounting for **29.1%** of the total. This share is down by about 2 percentage points compared to the previous year, mainly due to the lower energy produced by the combustion of landfill biogas, digesters and purifiers (-10%) and

geothermal power plants (-29%); on the other hand, there has been an increase in the production of biomethane (+20%) and energy from waste-to-energy plants (+3%) and photovoltaic energy (+9%).

The share of energy produced by **cogeneration and turboexpansion plants** is **27.9%**, down 3.5 percentage points mainly due to the lower energy demand resulting from the health emergency period and some technical problems at the Imola cogeneration plant.

Total energy produced (2020)



In future years, we expect to improve the sustainability profile of the Group's energy production, mainly by building **new plants that produce biomethane** from the organic fraction of waste and from separately collected mowing and pruning waste.

Electricity generation

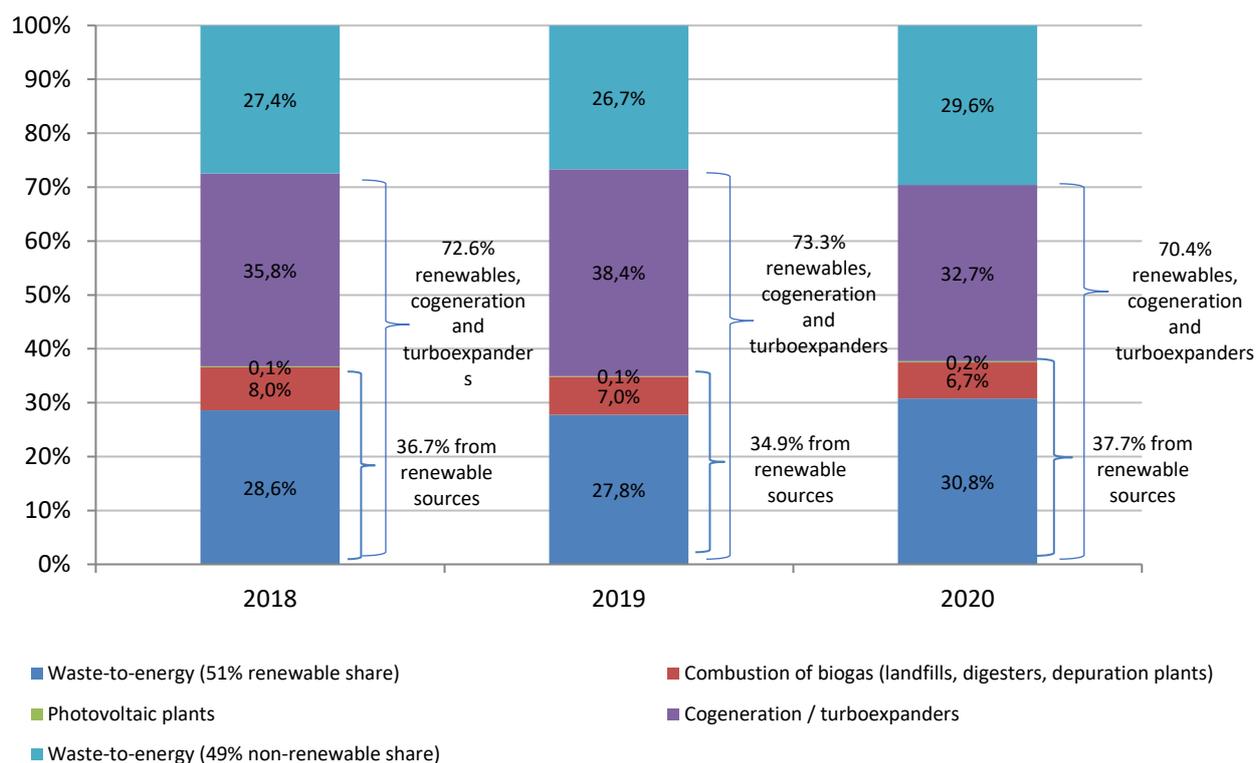
The table below outlines the **net electricity generation** of the Group's plants. The energy, net of consumption required by generation (auxiliary consumption), may not match that fed into the grid since part of it may be used in other production processes.

Net electricity generated

MWh	2018	2019	2020
Waste-to-energy plants (51% renewables share)	347,481	345,259	354,936
Combustion of landfill biogas	56,373	47,714	40,752
Combustion of landfill biogas in third-party plants	12,922	11,020	7,772
Combustion of digester biogas	22,309	22,466	22,362
Combustion of depuration plant biogas	6,139	5,967	6,793
Photovoltaic energy	1,714	1,858	1,937
Total renewable sources	446,937	434,285	434,552
Cogeneration	302,626	324,429	223,475
Industrial cogeneration at third party facilities	127,538	143,726	147,821
Turboexpanders	5,725	8,804	5,933
Total cogeneration + turboexpansion	435,889	476,959	377,229
Waste-to-energy plants (49% non-renewables share)	333,854	331,720	341,017
Total traditional sources	333,854	331,720	341,017
Total electricity produced	1,216,680	1,242,963	1,152,798

The total **net electricity** generated by the Group's plants in 2020 was **1,152.8 GWh**, down 7% from the previous year. **70.4%** comes from **renewable sources** and from **cogeneration and turboexpansion plants**.

Net electricity generated



In particular, **electricity production from renewable sources** in 2020 was 434.6 GWh, amounting to **37.7% of the total** generated. Energy produced by waste-to-energy (+3%) and photovoltaic plants (+4%) is increasing, while production from biogas combustion is decreasing (-11%). The production of electricity from cogeneration and turboexpanders, which represents 32.7% of the total, decreased by 21% compared to 2019 mainly due to the lower demand for energy during the health emergency period and the technical

problems affecting the Imola cogeneration plant. Lastly, electricity produced from traditional sources is up 3%, accounting for 29.6% of the total generated by 2020. However, this production is **highly environmentally sustainable** since it comes from the waste-to-energy process for the share exceeding 51% (considered biodegradable) and is therefore classified as energy from recovery processes.

Incentives to generate electricity using green certificates are awarded to plants fuelled by renewable sources which started operating by 31 December 2012 and to cogeneration plants combined with district heating networks which started operating by 31 December 2009. In both cases, the amount of energy incentivised is not exactly equal to the amount of electricity generated. In the first case, for plants that started operations after 2007, multiplication coefficients were introduced that take into account the plant's technology: for example, if landfill biogas is used, the recognition awarded is calculated by multiplying the energy generated by 0.8. For non-agricultural biomass with a short supply chain, the factor is 1.3. In the second case, the incentive is proportional to the sales of cogenerated useful heat to district heating network users. Since 2016, any remaining right to the issue of green certificates has been converted into an incentive for the electricity generated, as required by the Italian Ministerial Decree of 6 July 2012.

For waste-derived electricity, the energy recognised for earning incentives, and to which the above-mentioned factors apply, is limited to the biodegradable portion, since it is considered a renewable source by European and Italian regulations. The Italian Ministerial Decree of 6 July 2012 defines the criteria for evaluating this portion on a flat rate basis, set at 51% for waste-to-energy plants that use municipal waste downstream from separate waste collection. In calculating the share of energy produced from renewable sources, a figure of 51% was considered for both electricity and thermal energy produced from waste-to-energy plants, applying the flat-rate criteria. This percentage was assumed as applied to all waste disposed of in waste-to-energy plants (municipal and special) and for all the three years considered, in order to have consistent terms of comparison defined in accordance with the regulations in force. The one exception is the special-waste waste-to-energy plant in Ravenna, whose production is given a biodegradability coefficient of nearly zero since the waste it treats is considered totally non-renewable, because it comes from industrial processes.

For cogeneration plants, the Italian Ministerial Decree of 4 August 2011, implementing Italian Legislative Decree No. 20/2007, establishes the methods to calculate cogeneration production and the performance level the cogeneration process must achieve to qualify as high-performance cogeneration. The subsequent decree of the Italian Ministry of Economic Development of 5 September 2011 sets a new support regime for cogeneration. The incentive is based on white certificates and is recognised by the Energy Services Manager, after attributing the qualification of cogeneration, according to the actual primary energy savings achieved.

Thermal power generation

The table below outlines the **thermal energy production** of the Group's plants.

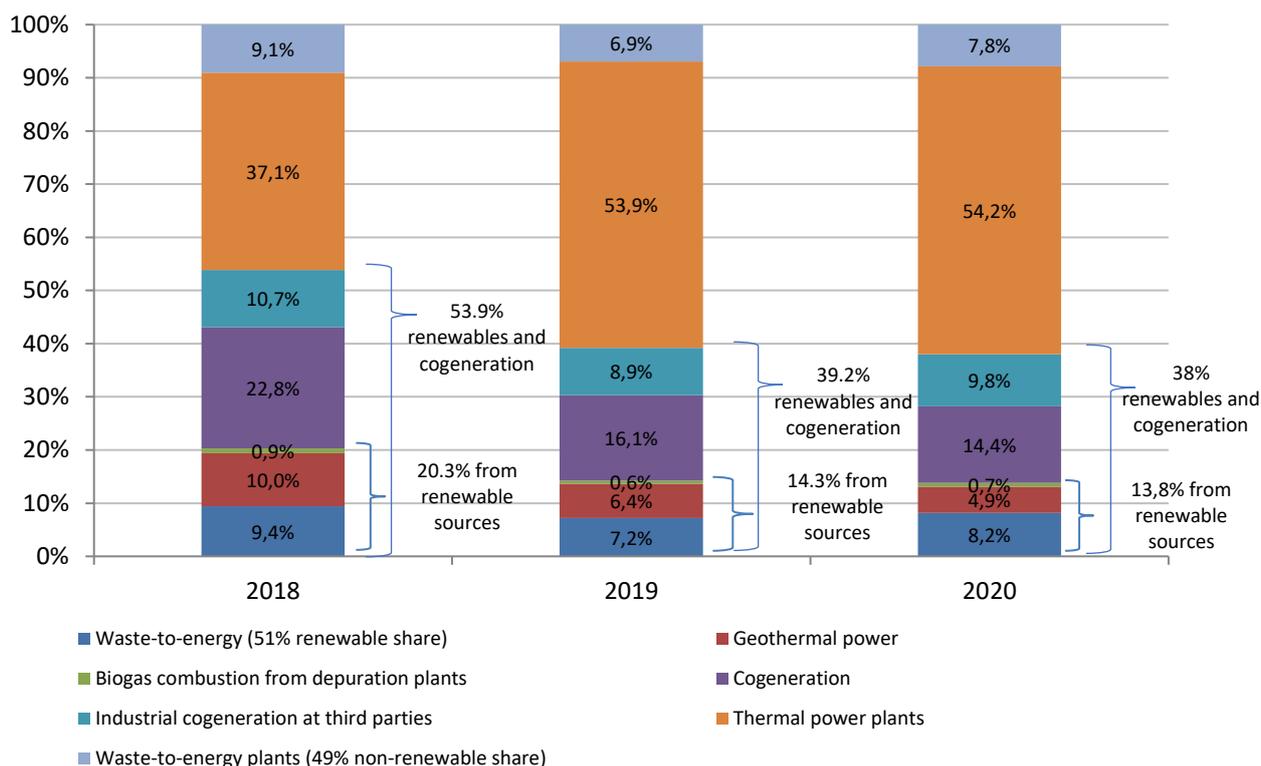
Thermal energy generated

MWh	2018	2019	2020
Waste-to-energy plants (51% renewables share)	71,231	75,312	79,581
Geothermal power	75,382	67,415	47,680
Combustion of depuration plant biogas	6,808	6,582	6,904
Total renewable sources	153,422	149,309	134,165
Cogeneration	172,721	168,433	140,850
Industrial cogeneration at third party facilities	81,004	92,762	95,403
Total cogeneration	253,725	261,195	236,253
Thermoelectric power stations	280,361	564,691	528,632
Waste-to-energy plants (49% non-renewables share)	68,438	72,358	76,460
Total traditional sources	348,799	637,049	605,092
Total thermal energy generated	755,946	1,047,553	975,510

Since 2019, the data also take into account the thermal energy produced by AcegasApsAmga Servizi Energetici's thermal power plants.

The total **thermal energy** generated by the Group's plants in 2020 was **975.5 GWh**, down 7% from the previous year. **38%** comes from **renewable sources** and from **cogeneration and turboexpansion plants**.

Thermal energy generated



Thermal energy production from renewable sources was 134.2 GWh, amounting to **13.8% of the total** generated in 2020. This share is down 10% compared to 2019 mainly due to some technical problems that occurred in the geothermal plant of Ferrara that produces 29% less. On the other hand, energy generation from waste-to-energy plants (+6%) and biogas combustion in depuration plants (+5%) is increasing. Thermal energy production from cogeneration, which accounts for 24.2% of the total, decreased by 10% for the reasons mentioned above. Lastly, electricity produced from traditional sources increased by 5%,

accounting for 62% of the total generated. However, 12.6% of this production is highly environmentally sustainable since it comes from the waste-to-energy process for the share exceeding 51% (considered biodegradable) and is therefore classified as energy from recovery processes.

Renewable energy for the Hera Group and our customers

In 2020, **83% of the electricity consumption of the Group's main companies was covered by energy from renewable sources**. Specifically, the companies for which electricity from renewable sources was purchased are: Acantho (covering 55% of consumption), AcegasApsAmga (100%), Estenergy (100%), Feronia (100%), Frullo Energia Ambiente (100%), Hera Spa (100%), Herambiente (92%), Herambiente Servizi Industriali (100%), Hestambiente (100%), Inrete Distribuzione Energia (72%), Marche Multiservizi (100%), Marche Multiservizi Falconara (100%), Uniflotte (100%). We plan to use electricity from renewable sources for 100% of the consumption of Group's companies by 2023.

Internal consumption of electricity from renewable sources

MWh	2019	2020
Consumption of electricity from renewable sources (GO)	483,705	465,835
Total electricity consumption	583,903	561,155
Consumption of electricity from renewable sources (%)	82.8%	83.0%

Creating shared value and sustainability are the pillars on which Hera Comm bases its commercial operations and as a result the design of new offers and solutions for customers also centres around these principles. The choice of **"green" energy** is the first step in a customer's change process towards environmental sustainability, and Hera Comm help its customers make this choice by marketing 100% "green" offers.

For example, the **"Nature Package"** offer guarantees that the **electricity provided will be from renewable sources** certified by the Energy Services Manager ("Guarantee of Origin"), while **"Hera zero footprint"**, in addition to including the supply of electricity from renewable sources, **offsets the CO₂ emissions of natural gas consumed** by customers by purchasing carbon credits that support decarbonisation projects with a positive impact on the environment and society (see the case study at the end of this chapter for more details). Both offers are available at no extra cost. Customers that choose these plans, can also help to reduce paper consumption by using online billing, and are on the road less since they use direct debit to pay their bills.

Electricity and gas contracts at year-end with “green” offers

qty	2018	2019	2020 pro forma	2020
Electricity contracts at year-end with electricity from renewable sources	102,779	201,339	335,042	340,507
Electricity contracts at year-end with electricity from renewable sources out of total electricity contracts (excluding safeguard contracts) (%)	12.2%	19.8%	31.5%	28.0%
Gas contracts at year-end with CO ₂ emissions offsetting	-	67,961	168,651	187,372
Gas contracts at year-end with CO ₂ offsets on total gas contracts (excluding default and last resort contracts) (%)	-	5.3%	13.3%	9.6%
Electricity and gas contracts at year-end with “green” offers (electricity from renewable sources or gas with CO₂ offsetting)	102,779	269,300	503,693	527,879
Electricity and gas contracts at year-end with “green” offers (electricity from renewable sources or gas with CO₂ offsetting) out of total electricity and gas contracts (excluding safeguard, default, and last resort contracts) (%)	4.9%	11.7%	21.6%	16.6%

The “2020 pro forma” excludes data relating to the companies Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera on 31/12/2019 and is therefore comparable with previous years.

On a like-for-like basis with previous years, in 2020, customers who have chosen “green” energy account for 21.6% of the total, up by around 10 percentage points compared with 2019. In detail, contracts with electricity from renewable sources account for 31.5% (+11.7 percentage points), while gas contracts with CO₂ offsets account for 13.3% (+8 percentage points). The indicator was calculated excluding safeguard, default, and last resort contracts since, by their very nature, it is not possible to market offers in line with the Group’s commercial strategy in these markets.

However, considering the recent inclusion of new sales companies in the reporting scope, customers with “green” energy account for 16.6% of the total. Electricity contracts with renewable energy supply account for 28%, while gas contracts with CO₂ offsetting account for 9.6%. Including contracts in the safeguard, default, and last resort markets, 15.9% of energy contracts include energy efficiency solutions (26.9% of electricity contracts and 9.1% of gas contracts).

Over the next few years, we will continue to increase our “green” energy offers and solutions for customers, also by extending Hera Comm’s main “sustainable” solutions to Estenergy and to the recently acquired sales companies.

Once again, in 2020, as an extraordinary measure, Hera purchased enough electricity from **renewable sources to fully cover the consumption of all of Hera Comm’s free market household customers**, not just those with the Pacchetto Natura or Hera Impronta Zero offers. The transaction, which involves the purchase of **Guarantee of Origin (GO) certificates**, ensuring that the energy comes from renewable sources, was made possible thanks to the availability and price conditions such as to be able to cover the 1,953 GWh corresponding precisely to the total consumption of the Hera Comm Group's free market household customers who have not chosen to purchase electricity from renewable sources.

Including renewable energy sold to companies that have voluntarily chosen a more sustainable energy profile and that sold to Group companies, we sold **3,410.8 GWh** of renewable energy in 2020, accounting for **32.9%** of the electricity we sold on the **free market**. Including the **enhanced protection market**, we sold a total of **3,418.8 GWh** of renewable energy in 2020, accounting for **32.2%** of the total electricity we sold in

the two markets (up more than 3 percentage points on the previous year). These figures take into account both the purchase of renewable energy certified by Guarantee of Origin certificates and the latest available Italian average fuel mix (where the share of renewable energy is 2.92%).

Electricity from renewable sources sold to free market and protected market customers

GWh	2018	2019	2020 pro forma	2020
Electricity from renewable sources sold	2,419.7	2,966.5	3,185.3	3,418.8
Total electricity sold (excluding safeguard)	9,455.8	10,197.5	9,991.5	10,628.5
Electricity from renewable sources sold to free market and protected market customers (% of total volumes sold excluding safeguard)	25.6%	29.1%	31.9%	32.2%

The "2020 pro forma" excludes data relating to the companies Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera on 31/12/2019 and is therefore comparable with previous years.

Considering also the contracts for safeguard services, the total renewable energy we sold in 2020 was **3,482.9 GWh, 27.2%** of the total electricity we sold. In the safeguarded market, by its very nature, it is not possible to market offers in line with the Group's commercial strategy, and the purchase of the electricity that is sold to customers is the responsibility of the Single Purchaser.

Electricity from renewable sources sold to free market, protected and safeguard customers

GWh	2018	2019	2020 pro forma	2020
Electricity from renewable sources sold	2,515.6	3,043.4	3,249.3	3,482.9
Total electricity sold	11,854.1	12,830.4	12,184.0	12,820.7
Electricity from renewable sources sold to free market, protected and safeguard customers (% of total volume sold)	21.2%	23.7%	26.7%	27.2%

The "2020 pro forma" excludes data relating to the companies Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera on 31/12/2019 and is therefore comparable with previous years.

The sales of **natural gas with CO₂** emissions offsets grew further in 2020, after we started to market the Hera Impronta Zero offer in 2019; on a like-for-like basis, the share of natural gas sold with CO₂ emissions offsets increased from 0.8% in 2019 to 5.2% in 2020. At the Group level, on the other hand, this share represents 4.4% of total natural gas we sold.

Natural gas sold with CO₂ offsetting

Million scm	2019	2020 pro forma	2020
Natural gas sold with CO ₂ offsetting	16	104	127
Total natural gas sold (excluding volumes sold to wholesalers, default service, and last resort supply)	2,018	2,012	2,923
Natural gas sold with CO₂ offsets (% of total sold volumes excluding volumes sold to wholesalers, default service, and last resort supply)	0.8%	5.2%	4.4%

The “2020 pro forma” excludes data relating to the companies Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera on 31/12/2019 and is therefore comparable with previous years.

Considering the markets for default service and for supply of last resort, the total methane gas sold with CO₂ emissions compensation in 2020 was 4.2%.

Climate change mitigation

Hera for climate

The challenge of climate change and Hera Group's commitment

Climate change is one of the greatest challenges facing humanity today. Accepting this challenge means initiating an **ecological transformation** of technology, the economy and society. Fossil fuels are one of the main causes of climate change and it is therefore essential to reduce their consumption to limit the increase of the main greenhouse gas, carbon dioxide.

The Group's commitment in this area starts with several actions taken in terms of **mitigation and adaptation**. The Group's strategy for climate change mitigation mainly consists of:

- **purchasing renewable energy** to power its business and to sell it to its customers;
- increasing **renewable energy production** (in particular biomethane and geothermal energy);
- **offering solutions to reduce the carbon footprint of customers** in all segments (households, condominiums, businesses, and public administration);
- initiatives and projects to **reduce its carbon footprint**;
- promoting and implementing **circular economy** principles;
- implementing **technological innovation projects and initiatives** for a more complete environmental sustainability of its business.

Since 2006, the Hera Group has been a member of the CDP, an independent not-for-profit organization that provides businesses and countries with a way to measure, track, manage and share information about climate change and on the sustainable use of water resources on a global scale. CDP compliance requires **measuring and reporting** all of an organisation's performance, and the initiatives taken to reduce GHG emissions. In 2020, Hera achieved **level A-** (on an A-D scale), **higher than the result obtained in 2019** (level B), than the **average of the "Energy utilities network" sector** (level B) **and than the European and global average** (level C).

Also in the field of **reporting**, this assessment contains:

- 1) the results of our process to **align with the Recommendations of the Task Force on Climate-related Financial Disclosure (TCFD)** which started in December 2019 and involved several Departments and all the Group's Business Units;
- 2) our first report on GHG emissions in relation to the reduction targets defined in 2020 and submitted to the **Science Based Target Initiative** at the end of January 2021.

TCFD recommendations

In 2015, the member states of the United Nations signed the **Paris Agreement**, in which they committed to work to limit the global average temperature rise to well below 2°C compared to pre-industrial levels and strive to limit the increase to 1.5°C by the end of this century. In the same year, the G20's **Financial Stability Board (FSB)** established the **Task Force on Climate-related Financial Disclosures (TCFD)** to support organisations in becoming more transparent about the financial opportunities and risks linked to climate change. In 2017, the TCFD published recommendations on financial disclosures, which are now an international reference for corporate climate risk management. The **TCFD's recommendations** are applicable to organisations in all sectors and are classified into four areas: governance, strategy, risk management, and metrics & targets.

The Hera Group decided to adopt the approach proposed by the TCFD and to do so, in December 2019, started a process to align with the recommendations. The process involves three main steps:

- **establishing a dedicated working group** consisting of: **Shared Value and Sustainability Department, Enterprise Risk Management, Central Department for Strategy, Regulation and Local Authorities** and **Energy Management**. Some steps also involved: Central Innovation Department, Administration, Finance and Control Department, HR and Organisation Central Department, Quality, Safety and Environment Department and the Business Units.
- **performing an in-depth analysis of the gaps** in Hera Group's reporting system and in the management of climate opportunities and risks with respect to TCFD recommendations.
- defining a **work plan** to increase the degree of alignment with the TCFD's recommendations, the first results of which were already visible in our 2019 Sustainability Report and our Value for Energy thematic report published in 2020, and which are completed in this report.

Governance of climate change issues

At the **Board of Directors** level, management of the risks and opportunities linked to climate change is supported by the **Control and Risks Committee**, the **Risk Committee** and, indirectly, the **Ethics and Sustainability Committee**, the tasks of which include monitoring the implementation of sustainability policies and the prior review of sustainability reporting to be submitted to the Board.

The **CEO** is responsible for ensuring the implementation of the sustainability and shared value guidelines, through the Shared Value and Sustainability Department, one of whose functions is to coordinate the **balanced scorecard system**. In addition to chairing the **Executive Committee**, the **Chairman of the Board of Directors** is responsible for setting strategic guidelines and for decisions on **capital allocation**. In fact, the Central Department for Strategy, Regulation and Local Authorities reports directly to the CEO.

The **Control and Risks Committee** is the advisory body set under the Corporate Governance Code to support the decisions and assessments of the Board of Directors concerning the internal control and risk management system, including risks related to climate change, with adequate preliminary activities.

At the management level, the **Risk Committee** defines risk management policies and develops specific guidelines and objectives to be followed by the business units. Therefore, it can also be an appropriate reference framework and guideline to address climate change risks.

The **Shared Value and Sustainability Department** has among its responsibilities some of the key elements to ensure the good management of climate risks and opportunities. It coordinates the process of defining balanced scorecards, prepares corporate guidelines and reporting in the Shared Value and Sustainability area and develops new sustainability projects. In addition to that, the head of the department is also a member of the Group's **Ethics and Sustainability Committee**.

The **Central Department for Strategy, Regulation and Local Authorities** plays a key role in the resilience of the Group's strategy. The management's forward-looking and future-oriented analysis skills were crucial in carrying out Hera Group's **first climate scenario analysis**. Among the initiatives identified to seize the opportunities defined through the scenario analysis, the most promising have been included in our 2020-2024 business plan.

Within Hera Group's organisational structure, a role in the management of climate opportunities and risks is also played by the **Administration, Finance and Control Department**, in particular for defining the annual budget and raising capital, and by the **Energy Management Department**, which supports the CEO in developing energy-saving initiatives.

In order to strengthen the governance of climate change aspects, during 2020 the working group also identified a number of **opportunities for improvement** that will be subject to evaluation and subsequent implementation. Some of these affect the management system and will support a more formalised and integrated consideration of climate change issues in all those business processes that can contribute to the

pursuit of carbon neutrality. In particular, the opportunities identified concern the investment authorisation process, the risk identification methodology and the planning process.

The management system and Enterprise Risk Management

Our quality, safety, environment and social responsibility **management system** is the set of interrelated or interacting elements that support the implementation of Hera Group's policies and objectives in a large number of areas, including those relating to climate change.

Concerning the **identification, assessment and management of climate risks**, the organisational structure adopted by the Hera Group makes it possible to manage the exposure to risk arising from its businesses and, at the same time, to preserve the effectiveness of management along the entire value chain.

In our corporate governance system, the **Control and Risks Committee**, which is a part of the Board of Directors, is responsible for monitoring the functionality of the internal control system, the efficiency of company operations, as well as compliance with laws and regulations.

The Control and Risks Committee receives regular reports from the **Risk Committee**, which is the main body for steering, monitoring, and reporting on risk management strategies, including climate risks. The Risk Committee is responsible for defining the guidelines for the **Enterprise Risk Management** process, the mapping and monitoring of corporate risks and the definition of **Risk Policies**, to submit to the Board of Directors for approval.

Specific risk analyses are conducted by the **Enterprise Risk Manager** or by the Risk Specialists, who play an essential role in identifying, assessing and controlling how risks are managed. Climate-related risks, both physical and transitional, are included in the risk categories that have been analysed by the Enterprise Risk Manager.

During 2020, the **climate scenario analysis** conducted by the cross-functional working group led the Enterprise Risk Manager to define new quantification methods to assess the potential financial impact of the most relevant climate risks.

Analysis of climate scenarios

Scenario analysis is a methodology used to test the **resilience of business plans** under different assumptions of future developments. In the context of climate change, analysis of the scenarios helps us understand how physical and transitional **climate opportunities and risks** may affect our business over time.

To carry out its analysis, Hera Group selected the **two most relevant scenarios** out of nine taken as a starting point.

We chose the **IEA ETP 2DS transition** scenario, developed by the International Energy Agency, as the “ambitious” climate scenario, that described a future development characterised by strong decarbonisation processes to keep the increase in average temperatures below 2°C.

IEA ETP 2DS transition scenario: Key parameters to 2050

Energy	<ul style="list-style-type: none"> • Energy intensity (TWh/GDP): -67% vs. 2013 • Production of advanced biofuels: 20-fold increase from 2020 to 2025 • Natural gas import price: 10.2 \$/MBTU (2017: 5 \$/MBTU)
Electricity	<ul style="list-style-type: none"> • Strong increase in production of electricity from renewable sources • Emission factor: <40 gCO₂/kWh (2017: 484 gCO₂/kWh) • 50% of solar generation from domestic panels (distributed generation)

	<ul style="list-style-type: none"> • Demand for electricity: +68% vs. 2017
GHG emissions	<ul style="list-style-type: none"> • CO₂ emissions: -54% vs. 2017 • CO₂ price: up to \$210/tCO₂ (2017: Euro 5.8/tCO₂) • Carbon capture utilisation and storage (Ccus): from 2.4 MtCO₂ (2017) to 3,500 Mt

We selected the **IPCC RCP 8.5 physical** scenario as a “pessimistic” scenario, in order to study the possible impacts on Hera Group’s strategy in case of a “business-as-usual” pathway and a resulting large increase in average temperature (about 4° C). We selected the indicators available in the models simulating the RCP 8.5 scenario from the results of an analysis previously conducted by Enterprise Risk Management, which involved the business units in order to identify the climate events to which they are most exposed.

Physical scenario RCP 8.5: Key parameters

Dimension	Parameters	1980-2005	Trend to 2050
Precipitation	No. of days with heavy rainfall	23 days	↘
	No. of rainy days	90 days	↘
	Consecutive days without rain	25 days	↗
Temperatures	Average maximum temperature	17.5 °C	↗↗
	Average minimum temperature	8.5 °C	↗↗
	Heating degree days	1950 DD	↘↘
Sea	Sea level	+8cm (vs. 1990)	↗↗

At the same time, we defined **timescales** to distinguish and classify risks, opportunities and impacts as short, medium- and long-term. This strategic approach enables us to go beyond the traditional time frame of the business plan.

Short-term	Medium-term	Long-term
From 0 to 5 years	From 5 to 10 years	From 10 to 30 years
Business plan timescale	Decarbonisation timescale	European Green Deal timescale

Risks and opportunities arising from climate change

The analysis of the ETP 2DS and RCP 8.5 climate scenarios identified **eight physical risks, eight transition risks, and 15 opportunities**. Each risk and each opportunity has been linked to:

- a timescale;
- a priority level (defined as the combination of the level of likelihood that the context in which Hera operates will change as described by the risk/opportunity and the impact of the risk/opportunity on the business);
- one or more management methods (for risks) and one or more business initiatives (for opportunities).

Physical risks

The RCP 8.5 climate scenario analysis conducted by the Hera Group, combined with the investigations already carried out by Enterprise Risk Management together with the business units, identified **eight physical risks**. The physical risks are distributed over the medium- and long-term timescales, with more

occurrences in the 2031-2050 horizon consistent with the notion that the impacts of climate change will become increasingly evident in the long term. To mitigate, manage or transfer these risks, we also identified **21 management methods**. Some of the management methods envisaged in the 2020-24 business plan are explained in the following section on Hera's climate strategy.

Of the eight physical risks assessed, we subjected those with a higher priority level to an in-depth analysis to quantify their **financial impacts**. In particular, the risk associated with the **decline in gas consumption and district heating** for civil use as a result of the **temperature increase** was assessed as significant in the long term.

Transition risks

We identified transition climate risks mainly by the analysis of the International Energy Agency's ETP 2DS scenario. The analysis led to mapping **eight transition risks**, mainly concentrated in the medium-term time horizon, but distributed over all categories of the classification suggested by the TCFD. We also linked each risk to **one or more management methods**, which allows the Group to be better prepared for possible future changes. Some of the management methods envisaged in the 2020-24 business plan are explained in the following section on Hera's climate strategy.

We further investigated the transition risks considered to be a priority to assess their **financial impacts**. The risks related to trends in **energy efficiency** and **electrification of consumption**, and to the extension of **carbon pricing systems** were significant. We defined management methods and monitoring indicators for each risk class.

Opportunities

The Hera Group identified the opportunities arising from decarbonisation processes on the basis of the International Energy Agency's ETP 2DS scenario. The analysis led to the identification of **15 opportunities**, mainly associated with projected reductions in greenhouse gas emissions, increased demand for electricity and greater use of renewable energy sources and the development of advanced biofuels. Most of the opportunities are expected in the short term and we identified **33 initiatives** to seize them.

We classified ten of the opportunities as **relevant in the short term** (by 2024). We further developed the initiatives designed to capture the most promising opportunities to feed into Hera Group's new **2020-2024 business plan**. The following section describes how the new plan seizes the opportunities to participate in the decarbonisation process and what initiatives will be implemented to achieve the objectives.

Hera's climate strategy

Hera Group's new 2020-2024 business plan takes the sustainability guidelines of **European policies** as a reference and confirms the **Sustainable Development Goals** as the basis for the creation of shared value.

The framework of the new business plan consists of **three strategic dimensions: environmental, socio-economic and innovation**, which the Group's projects in all its businesses are built around, to combine the development of the multi-utility with that of the context in which it operates, in a "win-win" perspective to increase the share of EBITDA "with shared value" (EBITDA CSV).

The EBITDA CSV indicator measures the share of the Group's consolidated EBITDA generated by business operations that respond to the drivers of change and related impact areas identified in the shared value creation model that informs Hera's approach to sustainability.

During 2020, we updated our shared value creation model to meet the new challenges of the global scenario. In the new model, shown below, one of the three drivers of shared value creation is the **pursuit of**

carbon neutrality of the services we provide, both for the benefit of customers and of the local ecosystem. The actions envisaged to fight climate change therefore play an important role in the environmental dimension and in the shared value creation model. These include the commercial offering of products and services for **energy efficiency** and **carbon neutrality**, support for **urban electric transportation to reduce the Group's energy consumption** and **natural gas leaks**, and circular economy initiatives such as **plastic recycling** and **biomethane production**. In addition, we are studying initiatives, also in partnership with other companies, aimed at **developing hydrogen as an energy vector**.

The strategic framework reaches beyond the Plan's timeframe, to 2030. The goal of reducing greenhouse gas emissions in line with the criteria of the Science Based Target Initiative is particularly prominent here.

The physical and transitional risk management and business initiatives linked to the opportunities included in our 2020-24 business plan are outlined below.

Physical risks	Timescale	Priorities	Management method
Floods and flooding with resulting landslides and mudslides	Medium term: 2025-2030	Medium-high	Infrastructural upgrading of drainage networks, reservoirs and purification plants
			Increased alert capacity for extreme events in critical areas
Rising temperatures	Long-term: 2031-2050	Medium-high	Market strategies oriented towards the development of customer-dedicated VAS to complement and enrich the offer portfolio
Extreme weather events	Medium term: 2025-2030	Medium-low	Network resilience plan and reinforcement of the electricity distribution network in the face of extreme winter events with interventions on overhead powerlines and substations
Changes in the distribution over time of annual precipitation and average rainfall amounts	Long-term: 2031-2050	Medium-low	Strengthening and expanding water resources to increase the resilience of water networks
			Construction of interconnections between water networks
			Enhancement of the application of advanced leak detection techniques to increase the efficiency of the network

Transition risks	Timescale	Priorities	Management method
Electrification of energy consumption and development of renewable energy sources	Medium term 2025-2030	Medium-high	Market strategies oriented towards the development of customer-dedicated VAS to complement and enrich the offer portfolio
			Acquiring increasing shares of electricity customers as a result of energy carrier switching
			Increased presence in electricity distribution

Transition risks	Timescale	Priorities	Management method
Limits on the generation of greenhouse gas emissions	Medium term 2025-2030	Medium-high	Reducing the group's carbon footprint with energy efficiency improvement projects, increasing optimised consumption management and the use of zero-emission energy sources
Introduction of measures requiring structural and non-structural efficiency measures	Medium term 2025-2030	Medium-high	<p>Specific projects in the field of energy efficiency</p> <p>Enhancement of advanced techniques aimed at limiting the use of primary resources in the field of:</p> <ul style="list-style-type: none"> • water (reduction of water losses, reuse of water resources) • waste (initiatives to enhance recovery and recycling)

Opportunities	Timescale	Priorities	Initiative
Air quality and urban emissions policies, including incentives for efficient district heating systems	Short-term 2021-2024	Medium-high	Production capacity saturation of existing district heating systems
			Conversion of district heating plants to "Efficient district heating systems"
Fiscal bonus for energy efficiency and EU incentives for decarbonisation	Short-term 2021-2024	Medium-high	Promotion and sales for improving the energy efficiency of products and services
			Support for energy efficiency in buildings
Raising customer awareness and increase of green offers by utilities	Short-term 2021-2024	Medium-high	Green loyalty programmes and value-added services for energy efficiency and carbon neutrality
Technological optimisation and plant efficiency improvement	Short-term 2021-2024	Medium-high	Plant optimisation through revamping
Stimulating the circular economy and increasing demand for recycled plastics and/or bioplastics	Short-term 2021-2024	Medium-high	Increase of plastic recycling activities
Dissemination of Renewable Energy Communities and Environmental Communities, and increase of distributed renewable energy demand	Short-term 2021-2024	Medium-high	Promoting the sales of domestic photovoltaic systems
Development of electric transportation and increased demand for electricity along road infrastructure	Short-term 2021-2024	Medium-high	Development of services and infrastructure to support electric transportation

Opportunities	Timescale	Priorities	Initiative
Production of biomethane through recovery processes (possible eligibility for incentives)	Short-term 2021-2024	Medium-high	Construction of plants for the production of biomethane from the organic fraction of MSW
Production of syngas and/or green gas (hydrogen, biogas) for the decarbonisation of the gas chain and to handle overproduction of renewable energy	Medium term 2025-2030	Medium-high	Introduction of Power-to-Methane technology for electrical energy storage

Climate performance and targets

The Hera Group's strategy to **seize the opportunities** linked to decarbonisation and **mitigate the risks** of climate change is also governed by monitoring specifically defined **KPIs**.

On the one hand, **greenhouse gas emission** indicators and related **intensity indices** measure the company's overall ability to reduce its climate impact and minimise risks.

On the other hand, **quantitative measures that affect emissions** and **economic and financial KPIs** capture how Hera Group is redesigning its internal processes and, above all, its commercial offering to seize the opportunities offered by regulatory, technological, and market developments related to decarbonisation.

The following table summarises the types and number of indicators that apply to each monitoring area. The indicators are set out in the appendix to this report.

Monitoring scope	Indicators	Of which with targets/forecasts
Emissions	7	6
Intensity index of emissions	5	3
Quantitative measures that affect emissions	12	9
Economic and financial indicators	6	4
Total indicators	30	22

Total emissions of the Hera Group

This report consolidates the innovative reporting of GHG emissions we introduced in our 2019 Sustainability Report as a result of an initial alignment with **TCFD's recommendations**. The following infographic represents the Hera Group's total emissions by supply chain, including those produced by suppliers and customers.

The **Group's total emissions** (Scope 1 + Scope 2 + Scope 3) in 2020 were about **12,644 thousand tonnes of ₂e**. Specifically, the **emissions directly produced** by the Group (Scope 1) are equal to 986 thousand tonnes of CO₂e and represent 7.8% of the Group's total emissions. The Group's **indirect emissions from consumption of electricity** (Scope 2), using the market-based method, amount to 44 thousand tonnes of CO₂e and represent less than 1% of the Group's total emissions.

The **emissions indirectly caused by the Group's activities** (Scope 3) amount to 11,613 thousand tonnes of CO₂e, equal to 91.8% of the Group's total emissions. According to the "Technical Guidance for Calculating Scope 3 Emissions" published by the GHG Protocol, Scope 3 emissions can be divided into two categories:

upstream and downstream of the supply chain. The Hera Group's Scope 3 includes the following emission categories:

- upstream category (5,072 thousand tonnes of CO₂e, 40.1% of the Group's total emissions): production of the fuels consumed to generate electricity from non-renewable sources sold to customers; production of natural gas sold to customers; production of fuel consumed in the industrial cogeneration plants installed at third parties; production of fuels consumed in owned vehicles; production of fuels consumed to generate electricity from non-renewable sources consumed internally; network losses of electricity consumed internally; use of suppliers' vehicles for waste collection; use of Herambiente's vehicles for waste transport; production and printing of paper bills;
- downstream category (6,541 thousand tonnes of CO₂e, 51.7% of the Group's total emissions): consumption by customers of natural gas sold; production of energy by joint venture plants; recycling of waste from separate waste collection.

Composition of greenhouse gas emissions

Thousands of t of CO ₂ e	2019	2020	Delta 2020/2019
Waste-to-Energy Plants	400.5	367.8	-8.2%
District heating	201.4	171.7	-14.7%
ASE and HSE energy services (natural gas, diesel, LPG)	208.9	186.4	-10.8%
Landfills for municipal waste	212.6	212.5	0.0%
Leaks in the gas network	28.8	18.2	-36.8%
Company fleets (diesel, petrol, LPG, natural gas)	30.5	29.7	-2.5%
Total direct emissions (Scope 1) [305-1]	1,082.6	986.2	-8.9%
Indirect emissions from energy consumption (Scope 2, market-based) [305-2]	48.4	44.4	-8.3%
Total emissions Scope 1 + 2 (market-based)	1,131.0	1,030.6	-8.9%
Sales of natural gas	7,078.2	6,684.0	-5.6%
Sales of electricity	4,386.7	4,195.8	-4.4%
Emissions from energy production and consumption (not included in Scope 1 and 2)	418.6	309.3	-26.1%
Emissions from services provided	612.0	423.9	-30.7%
Total indirect emissions (Scope 3) [305-3]	12,495.4	11,613.0	-7.1%
<i>Of which: Scope 3 sales of natural gas (downstream only) + sales of electricity</i>	<i>10,650.2</i>	<i>10,110.7</i>	<i>-5.1%</i>
Total emissions Scope 1 + 2 (market-based) +3	13,626.4	12,643.6	-7.2%
<i>Of which: Scope 1 + Scope 2 (market-based) + Scope 3 sales of natural gas (downstream only) and sales of electricity</i>	<i>11,781.2</i>	<i>11,141.3</i>	<i>-5.4%</i>

The calculation criteria were aligned with the methodology of the Science Based Target Initiative. The 2019 figure includes data on Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra Energia which merged into Hera as at 31/12/2019 to allow comparability of data over the two-year period. The calculation specifications adopted are detailed in the appendix.

In 2020, total GHG emissions (Scopes 1, 2 and 3) **decreased by 7.2%** compared to 2019.

In particular, direct emissions (**Scope 1**) and indirect emissions from electricity consumption (**Scope 2**) **decreased by around 9%** compared to 2019. This is mainly due to lower emissions from district heating (-15%) and from natural gas used in cogeneration plants (-15%) as a result of milder winter temperatures and lower thermal energy requirements due to the health emergency; without this effect, Scope 1 and 2

emissions would decrease by 4% mainly due to the decrease in emissions from waste-to-energy plants due to the closure of the Ravenna plant.

Scope 2 emissions for 2020 amounted to 44 thousand tonnes, down 8% compared to 2019 as a result of lower consumption of electricity from non-renewable sources (-5%, due to both a reduction in consumption and a slight increase in the share of purchased renewable energy) and a reduction in the national residual emission coefficient (-3%). The value of Scope 2 emissions shown above was calculated using the market-based method, which makes it possible to attribute value to the organisation's specific energy purchase choices, i.e. the part of renewable energy purchased with Guarantee of Origin certificates and the part of electricity purchased without certificates; for the latter component we used the emission factor relating to the national "residual mix". On the other hand, Scope 2 emissions calculated with the location-based method amount to 166 thousand tonnes, calculated by applying the Italian average emission factor from electricity production, which does not take into account the company's specific purchasing choices.

Total indirect **Scope 3** emissions in 2020 are around 11.6 million tonnes of CO₂e, **down 7%** from the previous year. These are indirect greenhouse gas emissions that occur outside the organisation's boundaries and from sources not owned or under direct operational control. This category may include activities both upstream and downstream of the business' perimeter, such as the extraction and production of purchased raw materials or emissions occurring when using the products sold.

Greenhouse gas reduction targets

During 2020, as part of the process of aligning our reporting with the TCFD recommendations, we explored climate and transition scenarios with a 2050-time horizon. On the basis of these studies, we identified 15 development opportunities for the Group's businesses and, as a result, we have defined many initiatives which, together with the development of the energy and climate scenario, will reduce direct and indirect Group's greenhouse gas emissions.

On the basis of the above, we have defined our **emission reduction targets for 2030** compared to 2019 in line with the **Science Based Target Initiative** method (with particular regard to the "Well below 2°C" level) and included **in the 2020-2024 business plan** approved in January 2021. The scope of the targets includes both the Group's emissions (Scope 1 and 2) and those of its customers (Scope 3, for the sales of electricity and the sales of natural gas downstream) and therefore applies to 86.5% of the Group's total 2019 emissions. We *submitted* the defined targets to the Science Based Target Initiative at the end of January 2021.

Specifically, the Group's 2030 targets defined and submitted to SBTi are:

- Scope 1 + 2: -28%;
- Scope 3 (sales of electricity and sales of natural gas downstream): -33%;
- Scope 1+2+3 (sales of electricity and sales of natural gas downstream): -33%.

In addition, Hera has set the target of increasing the share of electricity from renewable sources for internal consumption from 83.0% in 2019 to 100% by 2023.

We will achieve these targets through the many reduction initiatives described in this report, such as increasing the use of electricity from renewable sources for the consumption of Group companies, reducing greenhouse gas emissions from landfills, further developing district heating, developing energy efficiency services for buildings, promoting the energy efficiency of residential customers, increasing the sales of electricity from renewable sources and launching initiatives to develop hydrogen as an energy carrier. We expect further improvements from external aspects set out in the CEN energy scenario developed by Terna and Snam, used as a reference for defining the targets, such as the decarbonisation of electricity

production, the increase in energy efficiency and the electrification of energy consumption, which will contribute to meeting the target related to the decrease in GHG emissions.

In 2020, Scope 1 and 2 emissions **decreased by 9%** compared to 2019 for the reasons described in the previous section. With regards to Scope 3, emissions linked to the sales of natural gas (downstream) and electricity, the reduction in 2020 was **5.1%** compared to 2019 due to the reduction in the volumes of gas sold as a result of milder winter temperatures and lower thermal energy requirements linked to the health emergency. Net of the effects of milder winter temperatures and lower requirements as a result of the pandemic emergency, this reduction was **2.0%** compared to the previous year, due to the higher volumes of electricity from renewable sources sold by purchasing Guarantee of Origin certificates.

In brief, considering the scope of greenhouse gas emissions for which the 2030 reduction target was set compared to 2019, the first annual report shows a **5.4%** decrease as a result of the trends described above. Without taking into account the effects of the milder winter season and the lower thermal energy requirements due to the health emergency, the **decrease was 2.2%** and is due to the higher volumes of electricity from renewable sources sold by purchasing Guarantee of Origin certificates compared to the previous year and, in the waste-to-energy sector, the closure of the Ravenna plant.

GHG emissions under the EU-ETS

The **European Union Emissions Trading System (EU ETS)** is a cornerstone of the European policy to fight climate change and a key tool for cost-effective reduction of greenhouse gas emissions in regulated sectors. The system sets a **cap on the total level of emissions allowed** to all participants in the scheme but allows them to trade emission quotas on the market according to their needs. It covers about 45% of European emissions and in January 2021 its fourth phase of application began, to end in 2030. By 31 March of each year, installations in the regulated sectors must report the greenhouse gas emissions recorded in the previous calendar year, and by 30 April cancel a number of emission permits (“European union allowances”, 1 Eua = 1 t CO₂) made available on the market at a calibrated and decreasing rate over time to **encourage a gradual reduction of emissions** in accordance with the medium to long term European objectives.

In the Hera Group, nine plants will be subject to the EU-ETS regulation in 2020, all of which are related to energy production serving **district heating** networks. At 119,728 tonnes of CO₂, the emissions recorded in 2020 were lower than those of 2019 (162,679 t CO₂), mainly due to the effects of different weather, the temporary suspension of the application of the regulation for one plant and the exit from the application of the system for another in the last two months of the year. To take into account the fact that district heating is a public utility service and that it meets environmental sustainability criteria, the charge associated with actual emissions imposed by the ETS system is partly mitigated by free allocation of EUA or a maximum allowed amount of emissions within which no charges are made. In 2020, this measure totalled 23,219 tonnes of CO₂ (down from 30,004 t CO₂ in 2019, consistent with the regulatory profile); in particular, the EUA free allocation in 2020 totalled 13,246t CO₂ (16,726 t CO₂ in 2019).

In 2020, emissions from plants under EU-ETS accounted for 12.1% of the Group's total direct emissions (in 2019 they were 15.0%).

Carbon intensity indices

The Group's emission results can be represented by a number of indices that indicate their evolution and prospects, giving a picture of the company's performance in reducing impact in terms of greenhouse gases emitted. By relating direct emissions (Scope 1) and indirect emissions from energy consumption (Scope 2)

to certain economic and demographic indicators, we can obtain **carbon intensity indices** that reflect the improvements generated.

Carbon intensity indices [305-4]

	2019	2020
Direct emissions (scope 1) (t CO ₂ e)	1,082,609	986,211
Indirect emissions from consumption of electricity (Scope 2, market-based) (t CO ₂ e)	48,425	44,409
Total emissions – Scopes 1 and 2 (t CO₂e)	1,131,035	1,030,620
EBITDA (millions of Euro)	1,085	1,123
Carbon intensity index (t CO₂e emitted as Scope 1 and 2/EBITDA millions of Euro)	1,042	918
Citizens served (thousands)	4,332	4,221
Carbon intensity index (t CO₂e emitted as Scope 1 and 2/millions of citizens served)	261	244

The calculation criteria were aligned with the methodology of the Science Based Target Initiative.

The **emission intensity index** calculated as a ratio of Scope 1 and 2 greenhouse gas emissions to EBITDA improved compared to the previous year (-12%) due to the reduction in emissions for the reasons explained above and the parallel increase in EBITDA. The same index calculated against the value of production shows an improvement from 152 tonnes of CO₂ and in 2019 to 137 (-10%) due to a change in revenue. Lastly, the ratio on a city basis also decreased (-6%) due to the reduction in overall emissions. Relating Scope 3 emissions to the number of customers, the emission intensity index is about 5 tonnes per customer.

Carbon intensity index of energy production [305-4]

	2019	2020
Waste-to-energy plants (t CO ₂ e)	400,531	367,756
District heating (t CO ₂ e)	201,412	171,728
Landfills (t CO ₂ e)	212,577	212,493
Total emissions from energy production (t CO₂e)	814,520	751,976
Electricity (MWh)	1,242,963	1,152,798
Thermal energy (MWh)	1,047,553	975,510
Biomethane (MWh)	59,215	71,058
Total energy produced (MWh)	1,785,040	1,670,734
Carbon intensity index of energy production (kg/MWh)	456	450

The model for estimating landfill emissions was updated in 2020 and the 2019 data was recalculated using the same criteria as in 2020 to allow comparability of the data over the two-year period.

Considering the emissions generated by the electricity and heat generating plants shown in the table, the **carbon intensity index of power generation** in 2020 was **450 kg/MWh, down 22%** from the 2013 baseline (580 kg/MWh) and 1.4% from 2019. In detail, compared to the previous year, emissions from these plants decreased by 8% and energy production by 6%. This is a result of: (i) lower emissions from waste-to-energy plants, due to the closure of the Ravenna plant (-8%), from which, however, it was possible to produce more energy (+3%); (ii) increased production of biomethane at the Sant'Agata Bolognese plant compared to 2019 levels (+20%). These improved effects are partly offset by a reduction in energy production from district heating plants (-26%) that is more than proportional to the reduction in related emissions (-15%).

The energy-saving measures already in place and those planned by the Hera Group will enable us to further reduce the carbon intensity index of our energy production in the years to come. By 2024, we expect the carbon intensity index of energy production to **decrease by 34% compared to 2013** (reaching 386 kg of CO₂/MWh), mainly as a result of the Group's commitment to greater production of biomethane from the organic fraction of waste and a further decrease of the use of landfills for the treatment of municipal waste, as well as various efficiency measures that we will carry out on the plants.

Emissions avoided

Reduction of GHG emissions [305-5]

thousands t CO ₂ e	2018	2019	2020
Reduction of direct emissions (Scope 1)	583.3	557.6	506.5
Reduction of indirect emissions from energy consumption (Scope 2)	158.7	169.6	156.2
Reduction of other indirect emissions (Scope 3)	1,574.0	1,608.7	1,598.6
Emissions compensation	-	-	257.6
Total emissions avoided	2,316.0	2,335.9	2,518.9

The total greenhouse gas emissions avoided in 2020 as a result of the Group's activities amounted to **2.5 million tonnes**. Comparing this value to the number of inhabitants served by the Group, **597 kg of greenhouse gases per person were avoided**.

Emission reductions as a result of the following activities are considered in the calculation:

- Scope 1: Energy production from renewable sources, district heating, energy-saving measures and waste sorting;
- Scope 2: Energy saving measures and consumption of energy from renewable sources (either by purchasing Guarantee of Origin certificates or by considering the national fuel mix);
- Scope 3: energy-saving measures by Hera Luce, white certificates, sales of renewable energy (both through purchase of Guarantee of Origin certificates and considering the national fuel mix), sales of recycled plastic by Aliplast and, to a lesser extent, use of recycled paper for printing bills.

In addition, from 2020, emissions offsets from the sales of natural gas to customers with the Hera zero footprint offer and, to a lesser extent, from the printing of reports and balance sheets are included in the calculation.

Case study

Promotion of energy efficiency

Diario dei consumi (Consumption report)

The Diario dei consumi (Consumption report) is based on the principles of **behavioural economics**: all free market customers can request free activation of the digital service, which sends reports comparing their consumption with that of the previous year or with customers with similar characteristics in terms of size and type of house, number of inhabitants, supply location, and energy use. The report, currently active on about 600,000 electricity and gas supply points, aims to **make customers constantly aware** of their consumption habits and the potential effects of changing them, in order to help them **reduce their waste and save money**.

During 2020, **custom advice** was added to the report that highlights the tools that can be purchased to accelerate energy savings, that stimulate customers to find out more about environmental protection, that encourage the use of renewable energy, and that **quantify the savings achievable by reducing energy waste**. Together with the report, customers receive emails focusing on specific aspects of the report in order to keep engagement high.

The service is already in place **for electricity, gas, and district heating**. In 2020, we continued to conduct research together with the Milan Polytechnic University, a unique effort in Italy, extending the report to a sample of **water service** households (about 75,000) and to a sample of customers in Ferrara under **quantity-based charging** (about 35,000) to identify the effects of the reports on their consumption behaviour and any synergies that may arise from information pressure on several areas at the same time. The results of this research will be available in 2021, after monitoring at least one year of service.

In addition, the Hera Group has presented to the Energy Services Manager some energy-saving initiatives based on behavioural measures, and the Diario dei consumi (Consumption Diary) is among them. Again, quantification of the savings achieved will be available in 2021, once the first year of experimentation is completed.

The Diario dei consumi (Consumption Diary) contributes to **targets 7.3, 11.3, 11.6, and 12.8 of the UN's 2030 Agenda**, as well as - thanks to the involvement of customers and citizens - to **target 17.17**.

How does the project contribute to responsible digital transformation? The benefits we obtained in the Corporate digital responsibility dimensions (see the dedicated section "Corporate digital responsibility")

Social



A customised service that helps customers understand the environmental and economic effects of their behaviour and provides practical advice for reducing waste. The report can be consulted from various applications (Online Services and the MyHera app).

Economic



Quantification of savings achieved by reducing the waste generated by implementing more sustainable consumption patterns.

Environmental



Creation of a digital service aimed at encouraging more sustainable behaviour, with less waste and greater customer awareness of their consumption patterns.

Energy transition and renewables

The development of biomethane production

2020 was the first full year of industrial operation of our **biomethane production plant in Sant'Agata Bolognese**. With just under 100,000 tonnes of organic waste treated during the year, **7.8 million cubic metres of biomethane** were produced and fed into SNAM's network, **exceeding production forecasts by more than 5%** (6.5 million cubic metres in 2019). We also generated over 20,000 tonnes of high-quality compost. The biomethane we produced in 2020 was fed into the grid and provided to six service stations (five of which are in Emilia-Romagna and one in Umbria) identified by signs and specific graphics with the "Hera Group Biomethane" logo. Hera Group's corporate fleet in the city of Bologna refuelled at these service stations, which can also be used by citizens with natural gas powered vehicles.

In 2020, we started **the authorization process** for two projects designed to **increase the biomethane production** at Hera Group's plants. Both projects concern the revamping of two existing plants: the first one will partially convert the **Voltana** anaerobic digestion and composting plant in the municipality of Lugo (RA) from electricity production to the combined production of electricity and biomethane; the second will add an upgrading section to the liquid waste anaerobic digestion plant **Spilamberto** (MO) operated by the company Enomondo.

Lastly, by 2023 we will build a new anaerobic biodigester of mowing, pruning and organic waste in the **Pesaro-Urbino** province. It will be designed to treat approximately 105,000 tonnes per year of mowing, pruning and organic waste, from which it will be possible to generate **6 million cubic metres of biomethane** and 28,000 tonnes of high-quality compost per year. This is a strategic operation that is even more important in view of the fact that this type of plant is not self-sufficient in the Marche region, with significant positive repercussions on the environmental and employment front.

The "**LIFE+ Biomether**" project, concerning the construction of an experimental plant for the production of biomethane for automotive use from landfill biogas, started experimental operation in 2020. The results were satisfactory in terms of the quality of the biomethane produced, but not in terms of the continuity of operation and the quantity generated. The aim of the experiment was to apply two-stage upgrading technology, one using membranes and one using pressure swing adsorption, to obtain biomethane from biogas streams that were low in methane and originated from landfills the cultivation of which had been exhausted for some time, and therefore lacking the characteristics to be used in endothermic engines. Fluctuations in biogas production and the high presence of nitrogen have led to major obstacles for the continuity of plant operations, highlighting the substantial limitations of its development for application on an industrial scale.

Overall, the Group's target for 2024 is to **produce more than 15.5 million cubic metres per year of biomethane** from organic waste (more than doubling the current amount achieved). The target for 2030 will be even more ambitious, with the Group generating 30 million cubic metres.

The biomethane-from-waste projects contribute to achieving targets **7.2, 8.2, 9.1, 9.2, 9.4, 11.2, 11.6, 12.2, 12.4, 12.5, and 13.2 of the UN's 2030 Agenda**.

Hera with Yara Italia and Sapio for green hydrogen and sustainable agriculture

The Hera Group has long been committed to the sustainability of the **agricultural sector**, for example through circular and resilient water management, which also includes several projects for the regeneration of water resources and the reuse of purified water. The transition of this sector is a complex but essential challenge due to the large water consumption and emissions that result in the processes that affect agriculture directly and indirectly. One of these processes is undoubtedly the **fertilizer** sector, which is the subject of a memorandum signed by the Hera Group, Yara Italia, a leader in the production of nitrogen and

complex fertilizers, and Sapio, a leading company in the field of technical and medicinal gases, to explore the possibility of using **green hydrogen** to decarbonise the agricultural sector and thus promote sustainability. Green hydrogen is the only zero-impact hydrogen because it is generated by electrolysis of water in special technologies powered by renewable energy.

Under this agreement, Hera, Yara and Sapio will initiate a joint series of analyses and research which, by the end of 2021, will assess the technological, economic and regulatory **feasibility** of a concrete project for the use of renewable energies and the development of a green hydrogen supply chain, including its generation, transport and subsequent use to produce fertilizers. In particular, the envisaged experimental hydrogen generation plant would use the renewable energy produced by the Ferrara waste-to-energy plant to produce hydrogen from water and feed the nearby Yara Italia industrial plant dedicated to fertilizer production. Sapio will be responsible for scouting plant technology and further investigating technical solutions to supply the Yara plant. Estimates show a **production capacity of 500 tonnes per year of green hydrogen**.

The project described here contributes to achieving **targets 7.2, 9.1, 9.2, 9.4, 11.6, and 13.2 of the UN's 2030 Agenda**, as well as – thanks to the partnerships developed – contributing to achieving **target 17.17**.

Zero impact on climate with Hera Impronta Zero

The "**Hera impronta zero**" electricity and gas offer dedicated to families and small and family businesses require all the energy supplied to be "**green**" and **sustainable**. In particular, the supply of electricity comes from **certified renewable sources** by purchasing Guarantee of Origin (GO) certificates, and the emissions resulting from customers' consumption of natural gas are offset by purchasing **certified carbon credits** that finance projects with environmental and social benefits.

In 2020, our carbon credit purchases contributed to the following projects, which are certified under the highest **international standards** for carbon reduction:

- A 1,000 MW run-of-the-river **hydroelectric power plant** in the state of Himachal Pradesh in **India**, which generated about 3 TWh/year of energy, with an estimated emission avoidance benefit of about three million tonnes of CO₂e/year. Support for this project has also created jobs for the local community, built a school, an industrial training institute and a 40-bed hospital, besides providing essential infrastructure for travel among surrounding villages.
- A 50.6 MW **wind farm** in the village of Balabanli in **Turkey** supplied about 150 GWh/year of renewable energy to the national grid, with an estimated reduction of about 90,000 tonnes of CO₂e/year. It also contributed to the creation of new jobs for the local community, with a corresponding decrease in poverty and unemployment.

The Hera Impronta Zero offer contributes to achieving **targets 7.2, 13.1, and 13.2 of the UN's 2030 Agenda**.

Climate change mitigation

Aliplast measures the carbon footprint of its products

To make available information on the **carbon footprint** of some products, since 2018 Aliplast has been calculating the carbon footprint of five types of products: PE granules, PE films, PET granules, PET plates, and PET scales.

Aliplast commissioned this study to understand the **environmental performance in relation to global warming of the above products**. Therefore, the study quantified the greenhouse gas emission per functional unit of product (set as one kg), to identify the most environmentally critical phases of their life cycles and act to reduce their environmental impact. The study used the European EF 3.0 method, developed by the Joint Research Centre for the European Product Environmental Footprint (PEF) initiative.

One of the outcomes of the life cycle assessment (LCA) is the amount of CO₂ equivalent, the calculation method of which is the global warming potential GWP-100 of the IPCC 2013, a part of EF v3.0.

The project involved **analysing the greenhouse gas emissions of Aliplast products and comparing them with those of the corresponding virgin products**. The result is expressed in kg of CO₂ equivalent due to production. The CO₂ equivalent is the unit of measurement used to compare emissions of different greenhouse gases with climate-changing effects using a single index, the so-called global warming potential (GWP). CO₂ has been taken as a reference by the IPCC (Intergovernmental Panel on Climate Change) and its GWP set at 1. Other greenhouse gases are then converted into CO₂ equivalents according to their global warming potential. For example: a tonne of gas with a climate-changing potential 21 times greater than carbon dioxide is counted as 21 tonnes of CO₂ equivalents.

The analysis showed that in 2020, the production of more than 85 thousand tonnes including PE Granules, PE Films, PET Granules and regenerated PET plate, **avoided the production of more than 155 thousand tonnes of CO₂**, corresponding to more than 400 thousand barrels of oil. The CO₂ savings obtained thanks to the contribution of suppliers and customers who believe in Aliplast's recycled products is equivalent to a reduction of more than 100,000 cars in a year, equal to those of an average Italian city.

Aliplast's business contributes to achieving **targets 11.6, 12.2, 12.4, 12.5, and 13.2 of the UN's 2030 Agenda**.

New certification of Ferrara's district heating climate footprint

The **district heating plants** that Hera built in the city of **Ferrara** are one of the most significant models of an integrated energy system, so much so that it recently obtained a **Carbon Footprint** certification based on the ISO 14067:2018 standard that expresses the total greenhouse gas emissions directly or indirectly linked with the Ferrara district heating service in terms of CO₂ equivalent.

According to this certification, Ferrara's system has a carbon footprint of **just 0.122 kg of CO₂ equivalent per thermal kWh** sold to end users, **56% lower** than the environmental impact of heating with traditional domestic boilers.

This is a significant figure, which shows that the system helps the city of Ferrara **avoid emitting over 22,000 tonnes of CO₂ per year**, mainly due to the fact that this network makes extensive use of geothermal energy, a totally renewable source which, combined with the heat recovery in the waste-to-energy plant in Via Diana, means that almost 90% of the heat distributed to the city's homes is from renewable sources.

Also taking into account the new certification, Ferrara's district heating system contributes to achieving **targets 7.2, 11.6, 13.2, and 14.3 of the UN's 2030 Agenda**.

Environment - Regenerating resources and closing the loop

Objectives and performance

What we said we would do	What we have done	SDGs	Progress*	Geographic scope*
Transition towards a circular economy				
<ul style="list-style-type: none"> Achieve 75% of separate waste collection by 2023 also by extending quantity-based charging in Emilia-Romagna (77% Hera, 63% AcegasApsAmga, 73% Marche Multiservizi). 	<ul style="list-style-type: none"> 65.3% separate waste collection was achieved in 2020 (64.6% in 2019) (66.2% Hera, 55.8% AcegasApsAmga, 71.1% Marche Multiservizi) (see page 88) 	11, 12		ER T M
<ul style="list-style-type: none"> Reach a >70% recycling rate for packaging and 62% overall recycling rate for municipal waste by 2023 (exceeding the EU objectives for 2030). 	<ul style="list-style-type: none"> The recycling rate of packaging was 72% in 2019 (stable compared to 2018). The overall recycling rate was 56% in 2019 (53% in 2018). The 2020 data will be accounted for in the "Tracking Waste" report (see page 150) 	11, 12		ER T M
<ul style="list-style-type: none"> Increase by 70% by 2025 (compared to 2017) the plastic recycled by Aliplast, increase by 30% the plastic collected in the municipalities served, and by 50% the plastic selected and sent for recycling by the Group's plants. Those are the commitments made under the "New Plastics Economy Global Commitment" of the Ellen MacArthur Foundation to fight pollution from plastic waste. 	<ul style="list-style-type: none"> We increased by +16% the plastic recycled by Aliplast in 2020 (compared to 2017), we increased by +21% the plastic collected in 2020 in the municipalities served, and by +14% the plastic selected and sent for recycling in 2020 by the Group's plants, in line with the 2025 commitments for the Ellen MacArthur Foundation's "New Plastics Economy Global Commitment". (See page 152) 	11, 12		
<ul style="list-style-type: none"> Promote the principles of the circular economy among suppliers: define a Group guideline for "circular" purchases and increase the value of adjudications consistent with the "circularity" criteria identified. 	<ul style="list-style-type: none"> A group guideline for "circular" procurement has been defined. The value of "circular" contracting reached 9% of the value of new contracts awarded in 2020. (See page 380) 	12		ER T M
<ul style="list-style-type: none"> Launch a partnership project for the chemical recovery of PET waste, currently not mechanically recycled 	<ul style="list-style-type: none"> Contacts with a partner have started: we expect to finalise the agreement in 2021. Aliplast signed an agreement with NextChem to develop the recycling of certain rigid plastics. (See page 154) 	12		

What we said we would do	What we have done	SDGs	Progress*	Geographic scope*
Sustainable management of water resources				
<ul style="list-style-type: none"> • Achieve 100% compliance for urban areas >2,000 p.e. by end 2021 by continuing the compliance plan for the sewage and depuration sector. In addition: <ul style="list-style-type: none"> - 247 urban areas achieved compliance of the 249 served with a population between 200 and 2,000 p.e. in Emilia-Romagna and <2.000 in Triveneto by il 2021 (76 yet to achieve compliance in Emilia-Romagna and 2 in Triveneto); - implementation by 2021 of a further 7 interventions in the urban areas with a population of more than 10,000 p.e. in relation to the requirements of Resolution 201/2016 of the Emilia-Romagna Region on the upgrading of urban wastewater discharges (11 total interventions implemented by 2021 compared to 35 to be implemented by 2030). 	<ul style="list-style-type: none"> • 97.6% urban areas >2,000 p.e. (130 out of 135) compliant at end 2020 (95.6% at end 2019). Furthermore: <ul style="list-style-type: none"> - Achieve compliance for 174 urban areas of the 249 served with between 200 and 2,000 p.e. in Emilia-Romagna and <2,000 in Triveneto by end 2020 (3 urban areas achieved compliance in Emilia-Romagna); - 3 measures were carried out in 2020 in urban areas of more than 10,000 p.e. (in Emilia-Romagna) in relation to the requirements of Resolution 201/2016 of the Regional Government of Emilia-Romagna on the compliance of urban wastewater sewage. (See page 126) 	6, 14		ER T M
<ul style="list-style-type: none"> • 3 further interventions concluded by the end of 2021 for the Rimini Seawater Protection Plan. 10 interventions concluded by the end of 2021 out of the 14 that make up the Plan. 	<ul style="list-style-type: none"> • Two further measures were completed in 2020 for the Rimini Seawater Protection Plan, for a total of 9 interventions concluded out of the 14 contained in the Plan. (See page 164) 	6, 14		ER
<ul style="list-style-type: none"> • Reduce by 15% the internal water consumption by 2023, compared to 2017 consumption. 	<ul style="list-style-type: none"> • 12% reduction in internal consumption in 2020 compared to 2017 consumption due to specific water saving activities (see page 117) 	6, 8		ER
<ul style="list-style-type: none"> • Reduce domestic consumption by 5% by 2023 compared to 2018, also thanks to the diffusion of the Diario dei consumi (Consumption Diary) (26% of residential customers in 2021). 	<ul style="list-style-type: none"> • Domestic consumption up by 4% compared to 2018 as a result of the health emergency; 145,427 domestic customers with the Diario dei consumi (Consumption Diary) at the end of 2020 (20% of resident domestic customers; was 11% at the end of 2019). (See page 117) 	6, 8		ER
<ul style="list-style-type: none"> • Reduce water losses per km by 4.8% in 2023 (10.0 m3/km/day) compared to 2018 (10.5 m3/km/day). 	<ul style="list-style-type: none"> • Water losses per km down 2.1% in 2019 (10.2 m3/km/day) compared to 2018 (10.5 m3/km/day) (see page 114) 	6, 8		ER T M
<ul style="list-style-type: none"> • Reuse 9% of reusable wastewater out of total wastewater by 2023. 	<ul style="list-style-type: none"> • In 2020, 5% of reusable wastewater out of total wastewater (was 3% in 2019). (See page 116) 	6, 8, 12, 14		ER

What we said we would do	What we have done	SDGs	Progress*	Geographic scope*
Protection of air, soil and biodiversity				
<ul style="list-style-type: none"> 450 thousand m2 of land reused between 2020 and 2023 to design, build, and upgrade infrastructure (73% of the total land involved in new designs, constructions and upgrades by 2023). 	<ul style="list-style-type: none"> 278,000 square metres of land reused in 2020 in infrastructure design and construction/upgrading (87% of the total land used in 2020). (See page 148) 	8		ER
<ul style="list-style-type: none"> 13% increase of the volume served by district heating by the end of 2023 compared to 2018 improving the air quality in the cities served. In Ferrara, implement plant solutions to make greater use of geothermal energy (+20% geothermal energy produced in 2023 compared to the 2016-19 average). 	<ul style="list-style-type: none"> 2.5% increase of the volume served by district heating by the end of 2020 compared to 2018, improving the air quality in the cities we served. In Ferrara, extraordinary maintenance work was carried out to improve exploitation of the geothermal source. (See page 139) 	7, 11, 14		ER
<ul style="list-style-type: none"> Over 270 public infrastructure works installed by 2023 for electric transportation in cities. 	<ul style="list-style-type: none"> 104 public infrastructure works installed in 2020 for electric transportation in cities (43 at the end of 2019). (See page 148) 	11		ER T M

*  Result achieved or in line with plans.  Result with moderate deviation from planning.

** Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

What we will do	SDGs	Geographic scope*
Transition towards a circular economy		
<ul style="list-style-type: none"> Achieve 75% of separate waste collection by 2024 also by major investments focused on engaging residents and businesses (77% Hera, 60% AcegasApsAmga, 73% Marche Multiservizi). 	11, 12	ER T M
<ul style="list-style-type: none"> Reach a >75% recycling rate for packaging by 2024 and a 67% overall recycling rate for municipal waste by 2030 (exceeding the EU objectives for 2035). 	11, 12	ER T M
<ul style="list-style-type: none"> Increase by 70% by 2025 and by 150% by 2030 (compared to 2017) the plastic recycled by Aliplast, increase by 30% the plastic collected in the municipalities served, and by 50% the plastic selected and sent for recycling by the Group's plants. Those are the commitments made under the "New Plastics Economy Global Commitment" of the Ellen MacArthur Foundation to fight pollution from plastic waste. 	11, 12, 17	
<ul style="list-style-type: none"> Reuse 9% by 2024 and 15% by 2030 of reusable wastewater out of total wastewater. 	6, 8, 12, 14	ER
<ul style="list-style-type: none"> 9% value of tenders awarded in compliance with circular economy principles by 2021 by applying the new circular procurement guidelines and related operating instructions defined in 2020. 	12	ER T M

What we will do	SDGs	Geographic scope*		
Sustainable management of water resources				
<ul style="list-style-type: none"> Achieve 100% compliance for urban areas >2,000 p.e. by end 2023 by continuing the compliance plan for the sewage and depuration sector. In addition, 247 urban areas of the 249 served with between 200 and 2,000 p.e. in 2021, of which: <ul style="list-style-type: none"> Achieve compliance for 212 urban areas of the 212 served with between 200 and 2,000 p.e. in Emilia-Romagna (73 yet to achieve compliance as of 2021); Achieve compliance for 35 urban areas of the 37 served between 200 and 2,000 p.e. in Triveneto (two that will become compliant by 2030); by 2021, implement further 5 measures in urban areas of more than 10,000 p.e. in relation to the requirements of Resolution 201/2016 of the Regional Government of Emilia-Romagna on the compliance of urban wastewater sewage (12 interventions in total carried out by 2021, compared to 36 to be carried out by end of 2030). 	6, 14	ER	T	M
<ul style="list-style-type: none"> 1 further intervention concluded in the Rimini Seawater Protection Plan, thus bringing to 10 the number of interventions concluded by the end of 2021 out of the 14 that make up the Plan. 	6, 14	ER		
<ul style="list-style-type: none"> 77% of users served in areas with a Water Safety Plan defined by 2024 and 100% by 2030 (12.8% in 2020). 	6	ER	T	M
<ul style="list-style-type: none"> Reduce by 17% the internal water consumption by 2024 and by 25% by 2030, compared to 2017 consumption. 	6, 8	ER		
<ul style="list-style-type: none"> 26% of customers with "Water consumption diary" in 2021 equal to 200,000 customers. 	6, 8, 17	ER		
<ul style="list-style-type: none"> -4% Water losses per km by 2024 and -10% by 2030 compared to 2018. 	6, 8	ER	T	M
Protection of air, soil and biodiversity				
<ul style="list-style-type: none"> 256,000 m2 of land reused between 2021 and 2024 to design, build, and upgrade infrastructure (66% of the total land involved in new designs, constructions and upgrades). 	8			
<ul style="list-style-type: none"> 13% increase of the volume served by district heating by the end of 2024 compared to 2019, improving the air quality in the cities we served. In Bologna, continue the design of the CAAB/Pilastro and Sede S. Giacomo interconnection to significantly reduce CO₂ and NO_x emissions 	7, 11, 13, 14	ER		
<ul style="list-style-type: none"> >300 public infrastructure works installed by 2024 for electric transportation in cities. 	11, 17	ER	T	M

* Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

Transition towards a circular economy

The circular economy of municipal waste

While not the only measures needed to support a transition to a circular economy, waste management is one of the most urgent issues on which the new European directives focus. Hera Group is a major player in the field of municipal waste management, serving **187 municipalities in four regions for a total population of 3.2 million inhabitants**. In Emilia-Romagna, Hera Spa manages the municipal sanitation service in six provinces, for a total of 133 municipalities. The acquisition of Cosea Ambiente in 2019 brought 15 new municipalities in the Bologna area into Hera Spa's scope. Besides these municipalities, Hera Spa manages three others in the province of Florence. In addition, through Marche Multiservizi, it also serves 38 municipalities in the province of Pesaro-Urbino and another six municipalities in areas adjacent to the Marche Region. Since 2013, through AcegasApsAmga, it has served seven municipalities in the provinces of Padua and Trieste.

Total municipal waste collected, by area

thousands of tonnes	2018	2019	2020
Emilia-Romagna	1,554.7	1,619.5	1,527.3
Triveneto	252.8	254.3	241.0
Marche	172.8	163.9	146.9
Total	1,980.3	2,037.7	1,915.3
kg/inhabitant	632	636	597

The trend over the last two years shows a decrease in quantities collected (-6% compared to 2019) mainly due to the health emergency. Specifically, in Emilia-Romagna the decrease was -5.7%, in Triveneto -5.2%, while in Marche the decrease was greater (-10.4%): the effects of the health emergency were compounded by lower quantities of waste delivered to the separate waste collection centres (-14%), particularly for wood (-62%) as a result of the introduction of a new limit for delivery to the separate collection centres (3 m3) above which processing costs apply.

Hera Spa's service area is characterised by a high level of production of similar-to-municipal waste, which results in an **annual per capita production of waste** that is among the highest in Italy: about 597 kilograms per inhabitant (617 kilograms per inhabitant in Emilia-Romagna, 557 in Marche and 511 in Triveneto) compared to an Italian average of 499 kilograms in 2019 (Source: Ispra, 2020 Municipal Waste Report).

Hera Group's service area has a very well-structured collection system that can separately collect many different types of municipal waste, primarily for material recovery, reconciling the needs of the Municipalities with operating efficiency and effectiveness.

Hera's waste management system is characterised by three main services:

- **local collection:** these are widespread collections throughout the area, primarily targeted at residential users and small, non-residential users and can be carried out using:
 - roadside bins, set up according to the basic drop-off points (Isole Ecologiche di Base – IEB) model, which groups the main collection chains into individual stations. In recent years, electronic traceability systems for disposal monitoring (e.g. the "lid" model for mixed waste or locking systems for separate waste collection chains) have become increasingly widespread in combination with roadside bins;
 - door-to-door collection, carried out at the users' premises, where residents set out the waste for collection on set days and times;

- **residential collection** for “target”, non-residential users that produce specific waste similar to municipal waste such as cardboard in shops, glass or cans in bars, and organic waste in canteens or restaurants;
- **separate waste collection centres**: also known as Drop-Off Points, these facilities are present in almost all the municipalities Hera serves and complete the range of services offered to residents for disposing of their separated municipal waste. The use of waste collection centres is becoming a real habit for residents: a wide range of categories of municipal waste (including certain hazardous waste) can be safely disposed of besides bulky and heavy waste. Moreover, in many areas, there is a system of discounts that rewards the disposal of various categories of separate waste.

The system is also supplemented by the door-to-door collection of bulky waste (free of charge, by phone call or by appointment), the collection of green waste, and the collection of other types of hazardous waste (such as batteries and pharmaceuticals), at specific businesses. Lastly, roadside collection and collection at shopping centres of WEEE (Waste Electrical and Electronic Equipment) and of waste cooking oil is gradually spreading.

To improve their effectiveness, the collection services are **diversified according to standardised area types** (city centres, residential areas, tourist areas, suburban areas, and industrial zones). For each area, the collection system that best fits in with urban, environmental and local characteristics is identified. The aim is to **maximise the percentage of separate waste collection** and its quality by providing a technically and economically sustainable service.

Main forms of waste collection used

Number of municipalities served	2018	2019	2020	% 2020 (on the number of residents)
Roadside collection	86	84	79	50%
Roadside collection with special disposal-control mechanisms	31	35	37	20%
Mixed system (door-to-door for mixed waste and roadside collection for separated waste)	31	40	41	10%
Total door to door	26	28	30	20%
Total	174	187	187	100%

In view of the gradual switch to quantity-based charging in **Emilia-Romagna**, reorganisation of the service has started and will continue in coming years to implement the identification and measurement of disposals. In 2020, in Emilia-Romagna, the number of municipalities using normal bin-based roadside collection fell again while use of collection systems that identify users at the time of disposal increased, to initiate or prepare for quantity-based charging. The number of municipalities that use **disposal control systems** increased from 34 in 2019 to 36 (plus one municipality in the Triveneto area), while those that use **total door-to-door collection** held steady at 18 (plus five municipalities in the Triveneto area and seven in the Marche region). As far as the “**mixed**” system is concerned, i.e. with door-to-door collection for organic and mixed waste and roadside collection for other separate waste collection, seven municipalities in Emilia-Romagna and 34 municipalities in the Marche region now use this method (one more than in 2019).

Separate waste collection

The main types of separately collected waste are:

- **packaging and similar**: paper and cardboard, plastic, glass, aluminium and steel cans, wood;
- **durable goods**: iron, waste from electrical and electronic equipment (WEEE) and bulky waste;
- **compostable waste**: kitchen organic waste and “green” waste from mowing and pruning material;

- **other waste:** inert material from small demolitions, used mineral oil and cooking oil, batteries and accumulators, pharmaceuticals, and other hazardous municipal waste.

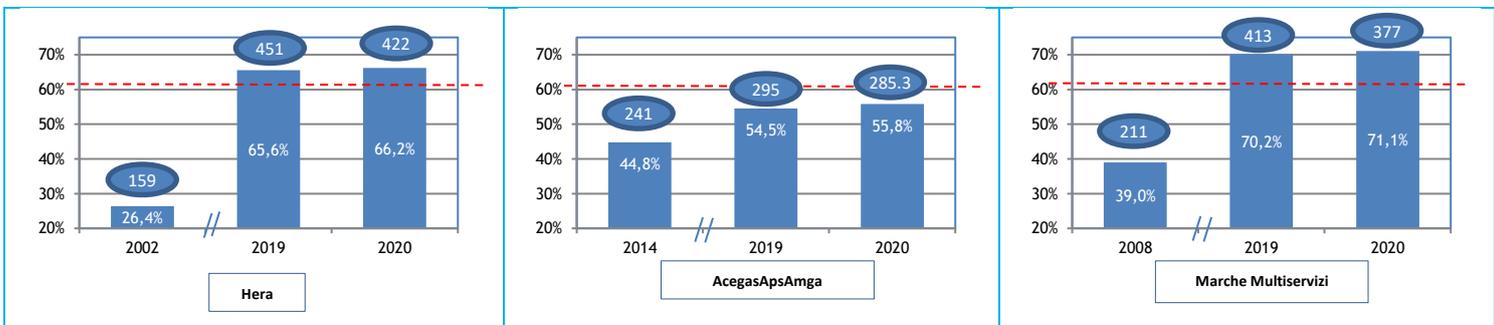
In **Emilia-Romagna**, Regional Law no. 16 of 2015 on the circular economy set as an objective the launch of **quantity-based charging** throughout the region; this objective was confirmed by the new 2020-2025 Regional Mandate Programme presented in June 2020. Quantity-based charging makes the payment of sanitation services no longer be linked only to the area and the number of residents in a house, but also to the quantity of mixed waste produced. Quantity-based charging rewards responsible conduct.

As regards local collection, which accounts for the majority of waste, Hera is implementing various systems in the area **geared towards the future application of quantity-based charging**:

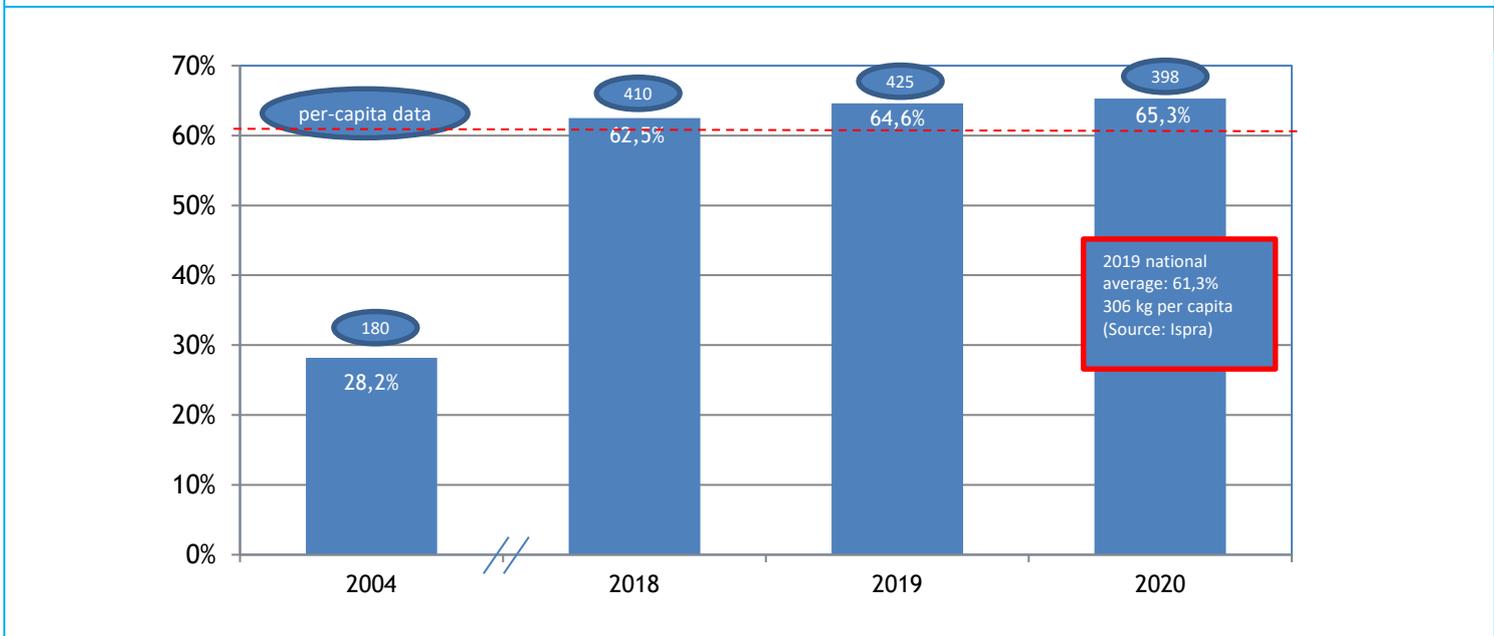
- roadside bins with a control system and user identification ("lid" system);
- residential collection with bins equipped with tag transponders;
- collection centres with weighing and user registration systems.

In many municipalities, mixed territorial systems coexist (e.g. roadside collection for some materials and door-to-door for others; roadside collection in some areas and door-to-door in others).

Separate waste collection



The baseline shown in the graph reflects the first year for which data are available.



Separate waste collection is calculated according to Regional Authority Decision 2218/2016: neutral fractions are therefore excluded (flows from beaches, cemeteries and EWC not classified as municipal waste) and the estimate of waste from home composting set by the Region is included. As per Regional Authority Decision 2218/2016, street sweeping for recovery is counted as separate waste collection. Separately collected waste also includes similar-to-municipal waste disposed of by manufacturers for

recovery and waste collected by volunteer associations or directly by municipalities. The differing criteria for considering waste as similar-to-municipal laid down by ATERSIR and Municipalities may be responsible for quota differences between area.

The amount of waste consists of separate (allowed EWC sent for recovery, allowed community and home composting) and mixed waste collection (solid municipal waste, street sweeping for disposal, bulky waste for disposal, and any waste collected separately but sent for disposal).

In 2020, due to the health emergency, the volumes of **separate waste collection** decreased by 6%, to 1,278.3 thousand tonnes, compared to 2019.

Despite this decrease, the substantial reduction of the mixed waste component (-9.1%) has led to an increase in the percentage of separate waste collection, given by the ratio of the quantity of municipal waste collected separately to total waste (separated municipal waste and mixed waste), which has risen at the Group level **from 64.6% in 2019 to 65.3% in 2020**, levels that are higher than the Italian average of 61.3% recorded by Ispra for 2019 (Source: Ispra, Municipal Waste Report 2020).

In 2020, in the **eight provincial capital cities served by the Hera Group**, the level of separate waste collection was 59.6%, compared to an Italian average of 51.2% for all of Italy's provincial capital cities (weighted average, Source: processing of Legambiente data, Ecosistema Urbano 2019).

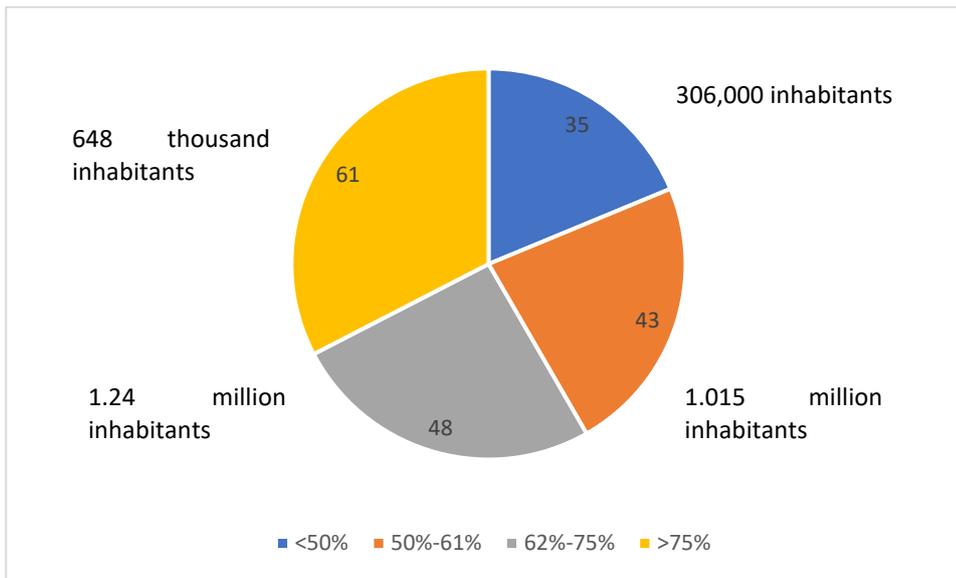
In Emilia-Romagna, the percentage of separate waste collection increased from 65.6% to 66.2%. This difference is only due to the "managed" component of separate waste collections, as for 2020 the share of independent recovery by companies has been estimated to be much lower than in 2019, as a result of the health emergency (final data will be available at the end of the reporting for the Osservatorio rifiuti Sovraregionale (supraregional waste observatory) - ORSo scheduled for April 2021). At territorial level, the percentage of separate waste collection exceeds:

- 85% in the municipality of Ferrara which has been operating under the quantity-based charging system since 2018;
- 70% in Marche;
- 65% in the provinces of Modena and Rimini;
- 60% in the provinces of Bologna (63.2%, down by about two percentage points compared to 2019 given the consolidation of the municipalities formerly managed by Cosea into the scope of the province of Bologna), Forlì-Cesena, Ravenna, and Padua.

The separate waste collection rate for the province of Trieste is still below the Group average (44.9%), but slightly improving.

At the municipal level, 2020 ended with **61 out of 187 municipalities served (2 more than the previous year) with a percentage of separate waste collection exceeding 75%**; 20% of the total population served lives in these municipalities. There were 31 municipalities in Emilia-Romagna with more than 75% of separate waste collection, 18 of which were applying quantity-based charging. The 16 municipalities using quantity-based charging in 2019 were joined by another 2 municipalities in 2020: Guiglia and Morciano di Romagna. The business plan's target for 2024 is to reach 77.4% as the average of the municipalities served in the region. In Triveneto three out of seven municipalities exceeded 75%, and the target for 2024 is to bring the value of separate waste collection to an average of 60%. In the Marche region, 26 out of 44 municipalities are above 75% separate waste collection. The target for separate waste collection by 2024 is 72.5%. **The Group's separate waste collection target for 2024 is 75%**, as envisaged in the latest business plan approved by Hera Spa's Board of Directors in January 2020.

Separate waste collection in the service area: number of municipalities by percentage range of separate waste collection (2020)



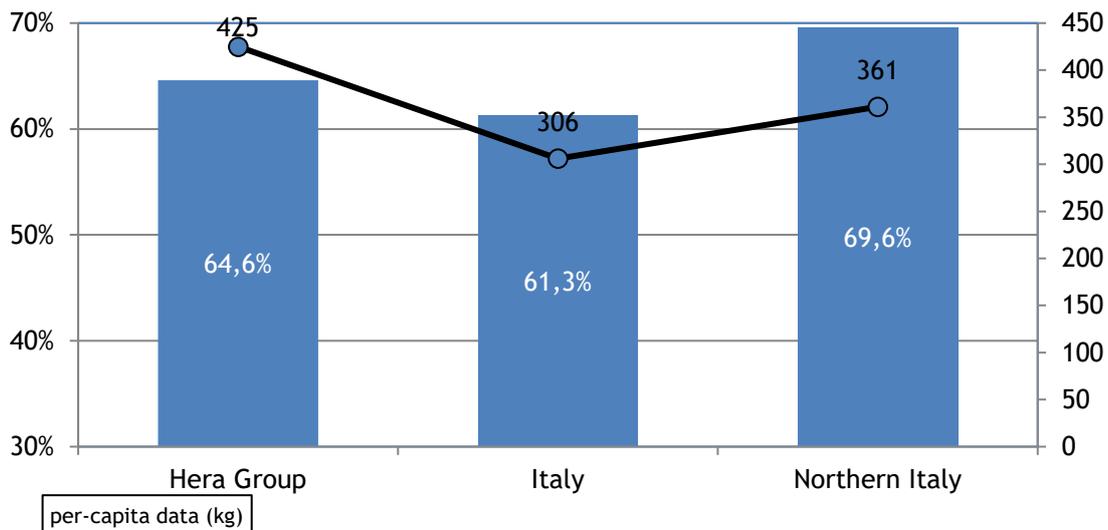
The Group's separate waste collection, according to Emilia-Romagna data, includes similar-to-municipal waste sent for recovery by manufacturers and separate waste collected by volunteer associations or directly by municipalities as defined by Regional Authority Decision 2218/2016, implemented in the municipal and local regulations in force. The situation is very diverse throughout our service area and depends on the revisions of the regulations of the individual municipalities. In 2020, in the areas we served in Emilia-Romagna, the percentage of similar-to-municipal waste we did not handle (similar-to-municipal waste delivered for recovery directly by the producer of such waste) of the total of separately collected waste during the year was 5.3%.

When considering the **effectiveness of separate waste collection**, a useful indicator is the quantity per capita figure, expressed in kg/inhabitant/year, which enables significant analyses on the quantities of **waste sent for recovery per capita, both overall and by single supply chain**. Due to the health emergency that led to lower volumes of separate collection, the per inhabitant separate waste collection at Group level decreased from 425 kg in 2019 to 398 kg in 2020, down 6.4% compared to the previous year.

At per capita level, separate waste collection in **Emilia-Romagna**, is around 422 kg/inhabitant/year, down 6.4% compared to 2019 for a total quantity of more than 1,044 thousand tonnes. At the individual area level, the decrease in separate waste collection per capita was 9.4% in **Bologna**, 6.6% in **Modena**, 6.4% in **Forli**, 5.9% in **Rimini**, and 5.3% in Ravenna. **Ferrara**, down by only 2.5%, is the only area with a lower-than-average decrease.

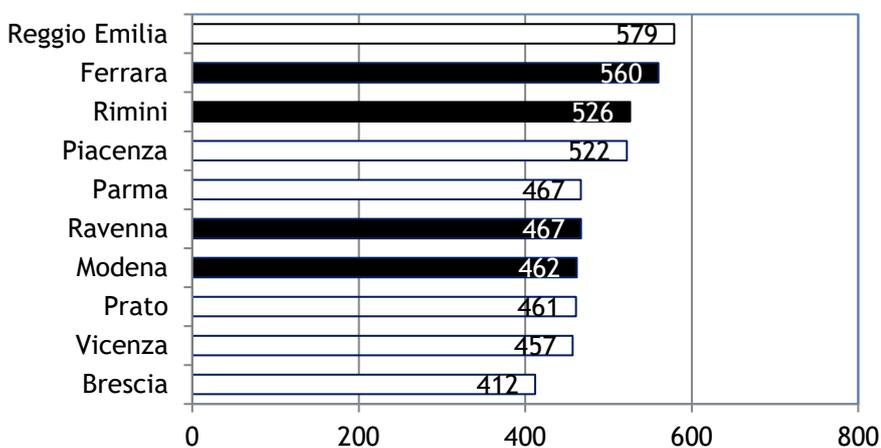
Considering the 2019 data published by Ispra, Hera's per capita separate waste collection is 39% higher than the Italian average and 18% higher than the average for Northern Italy.

Separate waste collection percentage and per capita (2019 data)



Considering Italy’s provincial administrative capitals with populations over 100,000 inhabitants, in 2019 **four of the top 10 best-performing Italian cities by per capita separate waste collection were served by the Hera Group**. Among them, Ferrara and Rimini are also among the top ten Italian cities in terms of percentage of separate waste collection (Ferrara with a rate of 86.2% ranks first among provincial capitals and at 68.8%, Rimini is in seventh place among all capitals with more than 100,000 inhabitants). As the data show, the high levels of production of similar-to-municipal waste in the territories managed by the Group generate significant benefits in terms of volumes of waste to be sent for recycling and recovery.

Separate waste collection per capita, in kilograms, for municipalities with over 100,000 inhabitants (2019)

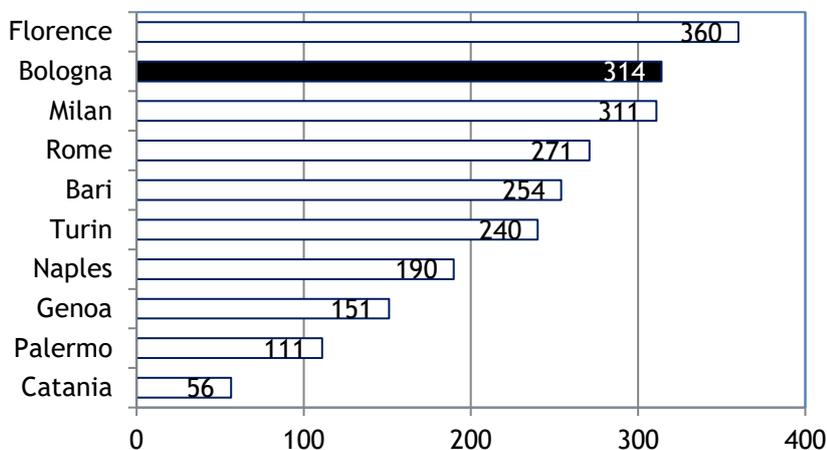


Source: processing of Legambiente data, Ecosistema Urbano 2020

On the other hand, considering provincial capital cities with over 300,000 inhabitants, **Bologna ranks second** in Italy for per capita separate waste collection (Source: processing of Legambiente data, Ecosistema Urbano 2020). Bologna is once again in second place in the ranking by percentage of separate waste collection. This achievement was made possible by the measures in the historical centre, with 109 underground drop-off points, 13 drop-off points above ground and the new smarty bins for the collection of mixed waste, which can be opened with the Smeraldo card (also used in the Savena district). The city’s

entire historic centre increased from 61.8% in 2018, to 67.5% in 2019 (the first full year with full operation of all drop-off points), and to 71.5% in 2020.

Separate waste collection per capita, in kilograms, for municipalities with over 300,000 inhabitants (2019)



Source: processing of Legambiente data, Ecosistema Urbano 2020

As regards separate collection by **type of material collected**, it should be noted that in 2020, with the exception of plastic, glass and bulky items, which increased by 1%, 4.1% and 0.4% respectively, all the other sectors recorded a decrease compared to 2019, due to the health emergency. The most significant changes are detailed below:

- the collection of organic waste decreased by -3.5%; it should be noted that this collection also includes flows from hotels and restaurants, which experienced a major slowdown in 2020 due to the health emergency;
- multi-material collection dropped by 23% also due to the gradual termination of the collection service;
- the collection of paper and cardboard fell by 9.7%;
- wood dropped sharply (19.6%), also due to the introduction, in Marche Multiservizi's service area, of a threshold on the volume of disposal (three cubic metres) above which the service is charged;
- green waste decreased by 5.4%;
- the collection of inert materials fell by 8.6%;
- the collection of iron decreased by 4.3%;
- WEEE decreased by 2.5%;
- the Other item increased by 1.2% mainly due to the effect of home composting in Emilia-Romagna, included in the calculation of separate waste collection as per Regional Authority Decision 2218/2016.

Separate waste collection by waste type

Thousands of tonnes	2018	2019	2020
Paper and cardboard	263.5	261.4	236.1
Green waste	227.6	243.4	230.2
Glass	103.9	116.6	121.3
Organic waste	220.9	237.0	228.8
Plastic containers	100.3	111.5	112.6
Waste from multi-material collection	63.6	64.1	49.0
Wood	102.1	108.1	86.9
Bulky waste	47.5	52.4	52.7
Inert material	66.4	69.0	63.0
Iron	12.1	12.8	12.3
WEEE	17.6	20.0	19.5
Other	60.2	65.1	65.9
Total	1,285.6	1,361.4	1,278.3

Separate waste collection per capita (2019)

kg/inhabitant	Paper	Glass	Plastic	Wood	Metals	Organic and green waste
Hera Group	82	36	35	34	4	150
Northern Italy	65	44	29	25	8	136
Italy	59	38	25	15	6	121
Best region	87*	57**	54**	39*	15**	185*
<i>Hera Group (2020)</i>	74	38	35	27	4	143

*Emilia-Romagna, **Valle d'Aosta, ***Trentino-Alto Adige. Source: Ispra, 2020 Municipal Waste Report

Hera's separate waste collection levels are due to the widespread coverage of its services and to the regulations for categorisation as similar-to-municipal waste, that encourage the material recovery. Hera ranks above the Italian average and the average for northern Italy in all cases except glass and metals.

The cost of collecting and disposing of municipal waste is also influenced by the revenue coming from the sales of separately collected and recovered material or from the subsidies that CONAI (the national packaging association) provides to the service operator. In 2019, these revenues and contributions amounted to 28% of the direct costs of separate waste collection (including the cost of treating and recovering waste) as described in the "Tracking Waste" report.

Separate Waste Collection Centres

Among other types, the waste collection centres receive waste that, due to its nature or size, cannot be collected with normal local services, supplementing roadside and residential collection, and is the most sustainable environmental solution with the lowest impact for collection of separate municipal waste.

There are 168 **separate waste collection centres**, or drop-off points, for direct disposal by citizens. Of these, 139 are located in Emilia-Romagna, 10 in Triveneto, and 19 in Marche. Many collection centres are equipped with weighing and user-recognition systems that make it possible to track waste disposal and apply tariff discounts.

Due to the health emergency, waste delivered to the separate waste collection centres decreased from 321,137 tonnes in 2019 to 296,513 tonnes in 2020 (down 7.7%). This trend was also confirmed for the Emilia-Romagna region, which in the comparison between the 2020 figure and the 2019 figure shows a 6.9% drop in disposals.

In 2020, there was also a significant decrease in the number of accesses to separate waste collection centres (down 17.2%), mainly due to the closure of most collection centres during the spring.

There was an increase in accesses to the separate waste collection centres (17%) only in the Padua area since the centres closed only partially on weekends.

Minor separate waste collection categories

For some time the Hera Group has been carrying out separate collections of so-called "minor" waste fractions. The main minor separate waste collections are WEEE (Waste Electrical and Electronic Equipment), toners, textiles, and cooking oils. A case study on the latter is at the end of this chapter.

WEEE collection

The **LIFE Identis WEEE project**, supported by the EU's LIFE fund, was designed to prove the traceability of Waste from Electrical and Electronic Equipment and increase the collection of small appliances such as chargers, mobile phones, televisions, electronic toys, and electronic lamps. This kind of collection is especially difficult using traditional systems. Hera is the parent company of the project that was created by partnering with two consortia: Ecolight in Italy, and Ecolum in Spain. The project, funded by the European Community, terminated in 2015 and became part of the collection services in Hera's service area. Currently, 13 "WEEE Point EVO" and 21 "WEEE Shop EVO" service points are active in Hera's area, distributed throughout its several provinces, mainly in shopping malls, to collect small WEEE. In addition, in the Bologna area, the "mobile" service model provides scheduled itinerant collection, and collects all types of WEEE.

Compared to the previous year, in 2020, the scheduled itinerant collection of all types of WEEE with the "Mobile" vehicle was suspended due to the health emergency. On the other hand, the number of disposals made by citizens to WEEE Points and WEEE Shops in our service area increased by around 3%, from 38,000 disposals in 2019 to 39,200 in 2020.

In the Triveneto area, separate waste collection of minor types is carried out at the collection centres, during the so-called "Ecological Saturdays" and, for some specific types, through dedicated roadside collections or centres. For example, in the Padua area, specific experimental roadside containers have been installed to collect waste home cooking oil. Toner collection is also provided by door-to-door collection systems for non-residential users. In smaller municipalities that have no collection centre, the presence of the "ecoself" is provided on specific days of the month to collect small WEEE and other fractions that cannot be disposed of in the main collection circuits.

Toner collection

For 2020, Ecorecuperi was again awarded the contract to provide the **collection and recovery of used toner cartridges** in Emilia-Romagna, as a result of a call for tenders again for 2020 for the provision of this service. In 2020, using the "Ecobox" containers distributed to public users such as schools and municipal offices, approximately 190 tonnes of used cartridges were collected and provided to the reuse market (regenerated toner cartridges for printers).

Collection of textiles

Lastly, in 2020, among the solidarity-based initiatives, Hera continued to **collect textile waste**, typically used clothing and cloth, relying on the Companies that won the tenders called in 2019.

Under these contracts, the companies awarded the contract (private operators and social cooperatives) carry out the collection service by emptying the containers owned by Hera, and make the best use of the material collected by sending it for recovery in their own plants, giving a new life to these recoverable textile materials, with a view to the circular economy.

The collection of used clothes provides no margin for Hera Spa and the income obtained, net of covering the costs of the service, can be allocated by the individual municipalities either to reduce the costs of the municipal sanitation service for residents (therefore of the TARI or of the quantity-based charging) or to specific non-profit organisations identified by the municipalities.

Every year, our “Tracking waste” report provides data on the economic resources available to the municipalities and the destination of the collected textile waste in terms of reuse, recycling, and disposal. The “Tracking waste” report provides all the details.

Collection of bulky waste

Bulky waste is waste that due to its type, size and weight, cannot be disposed of in the bins provided for municipal waste. Hera currently offers a number of options to dispose of bulky waste and large appliances, giving users the possibility of sending objects in good condition to be reused, preventing the production of waste or by sending them to the correct recovery or disposal flow:

- **donating the item to the non-profit organisations** involved in the “**Change the Ending**” project: if the item can be re-used, its user can donate it for reuse through one of Hera’s partner non-profit organisations. Non-profit organisations may collect bulky waste free of charge at their facility or at the user's home, to give it a new life and use it for charity. In Ferrara, Ravenna, Modena, and Cesena, reusable goods can be given to non-profit organisations by disposing of them in the “Reuse areas” located in the separate waste collection centres;
- **disposing of the item at drop-off points** (separate waste collection centres): if the bulky goods are not reusable, they can be delivered to the nearest drop-off point using the extensive network of drop-off points located throughout the service area;
- **using the home collection service** provided by Hera: if the item is not reusable and the customer cannot take it to a drop-off point, they can call the call centre to schedule free bulky waste at-home collection.

In 2020, these types of waste accounted for 3.6% of the total waste collected and 5.8% of separate waste collection, values that were in line in absolute terms but higher in percentage terms than the previous year, due to the overall decrease in waste in 2020 compared to 2019. In Hera Spa’s service area there were 155,359 requests for bulky waste collection, up compared to the previous year (+21%), partly due to the addition of municipalities previously under Cosea. On a like-for-like basis the increase was 10.8%. Including the waste disposed of at separate waste collection centres and the waste dumped without notification, about 55,000 tonnes were collected, in line with 2019. The number of bulky waste collection requests increased, in line with previous years, due to greater use of dedicated collection services and a greater number of reports for this type of waste, largely linked to a better usability of the channels to contact Hera and a greater appreciation of the cityscape.

Waste prevention initiatives

The European Directive 2008/98/EC on waste, transposed into Italian law by Italian Legislative Decree No. 205/2010, defines the following waste prevention and management hierarchy:

- prevention;
- preparation for reuse;
- recycling;
- other types of recovery, such as energy recovery;
- disposal.

Waste prevention is also confirmed as a priority action by the European circular economy package, referenced in one of the case studies in this chapter, which, among other things, includes a target for

preventing food waste, for which the agreement reached by the three-way meeting held in December 2017 set indicative targets of 30% by end 2025 and 50% by end 2030, compared to the quantity generated in 2014.

Emilia-Romagna's Regional Law 16/2015 on "Provisions to support the circular economy, the reduction of the production of municipal waste, the reuse of end-of-life goods, separate waste collection and amendments to Regional Law 31 of 19 August 1996" also addresses waste prevention, including the possibility to grant incentives to companies that implement waste prevention measures, within the framework of the regulation on waste management service fees.

During 2020, Hera participated in many initiatives aimed at encouraging waste prevention. This commitment is in line with the new European, Italian, and regional regulations, which, as seen above, introduce prevention and reuse objectives as an essential part of integrated waste management.

Some of the most significant initiatives are described below. Other significant initiatives such as "Cambia il finale" (Change the ending), "FarmacoAmico" (Medicine friend), and "Cibo Amico" (Food friend), are covered by special in-depth sections of this Sustainability Report (case histories).

Reuse Area

The Reuse Area is a real garage, housed inside a Separate Waste Collection Centre, where citizens can bring furniture (tables, chairs, beds, etc.), crockery, books, electrical and electronic appliances and miscellaneous objects, provided they are in good condition and therefore suitable for being used again by other people. Everything brought by citizens is for all intents and purposes a donation, and at the time of delivery, a document is prepared as a receipt of the donation. The material is then delivered to one of the Associations that participates in the Cambia il Finale project (described in a case study of this report), which handles the reuse of the goods deemed suitable. With this initiative, every time a citizen goes to the drop-off point, they can, therefore, choose whether to give a second chance of life to their goods by using the Reuse Area or whether to send it for material recovery through the recycling chains. Through the activities of the non-profit organisations involved in the project, the Reuse Area also has social aims, offering support to sensitive sections of the population, making used goods available and creating job opportunities for the unemployed, disabled, or disadvantaged.

The reuse area in Cesena was inaugurated in 2020, joining those in Ravenna and Modena which started up in 2019 and the one in Ferrara built in 2018 as recommended by the HeraLAB local multistakeholder board.

A total of 746 objects were donated during 2020 (considering as a single object the simultaneous donation of several small or inexpensive items, such as books or crockery or other small objects) for a total weight of 2,245 kilograms less waste.

The figure, significantly lower than that of 2019, reflects the reduced mobility of users and the closure of facilities due to the health emergency.

Trashware

This project is a reference point in the area for those that wish to get rid of old computer equipment that still works and for any parties that need reconditioned computers for basic computer activities. The project was developed in 2011 by the S.P.R.I.Te. student association jointly with the municipality of Cesena, Hera, and the Cesena Campus of the University of Bologna. Its goal is to recover PCs and computer components in general to counter the problems related to hazardous electronic waste. At the same time, it aims to reduce the digital divide of its residents by donating PCs with related peripherals to private individuals, associations, and schools in the municipality of Cesena. The Trashware project completed its ninth year in 2020. The project was promoted through widespread flier distribution and active presence on the main social networks and the Internet (Facebook as a channel to provide information or receive requests; Instagram, aimed at the younger generation, to promote events or the normal workshop session;

trashwarecesena.it as a web showcase for those less accustomed to social media) and supported the organisation of training courses for children in collaboration with local schools.

During 2020, we received 142 contacts from stakeholders interested in donating equipment (exceeding the number of 3,100 since the start of the project) and 78 refurbished PCs were delivered (over 1,400 since the start of the project), of which 67 were delivered to schools and associations. All the requests received from schools for devices to be used for distance learning were successfully dealt with, so the project was able to play a significant role during the health emergency.

Beer from bread

This initiative was developed during 2019 in close collaboration with the Bologna Bakers' Association and the Antica Orsa brewery cooperative. It was inaugurated with an experimental production at the end of that year. It continued in 2020 and was presented to the public in Bologna in July.

Unfortunately, the health emergency also profoundly affected this initiative, as the brewery is a social organisation that mainly employs disadvantaged staff, who are particularly vulnerable and therefore have limited availability. Nevertheless, two "crushes" were produced amounting to around 12,000 bottles of beer which were distributed, for the time being just to get the word out, in the Bologna bakery circuit. The production reused around 300 kg of surplus bread.

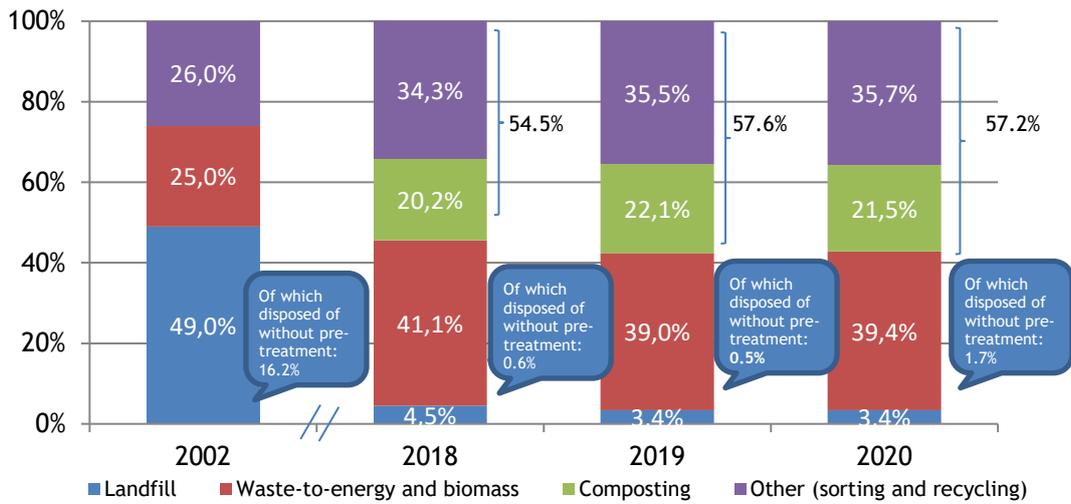
The project envisages a further stage of development with the use of bottles suitable for being washed and reused to create an experimental "deposit" circuit. The project has identified costs and suppliers but has not yet been implemented due to difficulties and delays caused by the health emergency.

Disposal of municipal waste in Italy and Europe and comparison with Hera

National and EU regulations define principles and priorities for waste management, from minimising waste at source to material recovery, energy recovery and, only as last resort, disposal in landfills.

Over the years, the Hera Group has worked in this direction, as shown by the comparison between 2002 data and the data of the last three years. In particular, in terms of reducing landfill disposal, the Group managed to maintain the already excellent performance achieved in 2019 despite the health emergency. This while remaining consistent with the Group's objectives, Italian and European regulations and the plans of the relevant authorities, which call for a reduction in the use of landfills and an increase in separate waste collection. In 2020, the share of municipal waste disposed of in landfills after pre-treatment will be 3.4%, compared to an Italian average of 23% in 2019 (Source: Eurostat data) and thus below the 2035 target set by the new European directives of the circular economy package. The use of landfills was particularly low in the Emilia-Romagna service area, standing at 1.5% in 2020 compared to the average for Emilia-Romagna of 9% in 2019, (Source: Ispra, 2020 Municipal Waste Report). In the areas served in the Marche region there was a slight increase in 2020 compared to 2019 (up from 28.5% in 2019 to 30.9% in 2020), in particular due to the health emergency that in some cases profoundly changed the waste treatment/disposal system, forcing the direct disposal of mixed waste in landfills, without passing through mechanical/biological separation plants. As of 2020, Hera's Triveneto region continues to have no landfills for the disposal of municipal solid waste.

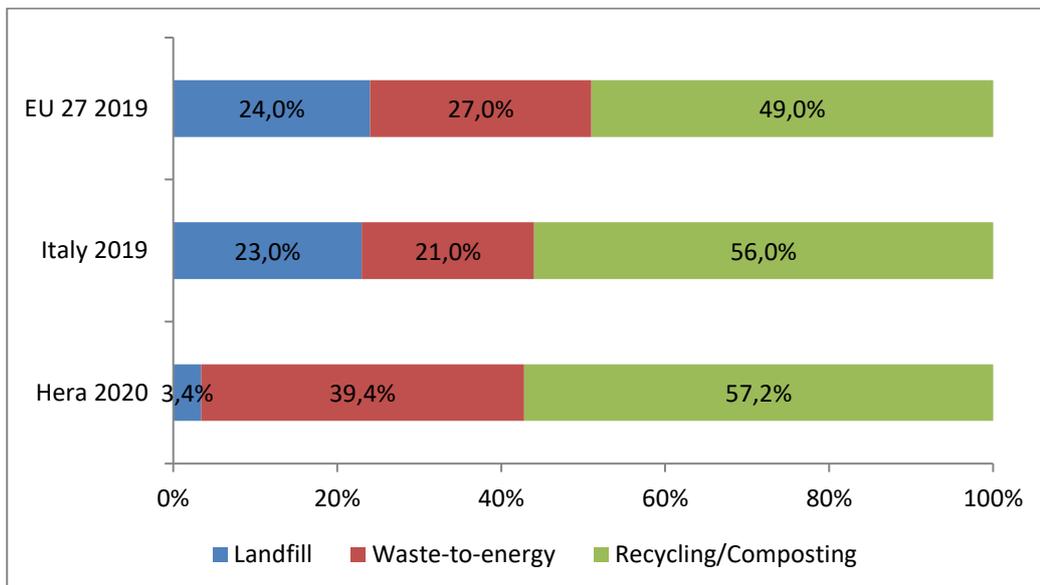
Municipal waste collected by Hera, by destination



At a European level, the trend towards reducing the use of landfills for municipal waste disposal is also continuing, although there are significant differences among the countries: in the EU-27 the figure for 2019 was 24% (Source: processing of Eurostat data). In Italy, 23% of municipal waste disposed of in 2019 was sent to landfills compared to 21% sent for waste-to-energy treatment. The use of landfills and waste-to-energy treatment remained stable.

Landfills continue to be the primary treatment method in 15 European countries, with peaks of up to 91% in Malta and above 80% in Romania and Cyprus. In Germany, Sweden, Finland, Denmark, Belgium and the Netherlands, the use of landfill is around 1%, and waste-to-energy ranges from 33% to 56%, while the remainder is sent for recycling. Hera is in line with these countries in terms of recycling with further improvements planned for the coming years.

Municipal waste management in Europe and Italy, and Hera's ranking (2019)

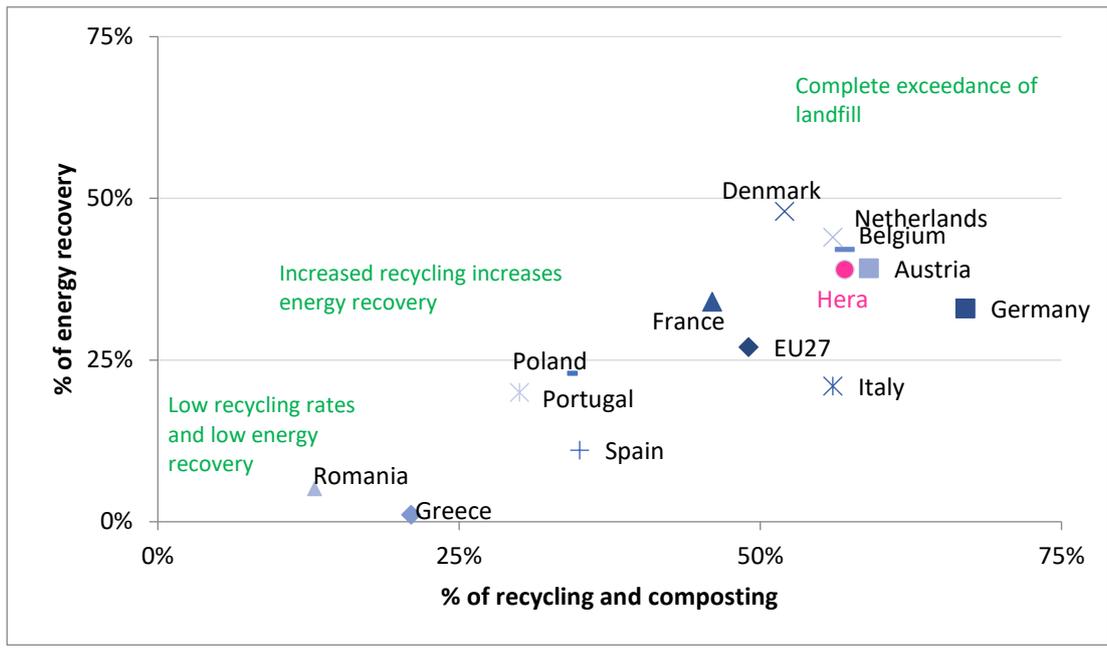


Municipal waste: A three-speed Europe and Hera's area of operation is among the best performing (2019)

Country	Landfill	Waste-to-energy	Recycling/Composting
Countries with landfill use lower than the European average			
Sweden	1%	53%	47%
Germany	1%	33%	67%
Belgium	1%	44%	56%
Denmark	1%	48%	52%
Finland	1%	56%	43%
Netherlands	1%	42%	57%
Austria	2%	39%	59%
Hera Group	3%	39%	57%
Luxembourg	4%	47%	49%
Slovenia	12%	16%	72%
Estonia	19%	48%	33%
France	20%	34%	46%
Italy	23%	21%	56%
Ireland*	24%	34%	43%
European Union (27 countries)	24%	27%	56%
Countries with landfill use less than 50% but higher than the European average			
Lithuania	27%	16%	58%
Poland	43%	23%	34%
Czech Republic	48%	17%	35%
Countries with landfill use greater than or equal to 50%			
Portugal	50%	20%	30%
Hungary	51%	14%	36%
Slovakia	52%	9%	39%
Spain	54%	11%	35%
Latvia	56%	3%	40%
Bulgaria*	60%	4%	37%
Croatia	66%	0%	34%
Greece	78%	1%	21%
Cyprus	81%	1%	18%
Romania	82%	5%	13%
Malta	91%	0%	9%

* 2018 data. Source: processing of Eurostat data

Disposal of municipal waste in Europe: the correlation between recycling/composting and energy recovery. Hera among the European best practices (2019)



Source: processing of Eurostat data

Material and energy recovery in Herambiente’s separation plants

Six (of the total of 15) of our **selection plants** process the municipal and special waste coming from separate waste collection and from industrial or artisan manufacturing in the province in which they are located. The objective of the process, which uses more or less complex technologies and treatment lines according to the type of waste to be treated, is to recover the greatest possible amount of material from the incoming flow and reduce reliance on landfills. These systems recover paper/cardboard, plastic, wood, metal, glass, biodegradable waste (pruning material), tires, textiles, and inert materials. The treatment lines used are specific to the characteristics of each collection. Five of the six plants have computer vision systems that are particularly effective in separating plastic and paper from municipal waste both in terms of flow (hourly quantity of waste treated) and in terms of the quality of the material obtained by the operation. The scrap of the treatment, the non-reusable fractions that are not sent for material recovery, are dispatched to be used for energy recovery or to be disposed of.

In 2020, Herambiente’s sorting and recovery plants treated **405,034 tonnes of waste**, down 6.3% compared to 2019. The decrease is due to the drop in waste input from HASI and the drop-off points, which had to stop operating temporarily during the health emergency. The quantity sent for **material recovery** was **76.9% of the waste treated**, up compared to the previous year, while the share sent for energy recovery was 4.4%, leading to an **overall recovery of 81.4%**, slightly down on 2019. A portion of the non-reusable fractions was used for energy recovery, about 19.3% in 2020. Although the volume of waste treated decreased, the amount of plastics sent for recycling in 2020 increased to **51,345 thousand tonnes** (+14% compared to 2017). The increase in the quantities of plastic recycled compared to the situation in the year 2017 was identified by Hera as one of the Group’s objectives in the new plastics economy; with these objectives Hera participated in the New Plastics Economy Global Commitment, described in a case study in this report, an initiative with which in 2018 the Ellen MacArthur Foundation dealt with the problem of plastic pollution at source to make the entire plastic production chain more circular.

The shredding operation to reduce the volume of large-sized waste, coming from the mechanised sorting of bulky waste, already present in the Ferrara and Bologna plants, was started up and will be fully operational

in 2020 also in the Rimini plant. The permit for shredding has been obtained for the Modena plant, which will be able to carry out the specific activity upon obtaining the relevant permit from the authorising body in 2021. We are still waiting for the conclusion of the permitting process for the shredding activity for the Lugo (RA) plant.

Destination of total waste treated – Herambiente’s selection plants

	2018	2019	2020
Waste sent for material recovery (t)	313,318	327,480	311,599
Non-reusable fractions outgoing (t)	112,457	104,799	93,379
<i>of which for energy recovery</i>	<i>15,153</i>	<i>34,097</i>	<i>18,004</i>
Other waste sent for disposal		199	56
Total waste treated in selection plants	425,775	432,478	405,034
<i>Of which sent for material recovery (%)</i>	<i>73.6%</i>	<i>75.4%</i>	<i>76.9%</i>
<i>Of which sent for energy recovery (%)</i>	<i>3.6%</i>	<i>7.8%</i>	<i>4.4%</i>
Waste sent for material and energy recovery (%)	77.2%	83.2%	81.4%

The circular economy to support businesses

Through its Herambiente subsidiary, the Hera Group operates over 90 treatment plants for the recovery and disposal of municipal waste, and of hazardous and non-hazardous special waste. Its plant fleet includes nine waste-to-energy plants, 11 composting plants/digesters, 15 selection plants, 16 chemical/physical and stabilisation plants. Of these, 25 plants are exclusively dedicated to the disposal of special waste, including Disidrat (RA) for the treatment of pumpable, palable sludge, ash and soil, F3 (RA) for the incineration of special industrial waste and the HASI (RA) waste storage and pre-treatment centre.

The initiatives launched by Herambiente for material and energy recovery continued in 2020, and were characterised by a constant focus on transitioning its industrial activities towards a **circular economy** approach. In particular:

- the completion, start-up, and attainment of industrial operation of the plant, built at the **Sant’Agata Bolognese** site, that uses the organic fraction of separately collected municipal waste to produce **biomethane**. In 2020, the plant, which has been fully operational since March, injected about 7.8 million m³ of biomethane into the grid, exceeding the project’s anticipated production rate by 5% and confirming the validity of the technological choices and management model. On the basis of this project, the Group has prepared two further projects to convert existing plants to biomethane production, in Lugo (RA) and Spilamberto (MO). The two projects have started the necessary permitting processes which will be completed in 2021. Starting in 2022, the biomethane production planned for these two plants will increase by a further 5.5 million cubic meters, allocated to power motor vehicles;
- the launch of the project to build **an integrated anaerobic biodigestion and composting plant** for the treatment of organic waste in Pesaro;
- completion of **logistics platforms** that handle the **storage, characterisation and pre-treatment** of waste to make it compatible with the recovery and/or disposal systems available in Italy and abroad. In this context, the agreement signed in 2020 with **Eni Rewind** to build a technologically advanced logistics platform in the “Ponticelle” area, adjacent to Ravenna’s petrochemical complex, capable of receiving and pre-treating up to 60,000 tonnes per year of industrial waste in solid, liquid and sludge form (mainly hazardous), is extremely significant;
- Herambiente Group’s constant focus on implementing the synergies arising from its presence throughout the entire value chain of **PE and PET-based polymer** recovery, through **Aliplast**, with its waste recovery and sorting operations, including those involving separate waste collection.

Aliplast's activities are perfectly in line with Europe's "plastic strategy" policies on the reduction and reuse of these materials.

A second cycle of modernisation of Herambiente Group's waste-to-energy plants began in 2020 after the cycle that took place between 2005 and 2010 (involving the plants in Bologna, Forli, Rimini, Ferrara, and Modena). The three plants involved in this phase are the hazardous industrial waste incinerator at Ravenna's petrochemical complex, line 2 of the **waste-to-energy plant in Trieste** and replacing the older lines 1 and 2 of the **waste-to-energy plant in Padua** with a new line with the same capacity.

The primary objective of these measures is to give a **long-term perspective to the current waste-to-energy capacity** of these plants, increasing the efficiency of their energy recovery, reliability, and continuity of operation, and, above all, equipping the plants with the best and most innovative flue gas cleaning systems to further reduce their environmental impact.

In addition to measures on individual projects, we are examining the feasibility of applying **new technologies** to extract resources and value from waste in market segments that currently, instead, resort to dumping solutions. These include:

- collaboration with manufacturers and the University of Bologna to develop an innovative technology that **recovers carbon fibre** to produce a secondary raw material with mechanical performance that fully matches the virgin material;
- the development of a highly automated plant solution for the treatment and **recovery of used mattresses and their components** (e.g. polyurethane). Currently, this "bulky" waste is handled either by disposal systems or by using rather costly manual disassembly to recover elements of limited value (iron and rags).

The recovery of industrial waste with Herambiente Servizi Industriali (HASI)

Herambiente Servizi Industriali is the Group's company that offers waste management solutions and services for businesses. **It is currently the largest Italian company dedicated to industrial waste treatment.**

Key elements of HASI's offer are **maximum traceability, compliance with all environmental regulations** and the identification of the optimal recovery and recycling solutions to **minimise landfill disposal.**

During 2020, our commercial strategy continued to focus on creating value for the Group and for its customers, also by pursuing synergies with subsidiaries and parent companies, **offering solutions that are increasingly oriented towards sustainability.**

We complemented the global waste management solutions by offers aimed at O&M (operations and maintenance) customers of private waste treatment plants, implementation of improvement/efficiency plans, and solutions designed to maximise recovery and overall reduction of the waste produced, such as by managing certain flows as by-products.

Herambiente Servizi Industriali has maintained a strong relationship with its client companies, as confirmed by the contract renewals for the Global Service with its longstanding clients, leaders in the food, pharmaceutical and engineering industries, and by the major new commercial opportunities it has seized. The latter include the treatment of significant flows produced by the leading European steelmaker, the renewal of the waste treatment service at the Italian plants of the multinational leader in tobacco processing, and the launch of the large contract signed at the end of last year to manage waste from the extraction activities of the leading independent natural gas storage services operator in Italy, offering, where possible, material and energy recovery solutions as alternatives to disposal.

The integration of our waste management services with on-site systems operation helps the Group be effective and well-known in the market, encourages customer loyalty and creates value, besides being a factor that sets it apart from its competitors.

The traceability of all waste delivered to HASI is totally transparent. Since 2015, Herambiente’s website has featured a special area dedicated to customers, who can remotely view the status of their waste streams, the validity of approvals, and the status of their payments. For each contract, information is provided in real time, and also includes information on the treatment operations, showing where each was sent, and the recovery percentage achieved versus the total waste received. More recently, we added a new feature that customers can use to book their disposals online.

In 2020, Hasi treated over **915 thousand tonnes of industrial waste**, of which about **29% was recycled for material or energy recovery**.

Destination of total waste treated – Herambiente Servizi Industriali

Thousands of tonnes	2018	2019	2020
Waste sent for material and energy recovery	264.9	329.2	264.5
Total waste sent for disposal	710.0	1,112.8	650.7
Total waste treated	974.9	1,441.9	915.2
% of waste sent for material or energy recovery on the total quantity of waste treated	27.2%	22.8%	28.9%

The percentage of waste sent for recovery in 2019 was affected by the expansion of the company's perimeter (merger of Waste Recycling into Hasi). The main types of waste processed by the plants in the Pisa area (e.g., liquid waste or sludge to stabilise) undergo major treatment operations and, where possible, volumetric reduction, in line with the best technologies available on the market, but which in many cases are still classified as disposal operations and not recovery operations.

In 2020, on the other hand, our recovery performance improved thanks to the consistent ability of Hasi’s plant equipment to meet our customers' growing demand for recovery solutions.

The decrease in volumes handled in 2020 is due to the extraordinary context in which Hasi operated during the year. The enforcement, in March, of restrictive measures throughout Italy to curb the health emergency led to the closure of most businesses and industries, and also affected the markets served by Herambiente Servizi Industriali. Italy has experienced a significant reduction in industrial production and waste, with special waste dropping by over 40%, depending on the geographical area. The reduction in waste has led to an increase in plant availability at the European and Italian level thus increasing treatment solutions available to customers lowering the cost of processing.

Below are some examples of recovery-oriented solutions applied to our customer portfolio:

- scraps of leather are used to produce soil improvers and fertilisers;
- the recoverable parts of paper are sent to paper mills;
- plastic is washed, cleaned, and made into flakes for subsequent processing;
- wood scraps are used to produce chipboard panels;
- ferrous materials are separated and recycled in foundries;
- organic waste from food manufacturing companies is used for composting to produce energy and produce compost;
- some types of production waste made of plastic or poly laminates (which until recently were sent to energy recovery) are selected and separated directly in the company and sent for material recovery at the group’s plants or at third parties;

- all mixed waste that is not hazardous, non-separable, nor recoverable in terms of material, to be used for energy recovery.

In 2020, we continued our cross-selling activities to customers and prospects thanks to commercial synergies with Aliplast and the services offered by Hera Group companies. This is reflected in the first memorandum of understanding signed by **Hera Business Solution** (Hera Group’s integrated and sustainable multi-service offer dedicated to companies) and a top Italian food company, leader in fresh fruit and vegetable, grain and legume processing (discussed in detail in a case study in this report). The collaboration is in the context of a business relationship already in place with Hasi that provides waste management, including plans to reduce waste, combined with Global Service solutions to achieve maximum recovery, and the management of the treatment plant in use at the factory.

Hera Group’s contribution to future plastics

The Aliplast Group, that Herambiente acquired in 2017, has **eight plants**. The three foreign plants located in Spain, Poland, and France, and the two Italian plants, at Formigine (MO) and Quinto di Treviso (TV), source and select the plastic. The Ospedaletto di Istrana (TV) and Borgolavezzaro (NO) plants transform the waste plastic into finished products, while the Gualdo Cattaneo (PG) plant produces finished goods using semi-finished recycled plastic products.

Aliplast **manages the integrated plastic cycle**, transforming waste into finished products, mainly PE films, PET plate and granules/flakes of the leading polymers. Its primary commitment is to make the plastic life-cycle sustainable, by collecting and recycling plastic to produce new materials, with the lowest possible environmental impact. Focusing on constant research, development, and technological innovation (regarding products, services, and processes), Aliplast manages a traceable plastics production chain, which is capable of transforming a disjointed chain into a virtuous circle and of ensuring high-quality final products that are efficient and economically more convenient than traditional materials.

Waste treated by Aliplast

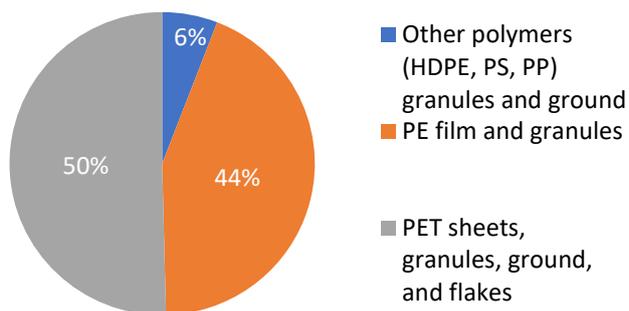
t	2018	2019	2020
Incoming waste	84,802	90,104	84,987
Total incoming waste sent for material recovery	77,700	80,416	74,947
Secondary raw material from incoming waste (New plastics economy Global Commitment)	63,726	72,766	68,848
Incoming waste sold (material recovered from third parties)	13,974	7,650	6,098
% of waste sent for recovery of material on the total quantity of waste treated	91.6%	89.2%	88.2%

The plants treat **waste from industrial scrap and from separate municipal waste collection**. This waste was transformed into new products or delivered to third party recycling companies (over 6 thousand tonnes). The Aliplast Group directly recycles a significant share of the incoming waste and discards only a small percentage of it if it is made of non-recyclable polymers or because of weight loss due to the presence of liquids. The reduction in the proportion of incoming waste sent for material recovery from 2018 to 2020 is a result of the start-up of the PET washing system at the Borgolavezzaro plant, which recycles PET bottles with waste percentages typically higher than those for PE recycling.

The secondary raw material from the incoming waste is sold or used to produce recycled plastic products. Products sold by Aliplast in 2020 will contain around 79% secondary raw material from waste plastic. In 2020, Aliplast reported a reduction in the sale of recycled plastic products (approximately -4.2% compared to 2019) due to the health emergency that severely affected the supply chains in which it trades its

products, causing a significant drop in demand. The decline in sales resulted in a reduction in waste incoming and sent to material recovery (by 5.7% and 6.8%, respectively, compared to 2019), while the **volumes of secondary raw material obtained** decreased from 72,766 in 2019 to 68,848. In 2020, despite declining sales and lower volumes, the ratio of waste input to secondary raw material obtained remained steady at 81%. These data are also reported in the Ellen MacArthur Foundation’s **New Plastics Economy Global Commitment**, and described in a case study of this report. The reduction in incoming waste sold and sent for material recovery by third parties, on the other hand, is a consequence of the choice – linked to the external macroeconomic context – to reduce the collection of low quality plastic waste, to focus on high quality, more suitable for use in the production of finished products.

Products sold by Aliplast, by type (2020)



The food industry demands high safety standards and strict compliance with applicable food industry regulations. Aliplast’s range of products, which is entirely **certified at the European level for food contact**, consists of polymers in granules and flakes, and PET rigid film for thermoforming and extrusion, ideal for producing food trays and bottles.

In 2018 Aliplast developed an IT tool for calculating the **carbon footprint** of five types of products, as described in greater detail in a case study in this Sustainability Report.

The circular approach within the Hera Group

Waste produced by the company

In 2020, the Group produced around 2.2 million tonnes of waste. Compared to 2019, (2.6 million tonnes) there was a decrease in total by-products leaving the Group’s plants. In particular, the following were reported:

- lower leachate output from composting and chemical-physical plants, and landfills, as a result of lower rainfall;
- lower production of waste from stabilisation plants (solid waste and other waste) due to the reduction of Hasi’s industrial activities brought about by the health emergency;
- lower production of refuse-derived fuel and of non-reusable fractions due to smaller amounts treated by the plants;
- slight decreases in the production of particulates and slag due to different mixes fed into the waste-to-energy plants.

In 2020, the analysis performed on the destination of the waste produced by the Group shows an expansion of the database, which also made it possible to highlight the volumes sent for composting and material recovery. A further addition with respect to 2019 was the introduction of the disposal item, which

includes the preliminary treatment operations of grouping and reconditioning, physical, chemical, biological treatments, and final disposal operations, such as landfilling and incineration. This in-depth analysis has provided a more complete view of the destination of the waste produced.

Main types of waste produced by the company, by disposal method (2020) [306-2]

tonnes	Disposal	Energy recovery	Composting	Sent for material recovery	Total
Particulates from flue gas scrubbing*	11,441	-	-	40,827	52,268
Waste-to-energy plant slag	15,814	-	-	243,845	259,659
Solid waste from stabilisation	49,430	-	-	23,915	73,345
Water purification sludge	25,894	26,995	89,689	-	142,558
Sand from purification plants	1,724	-	-	-	1,724
Sludge produced by chemical-physical-biological plants	37,213	-	-	3,496	40,709
Leachate from landfills/composting	331,665	-	-	-	331,665
Non-reusable fractions from selection plants	129,748	40,675	-	5,748	176,171
Liquid waste from stabilisation	31,548	-	-	-	31,548
Biostabilised	-	-	-	97,755	97,755
Water from chemical-physical-biological treatment	417,296	-	-	-	417,296
Production of fuel from waste	-	74,845	-	5,026	79,871
Other waste from Herambiente storage and plants	423,449	9,262	21,801	59,442	513,953
Total	1,475,221	151,777	111,490	480,054	2,218,540

*hazardous waste. Disposal is defined as being sent to landfills with the exception of liquid waste.

Recovery of waste-to-energy plant slag

The waste-to-energy plant growth and renovation plan pursued by Herambiente in recent years has had a positive impact on the production of combustion slag. The new combustion systems and, above all, the systems for the “cooling” and “gondola”-type systems to extract combustion slag, make it possible to have waste with a very low quantity of unburned matter and low water content. This has resulted in a lower percentage of slag being produced and, above all, a quality level that is more suitable for subsequent recovery.

In 2020, the eight waste-to-energy plants operated by the Group produced 254,813 tonnes of slag, equal to 21% of the waste treated at these plants. **95% of the slag produced was recovered**, for example by producing cement and concrete mixes, while the remainder was disposed of in landfills.

The plants in Ferrara, Bologna (since 2018), and Rimini (since 2019), also have **ferrous metal separation systems** that enable the reuse of the metal in the metallurgical industry. In 2020, 4,255 tonnes of metals were recovered, up compared to 2019 (3,667 tonnes).

There are two main ways to recover **particulate matter from flue gas scrubbing**:

- the sodium-rich powder is picked up by Solvay Italia, which processes it to recover its residual bicarbonate content;
- lime powders and electrofilter particulate are sent to Germany where they can be reused to restore cavities in decommissioned mines.

The **sludge produced by chemical, physical, and biological plants** is sent abroad where it is used in a process to produce cement granules that can then be used as a raw material to produce composite mixtures for geoenvironmental applications, i.e. in levelling, reclamation and shaping of the surface of areas, formation of embankments or for special applications in areas where there is mining waste from the extraction of hard coal. In addition, the granulate can also be used in civil engineering to build the bottom layers of foundations and roads, or for land reclamation.

Recovery of purification sludge

Purification sludge is considered special waste and must be handled as specified in Italian **Legislative Decree No. 152/2006**. In 2020, the plants operated by the Group produced 36 kg of sludge per population equivalent served, in line with the previous year. At the Group level, the sludge produced was processed by **dedicated incineration** (26,995 tonnes, 18.9% of the total), **disposal in landfills** (23,033 tonnes, 16.1% of the total compared to 19.0% in 2015), **indirect agricultural reuse following composting** (89,689, 62.9%), and the remainder was processed with other treatments (2,860, 2%). Added to the volumes disposed of at landfills, give the actual amount sent for disposal (25,894 tonnes, 18.1%). The Hera Group aims to further reduce the amount of sludge sent to landfills in Emilia-Romagna (area served by Hera Spa), reaching 3.3% by 2024 and 1.5% by 2030. Several projects aimed at reducing sludge production are scheduled for 2021, including:

- some replacement work on the centrifuges at the Savignano and Castelnuovo Rangone plants and the sludge thickener at the Riccione treatment plant;
- the use of two new-generation additives which should lead to a reduction in sludge production and lead to an increase in the production of biogas that can be used to generate thermal energy and possibly also electricity.

In 2020, in the Triveneto area, a solar greenhouse was installed in the Padua plant which reduced the sludge produced by about 15%, while the installation of two biological dryers is planned for 2021.

Plant equipment serving the circular economy, and total waste treated

Main waste treatment plant expansion measures

In addition to marking the first full year of full-scale nominal operation of the **Sant'Agata Bolognese biomethane plant** with excellent results, in 2020 we set up two further projects, currently awaiting regulatory approval, biomethane plants at Lugo (RA) and Spilamberto (MO). In 2020, work also started on two waste-to-energy modernisation projects: the revamping of the hazardous waste-to-energy plant in Ravenna, increasing its capacity from 40,000 to 50,000 tonnes/year (and increasing the electricity production by 7,000 MWh/year), and the replacement of current unit 2 of the Trieste waste-to-energy plant (increasing its electricity production by 20,000 MWh/year).

At the end of the year, work also began on the installation of the new secondary solid fuel production line at the Castiglione delle Stiviere (MN) plant, which aims to make better use of the dry fractions of waste.

Hasi progressed with the construction of an osmosis and evaporation treatment system to recover and reuse process water at the Castelfranco di Sotto (PI) site. Aliplast has completed the assembly and start-up of a further polyethylene regeneration line.

In addition to the above, the Herambiente Group made operating investments **for material and energy recovery**, and for the creation of additional landfill volumes, totalling **Euro 52.6 million** (plus a further Euro 5.4 million for M&A transactions for a total of approximately **Euro 58.0 million**).

Below is a summary of some of the main environmental measures being planned, in progress or that have been completed at the end of 2020.

Main waste treatment plant expansion/improvement measures

Plant	Progress at 31 December 2020	Type of measure	Environmental benefits expected/obtained
Sant'Agata Bolognese (BO) biomethane plant	Plant in industrial operation	Construction of biomethane plant	Biomethane production in 2020, 7.8 Mm ³ (+5% compared to the projected 7.5 Mm ³)
Spilamberto (MO) biomethane plant	Planning stage (permitting process in progress)	Construction of biomethane production section	Biomethane production by 2022, 3.5 Mm ³ and 40 kton MSW treatment
Lugo (RA) biomethane plant	Planning stage (permitting process in progress)	Partial conversion to biomethane production	Biomethane production 2.0 Mm ³ from 2022
Trieste waste-to-energy plant	In progress	Revamping of Line 2	Increased treatment and energy recovery capacity (+20 thousand MWh/year expected)
Ravenna waste-to-energy plant (F3)	In progress	Revamping of the F3 hazardous waste incinerator (Ravenna)	Increased treatment capacity (+10 kt/year) and energy recovery (+7,000 MWh/year)
Padua waste-to-energy plant	Planning stage (permitting process in progress)	Replacement of lines 1 and 2 with new line 4	Increased energy recovery (+70,000 MWh/year planned), upgrade to BAT and continuity of operation.
5th portion of Ravenna landfill	Planning stage	Construction of 5th portion of landfill for NH and H stabilised waste	Capacity increase
Firenzuola (FI) landfill	In progress	Construction of 5th lot	Capacity increase
Loria landfill	In progress	Construction of lots 5 and 6	Capacity increase
Sommacampagna (VR) landfill	In progress	Capping and environmental restoration	Reduction of leachate production and environmental restoration
Firenzuola (FI) landfill	Completed	Capping and environmental restoration of lots 3 and 4	Reduction of leachate production and environmental restoration
Civitella (FC) landfill	Completed	Capping and environmental restoration	Reduction of leachate production and environmental restoration
S. Agata Bolognese (BO) landfill	In progress	Capping and environmental restoration	Reduction of leachate production and environmental restoration
Ravenna landfill site km 3.8	Planning stage (permitting process in progress)	Restoration and renaturation of the area	Renaturation and landscaping; site within the Po Delta Park
Ravenna landfill, fourth portion	In progress	Capping and environmental restoration	Reduction of leachate production and environmental restoration
Castiglione delle Stiviere (MN) plant	In progress	Modification and revamping of high-quality secondary solid fuel (SSF) production line	Reduction of processing waste that cannot be used as fuel

Plant	Progress at 31 December 2020	Type of measure	Environmental benefits expected/obtained
Aliplast	Completed (line operating)	Construction of new PE regeneration line	Capacity increase
Aliplast	Planning stage	Construction of hard plastic recovery plant (Modena)	Increase of the range of recoverable plastic waste
Lugo (RA) selection plant	Planning stage (permitting process in progress)	New line for the treatment of glass waste from separate waste collection	Improvement of glass recovery system from separate waste collection
Castelfranco di Sotto (PI) plant	Construction in progress	New osmosis line for liquid waste/wastewater	Recovery of water for industrial use
Ravenna Ponticelle (Hasi) platform	Planning stage	New platform for storage and pre-treatment of industrial waste	Capacity increase

Environmental impact assessments presented during the year

[102-11]

The **IEA** and **Screening** procedures are accompanied by a series of **environmental assessments** of the effects of the works (both during construction and at the project stage) on the environment, and on human health and well-being, based on the characteristics of the project itself and following analysis of the components involved in their pre-construction condition. In particular, interference with the following aspects was analysed: atmosphere, water resources, soil and subsoil, flora, fauna and ecosystems, noise, human health and well-being, landscape and cultural heritage, residential system, and socio-economic conditions.

In addition to qualitative and descriptive evaluations, the approach used involves running specific **modelling and forecasting simulations** using software and calculation algorithms, to obtain numerical data that can be compared with standards and limits defined by industry regulations and that can assess the relevance of the impact. Model simulations are carried out in particular for the release of pollutants and odorous substances into the atmosphere, and noise emissions. They are also used to prepare risk analysis at landfill sites, where it is necessary to request exceptions to the acceptance criteria for incoming waste, and in any case necessary during plant closure procedure as required by recent regulatory updates on landfills.

All the simulations carried out include an accurate characterisation of the sources and the assessment of the most unfavourable scenario, so as to provide a **precautionary analysis**. Landscape assessments are carried out by using renderings and photomontages to assess the visual effect of the new works on the surrounding environment, for example for creating new lots/landfill sites. In addition, if the works planned are located within or near sites of Community interest (sites belonging to the Natura 2000 Network), special assessments are required to determine whether or not the works/activities in the project could have a significant impact on these sites. Lastly, in some cases, the applications are also accompanied by a specific "Health impact assessment and proposed health monitoring plan".

Once all impacts have been assessed, specific **mitigation measures** are identified, where necessary, so as to reduce them and, if that is not possible, specific compensatory measures are implemented (construction of photovoltaic plants, planting trees, construction of charging stations for electric vehicles, etc.).

It must be noted that the design of the works is always carried out by identifying and using the best available technologies as required by Legislative Decree No. 152/2006 as amended and Art. 29 bis, paragraph 3, which, for landfills, are defined by Italian Legislative Decree No. 36/2003.

The following Environmental Impact Assessment procedures were activated in 2020 (still in progress):

- **Multi-purpose waste treatment facility located at Via S.S 309 Romea km 2.6, in the municipality of Ravenna (RA) – Landfills for hazardous and non-hazardous waste. Construction of the 5th section for stable non-hazardous and hazardous waste as an extension to the existing “Ex Sotris” landfill for hazardous and non-hazardous waste, 1st, 2nd, 3rd and 4th sections.**

The project involves the construction of a new landfill sector, known as the 5th section, which will extend existing landfills for hazardous and non-hazardous waste in the 1st, 2nd, 3rd and 4th sections “Ex Sotris” within the same operation. This type of plant will serve industrial customers and help close the waste treatment cycle, and meet part of the disposal requirements identified in the PRGR.

The volumes required to build the 5th segment will use the space currently occupied by the WDF/CSS-IRE plant, since, in accordance with the Regional Waste Management Plan, in December 2019 disposals to the IRE plant were stopped.

The new section will handle a total of 501,358 tonnes of waste and 26,387 tonnes of inert waste.

The assessment of the environmental impact takes into account both the activities related to the decommissioning of the IRE WDF plant and those for the construction and cultivation of the new landfill section. The assessments of the different environmental components took into account not only the new project, but all the activities present in the complex.

- **Composting and anaerobic digestion plant for the recovery of urban and special non-hazardous waste located in the plant complex at via Traversagno 30, Voltana, in the municipality of Lugo (RA) – Revamping of the composting plant to produce biomethane.**

The project under review envisages modifications to the existing composting and anaerobic digestion plant to enable biomethane production. It will require an increase in the amount of waste accepted for recovery operations from 60,000 tonnes/year to 90,000 tonnes/year.

A new anaerobic digestion section (dry type as the existing one) and a new stabilisation section will be built to cope with the increase in material entering the plant. The biogas thus produced will be divided between the existing energy recovery system (cogenerators), and a new system to convert biogas into biomethane (upgrading).

The biogas generated in the anaerobic section is expected to produce 2,050,000 Sm³/year of biomethane to power motor vehicles, and 4,371 MWh/year of electricity, of which 3,543 MWh/year to be fed into the grid and 828 MWh/year to be used for self-consumption.

The planned measures, aimed at increasing the efficiency and the recovery of wet waste, consist mainly of the following:

- expansion of the anaerobic and aerobic digestion sections;
- construction of a gasometer to improve the efficiency of the biogas recovery system;
- construction of an upgrading plant to transform biogas into biomethane and its connection to feed biomethane into the SNAM network.

The positive impact on greenhouse gas emissions is noteworthy: the balance sheet shows that the implementation of this project will reduce greenhouse gas emissions by 1,878 tonnes/year of CO₂ equivalent. The contribution of biomethane to the grid must be added to these assessments.

Biomethane is a renewable energy source, an alternative to traditional fossil fuels, and therefore leads to a significant reduction in greenhouse gas emissions.

In 2020, we also applied for the review of Integrated Environmental Authorisations for compliance with BAT (Best Available Techniques), seeking a renewal, following:

- the Commission's Implementing Decision (EU) 2018/1147 of 10/08/2018 establishing the conclusions of Best Available Techniques (BAT) for waste treatment;
- the Commission's Implementing Decision (EU) 2019/2010 of 12/11/2019 establishing the conclusions of Best Available Techniques (BAT) for waste incineration.

The evaluations in submission of the IEA Review applications showed that they all substantially comply with the sector BAT.

The plant sites for which IEA review applications have been activated in 2020 are:

- Romea Ecological Centre (Disidrat and TCF) located in the Ravenna plant area at km 2.6 SS 16 (RA);
- Ferrara Storage centre located in Via Cesare Diana 32 (FE). This review was concluded in 2020 with the issuance of the new IEA (DET-AMB no. 5313 of 05/11/2020);
- Non-hazardous waste co-incineration plant, located in the industrial area in Via dell'Energia s.n.c. Pozzilli (IS);
- Industrial waste water and waste treatment plant, located in the industrial area of viale delle ricerche snc in the municipality of Pozzilli (IS);
- Composting and anaerobic digestion plant located in via Rio della Busca in the municipality of Cesena (FC).
- Chemical-physical treatment plant, called Impianto di Trattamento Fanghi Industriali (ITFI), located in Viale Shakespeare 29, in the municipality of Bologna (BO);
- Landfill for non-hazardous waste located in Siberie, in the municipality of Sommacampagna (VR);
- Waste-to-energy plant for non-hazardous waste located in Via Cesare Diana, in the municipality of Ferrara.

In addition, an application was filed to amend the integrated environmental authorisation of the landfill for non-hazardous waste located in the Cà dei Ladri hamlet in the municipality of Gaggio Montano (BO), following the conclusion of the relevant EIA procedure, (the so-called Screening) which ruled its exclusion.

The amendment involves the volumetric recovery of sector V. At present, in this area during the cultivation phase, the effective compaction of the waste dumped has occurred, leading to the possibility of delivering a greater quantity of waste within the authorised volumes. An additional 119,364 tonnes are therefore expected to be delivered compared to what has been authorised to date with the same authorised closure configuration.

Recovery plant classification for Hera Group's waste-to-energy plants

Directive 2008/98/EC, implemented in Italy by Italian Legislative Decree No. 205/2010, introduces a criterion to calculate energy efficiency which makes it possible to classify a municipal waste incineration plant as an energy recovery plant. This criterion makes it possible to calculate the energy efficiency of the incineration process on the basis of the energy introduced with the waste, the amount of energy consumed and the amount of energy produced (thermal and electrical).

All the waste-to-energy plants operated by the Herambiente Group (including those of Hestambiente at Padua and Trieste) are R1 recovery plants, except for the Ravenna special waste plant (F3).

The “Sblocca Italia” decree and the new regulations on waste disposal

Art. 35 of Italian Legislative Decree No. 133/2014, converted, with amendments, into Italian Law No. 164/2014, the so-called “Sblocca Italia” law, aims to develop a suitable, integrated system at national level to manage municipal waste and to meet the separate waste collection and recycling objectives.

To apply the principles and objectives defined in Art. 35, the Hera Group uses the following hierarchy to identify the priority criteria for the saturation of the capacities of its waste-to-energy plants:

- local municipal waste;
- regional municipal waste;
- any municipal waste from outside the region according to the resolutions of the relevant bodies;
- non-hazardous special waste until saturation of the residual heat load.

On the basis of these principles, our integrated environmental authorisations (IEAs) were updated between the end of 2015 and during 2016 and, at the same time, we signed framework agreements with Local Authorities for the waste-to-energy plants of Forlì, Rimini and Modena. For the waste-to-energy plant of Ferrara, in the context of these updates, we were granted a permit to increase the amount of waste to treat up to 142,000 tonnes a year to cope with any emergencies outside the region for municipal solid waste, subject to a specific request from the relevant authorities. In December 2015, the local authorities in Forlì and the Regional Administration signed a specific agreement for the management of municipal waste in the Forlì waste-to-energy plant to which municipal waste is sent only from the regional catchment area in respect of the planning being approved.

In 2020, no solid municipal waste from other regions was treated in Herambiente’s eight waste-to-energy plants for municipal waste (thus excluding the Ravenna plant), as determined by the relevant authorities. Also, no solid municipal waste from other regions was treated in Herambiente’s **landfills**.

Total waste treated by the Group

Waste treated, by type

thousands of tonnes	2018	2019	2020
Municipal waste	2,348.0	2,347.8	2,219.1
Street market waste	2,142.8	2,211.1	2,187.6
Total waste sold	4,490.8	4,558.9	4,406.7
Plant by-products	2,802.2	2,616.2	2,203.2
Total waste treated, by type	7,293.0	7,175.1	6,609.9

The municipal waste treated in the Group’s plants, as well as the municipal waste collected in the municipalities where Hera operates the municipal sanitation service, includes about 304 thousand tonnes collected by other companies or public bodies.

An analysis of the quantitative data shows a decrease in waste sold due to both a decrease in municipal waste and street market waste. As far as municipal waste is concerned, in 2020 it decreased by 5.5%, in particular the quantities of separated waste, waste from beaches, and mixed waste. Market volumes decreased slightly (-1.1%) compared to last year due less activity caused by the health emergency. Lastly, plant by-products show lower values compared to the previous year due to both lower quantities treated and lower rainfall (-15.8% compared to 2019).

Municipal and special waste disposed of, by plant type

thousands of tonnes	2018	2019	2020
Selection plants	531.2	572.8	530.7
Waste-to-energy plants and biomass plants	1,309.8	1,259.9	1,275.4
Composting and stabilisation plants	361.5	506.1	509.4
Landfill	704.3	663.5	677.4
Stabilisation, and chemical-physical treatment	1,231.7	1,600.2	1,208.4
Third-party plants/Other plants	3,154.6	2,572.7	2,408.7
Total	7,293.0	7,175.1	6,610.0

The data concern waste incoming to the plant. Duplication may therefore occur. Some of the waste treated in selection plants, for example, may be disposed of in landfills following selection. The waste outgoing from plants, which has therefore been included among the final-use plants, was subtracted from the quantities counted in the separation plants.

Waste treatment decreased overall by 7.9% compared to 2019. In this regard, the quantities in landfills increased due to the full operation of the Loria and Serravalle Pistoiese landfills. In the waste-to-energy sector, the trend is mainly due to the different scheduling of plant shutdowns and scheduled maintenance compared to the same period in 2019 and the increase in waste delivered. The increase in quantities at the selection plants is due to the higher quantities treated, mainly at the Rimini and Bologna plants. In the composting and stabilisation plants, the volumes are broadly in line. The lower quantities in the stabilisation and chemical-physical plants are due mainly to the decrease in leachates from landfills due to less rainfall and less activity due to the health emergency. Lastly, the decrease in the other plants sector is mainly due to lower by-products, mainly wastewater, treated in third-party plants.

The circularity of water

Non-invoiced water

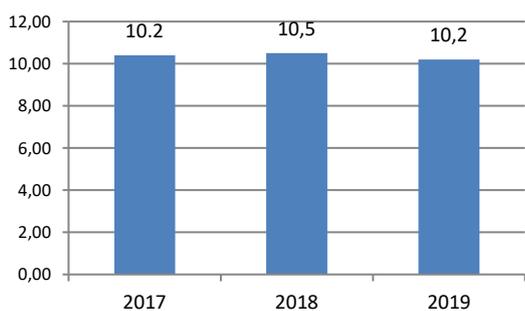
The percentage of non-invoiced water compared to water fed into the network is related to physical or real losses (due to breakage of pipes or hydraulic equipment, etc.) or procedural or apparent losses (metering inaccuracies, errors in estimated presumed consumption at 31 December, unrecorded internal consumption, and illegal use). The latter losses result in water which is effectively delivered to the end customer but is not recorded and invoiced.

Until 2006, network losses were calculated as the difference between the water fed into the water network during the year and the water accounted for as supplied to customers during the same period: the amount was estimated at 31 December of each year on the basis of the historical consumption of customers since it is not possible to take a single reading of all the meters at 31 December. This estimate was then supplemented so as to consider the correct period of recording in accounts of the water sold to customers as at 31 December of the previous year, calculated after reading all the meters. Since 2007, network losses have been calculated by integrating the adjustments coming from meter readings in the pertinent year, thereby ensuring comparability of the water sold with the related amounts fed into the system each year. To calculate non-invoiced water, we used the method defined by ARERA in its Technical Quality Regulation (resolution 917/2017); the volume of water lost is calculated as the difference between the volume fed into the water network and the volume leaving it; this value is compared to the input volume to calculate the percentage and to the length of the supply and distribution pipelines to calculate the losses per km. With this approach, it is however possible to calculate the final figure for the year only around four to six months after the close of the financial statements, after all the meters have been read. That is why the table below does not include the figures for 2020. On the basis of the information available at the date of approval of this Sustainability Report, there is no evidence to suggest that the final figure for non-invoiced water for 2020 differs significantly from that for 2019.

At the Group level, **network losses** for 2019, calculated using the Arera method, **amounted to 30.0%**, slightly lower than those of 2018 (both data calculated according to Arera’s new resolution). The Group continues to be positioned at a level **significantly lower than the Italian average** of 43.7% in 2016, **also lower than the average for the North-Eastern area** of 38.9% in 2016 (Source: Arera, 2020 Annual Report), and than the 36% in 2019 **average for provincial capitals** (Source: Legambiente Ecosistema Urbano 2020).

The corresponding **losses per km** (2019 figure) is **10.2 m³/km/day**, slightly down compared to 2018. We believe that the figure of non-invoiced water per kilometre of network is more representative of the effectiveness and efficiency of the distribution system and more useful for comparison with other companies. The figure for losses per km in Emilia-Romagna was 9.1 m³/km/day in 2019, substantially in line with the average of 8.3-8.4 m³/km/day found by the European Environment Agency on a group of **32 European utilities** that took part in the study entitled “Performance of water utilities beyond compliance”. It is an even more significant value if compared with the average of 22 m³/km/day of the Italian utilities for 2018 (Source: Utilitalia, 2019 Sustainability Report) and with the 24 m³/km/day of the **Italian average** reported by Arera for 2016 (Source: Arera, 2020 Annual Report). The figure is also lower than the **average for the North-east**, which has the best performance at Italian level, at 14.1 m³/km/day in 2016 (Source: ARERA, 2019 Annual report). The **Hera Group’s objective** is to reduce losses per km by 4% by 2024 compared to 2018 and by 10% by 2030 also compared to 2018.

Non-invoiced water per kilometre of network operated (m³/km/day) (physical and administrative losses from the domestic water network calculated using ARERA’s method)



	2017	2018	2019
Hera	9.1	9.4	9.1
AcegasApsAmga	30.7	28.6	28.0
Marche Multiservizi	6.5	6.6	6.4

Non-invoiced water (physical and administrative losses from the domestic water network calculated using ARERA’s method)



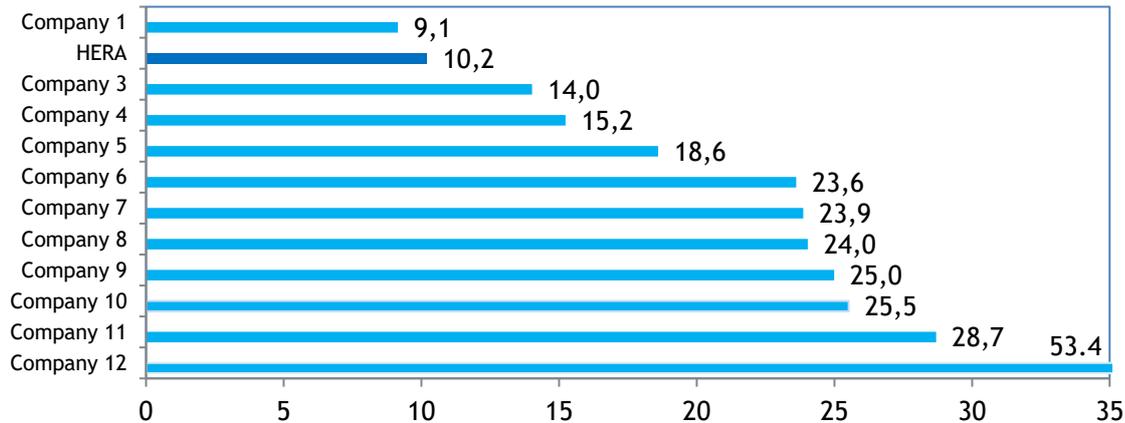
	2017	2018	2019
Hera	28.9%	29.7%	29.0%
AcegasApsAmga	36.1%	34.4%	32.1%
Marche Multiservizi	32.8%	34.7%	34.3%

Italy average: 43.7% (2016)

Non-invoiced water for the main Italian utilities

Utilitatis performed a comparative analysis of the main Italian utility companies in terms of non-invoiced water per kilometre of network: Hera ranked second among the 11 companies considered.

Non-invoiced water per kilometre of network operated (m³/km/day) (2019)



Source: Utilitatis, 2020 Sustainability Benchmarking (2019 data)

The recovery of purified water in the interest of the local area

In April 2018, we signed a **three-year programme agreement with the Regional Government of Emilia-Romagna, Arpae, Atersir and Consorzio Bonifica Renana** aimed at **recovering the wastewater** discharged from the Bologna wastewater treatment plant (the total reuse potential is **7.5 million m³**). In the period from 1 April to 31 October 2020, the total flow diverted to the Bonifica Renana plant from the Bologna wastewater treatment plant was **about 68 thousand m³**, much lower than the approximately **966 thousand m³** in 2019. This is because the consortium was able to draw the necessary water requirements directly from its own canals, limiting acquisition from the outlet from the treatment plant.

The agreement enables the consortium to withdraw about 2,160 m³/h, equal to about 40% of the flow rate treated during the summer period. In particular, part of the water purified by the plant is carried by a dedicated pipeline to the "Savena Abbandonato" plant, leaving the corresponding flow, coming from the river Reno, to go to the "Canale Navile". This is done through a modulated management of surface water flows by the Consorzio della Bonifica Renana, in relation to the demands and the degree of drought of the water bodies.

Under the agreement, Hera and the Consorzio della Bonifica Renana have invested about Euro 120,000 to implement the system (sluice gate and pumping/extraction plant) to transfer part of the flow treated by the Bologna purification plant to the network of channels managed by the consortium. During the activity, additional analyses are planned on the waste water discharged by IDAR, to monitor additional parameters with respect to those already in the authorisation process.

This initiative, in addition to the primary objective of protecting water bodies in the area, also pursues the principle of reuse of water as a good to be preserved.

In July 2019, a **Memorandum of Understanding was signed by Hera and the Consorzio della Bonifica Renana for some minor purification plants in the Bologna area**, so as to identify the operating methods to apply to enable reuse of water treated by the purification plants located in the consortium's district downstream of the discharge, and possibly be stored, to improve the hydrological balance of the flows through the water bodies in the consortium's district. The total reuse potential is approximately **2.5 million m³**.

In 2020, we signed a **Programme Agreement for the reuse of wastewater** from the **Sassuolo and Savignano sul Panaro** wastewater treatment plants, and the agreement was sent **to the Municipality of**

Modena for the wastewater treatment plant, to formalise the reuse process already in use (final approval expected in February 2021). These agreements, aimed at reusing water for irrigation purposes in the Modena area, resulted in a potential reuse volume of about **4.2 million m³**.

During 2021, the VALUE CE-IN research project (“VALorizzazione di acque reflUE e fanghi in ottica di economia CircolarE e simbiosi INDUSTRIALE”) will continue in the Cesena area, aiming to improve waste water management in a circular economy and industrial symbiosis perspective. In addition, the framework agreement with the Regional Government of Emilia-Romagna, Arpa and the reclamation consortia on the indirect re-use of purified wastewater for irrigation purposes and with a view to hydraulic balance will be extended to some plants in the Ravenna and Ferrara areas.

Reusable purified wastewater (% of total purified wastewater)

	2018	2019	2020
Reusable purified wastewater (million m ³)	2.5	10.0	14.2
Reusable purified wastewater (million m ³)	294.2	291.3	271.2
Reusable purified wastewater (% of total purified wastewater)	0.8%	3.4%	5.2%

By comparing reusable purified wastewater (meaning potentially reusable purified wastewater leaving plants for which reuse agreements have been signed with the authorities) and the total water purified in the plants managed by Hera Spa, reusable purified wastewater is 5.2% of the total in 2020 (it was 3.4% in 2019). The objective is to increase this share to 9% in 2024, and 15% in 2030.

The commitment to reduce internal water consumption and the consumption by customers

Reduction in consumption within the Group

In 2018, we began to plan actions aimed at **saving, reusing and recovering water** (the "water management project"). The objective set in 2018 was to **reduce by 10% in four years** (compared to the 2017 final balance) the consumption of water from the domestic and industrial water networks in the Group's most "water-hungry" business units served by Hera Spa in Emilia-Romagna, namely:

- the sewage and water purification service,
- district heating,
- the Imola cogeneration plant,
- company facilities,
- and Herambiente's waste treatment plants in Emilia-Romagna.

Starting from 2020, the scope of the project was extended to include further business units regardless of their consumption incidence; the activities involved were those relating to vehicle management, the waste collection service in Emilia-Romagna, and the water network service.

The target outlined in the latest business plan envisages a **17% reduction in the volume of water used** for the activities of the offices and plants by 2024 compared to the actual 2017 figure (project baseline with perimeter updated to 2020) and a **25% reduction** by 2030.

With respect to this target, in 2020 we reduced water consumption by about **12% compared to the 2017 baseline** (about 1,352 thousand m³ in 2020, compared to 1,534 thousand m³ in 2017), attributable primarily to the ongoing efforts to find areas of improvement in the use of water, optimise the systems, and implement measures to reuse and recover the resource. The outcome was influenced by the earlier than expected completion of some water saving actions initially planned for 2024.

Water management project (2020)

Internal water consumption (thousand m ³)	2017	Reductions related to specific measures	2020
Sewage, purification, and water network service	571.7	82.8	488.9
Waste collection service	64.1	20.0	44.1
District heating	208.5	7.4	201.1
Imola cogeneration plant	272.5	6.1	266.5
Corporate offices	127.2	16.4	110.8
Waste treatment plants	277.1	50.6	227.5
Vehicle management	13.7	0	13.7
	1,534.8	182.3 <i>12% of 2017 consumption</i>	1,352.5

The scope of consumption was aligned with that of the Group's *water management project*. The BU's total consumption is calculated on the basis of the billed consumption using the deviation between billed and read volumes on the meters of the relevant sites as a driver for correction. The correction is applied to avoid that the mechanism of estimated readings, which is applied in billing whenever meters are not read on time, leads to an over- or underestimation of the real volumes used.

Therefore, for the coming years, we have scheduled projects, both structural (i.e. fields of operation involving investments in plant modernisation) and non-structural (i.e. aimed at creating awareness of the use of water resources). More in detail, the main actions of the plan are:

- measures to **improve the main plants** (waste-to-energy plants, purification plants, etc.) to allow the recovery and reuse of process water which would otherwise be discharged into public sewage or into the surface water body after purification treatment;
- **technological modernisation** to optimise the systems, thus reducing water consumption for the replenishment of circuits;
- enhancement of the search for **hidden leaks** downstream of meters.

In 2020, the first treatment sections of purified wastewater for internal reuse in the Bologna and Imola purification plants came into service, and will yield concrete results in terms of water savings from 2021.

The particular operating conditions that occurred in 2020, also related to the health emergency, have certainly resulted in an "apparent" water saving scenario that will be put into context in the next three years. It has shown a further reduction in water consumption of 13%, which is added to the aforementioned actions to reduce water consumption that were completed early, generating an overall reduction of 25%. The main contributing factor was the reduction in operating hours for various company activities as a result of the health emergency (down 11%).

The Group's water consumption not included in the scope of the water management project which includes the consumption of Aliplast, HASI, the waste-to-energy plants of Trieste, Padua, and Pozzilli, and AcegasApmAmga (for the purification plants and offices) amount to approximately **2.8 million m³**.

The commitment to reduce the consumption of residential customers and businesses

[303-1]

When, in 2018, we started the "water management" project within the Hera Group, it became clear that extending this project to **external domestic and business customers** was important, in the awareness that

habits, choices, culture in the use of water resources evolve only if the company involves the territory and people in its sustainable development.

Campaigns were therefore prepared and addressed to **residential and business customers**, to analyse and help them reduce their consumption, so as to stimulate and increase virtuous and conscious behaviour in the use of water resources also among our customers.

The **Diario dei consumi (Consumption Diary)** is the tool introduced in 2019 to support the **reduction of domestic consumption**, similar to what has already been experimented in the energy field on the basis of Thaler's behavioural theories. It is an experimental project, developed together with the "Department of Management, Economics and Industrial Organisation" of the Politecnico di Milano, which analyses the behavioural interactions of individuals, trying to enhance positive and virtuous behaviour. In 2020, the service was extended to about 65,000 additional customers and now involves 145,427 residential customers (about 20% of all residential customers).

There are **synergies among different resources** that make the consumption of one resource dependent on that of the others. Some of these synergies are technological, e.g. in the case of household appliances that consume both water and electricity (positive synergies); other interactions, on the other hand, have behavioural roots, such as for example the desire of individuals to behave consistently in different contexts (positive synergies) or in the presence of cognitive limitations that prevent individuals from paying attention to all the resources consumed at the same time (negative synergies). If positive synergies prevail, a decrease in the consumption of one resource causes a decrease in the consumption of other resources, while the opposite occurs if negative synergies dominate.

A report is sent to them, via email, which analyses their consumption patterns in detail, comparing the volumes of water used by the individual customer with that of similar customers and the change in the customer's consumption over time. The report is also complete with tips to help customers choose some good functional water-saving household practices. Activation of the Diario dei consumi (Consumption Diary) will be gradual and over the next four years will involve all users who have provided their e-mail address to Hera Group.

An important element to be considered in the assessment of consumption by residential customers is the data on volumes of **water sold for residential use**, which in 2020 were 145,652,381 m³ in Emilia-Romagna. ----- The figure is not comparable with that of previous years, due to a conversion of the intended use categories to correctly apply the water tariff, which has led to substantial changes (among which the exclusion of volumes previously considered to belong to the residential use category). In 2020, the **average annual per capita consumption** increased by 4% compared to 2018 due to the health emergency.

On the other hand, the "**water management portal**" has been created, specifically for water-hungry **business customers**, i.e. those with water consumption of more than 50,000 m³ per year. Once again in 2020, in line with the previous year, the portal involved 70 companies in the service area, and more than 7,000 of the drinking water supply points we operate. The portal is an interface that allows companies to monitor, through trend analysis, how they use water, so as to evaluate process optimisation strategies.

Sustainable management of water resources

Quality of drinking water

Water resources

[303-1]

The integrated water service makes the water available in nature suitable for human use and consumption and returns it purified to the environment. Hera is present in the **operation of the water service** in 227 municipalities with a catchment area of over 3.6 million inhabitants. In this area, Hera Group deals with the integrated management of all the phases necessary to make water usable and available for domestic and industrial use and consumption: from withdrawal to drinking water purification and distribution to users, from sewage system management to purification and returning water to the environment.

The management of the entire system of water collection, purification and distribution plants up to the end customer is the so-called **water network service**. Hera Group's water resources include underground water, surface water and, to a lesser extent, springs. In Romagna, we purchase the water we distribute wholesale from Romagna Acque – Società delle Fonti.

The complexity of drinking water purification processes varies depending on the quality of the source water: they range from advanced chemical and physical processes, usually used for surface water, to simpler filtration and disinfection treatments for water coming from deep wells and springs that is already of good quality when collected.

The treatments carried out ensure that the product we distribute has suitable chemical, physical and microbiological features for human consumption, and is constantly compliant with the limits set by applicable regulations.

Water withdrawn and fed into the network, by source [303-3]

Thousands of m ³	2018		2019		2020	
Groundwater	223,777	53.1%	221,221	52.9%	206,894	50.5%
Surface water	165,414	39.2%	162,784	38.9%	170,593	41.7%
Springs and minor sources	32,558	7.7%	34,150	8.2%	32,060	7.8%
Total	421,749	100.0%	418,155	100.0%	409,547	100%

All sources specified in the table are fresh water ($\leq 1,000$ mg/l total dissolved solids). All water withdrawals refer to areas classified as having a "moderate" water stress risk (values between 2.6 and 3.4, WWF Water Risk Filter, Overall Risk Layer)

The data shows that the total volume of water fed into the network decreased slightly compared to 2019 (-2.1%). The composition of the sources shows a slight variation characterised by greater withdrawals of surface water and resulting reduction of groundwater withdrawals especially in the Hera Spa areas. From a geographical point of view, the share of groundwater is lowest in the Marche Multiservizi area (16%), while it is predominant in the Triveneto area (89%).

Hera Group's distribution network covers **35,080 kilometres** and, where possible, is interconnected and linked to ensure **supply continuity** even in the event of temporary interruptions of one or more pipelines.

Composition of the water network

%	2018	2019	2020
Plastic	53.7%	54.3%	54.5%
Asbestos-cement	20.5%	20.3%	20.2%
Steel	16.6%	16.1%	15.9%
Cast iron	8.5%	8.6%	8.7%
Other materials	0.7%	0.7%	0.7%
Total	100%	100%	100%

The amount of asbestos-cement in the water network is continuing to decrease, and in 2020 accounted for 20.2% at the Group level. The slight decrease is due to use of materials other than asbestos-cement in new networks or in those subject to extraordinary maintenance. Over the last three years the Group has replaced approximately 93.4 kilometres of asbestos-cement network. At territorial level, the asbestos cement network is most present in the areas of Ferrara, Padua and Ravenna.

Drinking water controls

[416-1] [416-2]

In 2020, to ensure the quality control of the water supplied, the Group's laboratories in Emilia-Romagna, Triveneto and Marche performed **636,562** analyses on drinking water, including all the analyses performed for the water network as a whole (tanks, networks, wells, plants, etc.). Of these, 76% were carried out on samples collected in the **distribution networks**. Substantial stability continues in the relationship between the analyses carried out on the distribution network and those carried out on the plants, aimed at effectively preventing non-conformities.

On 16 December 2020, the **new EU Directive 2020/2184 on the quality of water intended for human consumption** was published. Within two years of its entry into force, Member States must make the necessary amendments to comply with the new directive. Therefore, quality checks on the water used to produce water for drinking and for human consumption are governed by Italian Legislative Decrees Nos. 152/2006 and 31/2001 as amended, respectively (transposing EU Directive EU 98/83/EC).

The checks are carried out by the water service operator and the local health authorities at the source **sampling points**, at the water purification and accumulation plants, and along the **supply and distribution networks**.

Hera has consolidated a Group Control Plan which describes the **sampling points** and the **analysis methods used** (parameters and frequencies of the analyses). The Control Plan is developed on the basis of a procedure that focuses on the water's chemical, physical and bacteriological characteristics, so as to fully comply with legal requirements and ensure a top-quality product.

Water quality also means monitoring the effectiveness of the **treatment processes**. For example, the water is checked for chlorites and trihalomethanes, which come from, respectively, the use of chlorine dioxide and sodium hypochlorite as disinfectants. The **concentration of chlorites** and trihalomethanes in the distribution network is kept under constant control in line with the **regulatory limits**.

Since 2008, the average data recorded for the **pH, total hardness, dry solids at 180 °C, chloride, fluoride, sodium, nitrate, nitrite, and ammonium** has been published on the Group's website, listed by individual municipality, and updated every six months. Since 2012, this set of parameters has been extended to include four others: **calcium, magnesium, sulphates, and total alkalinity**. These 13 parameters are considered to be representative of the quality of the **drinking water distributed** and can be used to draw comparisons with the quality of bottled water on the market.

Starting from the second half of 2014, the set of parameters was further expanded with 6 additional parameters as required by AEEGSI: **conductivity, potassium, arsenic, bicarbonate, residual chlorine and manganese**. As such, 19 parameters are published, one more than the number determined by the regulatory authority.

[417-1]

Since 2012, the **tap water label** has been present in Hera’s bills as well as on its website. Customers can find the data on the quality of the water distributed by Hera in their municipality (updated every six months), directly on their bill. The report concerns 162 municipalities in Emilia-Romagna where Hera manages the water distribution service and includes the values of 19 water quality parameters, compared with the regulatory limits (alkalinity from bicarbonates, total alkalinity, ammonium, arsenic, calcium, free chlorine, chloride, conductivity, pH, hardness, fluoride, magnesium, manganese, nitrate, nitrite, potassium, dry residue at 180 °C, sodium, and sulphate). Also for the served municipalities of Padua, Trieste and Pesaro Urbino, constantly updated water quality data are available on the AcegasApsAmga and Marche Multiservizi websites.

Since January 2009, all drinking water production plants in Romagna have been operated by **Romagna Acque – Società delle Fonti**, the company set up for this purpose by the local regional administrations of Romagna. As a result, the water distributed in the Forlì-Cesena, Ravenna and Rimini areas is in large part purchased wholesale from that company, and Hera’s involvement in quality is limited to **operating the networks and the supplementary disinfection stations** along the distribution networks.

The assessments of the quality of drinking water distributed, as compared to the quality of bottled water, are made on the basis of the analytical parameters which are commonly tested at the representative sampling points of the water networks: pH, hardness, dry residue at 180°C, sodium, fluorides, nitrates, and chlorides. The parameters chosen are largely indicative of the saline components the drinking water should have.

Once again in 2020, the average values for Hera’s water are comparable with those of commercial bottled waters and no exemptions were granted from compliance with the limits set by Italian Legislative Decree No. 31/2001.

Quality comparison between water distributed by Hera and bottled waters on the market (2020)

	Bottled waters (min-max)	Tap water limits Leg. Dec. 31/2001	Bologna	Ferrara	Forlì-Cesena	Modena	Padua	Pesaro-Urbino	Ravenna	Rimini	Trieste
pH	5.8-8.1	6.5-9.5	7.4	7.5	7.6	7.4	7.7	7.8	7.7	7.5	7.8
Hardness (°F)	1-88	50*	28	21	21	34	24	27	20	24	19
Dry solids at 180 °C (mg/l)	22-987	1,500*	401	349	329	535	302	389	360	370	236
Sodium (mg/l)	0.3-64	200	23	21	13	56	4	23	24	22	8
Fluorides (mg/l)	0.03-1	1.5	<0.10	<0.10	<0.10	<0.10	<0.10	0.2	<0.10	<0.10	<0.10
Nitrates (mg/l)	1-9	50	6	6	5	16	14	4	4	5	7
Chlorides (mg/l)	0-74	250	32	32	17	89	8	29	33	21	14

* Recommended value.

Comparison carried out with the data provided on the labels of 17 widely available bottled waters. The data on drinking water express the averages of the analyses carried out according to the frequency and withdrawal points on the distribution network outlined in the control and monitoring plan for the water cycle.

If even a single parameter is not compliant with regulatory limits, **Hera takes immediate action to restore compliance of the water** (by washing pipes, checking disinfection, etc.), also based on the instructions of the local health authorities. For hygiene, health, and public safety reasons, municipalities may issue orders **declaring that the water is not fit** for drinking for specific periods. In these cases, it may be prohibited to use water for cooking and drinking, or particular precautions will need to be adopted (e.g., boiling in case of microbiological non-compliance), while in general, the water can continue to be used for all other purposes.

During 2020, 26 non-drinking water orders were issued for the Marche region, involving about 5,000 citizens for 3 days. The reported orders affected almost exclusively small municipalities. In almost all cases, the orders are related to problems at disinfection plants in small water networks where, due to low flow rates and location in remote areas, control and regulation are generally more difficult. Half of the citizens involved are linked to two orders issued by the Municipality of Mercatello sul Metauro (PU) for problems related to the sudden deterioration of the quality of water supply sources due to weather events. In the area managed by Hera Spa in Emilia-Romagna and in the area managed by AcegasApsAmga, there were no drinking water non-potability orders.

As to the presence of **asbestos cement** pipes in the water network, note that asbestos was used in construction and other industrial sectors until the late '80s, and was definitively prohibited in 1992. While it has been recognised that the inhalation of asbestos fibres causes serious respiratory illnesses, there is no evidence of toxicity linked to the ingestion of asbestos. In fact, current regulations on the quality of water for human consumption (Italian Legislative Decree No. 31/2001) do not set limits for the presence of asbestos fibres. In particular, Ministerial Decree of 14 May 1996, Annex 3, references a WHO (World Health Organisation) document which states that "There is, therefore, no consistent, convincing evidence that ingested asbestos is hazardous to health". The WHO reiterated this stance in 2011, in the fourth edition of its Guidelines for Drinking-Water Quality. European and Italian legislation is aligned with the position of the WHO and does not set limits for the presence of asbestos in water destined for human consumption. In 2015, the Italian National Health Institute (Istituto Superiore di Sanità) reiterated these positions once again in one of its statements in which, among other things, it states that: "On the basis of our current knowledge and the conclusions of the international institutions of reference, the water situation must not be regarded as an imminent risk for public health either in terms of eventual fibres ingested or as regards concentrations potentially transferred from the water media to the air media". In the same report, the Italian National Health Institute specifies, as the only reference limit, (not a parameter value) the one defined by the US EPA (US Environmental Protection Agency) as 7 million fibres/litre for fibres longer than 10 µm.

In terms of monitoring, Hera carries out regular checks to determine if asbestos fibre is present in the water it distributes and the level of maintenance of the pipes. Every year since 2003, Hera Spa has prepared and applied a specific Asbestos Control Plan, which outlines the details of the sampling points that are most representative for the presence of asbestos cement, the frequencies and the analytical parameters to analyse. In Emilia Romagna, over 234 inspections were carried out during 2020 and they confirm that almost all of the samples (97%) contain no asbestos fibres. In no case has the EPA limit of 7 million F/L been exceeded and even the highest value found in 2020 was 2 orders of magnitude lower than this limit. The water distributed by Hera has aggressiveness levels in most cases above 12, meaning it tends to not be aggressive with respect to the cement base. In 2020 in the Triveneto region, all the checks carried out showed that the asbestos fibre levels were significantly below the EPA limit. Marche Multiservizi planned to perform the initial checks on the possible presence of asbestos fibres in the distributed water in 2021.

For further details on the quality of the tap water distributed by Hera, see the “In Buone Acque” (In Good Waters) report, a publication entirely dedicated to the quality of tap water that Hera has been publishing annually since 2009 with the collaboration of local health authorities and Romagna Acque.

Management of water-related impacts

As required by its **environmental management system** (ISO 14001:2015), Hera Group has identified the environmental aspects related to the activities, services, and plants it operates, and their potential environmental impacts; this led to an assessment of the relevance of the environmental aspects and risks related to each of them.

The "environmental analysis" process was conducted at Hera consistently and according to the shared methodology identified in the "Identification and Evaluation of Environmental Aspects and Related Risks/Opportunities". Certain plants/services, representative of clusters with uniform characteristics, were examined for each process. In particular, the assessment of the environmental impact of the use of water resources takes into account the type of **water supply** and the **amount of water consumed/drawn** in relation to the output produced. The assessments showed that this is the aspect typically to be kept under control in some plants of the water cycle.

In parallel, ISO 14001 requires the organisation to set up its environmental management system using “Risk Based Thinking”. Within the Hera Group, **risk assessment** is carried out by adopting the Enterprise Risk Management approach, which identifies risk scenarios that may impact the Group, and the related financial and reputational consequences. The combination of the likelihood of occurrence and impact determines the severity of the risk scenarios of individual environmental aspects of representative plants/services. In this context, the reputational factor was considered particularly important. Given the supply system and the type of plant, the environmental risk scenarios (i.e. the risk of aggravating the impacts on the environment itself) related to the methods of use of the water resource were of low severity.

The new technical quality of the water service

Arera introduced the Integrated Water Service Technical Quality Regulation in its Resolution 917/2017. The resolution requires monitoring:

- **Three specific indicators** concerning interruptions of water network services; exceeding the corresponding standard values triggers automatic compensation payments to users;
- **six macro-indicators** to which an incentive/penalty system is associated, three of which relate to the water network service, one to the sewage service, and two to the purification service.

The bonus/penalty system became operational in 2020. For access to this system, Resolution 917 requires certain prerequisites: a drinking water quality control system, no urban areas subject to European infringement procedures, and minimum quality levels of process and metering user data. The existence of all the prerequisites has been recognised for all Hera Spa operations.

During 2020, we continued to pursue the gradual improvement objectives we set in 2018 and on which we made progress in 2019. Specifically, in terms of specific investments and management actions, our operational actions focused on countering physical and administrative water leaks by implementing a programme to renovate user meters, improving drinking water and wastewater quality parameters, and certain aspects of our sewage network management.

Application of the new Water Safety Plan

On 23 December 2020, **Directive (EU) 2020/2184** of the European Parliament and of the Council repealing the previous Directive 98/83/EC on the quality of water intended for human consumption was published in the Official Journal of the European Union. The publication of Commission Directive (EU) 2015/1787 had

already amended the latter's Annexes II and III which laid down the minimum requirements of monitoring programmes for water intended for human consumption and the methods of analysis of the various parameters, and introduced the methodology for **Water Safety Plans** (WSPs) for implementing control and prevention measures to ensure the best quality of drinking water.

It was a substantial change of approach for protecting human health in terms of drinking water, as it marked the transition from a monitoring regime based on the retrospective control to a preventive risk assessment. The risk-based approach involves the control of emerging contaminants, currently not subject to systematic monitoring, and the verification of the degree of vulnerability of drinking water systems with respect to direct and indirect impacts induced by climate change.

Italy had transposed this directive with the Decree of the Ministry of Health of 14 June 2017.

Hera has structured prevention and control plans that guarantee good drinking water to its customers, in compliance with regulatory requirements, with constant surveillance carried out through the planning of targeted checks on the entire water production chain. In this regard, the analytical control plan of the integrated water service is drawn up annually, substantially in accordance with the risk assessment criteria contained in Directive 2015/1787.

In light of the new European directive, member states will have 2 years to transpose it (by 2022) and by 2029, they will have to carry out the initial risk assessment and management, and achieve full regulatory compliance of the WSPs.

The updating of the quality standards of drinking water, both from a chemical and microbiological point of view, the introduction of new thresholds for some emerging contaminants and the definition of the requirements for assessing the suitability of materials intended for contact with water drinking will be elements that must be included in the definition of WSP.

In 2019, for the implementation and construction of the new WSPs, Hera completed its plans for two water supply zones in the province of Ravenna: Casola Valsenio and Massa Lombarda. The plans are in addition to those of four water supply zones for two water networks in the province of Bologna: San Giovanni in Persiceto, Imola's industrial water network, Imola, and Dozza.

Coverage of Water Safety Plans

number	2018	2019	2020
End users served (including indirect users) under a water safety management plan (sent to ISS – Italian National Health Institute)	92,423	251,086	273,907
End users served by the operator for the water network service	2,144,398	2,145,266	2,145,266
% of users served in areas with a Water Safety Plan out of the total number of users served by waterworks	4.3%	11.7%	12.8%
Number of municipalities with a Water Safety Plan	8	10	23

At the end of 2020, 23 municipalities we serve had prepared a Water Safety Plan and sent it to the Istituto Superiore di Sanità for a water network in their municipality. Residents of these municipalities account for 12.8% of the total in municipalities in which Hera Group provides the water network service.

In 2020, the WSPs for 11 water supply zones in the provinces of Modena, Ferrara, Bologna, and Ravenna were agreed with the Istituto Superiore di Sanità and have already been submitted to the Istituto Superiore di Sanità and the Ministry of Health for completion of the approval process. Risk analysis has been completed for two other supply zones in the Modena area and for the Pontelagoscuro supply zone serving Ferrara, and we expect to submit it to authorities in early 2021. During the year, a risk analysis was

prepared for the first WSPs, jointly with Romagna Acque Società delle Fonti, in the municipalities of Modigliana and Tredozio, and it is currently being discussed with stakeholders.

In terms of priorities, we expect to gradually implement the plans for the most densely populated supply areas. In 2021, WSPs will also be launched for the supply areas served by the Setta plant in the Bologna area and the Ridracoli dam, once again in partnership with Romagna Acque Società delle Fonti.

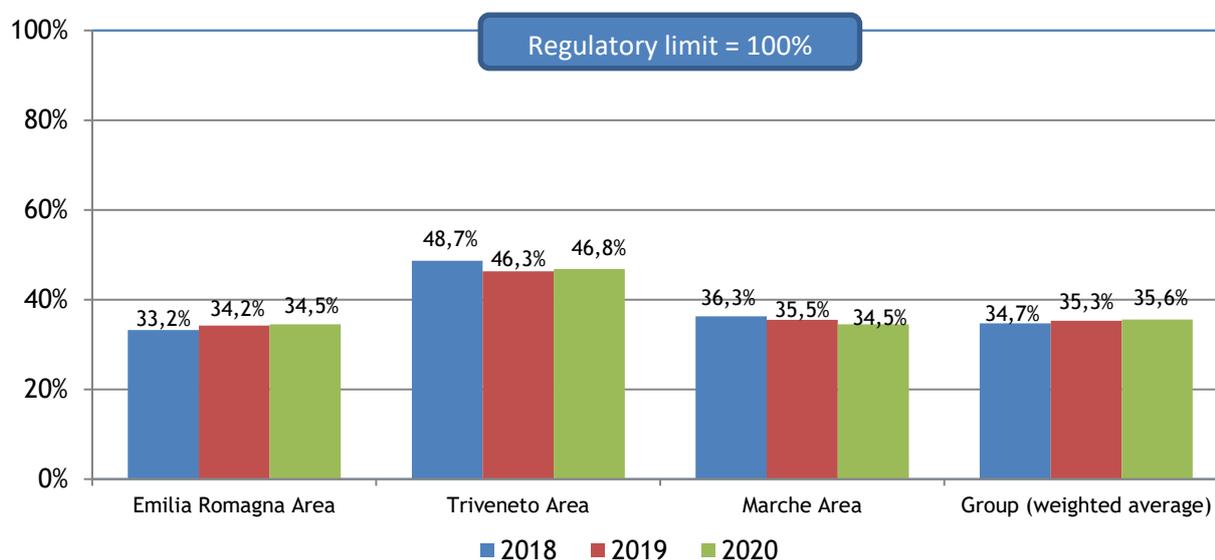
Wastewater purification quality

In 2020, the Hera Group operated the sewage and water purification service in 227 municipalities, 47 of which as Marche Multiservizi and 16 of which as AcegasApsAmga while the coverage of the **sewage service** for all urban areas is equal to 87.6% of the area's requirements (population equivalents).

In 2020, the **purification service** covered 86.4% of the population equivalents in the Group's service areas.

In 2020, Hera Group purified a total of over 360 million m³ of wastewater, in line with the 2019 data (383 million m³). It should be noted that this figure is influenced by the amount of rainfall since the sewer network (18,793 km) is predominantly a mixed-type network (57% of the total).

Compliance of the purified water's quality with the regulatory limits (optimal values <100%)



The indicator concerns the plants that serve over ten thousand population equivalents (the volumes treated in these plants are 93% of the total wastewater treated) and expresses the ratio between the measured concentration of BOD5, COD, TSS, ammoniacal nitrogen, phosphorus and total nitrogen, and the corresponding maximum concentrations allowed by Italian Legislative Decree No. 152/2006.

The efficiency in removing pollutants to comply with the regulatory limits, as expressed by the indicator in the chart, is related to the purification capacity of the plant and the technologies used. Low indicator values mean higher purified water quality. At the Group level, this indicator averages 35.6% of regulatory limits, taking into account BOD5, COD, TSS, ammoniacal nitrogen, phosphorus and total nitrogen, and 26.6% excluding phosphorus and total nitrogen. The trend in the indicator of the removal efficiency of the main pollutants is in line with 2019. It should be noted that we have completed several major upgrade projects initiated in previous years. In particular, concerning the Triveneto area, in the first few months of 2018 the new biological section of the Servola purification plant in Trieste was started up, and went into operation in June 2018.

[303-2]

The water leaving the purification plants must comply with the applicable regulation, Italian Legislative Decree No. 152/06 as amended, and with the permit requirements. For discharges of municipal wastewater into urban areas of more than 2,000 population equivalents, required to comply with the tables in Annex 5 of Italian Legislative Decree No. 152/06, a Protocol on proper performance of control measures has been drawn up with ARPAE/ARPAT, aimed at scheduling the number of annual controls on the discharge, to assess its compliance, while for discharges in smaller urban areas (less than 2,000 population equivalents) the limits of acceptability and the appropriate treatment are set by the Regions. Group procedures are applied to manage and schedule the controls, to handle anomalies and non-conformities with the rules and regulations on the integrated water service, at EU, Italian, regional, and provincial level, in the individual provinces and municipalities of Hera Group's service area.

The following table shows the main enhancement and upgrade measures of purification plants completed during the year and in progress.

Main purification plant expansion/improvement measures

Plant	Population equiv.	Progress (end 2020)	Type of measure	Environmental benefits expected/obtained
Ravenna	240,000	Completed	Revamping of Ravenna water purification plant water line	Increased plant efficiency (revamping of old water line's air circulation system)
Savignano sul Rubicone	139,000	Ongoing (completion scheduled in 2023)	Upgrade of purification plant	Compliance with nitrogen limit
Ferrara	120,000	Ongoing (completion scheduled in 2023)	Revamping of anaerobic digester and treatment plant	Improved management of purification sludge (reclamation of anaerobic digesters)
Ca' Nordio (PD)	197,000	Ongoing (to be completed in 2022)	Plant upgrade measure	Increase of the nominal power of the system to 230,000 p.e.
Borgheria (PU)	116,500	Ongoing (to be completed in 2021)	Measure to achieve plant's regulatory compliance	Improvement of purification efficiency and of compliance with applicable regulations. EC Infringement Resolution 2009/2034 and 2014/2059
Massa Lombarda	80,000	Ongoing (completion scheduled in 2021)	Upgrade of purification plant	Compliance with nitrogen limit
Imola-Santerno	75,000	Completed	Reclamation of Santerno purification plant digesters	Improved management of purification sludge (reclamation of anaerobic digesters)
Lido di Classe	30,000	Ongoing (completion scheduled in 2024)	Upgrade of purification plant	Compliance with nitrogen limit

Plant	Population equiv.	Progress (end 2020)	Type of measure	Environmental benefits expected/obtained
Montecchio (PU)	30,000	Construction in progress (to be completed in 2021)	Plant upgrade measure	More effective treatment to ensure greater compliance with applicable regulations. EC Infringement Resolution 2014/2059
Former sugar refinery – San Giovanni in Persiceto	16,000	Ongoing (completion scheduled in 2023)	purification plant recovery	Compliance with nitrogen limit, also in view of future expansions
Sasso Marconi	12,000	Ongoing (completion scheduled in 2021)	Revamping the Sasso Marconi purification plant	Increased efficiency of the plant, to be capable of receiving new drainage from housing developments
Bentivoglio	7,000	Ongoing (completion scheduled in 2021)	Bentivoglio capital city purification plant upgrade	Greater plant efficiency (implementation of a new activated sludge section and extraordinary maintenance of the existing biodisc line)
Lavezzola	4,500	Ongoing (completion scheduled in 2021)	Upgrade of purification plant	Increased purification capacity of the plant to be capable of handling treatment for new housing developments and of industrial discharge
Vergato	2,000 (completion scheduled in 2021)	In progress	Expansion of sewage purification plant at Tolè	Greater system efficiency
Buonacompra	2,000	Ongoing (completion scheduled in 2021)	Construction of a new purification plant in Buonacompra and collection of non compliant drainage	Restoration of the Pilastrello – Alberone di Cento – Buonacompra urban areas
Pioppe	1,300	Ongoing (completion scheduled in 2022)	Urban area upgrade	Restoration of the Pioppe urban area
Grizzana	1,100	Ongoing (completion scheduled in 2021)	Construction of new sewage purification plant and collection of non compliant drainage	Restoration of the Grizzana urban area

Percentage of analyses on outgoing purification plant water compliant with regulations

%	2018	2019	2020
Plants with over 10,000 population equivalents	99.7%	99.5%	99.5%
Plants with less than 10,000 population equivalents	99.8%	99.9%	99.7%
Weighted average	99.7%	99.6%	99.6%

Considering the 10,186 analyses carried out in 2020 in the 226 purification plants we operate, in 99.6% of the cases the results were compliant with the regulatory limits. The final values for this indicator in 2020 show a very satisfactory situation, with excellent percentages of compliant controls compared to the total monitoring. The only cases that exceeded the authorised limits were in relation to purely incidental situations, largely compatible with the variability of the incoming quantities, the operating conditions and the structural condition of the plants.

Wastewater purification quality can also be identified by monitoring the upgrade trends of urban areas, defined as areas in which population and production activities are concentrated to the extent that it is technically and economically acceptable to build an independent sewage purification system. As established by Directive 91/271/EEC, Legislative Decree 152/2006 and the Water Protection Plan of Emilia-Romagna, to declare an urban area compliant, the following two conditions must be met:

- at least 95% wastewater collection;
- the capacity of the treatment plants must be greater than the population equivalent of the urban area itself with secondary or tertiary treatment (where necessary).

Compliance of the sewage-water purification system, urban areas

	2019	2020	2021
Urban areas compliant for purification >2,000 p.e. (qty)	129	130	135
Urban areas compliant for purification >2,000 p.e. (% population equivalents)	97.3%	97.6%	100%
Urban areas compliant for purification <2,000 p.e. (qty)	171	174	247
Urban areas compliant for purification <2,000 p.e. (% population equivalents)	72.8%	74.5%	98.9%
Urban areas compliant for purification total (qty)	300	304	382
Total urban areas compliant for purification total (% population equivalents)	96.5%	97.6%	99.9%

The urban areas <2,000 p.e. are in the Emilia-Romagna Region, for which they are all between 200 and 2,000 p.e., and in the Friuli-Venezia Giulia Region. There are no urban areas <2,000 p.e. in the areas served by the Group in the province of Padua, and the Marche Region has not yet issued provisions regarding urban areas <2,000 p.e.

At the Group level, at the end of 2020, **130 of 135 urban areas with more than 2,000 population equivalents** (p.e.) have been upgraded to comply with Italian Legislative Decree No. 152/2006.

Under Regional Authority Decision 569/2019, the **Regional Government of Emilia-Romagna** has updated the population equivalent numbers and the perimeters of the urban areas, which have therefore changed, in the Group's service area from a total of 137 urban areas to a total of 135. Compliant urban areas amount to 97.3% of the total population equivalents and all urban areas with more than 2000 p.e. are compliant. In 2017, in fact, the Ministry for the Environment formally informed the Regional Government of Emilia-Romagna that it had withdrawn infringement procedure 2014/2059, which therefore ended reinstating the compliance of the region's 206 urban areas with >2,000 p.e., of which 101 (at the time 102) are served by Hera. In 2016, all of those urban areas had achieved the quality objectives set out in the Water Protection Plan of the Regional Government of Emilia-Romagna, in terms of extension of the networks and the presence of treatment plants. In the **Triveneto region**, 100% of the urban areas served in the area have

compliant treatment. In the **Marche** region, in the area served by the Group, six urban areas have been declared non-compliant and infringement procedures 2014/2059 and 2009/2034 have been initiated. In 2020, the measures to achieve compliance of the Urbino urban area > 10,000 p.e., resolving infringement 2009/2034 C, were completed. Measures have already been planned to make each urban area compliant with the requirements of EU and Italian legislation by 2023, as established by Marche Regional Authority's new plan, approved in December 2020. By 2023, therefore, all urban areas with a population equivalent greater than 2000 in the service areas of Hera will have achieved compliance.

In addition to the above, the Emilia-Romagna Regional Government, in its resolution 201/2016 on the adaptation of urban wastewater discharges, ruled to implement some additional measures in **urban areas with more than 10,000 p.e.** These are structural adjustments relating, for example to the upgrade of undersized network floodways or more thorough nitrogen abatement. Although these situations do not undermine the compliance of those urban areas to Legislative Decree 152/2006, they may locally jeopardise the achievement of quality objectives for water bodies. Therefore, the Regional Government of Emilia-Romagna, together with the integrated water service operators, have defined timescales and compliance criteria in the aforementioned resolution. Seven measures have already been completed (the purification plants of Riccione in 2017, of Cattolica in 2018, those of Castel San Pietro and of Lugo in 2019, and those of Budrio, Medicina, and Alfonsine in 2020). A further 5 measures are planned by end 2021 (San Giovanni in Persiceto, Savignano sul Rubicone, Lido di Classe-Lido di Savio, Massa Lombarda and Cattolica-Misano urban areas for the Misano purification plant measure alone) out of a total of 12 nitrogen upgrading measures in 11 urban areas. In addition to these, 8 measures are planned by 2024 and 16 by 2030. It should be borne in mind that a total of 25 urban areas are affected by the 36 improvement measures, some of which involve more than one intervention in different years.

As to **urban areas under 2,000 p.e.**, (between 200 and 2,000 for Emilia-Romagna), where there are still critical issues for subjecting the final effluents to appropriate treatment, Regional Government of Emilia-Romagna identified and set the timeframe for achieving compliance in its Resolutions 201/2016 and 569/2019 as: 31/12/2018 to prepare the detailed plan; 31/12/2021 to implement the measure. In 2020, 3 urban areas were made compliant, one in the province of Ferrara, one in the province of Rimini, and one in the province of Ravenna, for a total of 2697 population equivalents. Compliance is to be achieved by end 2021 in 73 urban areas in Emilia-Romagna for a total of about 37,287 thousand population equivalents. In the Triveneto service area there are 37 urban areas of less than 2,000 p.e., of which 34 were already compliant with regulations in 2018, one complied in 2019 (Longera, with 309 population equivalents) and two will be upgraded in coming years.

Considering Emilia-Romagna and Triveneto, there are 249 urban areas with less than 2,000 p.e. of which 174 are compliant at end 2020, equal to 74.5% of the population equivalents. By 2021, 247 urban areas out of 249 (99.2%) with less than 2,000 p.e. will achieve compliance. Concerning urban areas of less than 2,000 p.e. in Marche, the Regional Government has not yet issued provisions in this regard.

Constructed wetlands

Constructed wetlands are a natural process used to treat polluted water based on the capability of soil and vegetation to remove pollutants. They are designed as a system of biological ponds and of planted macrophyte vegetation. The purification process is completely environmentally friendly and does not involve the use of chemicals. The wastewater arriving at the plant flows into a bed of gravel and aquatic plants: here microorganisms come into play to eliminate the pollutants present. The action of the plants is fundamental because the micro-organisms necessary for the entire system develop in their roots; they absorb the oxygen produced by the plant species and trigger the processes necessary for purification of the wastewater.

This kind of treatment also contributes to the reclamation of borderline areas, creating natural environments and landscapes that are pleasing to the eye, and often chosen as refuges for various species of birds, amphibians and reptiles.

Hera Spa operates eighteen small or medium-capacity constructed wetlands, located in the provinces of Bologna, Florence, Forli-Cesena, Rimini and Ravenna: some are secondary biological treatment plants downstream of primary sedimentation while others are tertiary treatments used for final refinement of the wastewater before its final discharge. Marche Multiservizi operates five constructed wetlands plants with a potential of between 80 and 180 population equivalents.

Protection of air, land, and biodiversity

Atmospheric emissions from waste-to-energy plants

All of Hera Group's waste-to-energy plants are equipped with **flue gas purification systems** and **process and emission control systems**, designed and built so as to attain:

- high flue gas purification performance in all process conditions;
- high operational versatility;
- high reliability of emission control systems.

To pursue these objectives, the **plant engineering standards** adopted in the Group's plants are characterised by:

- a **double reaction and filtration** system to lower the concentrations of particulate, hydrochloric acid, hydrofluoric acid, sulphur dioxide, heavy metals, dioxins and furans, and polycyclic aromatic hydrocarbons (except for the Pozzilli plant, equipped with a single reaction and filtration system);
- a **double reaction system** (non-catalytic and catalytic) to reduce nitrogen oxide concentrations (except for the Pozzilli plant, equipped with a single, non-catalytic reaction system);
- a **double flue gas monitoring system** for process control (except for the plants in Padua, Pozzilli and Trieste, equipped with a single system). The two systems measure the concentrations of the main pollutants from the furnace and downstream of the first reaction and filtration phase. On that basis it adjusts the volume of reactants required to achieve purification levels that are compliant with statutory emission thresholds and which are, on average, 80-90% below such thresholds;
- a **continuous double monitoring system** for stack emissions: one as a backup for the other to ensure the continuity of the analysis of the concentrations in the atmospheric emissions.

The possibility of using double purification and monitoring systems in series (or in parallel for stack monitoring) enables us to successfully pursue the objectives described above.

In addition to the aforementioned activities, to **monitor emissions and environmental impact**, we carry out the following operations annually:

- **specific chimney inspections**, carried out by certified inspectors at intervals set by the integrated environmental authorisation, for the parameters which cannot be continuously monitored;
- **checks on soil fallout of pollutants**: we carry out external monitoring programmes jointly with University and research agencies to analyse the fallout on soil, ground and vegetation, etc., to ensure that the emissions are not only within the regulatory limits, but also have no significant impact on the surrounding environment.

The **plant renovation process** has significantly improved the abatement percentages of polluting emissions:

- in January 2008, two new lines of the Ferrara waste-to-energy plant became fully operational;
- the new Forlì plant became fully operational at the beginning of 2009;
- in April 2010, the new line 4 of the Modena waste-to-energy plant became operational;
- in October 2010, the new line 4 of the Rimini waste-to-energy plant became operational.

The 2021-2024 plan includes the modernisation of the Padua and Trieste waste-to-energy plants, which will equip the two plants with better and more innovative flue gas treatment systems to further reduce their environmental impact.

This paragraph also contains data on the Faenza biomass plant (operated by Enomondo, 50% owned by Herambiente and not consolidated using the line-by-line method), which is equipped with a double reaction system (catalytic and non-catalytic) to reduce the concentration of nitrogen oxides.

Legislative Decree. 133/2005 requires **continuous monitoring of stack emissions** for seven parameters: particulates, hydrochloric acid, nitric oxides, sulphur oxides, carbon monoxide, hydrofluoric acid, and total organic carbon. Mercury is also continuously monitored at the Ferrara, Forlì, Modena, and Rimini plants.

Atmospheric emissions from waste-to-energy plants, continuously monitored parameters [305-7]

t	2018	2019	2020
Particulates	6.2	4.6	4.8
Hydrochloric acid	16.7	18.5	20.3
Nitrogen Oxides	689.9	701.7	718.6
Sulphur oxides	13.1	18.4	19.9
Carbon monoxide	82.2	80.3	81.1
Hydrofluoric acid	0.6	0.6	0.6
Total Organic Carbon	9.7	9.9	9.8
<i>Waste treated in the plants (thousands of t)</i>	<i>1,407</i>	<i>1,360</i>	<i>1,371</i>
<i>Net electricity generated (MWh)</i>	<i>754,043</i>	<i>864,698</i>	<i>894,813</i>
<i>Thermal energy produced (MWh)</i>	<i>245,493</i>	<i>243,248</i>	<i>259,995</i>

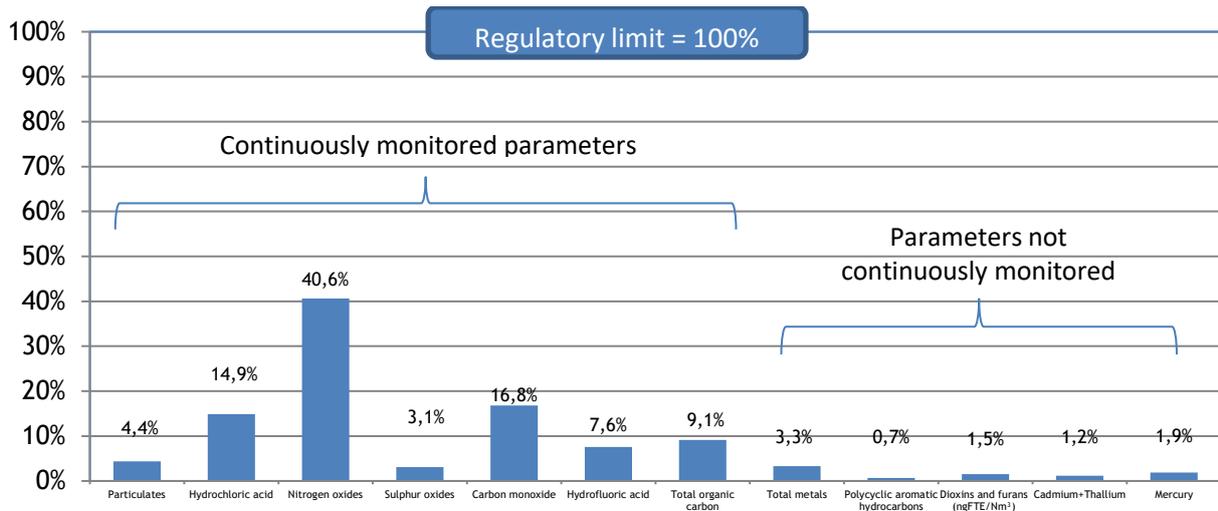
The data are calculated using continuous measurement systems which are subject to the approval of the supervisory bodies at the time the plant is granted a permit to operate. The procedures used by individual plants to collect and calculate the volume of substances released are not completely standardised. Including the Enomondo waste-to-energy plant.

The analysis of mass flows shows a **slight increase** in the last two years for almost all emissions from waste-to-energy plants, also due to the increase in waste treated (+0.8%); the percentages of increase range from +1% for carbon monoxide to +10% for hydrochloric acid. Total organic carbon emissions fell slightly and hydrofluoric acid emissions were stable. However, these deviations are small and depend on the composition of the waste treated as well as on the quantities of waste.

Concerning **pollutants that are not continuously monitored** (total metals, polycyclic aromatic hydrocarbons, dioxins and furans, cadmium and thallium, and mercury), the results of the analyses carried out during the year enable us to estimate the total emissions: 128 kg of metals were emitted in 2020 (152 in 2019), 0.59 kg of polycyclic aromatic hydrocarbons (0.72 in 2019), and 10.9 mg of dioxins (17.4 in 2019).

The results of the emissions measurements at Hera Group's waste-to-energy plants confirm again in 2020 that, since they are equipped with the best technologies available and run in the most efficient manner possible, these plants emit levels of particulate, sulphur oxides, metals, polycyclic aromatic hydrocarbons, and dioxins and furans **that are far below the regulatory emission limits**.

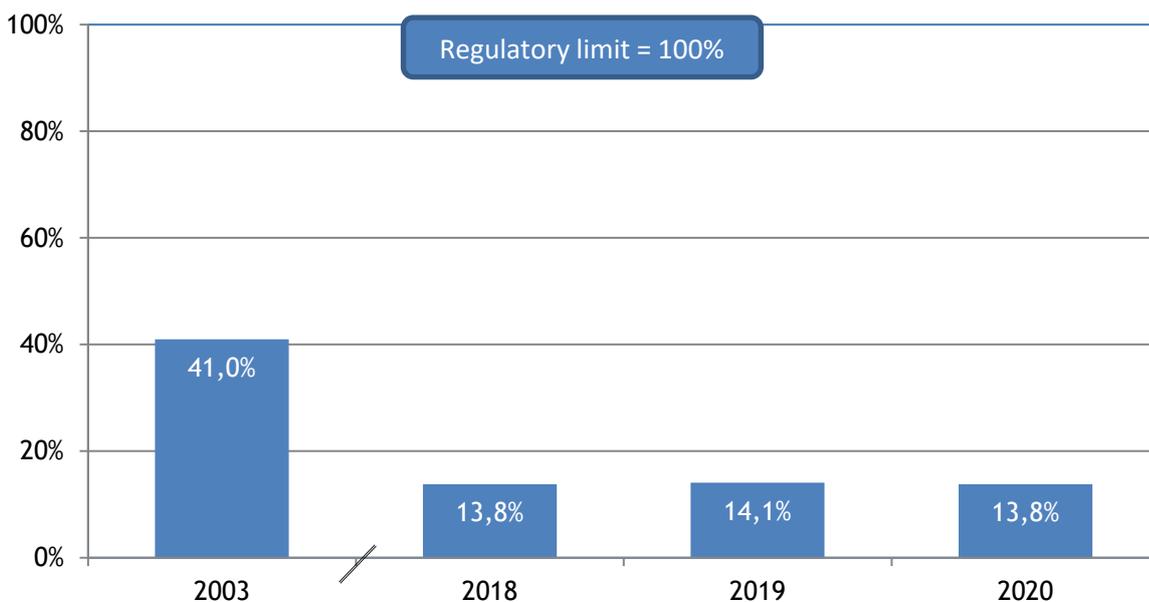
Compliance of atmospheric emissions of waste-to-energy plants with regulatory limits pursuant to Italian Legislative Decree No. 133/2005 – (optimal values <100%), 2020



Including the Enomondo waste-to-energy plant.

For all **monitored continuously** pollutants, average stack concentrations were **at least 59%** (for nitrogen oxides) and **up to 97%** (for sulphur oxides) below the limits. At plants equipped with the dual reaction sulphur oxide reduction system (Bologna, Ferrara, Forlì, Modena, and Rimini), the **concentrations were also well below the limits set by local authorities, which are much more stringent** than Italian regulations. Even for parameters that are **not continuously monitored**, all values are well below regulatory limits **by at least 96.7%** (total metals), **and up to 99.3%** (polycyclic aromatic hydrocarbons).

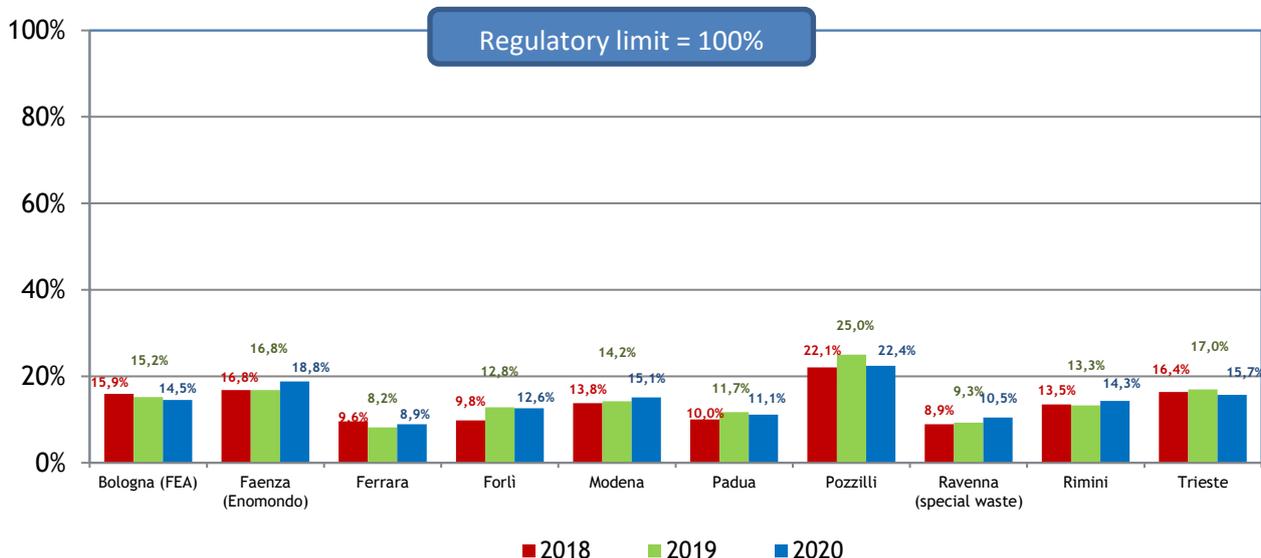
Compliance of atmospheric emissions of waste-to-energy plants with regulatory limits pursuant to Italian Legislative Decree No. 133/2005 – continuously monitored parameters (optimal values <100%), weighted average of the volumes of waste treated in the plants operated



Including the Enomondo waste-to-energy plant.

Taking into account all the continuously monitored pollutants, in 2020 the **concentrations of atmospheric emissions** from waste-to-energy plants were on average **86.2% below the limit** (13.8% of regulatory limits), whereas in 2003 this percentage was 59%.

Compliance of atmospheric emissions of waste-to-energy plants with regulatory limits pursuant to Italian Legislative Decree No. 133/2005 – continuously monitored parameters (optimal values <100%), detail by plant



The same indicator was calculated for the six plants with authorised limits that are more stringent than Italian regulations for 2019 (for the eight continuously-monitored parameters, on average the authorisations are at 73% of the limits let by Italian Legislative Decree No. 133/2005). The data are shown in the following table.

Waste-to-energy plant atmospheric emissions compared to authorised limits – continuously monitored parameters (optimal values <100%)

%	2018	2019	2020
Bologna (FEA) waste-to-energy plant	26.7%	25.7%	24.9%
Ferrara waste-to-energy plant	10.8%	8.5%	9.4%
Forlì waste-to-energy plant	23.8%	24.2%	24.0%
Modena waste-to-energy plant	17.7%	17.2%	18.6%
Ravenna waste-to-energy plant (special waste)	13.4%	11.1%	12.4%
Faenza (Enomondo) waste-to-energy plant	20.3%	19.4%	23.3%
Average compared to regulatory limits	18.8%	17.7%	18.8%

The integrated environmental authorisations for the plants in Ferrara, Forlì, Modena, and Faenza also require continuous mercury monitoring.

The results are excellent again in this case: the concentrations are, on average, about 81.2% below the most restrictive limits. Note that since the limits set by the individual authorisations depend on the specific plant, they are not comparable.

Transparency of waste-to-energy plant emissions

Since 2008, the Group's website has provided the previous day's average values and "half-hourly averages" of the Group's waste-to-energy plants (every half hour the online data are updated with the average value of the past 30 minutes). The data are automatically transmitted by the measurement systems, operational 24/7 at all the Group's plants, located in the provinces of Bologna, Ferrara, Forlì-Cesena, Modena, Ravenna, Rimini, and Isernia.

As a further guarantee of transparency, Hera commits to:

- daily or weekly reporting of the half-hour and daily averages to the control agency (ARPA);
- yearly reporting on the plant's operations, by 30 April every year, to the competent authority;
- if the plant is EMAS registered, the control results are published upon formalisation of the "Environmental Declaration";
- publishing annual data, compared to regulatory limits and limits in the permits, in the Group's sustainability report.

Since 2015, the Group's website also provides the data of the Padua and Trieste plants, in the same format (half-hour average updated in real-time).

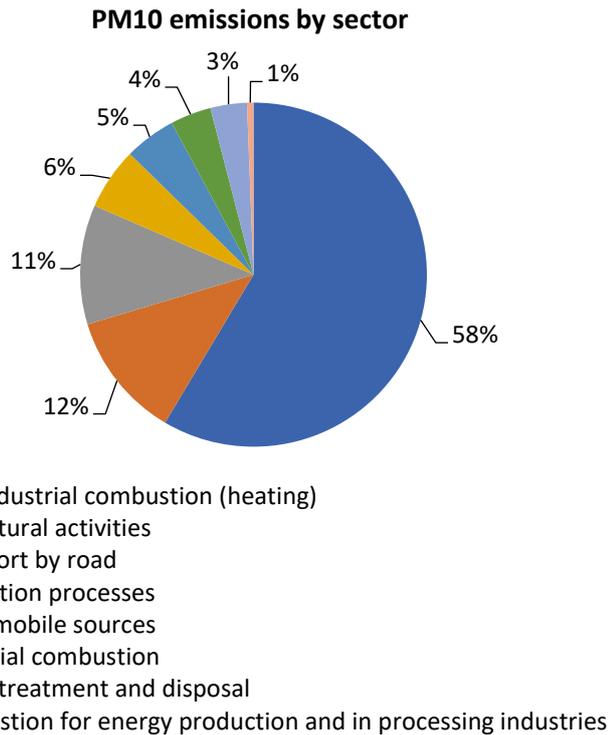
Lastly, from 2018 on, average annual data on periodic self-checks on metals and organic micro-pollutants has also been available for all plants.

Studies on the environmental impacts of waste-to-energy plants

For many years, the waste-to-energy business has been the subject of **several studies and monitoring projects**, as well as of major **technical improvements** also related to the introduction of increasingly stringent plant and management criteria by European and Italian legislation. The technology has achieved very high performance levels in terms of **reducing emissions and environmental impact**.

If we consider the **total annual emissions of dioxins** into the atmosphere as the sum of all waste incineration plants in Italy **from 1990 to 2018**, we can see that as a result of regulatory and technological developments there has been a **99% reduction in emissions** (Source: Sinanet-Ispra-SNAP databank). Putting the analysis of the different production sectors into context, since 2001, waste incineration has been the smallest source in terms of emissions of dioxins and furans, in contrast to the iron and steel industry, and the entire residential sector (e.g., domestic heating).

The **PM10** emissions of Italy's waste incinerators are around **three magnitudes lower than those of the residential segment**. The main sources of PM10 at Italian level are in fact the residential sector, agricultural activities, vehicle traffic, and production processes, as the graph below shows.



Source: ISPRA, XV Rapporto Stato dell’Ambiente – 2019 Edition (2017 Data)

Environmental supervision and air quality monitoring projects

According to the permits for the **waste-to-energy plants in Ferrara, Modena, Forlì, Rimini, Bologna, Padua, and Isernia**, the Hera Group must carry out studies on the potential impact that its plants have on the surrounding environment.

In 2008, under the provisions of the integrated environmental authorisation of the **Rimini** incinerator, the **level of air quality was monitored** by ARPAE (*pre-construction monitoring*). This study was designed to determine the air quality in the areas around the incinerator, potentially affected by the plant’s emissions. In 2013, with the new line 4 now fully operational, we repeated the monitoring process in the same way to assess any differences or impacts on air quality that could be attributed to the new plant (*post-construction monitoring*). The monitoring results were prepared by the regional agency for the protection of the environment (ARPA) of Rimini in 2014 and made available in 2015. The study shows that **there is no significant impact on air quality**, post-construction vs. pre-construction.

In the industrial area in which the **Forlì** plant operates, Hera has installed a **station for monitoring air quality** that is run by ARPAE Forlì. This station has been operational since 2009, and provides a continuous stream of data that are validated by ARPAE and published on their website. Periodic campaigns are also carried out at the station to identify for micro-pollutants and metals in the particulate matter. The results show that there is **no substantial difference** between a public area and the area around the plant, indicating the presence of a uniform environment, influenced significantly by the town rather than the presence of the plant. These results were **confirmed in 2020** when ARPAE Forlì made available the previous year’s air and soil quality monitoring data.

For over a decade, **environmental monitoring tests** have been carried out at the **Modena** plant on various environmental media: air and soil quality, biomonitoring, total depositions. Since 2013, the monitoring network has been operated by the local ARPA (now ARPAE), which carries out all the analyses required by the waste-to-energy plant’s IEA. In addition, in accordance with the IEA, a **health monitoring studies** have

been carried out since 2003 to assess health risks for the population that lives near the incinerator and the workers at industrial sites near it. Two reproduction indicators are monitored: teratogenic risk, i.e., congenital malformations, and spontaneous abortion risk. The program ended in 2014 with the processing of the data collected in 2013 and **showed no dose-response relationships** between exposure and relative risk of miscarriage and congenital disabilities.

Between 2010 and 2012, a genuine **environmental and health monitoring protocol** was carried out at the **Ferrara** waste-to-energy plant. Its details were defined by ARPA (now ARPAE), AUSL and the provincial government of Ferrara, and it examined several environmental media. We appointed institutions with proven experience in the sector (CNR and Universities) to handle the scientific coordination for these studies. The results of the first two-year study, which ended in October 2012, confirmed the preliminary evaluations made when the Integrated Environmental Authorisation was granted and showed that the **plant's contribution, in terms of air quality, cannot be distinguished from the environmental background levels**. In the light of the results that have been obtained, a subset of the monitoring was extended for a second period (2013-2015), to examine only the aspects considered most significant: air quality and studies of soil pollutants. Air quality monitoring activities ended in early 2015, confirming the results of the two previous years. In particular, the study of the soil, repeated in the autumn of 2013, **showed no accumulation** of metals and micro-pollutants in the areas surrounding the plant, thereby confirming that the incinerator's emissions cannot be distinguished from the environmental baseline. Furthermore, in 2015, the monitoring guidelines for the coming years were agreed with the regulators. To this end, we continued our collaboration with CNR-IIA and La Sapienza University to ensure the continuity of the study of air quality, which takes place annually with four monitoring campaigns lasting 30 days (in winter, spring, summer, and autumn). Also, in 2016, we signed a convention with ARPAE to continue the three-year soil monitoring project. As for previous studies, **no correlation with the presence of the plant has been identified**. The study was repeated in autumn 2019, and the results, made available during 2020, confirmed that the operation of the plant has a **very small impact** on the environmental framework of the investigated area and can **hardly be distinguished** from the environmental baseline.

The **Padua** waste-to-energy plant, in line with the requirements of the "Memorandum of understanding on the assessment of the health impact in the city of Padua and in its metropolitan area" signed by the municipalities of Padua and Noventa Padovana, with Arpav, ULSS 16 of Padua, and the University of Padua was the subject of a study that was completed in December 2015, with the presentation of the "Report on the pilot project of population health monitoring assisted by the ULSS 16 state healthcare unit of Padua, particularly on potential health effects from air pollution – a longitudinal study in Padua (SLPD)". The conclusions showed on one hand **insufficient statistical evidence to identify statistical effects** on people's health related to the plant's emissions, on the other the differential of the concentration estimates (with three decimal digits of precision) **is not compatible with measurable health effects**, i.e., the effect of PM10 emissions from the waste-to-energy plant on the background pollution levels appears to be **irrelevant**. The same system is the subject of the Voluntary agreement to monitor the effects of the San Lazzaro waste-to-energy plant near Padua, which lasts three years. Hestambiente and Arpav have carried out some **environmental studies in addition** to those required by the applicable regulations and by the permits. More specifically, the operation of two fixed Hestambiente stations for air quality monitoring (SO₂, CO, O₃, NO_x, PM10 and PM2.5, with automatic equipment and publishing the relevant data, validated by Arpav, on the Arpav website in a page dedicated to the waste-to-energy plant) was guaranteed. An annual air quality monitoring campaign was carried out using a mobile lab provided to Arpav by Hestambiente. We sampled the soil out at five sites near the waste-to-energy plant, and analysed the samples for metals (Pb, As, Cd, Ni, Hg), polycyclic aromatic hydrocarbons, dioxins, furans and PCBs in the laboratory, and we measured the sound pressure levels around the plant. All the surveys highlighted the plant's **negligible** environmental impacts. We entered into a new three-year agreement with various bodies to monitor the fallout from the Padua waste-to-energy plant, for which Hestambiente has expressed its willingness to continue.

In the area surrounding the **Pozzilli** (Isernia) waste-to-energy plant, in agreement with ARPA Molise, a series of representative monitoring points have been identified at which studies on atmospheric depositions and PM2.5 atmospheric particulate sampling have been carried out in the 2017-2018 two-year period. At all monitoring points, the annual average PM2.5 was **below the regulatory level** and the deposition study showed values for organic micro-pollutants (dioxins, PAHs) **always below** the instrumental detection limits.

Many environmental monitoring campaigns have been conducted in the area surrounding the plant site of the waste-to-energy plant in **Granarolo dell'Emilia** (BO). At the end of 2004 a memorandum of understanding was signed by the Provincial Administration, Arpa Bologna, the municipalities of Castenaso and Granarolo dell'Emilia, Ausl of Bologna, the University of Bologna and Fea Srl for the environmental monitoring of the area surrounding the plant. The monitoring, which continued until 2007, analysed the air media by monitoring the five sites. **Innovative bio-toxicological tests** have been performed on solid particulate matter samples to assess and estimate carcinogenic risk. The public health department of the local health organisation, following up on the work carried out in the previous campaign, also carried out an epidemiological survey on the causes of mortality, extending the research to include reproductive data. Lastly, the experimental centre for the study and analysis of soil at the University of Bologna studied the presence of heavy metals and other micro-elements in the water-soil-plant system and also in surface and groundwater. It completed the analysis and verification of atmospheric emissions and water discharges from the waste-to-energy plant. The 2004–2007 campaign attested that concerning air quality, atmospheric emissions and the water-soil-plant system, the plant **did not determine significant impacts** on the area. The waste-to-energy plant in Granarolo dell'Emilia has also been included in the Monitor project (Monitoring of waste-to-energy plants in Emilia-Romagna), promoted by the Emilia-Romagna Region and Arpa, whose goal is to organise an environmental surveillance and epidemiological evaluation system in the areas surrounding the plants. The project, carried out between 2007 and 2011, has improved scientific knowledge on the quality and quantity of the substances emitted by waste-to-energy plants and their impact on the quality of the surrounding air; it has also studied the health effects with toxicological investigations and has assessed their correlation with exposure to waste-to-energy plants in epidemiological terms. The results of the Monitor project were presented to the public in 2011, and the related documentation (Quaderni Monitor) can be freely downloaded from the Arpa Emilia-Romagna website. The current Integrated Environmental Authorisation confirms the air quality monitoring activities, which are carried out through two fixed permanent monitoring units that monitor PM10 and PM2.5 particulate matter, PAH, and metals.

District heating: an answer to air quality protection

District heating is a service that sells heat for customer home heating and domestic hot water. It is an alternative system to traditional autonomous or condominium-based boilers which makes it possible to **concentrate** the production of heat in **central installations, which are more efficient and better controlled** than home boilers. The heat from these installations, in the form of hot water, is sent to our customers' homes through a distribution network made of insulated pipes. The heat then fuels the domestic heating system via **non-polluting** heat exchangers. Customers have the **advantage** of **greater safety** and **lower running and maintenance costs**, while maintaining the freedom to independently adjust the temperature of their homes.

District heating provides a **solution to air pollution problems** in cities by replacing home boilers, which are sometimes fuelled by gas-oil or fuel oil, with high-efficiency heat production methods, renewable energy, or energy recovered from other production processes.

During 2020, some new factors arose:

- Ferrara: first year after taking over the operational management of the Casaglia geothermal asset;

- Ferrara: connection of the two independent systems Acer Barco and Centro Diamante to the main DH network;
- Ferrara: connection and activation of the former Sant'Anna hospital;
- Bologna: installation of four heat pumps with thermal recovery on the cogeneration cycle at the headquarter's Berti Pichat power plant.

In addition, during 2021, technical and economic optimisation, and efficiency improvements will be carried out on district heating systems in Ferrara, such as the revamping of well pump drives and the integration of remote control.

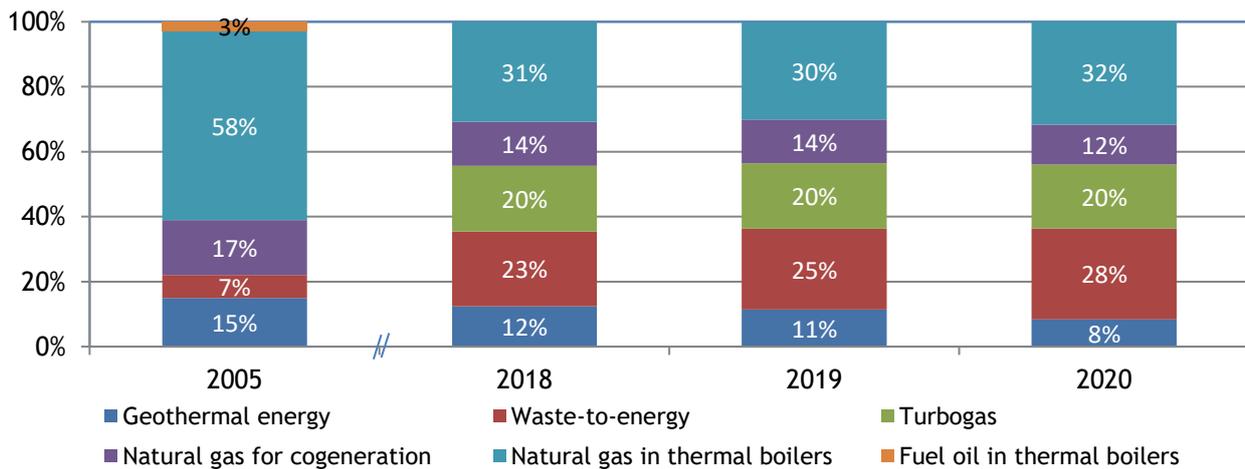
Environmental advantages of district heating [302-5]

	2018	2019	2020
Primary energy saved (toe)	36,495	35,132	28,967
Nitrogen oxides avoided (t)	265	281	202
Carbon dioxide avoided (t)	121,022	119,639	103,125
Sulphur oxides avoided (t)	268	273	214

Calculated as the difference between a traditional system (existing boiler park comprising 65% natural gas-powered boilers and 35% diesel boilers with an average seasonal yield of 75% (Source: Comitato Termotecnico Italiano, 2009), and the Italian electricity grid with average Italian emissions and Hera's district heating systems for the same quantities of energy (thermal and electric). Excluding AcegasApsAmga.

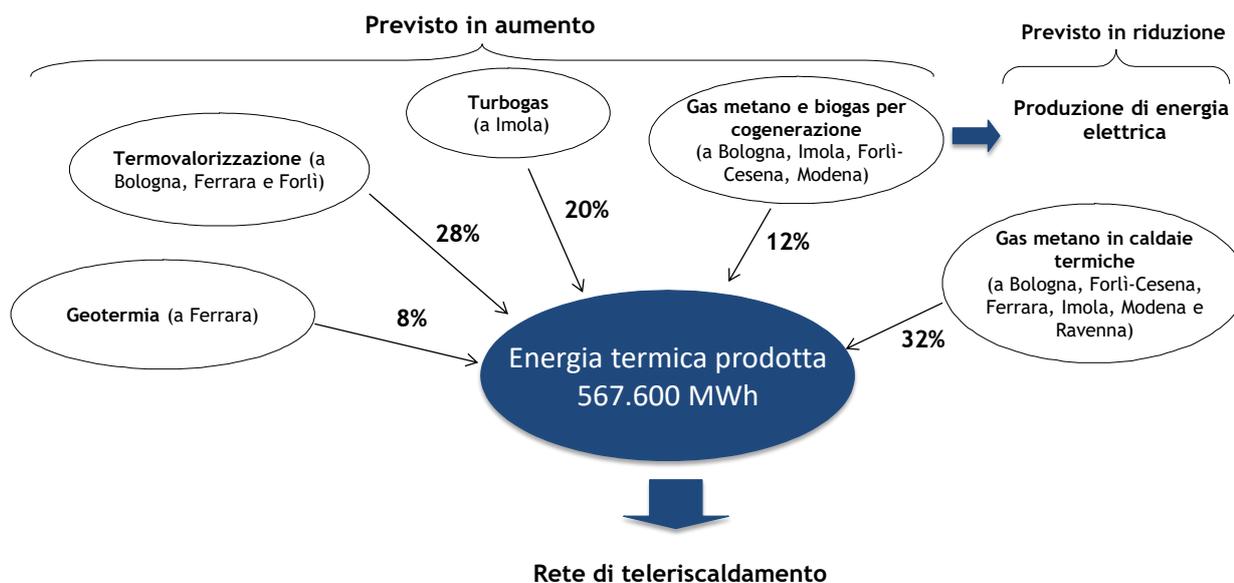
Overall, **28,967 tonnes of oil equivalent** and **103,125 tonnes of carbon dioxide were saved in 2020** thanks to district heating, figures that were down by 17.5% and 13.8% respectively compared to 2019 due to lower thermal input and a significantly lower production of electricity. The decrease in thermal energy produced in 2020 is due to a combined effect of milder winter temperatures and lower thermal energy requirements as a result of the health emergency. The lower production of electricity was due to breakdowns in the Cogen Barca network in January and February 2020 that did not allow the turbines to operate, accidental failures at the Sede Berti, Modena Giardino, Cesena Bufalini and Imola Casalegno cogenerators, and the extraordinary maintenance required.

Sources used for district heating



Excluding AcegasApsAmga.

Sources used for district heating (2020)



Excluding AcegasApsAmga.

Concerning the **sources used for district heating**, it should be noted that the percentage of **thermal energy from renewable or high-efficiency sources (68% in 2020)** has slightly decreased compared to 2019 (down 2 percentage points). This is due to some outages and technical problems, which affected geothermal energy in Ferrara (-29% of production) and the cogeneration plants (-14%); production from turbogas in Imola also decreased (-6%); this lower production was offset by a greater withdrawal of heat from waste-to-energy plants (+6%) and the activation of thermal boilers (+4%).

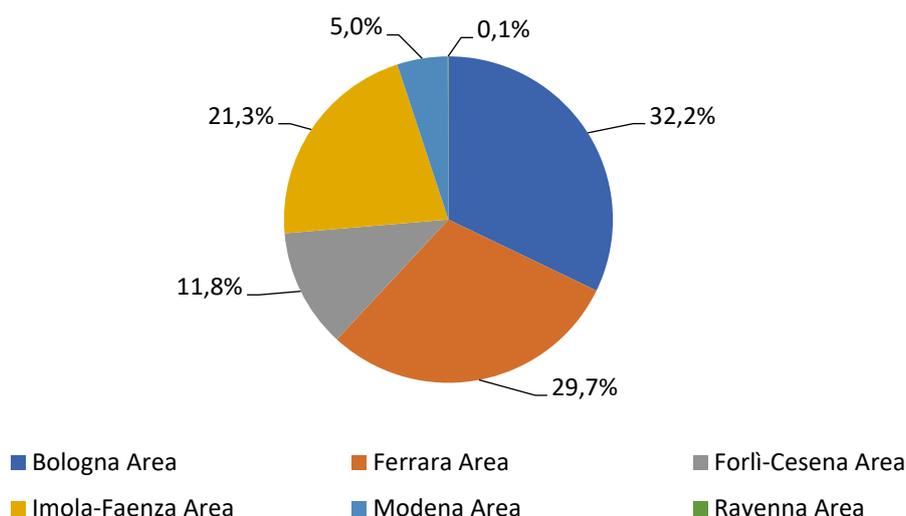
District heating: energy sold and volume served

	2018	2019	2020
Thermal energy sold (MWh)	500,916	481,510	453,318
Volumes served (thousands of m ³)	21,174	21,194	21,700
Housing unit equivalents served (qty)	88,225	88,307	90,415

The housing unit equivalents were calculated on the basis of an average apartment volume of 240 m³. Excluding AcegasApsAmga.

In 2020, the volume and housing unit equivalents served both increased by **2.5%** and **2.4%** respectively compared to the previous year, mainly in the Ferrara and Forlì-Cesena systems, while the thermal energy sold decreased by 5.9% due to the reasons explained above.

Housing unit equivalents served, by area (2020)



Excluding AcegasApsAmga.

Cogeneration for district heating

Cogeneration is the **combined production of electricity and thermal energy** in a single integrated system, using a single fossil or renewable source. It is done in specially-designed thermoelectric power plants, which recover heat from the flue gas produced by an engine powered by any fuel. The process achieves **significant energy savings** (about 40%) compared to separate electricity and thermal energy production.

Thanks to their **connection with district heating networks**, Hera Group's cogeneration plants help **improve the air quality** of the towns where they are located. Thanks to them, many boilers have been replaced with modern, efficient systems to heat and supply hot water to buildings. With district heating, systems are monitored continuously, both in terms of combustion processes and atmospheric emissions.

Hera Spa operates ten cogeneration plants, of which three are trigeneration plants, for an overall nominal installed electric power of 27.15 MW. In 2020, they produced 174,336 MWh of thermal energy for district heating in all our service areas, of which 111,736 MWh were generated in the Imola cogeneration plant.

Atmospheric emissions generated by district heating

In 2020, the district heating plants produced a total of 629.3 GWh of electricity and thermal energy, down 4.5% compared to 2019 due to the technical problems explained above. In 2020 this production generated a total of 107.8 tonnes of nitrogen oxides (NOx), a value that is **steadily decreasing** compared to previous years (2.7% less than 2019). In relation to the energy produced, these emissions amount to approximately 171 grams per megawatt hour, a ratio that has increased slightly, by 1.8%, compared to 2019 due to the decrease in energy produced.

Atmospheric emissions generated by district heating [305-7]

	2018	2019	2020
Nitrogen oxides NOx (t)	119.2	110.8	107.8
Electricity and thermal energy generated (GWh)	679.8	658.8	629.3
Specific emissions (g NOx/MWh)	175.3	168.2	171.3

The data refer to the thermoelectric and cogeneration power stations that provide district heating (source of emission factors for NOx: Corinair 2004 for boilers and data from manufacturers for cogenerators). The data do not include Imola's power plant, detailed in the following paragraph.

Emissions of the Imola cogeneration plant

The **Imola** cogeneration plant, used for **the city's district heating**, stands out not only for its excellent performance in terms of energy production but also from an environmental perspective since it achieves its low atmospheric emissions while also saving a significant amount of energy.

In 2020, it generated **111,736 MWh thermal** and **163,483 MWh electrical** with an installed capacity of 65 MW thermal and 80 MW electrical. The lower production compared to previous years is due not only to the health emergency period, but also to a period of plant downtime in the summer and in the last months of the year due to technical problems with the generator.

The plant consumed 156,949 m³ of industrial water, (down 14.5% compared to 2019), of which 93,905 m³ were used to replenish the cooling tower, an amount compliant with the 210,000 m³ authorised by the IEA for that year. This replenishment was much lower than in previous years since the plant experienced some downtime.

Again in 2020, the **absolute specific emissions** of the Imola cogeneration plant remained at **extremely low levels**. The environmental authorisation for the Imola plant requires pollutant limits 75%/80% lower than nationwide Italian regulations for the pollutants most present in flue gases (NOx and CO). In 2019, IEA amended the limits on airborne emissions by introducing compliance with the daily limit instead of the hourly limit for continuously monitored pollutants.

Atmospheric emissions from the Imola cogeneration plant [305-7]

mg/Nm ³	National limit	Authorised limit	2018	2019	2020
Nitrogen oxides	60	14.5	10.0	9.0	8.8
Carbon monoxide	50	9.5	2.2	2.1	2.1
Ammonia slip	not required	2	0.45	0.38	0.25
Total particulate matter	not required	4	0.01	0.01	0.01
PM10	not required	1	<0.04	0.01	<0.01

The authorised emission limits are those set by the environmental compatibility decree issued by the Ministry for the Environment, Land and Sea Protection DEC/DAS/2006/00142 of 15 February 2006 (only NOx, CO and NH3) and the integrated environmental authorisation of the province of Bologna of 11 April 2007, ref. 124043, as amended. The values are the average continuously-measured values (for PM10 the values are the average of the eight analyses carried out). The Italian limits are for the hourly average (except for PM10), while the authorised limits are for the daily average.

The corporate vehicle fleet and mobility management

Corporate vehicles

In 2020, we continued along our strategy to optimise the use of the vehicles, beginning by purchasing technologically advanced vehicles powered by **low environmental impact fuels**, to replace obsolete vehicles.

No. of vehicles

qty	2018	2019	2020
Diesel	2,796	2,780	2,899
Petrol	326	270	257
Natural gas	496	468	435
LPG	404	412	400
Electric	22	18	15
Total	4,044	3,948	4,006
Of which with lower environmental impact (%)	922	898	850
Of which with lower environmental impact (%)	22.8%	22.7%	21.2%

Non-circulating vehicles being disposed of were not included.

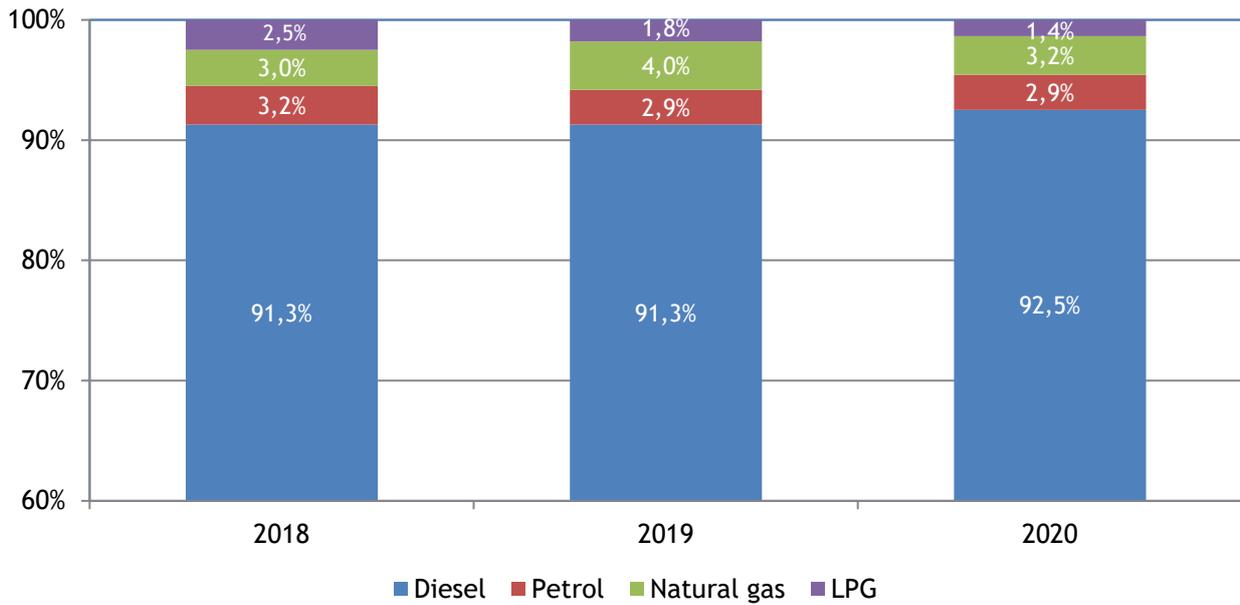
In 2020, the Group had 4,006 vehicles (58 more than the previous year), 850 of which were powered by fuel with a lower environmental impact (435 natural gas, 400 LPG, and 15 electric), accounting for **21.2% of the total**. The share of diesel-powered vehicles in the total is increasing (72% in 2020 compared to 70% in 2019), mainly as a result of the acquisition in 2019 of the Bologna-based company Cosea Ambiente, which has 67 vehicles, all diesel-powered, and whose fleet figures have been consolidated in this report since 2020.

In 2020, a total of 182 vehicles were sold and/or scrapped, while 138 vehicles were registered, of which eight natural gas-powered, 4 powered by LPG, and one was electric.

Fuel consumed by vehicles (toe)

toe	2018	2019	2020
Diesel	9,025	8,734	9,293
Petrol	313	275	295
Natural gas	301	384	322
LPG	250	177	136
Total	9,889	9,570	10,046

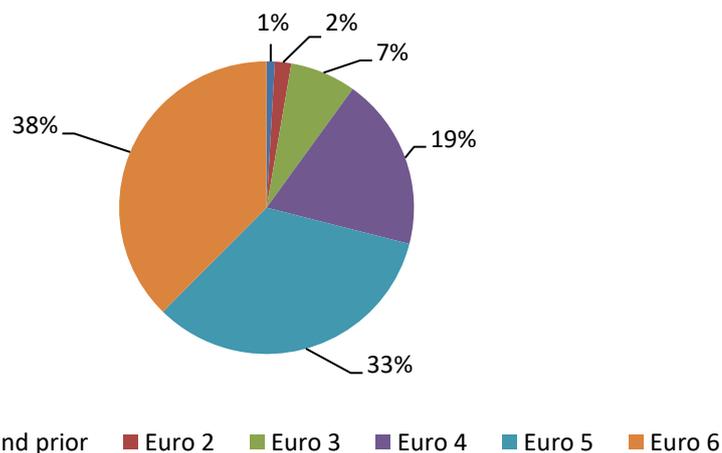
Fuel consumed by vehicles (%)



A comparison between the several types of fuel was made considering the primary energy present in the individual fuels.

At the Group level, average fuel consumption per vehicle in 2020 increased by 3.5% compared to 2019, to 2.51 toe/vehicle. In detail, diesel fuel consumption increased by 6.4% (mainly due to the effect of Cosea Ambiente vehicles consolidated since the 2020 report) and petrol consumption by 7.3%, while natural gas consumption decreased by 16.1%, and LPG by 23.2%.

Breakdown of vehicles by anti-pollution directive class (2020)



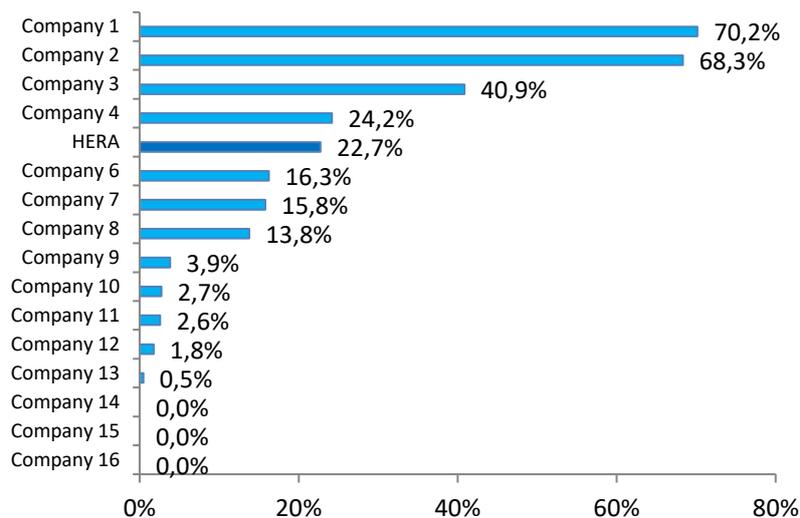
At the Group level, the **most recently registered vehicles** (Euro 4, 5, and 6) account for **90.1% of the total**, up 6 percentage points compared to the previous year. The largest increase was for Euro 6 vehicles, up 31% on 2019, while Euro 1 and earlier vehicles fell by 82%.

In 2020, the **average age** of the Group's fleet was **7.7 years**. For the Uniflotte perimeter, therefore excluding the vehicles of AcegasApsAmga and Marche Multiservizi, the average age decreases to 7.4 years, slightly up on the 7.2 years of 2019 but still down on 2013 when the value stood at eight years. These results are the fruit of the company's investments to renew its vehicle fleet.

Low environmental impact vehicles in the leading Italian utilities

According to a comparison analysis carried out by Utilitatis in 2020 among the 16 main Italian utilities, in 2019 Hera ranks fifth in terms of percentage of low environmental impact vehicles.

Low environmental impact vehicles (2019)



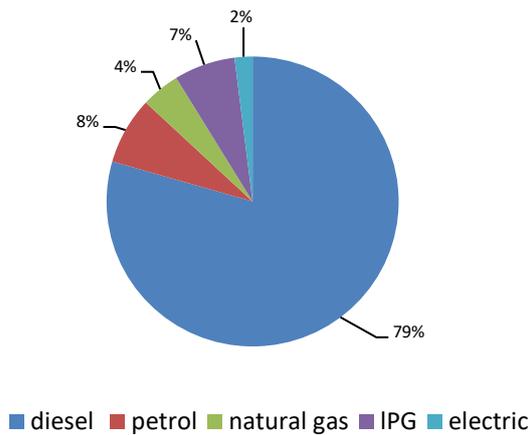
Source: Utilitatis, 2020 Sustainability Benchmarking (2019 data)

In addition to the fleet of company vehicles, there are also the **cars assigned to Hera Group's managers**. In 2020, this fleet consisted of 118 cars, of which 96 ran on diesel, 7 on petrol, and 15 on hybrid power, giving a total of 12.7% of vehicles powered by fuels with a lower environmental impact. All 118 vehicles were registered after 2011 and are **Euro 6** compliant.

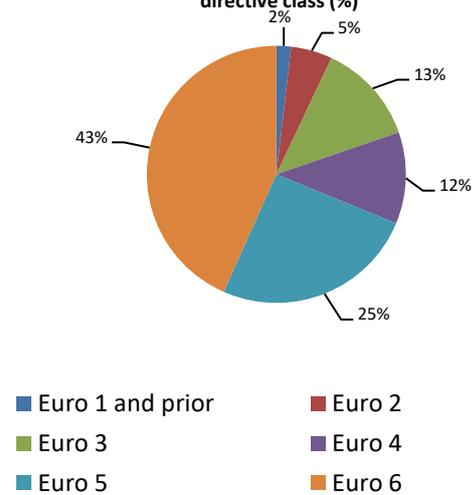
Suppliers' vehicles

Hera's commitment to sustainability and energy efficiency also affects the **supply chain**, and, in particular, the **criteria used to choose suppliers**. Given the high environmental impact of municipal waste management services, especially in terms of atmospheric emissions, the Group has decided to **reward the best-performing suppliers** in this respect, favouring those who use **low environmental impact vehicles**, giving a premium to these vehicles in the tenders for waste management services called in 2020. For example, in the environmental services tender for the area of the municipality of Ferrara, the new temporary joint venture that won the tender offered, as an incentive, the supply of seven fully electric trucks to be used in the historic centre of Ferrara.

Supplier vehicles by type of energy used (%)



Breakdown of suppliers' vehicles by anti-pollution directive class (%)



Excluding Marche Multiservizi.

In 2020, excluding Marche Multiservizi, the contractors' vehicle fleet consisted of 2,521 vehicles. There was a 2.2% **increase in the use of light vehicles** compared to the previous year, due to the increase in door-to-door collection services, which require more light vehicles than heavy vehicles.

In 2020, as far as the anti-pollution directives are concerned, **more environmentally friendly** vehicles (powered by natural gas, LPG, or electricity) accounted for 13% of the total, the same proportion as the previous year. In addition, in 2020, we continued the process of modernising the fleet of our subcontractors, as reflected in the fact that the **most recently registered vehicles** (Euro 4, 5, and 6) account for 80.3% of the total, up compared to 2019 when the figure stood at 78%.

Mobility management

In 2020, we continued to raise awareness among workers to reduce the environmental impact of the Group's employee's **commutes**, also taking into account the regulations and restrictions due to the health emergency.

The initiatives included continuing to provide the **shuttle bus service** that links Bologna's train station with our offices in Viale Berti Pichat, Via del Frullo/Via Cristina Campo and the Imola station to our offices in Via Molino Rosso and Via Casalegno, while ensuring the distancing of the people on board. An important innovation was also introduced in 2020: an **additional corporate welfare allowance for sustainable transportation** was made available to all Group employees, for example to cover part of the cost of a public transport pass.

To raise awareness of sustainable transportation, once again, in September 2020, Hera organised the now-usual challenge among the Group's sites during the **European Sustainable Transportation Week**, inviting people to use non-polluting vehicles. Also, initiatives have been held together with the Salvaiciclisti association aimed at increasing the use of **bicycles** as a means of transport.

Also in September 2020, an **internal survey** was launched to ascertain the travel habits and needs of employees, so as to plan actions for 2021.

Lastly, there are five **pedelecs** in the Bologna office in Viale Berti Pichat, confirming our commitment to facilitating the adoption of sustainable transportation.

Telepresence services

Telepresence is increasingly proving to be a facilitator to manage meetings, saving time, reducing risk and fatigue, significantly saving energy and, last but not least, helping to reduce the Group's ecological footprint.

In 2020, the usage statistics on Acantho-managed telepresence systems dropped significantly, mainly due to the health emergency period, which led to a higher usage of distributed systems (i.e. clients installed on all employees' PCs) based on technologies not managed by Acantho, such as Microsoft Teams. Nevertheless, the total hours of use of telepresence services remain high, at 10,094 (-68% compared to 2019).

Hera for electric transportation

During 2020, the Hera Group, through Hera Comm, continued to develop its **electric charging station** infrastructure network, installing a further 61 public charging stations, reaching a total of **104 public charging stations** now present in the areas where the Group has its greatest presence (there were 43 in 2019). Contracts for 83 more public charging stations have been awarded by Hera Comm, and further memoranda of understanding were signed in 2020, specifically for the municipalities of Udine and Padua, helping to achieve the target of 300 charging stations installed by 2024.

The development of the infrastructure network and new charging services led the Group's public infrastructure to consume **more than 90 MWh** in 2020. The more than 250 customers of the public charging service, who were also able to **charge their vehicles at other charging stations**, contributed to this result, consuming a total of more than 36 MWh.

To maximise the usability and availability of the network for users, Hera Comm signed an agreement with the Hubject interoperability platform, under which the Group's charging stations can be **accessed by any user**, including foreign ones, whose provider is present on the platform, among the 600 spread across Europe.

Hera's activities in the field of electric transportation are not limited to public charging, but also involve **private charging** through offers for citizens and companies to supply several models of wallboxes and charging stations up to 22 kW. These solutions are particularly well received by customers, as confirmed by the **more than 300 private charging stations** sold during the year, bringing the total to 469.

Lastly, the solutions for private individuals include **e-bikes**. In 2020, Hera Comm launched an offer covering several models, and in particular city bikes, trekking bikes, and folding bikes. This initiative was an immediate success with **over 500 electric bikes ordered in just six months**.

Hera for land protection

Land reuse in Group projects and re-use of excavated soil

From the preliminary analyses to the design of the works, Hera Group identifies technical solutions aimed at **reusing areas that have already been developed and/or preserving** the natural context of the land subject to the measures, in line with the objectives of the UN's 2030 Agenda. Some of the key design criteria include:

- for networks: extensions carried out using existing roads and/or urban fabric, improving the network layout by upgrading or reclaiming existing pipelines, laying new pipelines adjacent to existing services;
- for plants: reusing existing/already occupied infrastructure and areas; disposing of infrastructure and restoring/returning the area at the end of its life cycle, using technological solutions to reduce the overall size of the infrastructure.

Continuing along our path towards sustainability that we started last year, in 2020, the network and plant work we completed **used almost 320 thousand m² of land**, 87% of which was **already occupied** by existing infrastructure (about 278 thousand m²).

Among the results we achieved in 2020, the lion's share is made up of measures designed to protect the seawater in **Rimini**, where more than 230,000 m² were reused, 99% of the total land involved. In the province of **Forlì-Cesena**, we have completed the measures to implement collection from small urban areas towards centralised treatment systems, reusing about 12 thousand m² of developed land (86% of the land involved). In **Modena** and **Ferrara** we were able to reuse 68% of the soil, in **Bologna** 47%, and in **Ravenna** 24%.

In the **2021-2024 period**, we will pursue the objective of land re-use by adapting and upgrading existing infrastructure. We expect to re-use about 256 thousand m² of land for infrastructure, i.e. **66% of the total land involved** in new construction (in 2024 this percentage will be 65%).

In particular, in the province of Ravenna, we will upgrade the Lugo, Lido di Classe, and Cervia purification plants reusing the areas that are already occupied by the existing infrastructure, enabling the reuse of about 24 thousand m². In Rimini, we will complete some of the measures of the seawater protection plan, involving the reuse of more than 20 thousand m² of land. In the province of Bologna, the most significant measures in terms of land re-use will be those to improve the safety of gas distribution, with several measures to move networks in the Apennines to areas with a lower hydrogeological risk and measures to downgrade the high pressure network to medium pressure. This will involve the reuse of approximately 7,000 thousand m² of land. In Ferrara, we will upgrade the Via Gramiccia purification plant, reusing 7 thousand m² of land already occupied by the infrastructure. In the Forlì area, we will carry out work on discharges by connecting minor urban areas to existing purification plants, reusing about 6 thousand m². Lastly, the province of Modena will be involved in upgrading the water network, reusing about 6 thousand m².

Biodiversity

As regards the protection and **conservation of habitats and wild species**, the EU issued two regulations, Council Directive 409/79, adopted in April 1979, on the conservation of wild birds (the "Birds Directive") and Council Directive 43/92, adopted in May 1992, on the conservation of natural habitats and wild flora and fauna (the "Habitats Directive"). These directives created a consistent ecological network of protected areas in the European Union, known as **Natura 2000**.

In the province of Ferrara, the two largest water collection plants, Pontelagoscuro and Stellata, on the Po river, are located within the special protection area called "**Fiume Po da Stellata a Mesola e Cavo Napoleonico**". In the province of Ravenna, the Marina di Ravenna treatment plant is located within the EU Conservation Area "**Piallassa Piombone**" and discharges the treated wastewater into the "**Piallassa Baiona**" special protection area.

At these two plants, to protect biodiversity, Hera Group carries out **acute toxicity tests** on the purification plants.

Case study

Transition towards a circular economy

European circular economy package: Hera leads the way

Hera confirms its goals on packaging recycling and landfill reduction, showing that it is **ahead of both European targets for urban waste**.

In the Group's service area, in fact, it has achieved all 3 main European targets: the one for landfill (3.4% in 2020 compared to a target of no more than 10% in 2035), the one for packaging (72% in 2019 compared to a target of 65% in 2025 and 70% in 2030) and the one for the overall recycling rate (56% in 2019 compared to a target of 55% in 2025, 60% in 2030 and 65% in 2035). The data for these last two targets will be updated to 2020 in the coming months and as usual published in the "Tracking Waste" report.

Achieving and exceeding the European targets on municipal waste contribute to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**. The publishing of the "Value to energy" (Tracking waste) report contributes to achieving **target 12.8 of the UN's 2030 Agenda**.

Projects and collaborations with Italian and international networks for the circular economy

In October 2017, the Hera Group was the second Italian company to become a *member* of the **Ellen MacArthur Foundation** and immediately started a close collaboration relationship to implement the projects carried out to create shared value through activities inspired by circular economy principles. In addition to large groups concentrated mainly in Europe, the United States and South America, the Foundation's network also includes institutions, universities, small and medium-sized enterprises, with the aim of promoting awareness of these issues, the exchange of experience, the launching of partnership projects and collaborations in the field of research and development. Through the Ellen MacArthur Foundation, the Group has the opportunity to increase the exchange of ideas with other members, to increase the creation of shared value and contribute to long-term sustainable development.

2020 was the second consecutive year of progress in reporting on the **New Plastics Economy Global Commitment**, an initiative set up by the Foundation to make the plastics sector more circular, which the Group joined in 2018 with challenging objectives and which is discussed in depth in this Sustainability Report.

Furthermore, in March 2020, the Hera Group, through Hera Luce, sent its submission to **Circulytics V.1**, a digital tool designed to measure circularity. The tool supports decision-making and the adoption of circular economy principles in business strategies, demonstrates strengths and highlights areas for improvement, provides transparency to investors and customers on circularity projects, to generate value in a multi-stakeholder perspective. Hera Luce, a Hera Group subsidiary, has long supported circularity in public lighting by including circular economy parameters in its tenders. In 2017 Hera Luce participated in the workgroup to define the Minimum Environmental Criteria (MEC) which are now recognised as a best practice in the field, in line with the criteria of the tool developed by the Mac Arthur Foundation. In October 2020, the Foundation launched the new release of the tool, **Circulytics V.2**, for which the Hera Group, again through Hera Luce, plans to make a new submission during 2021.

In 2020, Hera was one of the first companies to support the **Business Call for a UN Treaty on Plastic Pollution** promoted by the Ellen MacArthur Foundation, the World Wide Fund for Nature (WWF), and the Boston Consulting Group. This call to action aims to provide a coordinated global response in the form of a UN treaty to help governments and businesses tackle plastic pollution.

Hera is also among the promoters of the **Circular Economy Network**, a project promoted by Fondazione per lo Sviluppo Sostenibile (a foundation for sustainable development) and by a group of companies and trade associations involved in the transition to a circular economy. Other significant events in 2020 included the second National Conference on the Circular Economy, held on 19 March on line, at which we the second Report on the Circular Economy in Italy, produced jointly with ENEA, was presented.

Moreover, since its foundation, Hera has been a member of the **Italian Circular Economy Stakeholder Platform (ICESP)**, created in 2018 as a mirror of the European Circular Economy Stakeholder Platform – ECESP initiative, which promotes the Italian way for circular economy, by involving Italian stakeholders committed to the issue. During the third Annual ICESP Conference, held on line by ENEA on 11 December 2020, priorities for post-emergency recovery were identified based on the circular economy as a lever for effective actions within a resilience process and in a recovery perspective.

The projects and collaborations with Italian and international networks contribute to achieving **targets 17.16 and 17.17 of the UN's 2030 Agenda**.

Hera measures circularity with Circulytics V1

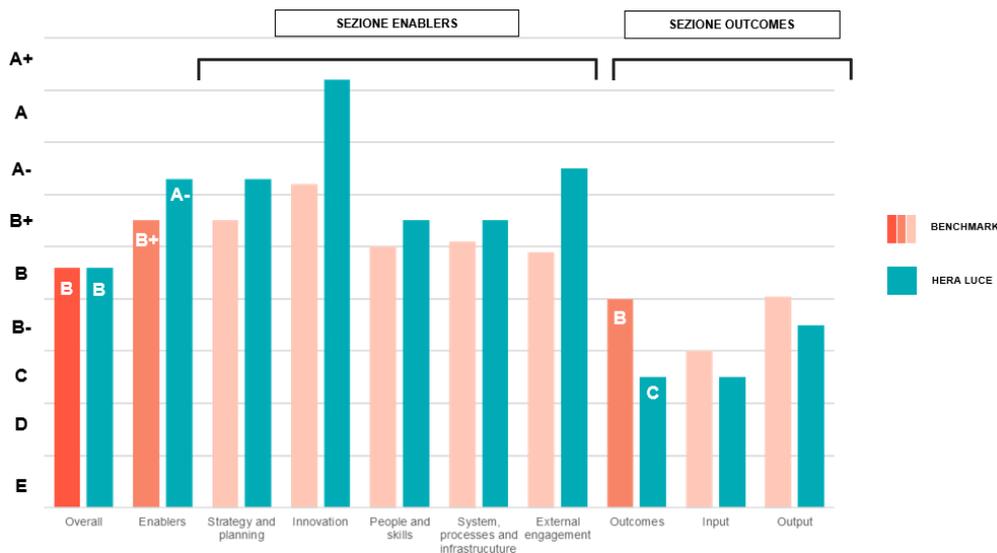
In 2019, the Ellen MacArthur Foundation, together with 13 strategic partners and 30 members of its network, including Hera, developed a digital tool for measuring circular economy performance, called **Circulytics V.1**. The tool supports a company's transition towards the circular economy by going beyond simply assessing products and material flows. It uses the broadest set of qualitative and quantitative indicators available divided into two categories: **Enablers**, the critical aspects that enable a company to make a broad transformation towards the circular economy (Strategy and Planning; Innovation; People and skills; Systems, processes and infrastructure; External Engagement), and **Outcomes**, elements helpful for measuring circular inputs and outputs that provide an overview of current performance. The tool supports decision-making and the adoption of circular economy principles in business strategies, demonstrates strengths and highlights areas for improvement, provides transparency to investors and customers on circularity projects, to generate value in a multi-stakeholder perspective.

In March 2020, the Hera Group, through Hera Luce, sent its submission to Circulytics V.1 and obtained a bespoke company scorecard containing the assessment of its circularity score. The evaluation revealed some areas for improvement in both the Enablers and Outcomes categories. In particular, in the Enablers category, the scorecard revealed some areas **for improvement** and **strengths that were not previously observed**, such as:

- it recommended that employees be more involved to generate greater knowledge of the Circular Economy within the organisation;
- it found that, at present, there are no processes, digital systems or operational IT systems that can support a circular business model, except in the planning stage;
- it highlighted the importance of effectively engaging stakeholders (especially suppliers) on circular economy issues.

While the areas for improvement and strengths identified for the Outcomes category were:

- alternative solutions to the use of concrete must be found;
- there is a need to improve energy supply with more input from renewable sources;
- the recycling rate of the output material is remarkable.



On an overall level, the "B" score obtained by Hera Luce emphasises the commitment put in place to enable the company's transition to a circular economy model, a commitment further supported by the group-wide definition of circular economy activities, initiatives and objectives with a long-term strategic perspective.

In October 2020, the Foundation launched a new release of the tool, "**Circulytics V.2**", which Hera intends to apply, once again, to Hera Luce.

The Circulytics tool contributes to achieving targets **12.2, 12.4, 12.5, and 17.16 of the UN's 2030 Agenda**.

Hera Group's commitment to the new plastics economy

Hera is one of the 250 companies worldwide, the only Italian multiutility company that in 2018 signed the **New Plastics Economy Global Commitment**, launched by the Ellen MacArthur Foundation in collaboration with the UN Environment Programme (UNEP). The Foundation's initiative has the ultimate aim of tackling the problem of plastic pollution at the source and making the entire supply chain more circular: eliminating disposable products as much as possible, producing and using only recyclable, reusable or compostable packaging and promoting the use of recycled plastic. For this reason, the Foundation has created a global movement, involving all players in the supply chain, such as plastic packaging manufacturers and companies that use them to pack their products, large retailers, recycling companies, but also governments and investors.

Hera Group is committed to:

- increase by 2025 the amount of plastic collected in the municipalities served, by 30%;
- increase by 50% the amount of plastic sorted and recycled by the Group's plants;
- increase the plastic recycled by Aliplast by 70%.

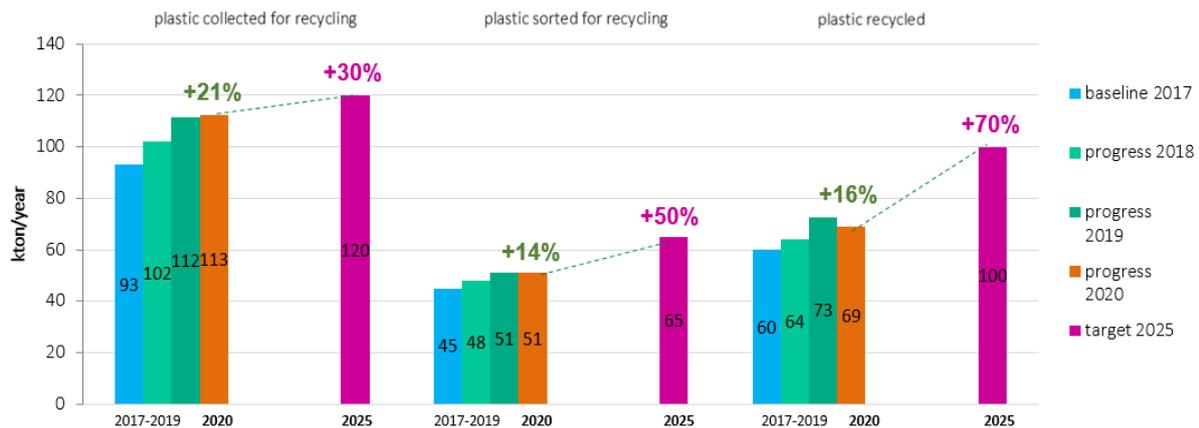
To date, the Global Commitment has been signed by more than 500 organisations worldwide:

- 20 governments and public administrations on 5 continents;
- more than 250 companies active in the different stages of the plastic packaging value chain, which together account for more than 20% of the plastic packaging volumes used globally;
- more than 200 institutions, including National Geographic, WWF, World Economic Forum, Consumer Goods Forum, International Union for Conservation of Nature (IUCN), 50 universities and research institutions, 27 financial institutions.

The second Progress report was published in November 2020, and contained data from 118 companies (98% of those eligible for reporting, depending on the date they became members) and 17

governments/administrations (of the 20 eligible for reporting). The momentum created around the issue of the circular plastic economy is unprecedented and the initial progress made by the signatories is noteworthy. Despite this, efforts to eliminate the problem of plastic waste pollution at source must advance towards a higher level of ambition. The data reported on that occasion by the Hera Group was for 2019.

New Plastics Economy Global Commitment Progress 2020



The data of the Hera Group at the end of 2020 show **gradual and positive progress** towards the objectives, showing that **we are going the right direction**. Achieving the targets will be possible only by continuing the efforts on the innovation front and by leveraging the Group’s industrial capacity, but also requires the fundamental contribution of citizens, in the framework of a logic geared towards – also on this front – encouraging reuse and recycling, thus extending as much as possible the average life of products and plastic materials.

The same targets were presented by Hera in the context of the “**EU-wide pledging campaign for the uptake of recycled plastics**”, the campaign promoted by the European Commission to accelerate the diffusion of recycled plastics and achieve the European target of ten million tonnes of recycled plastic used for new products by 2025.

Achieving the objectives on the plastics supply chain contributes to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**.

Recycled plastic bags with Aliplast

In November 2019, Hera and Aliplast launched a circular economy pilot project, to increase the virtuous reuse of reels made of post-consumer recycled plastic to produce bags for separate waste collection. The ultimate goal was to close the loop of the life cycle of products, increasing recycling and reuse, to increase economic sustainability and reduce the environmental impact as much as possible.

The following results were achieved during 2020 (the first year of the pilot project):

- production of 1,250 tonnes of reels;
- production of about 26 million recycled plastic bags.

Going beyond mere numbers, the project has achieved other important positive results: the quality of the bags has improved significantly as Aliplast itself ensures that they meet the technical requirements. In addition, the initiative eliminated the problem of disputes with third-party suppliers who did not comply with product specifications and the service offered to Hera users was improved.

In January 2021, the actual industrialisation of the process will begin, involving all the areas managed by the Hera Group (AcegasApsAmga and Marche Multiservizi are also included in the contract).

The main outputs planned for next year are:

- produce 1,776 tonnes of reels (about +42%);
- produce about 35 million bags (about +34%) using recycled plastic;
- optimise each stage of the production process to enhance the project's economic sustainability and improve product quality standards.

The use of recycled plastic bags for waste collection contributes to achieving **targets 9.4, 11.6, 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**.

Aliplast and NextChem: a state-of-the-art plastic recycling plant

In October 2020 Maire Tecnimont and Hera Group announced that Aliplast and NextChem, a Maire Tecnimont Group's company for the development of energy transition and circular economy projects and technologies signed a strategic agreement. Under the terms of the agreement, Nextchem will provide technology, Engineering, Procurement and Construction services to build a plant that will use its proprietary innovative MyReplast™ technology to upcycle plastic waste into high value-added polymers.

The synergy of these two major players' skills and resources will result in a unique kind of plant in Europe. Built on a site owned by the Hera Group, this plant will leverage the innovative MyReplast™ technology developed by NextChem, which makes it possible to produce high-purity, high-quality recycled polymers with high-level chemical/physical and mechanical performance. The aim of the plant is therefore to process post-consumer plastic waste into customised recycled products capable of meeting customer requirements and the most stringent quality market standards, with features and properties on par with virgin polymers from fossil sources. All this will create cutting-edge plant engineering experience.

Once fully operational, the new plant will be capable of producing up to 30,000 tonnes of polymer per year. The plant will ensure high security standards and be equipped with innovative features such as maximum process automation and high digitalisation for data analytics, thereby allowing it to maximise energy efficiency, delivering further environmental benefits.

The state-of-the-art plant described above contributes to achieving **targets 9.4, 11.6, 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnership developed – contributing to achieving **target 17.17**.

Hera and Eni: a partnership to transform cooking oil into biofuel

As part of the Group's transition towards a circular economy, the collection of used oils has increased its visibility and importance, generating significant economic returns.

The new service for **roadside collection of vegetable oil**, provided using new good-looking bins specially designed to contain residual domestic cooking oil, was launched in Emilia-Romagna as a pilot project at the beginning of 2018. This new initiative is part of a broader Hera project, and the only one of its kind in Italy in terms of the service provided and geographical extent, aimed at spreading this type of collection which up to 2013 was only carried out via the Group's separate waste collection centres.

In 2020, a further 60 roadside containers were put in service, mainly in the municipalities of the Bologna Apennines in the service area of Cosea, a company acquired by the Group in 2019, bringing the total

number of containers in the area to over 800 in no less than 120 municipalities, serving around 2.4 million inhabitants. This service collected 1,110 tonnes of waste cooking oil to be sent for recovery in 2020.

The results of the collection of vegetable oils in Emilia-Romagna feed a virtuous **circular economy** project. In fact, under an experimental framework agreement signed in November 2018 with Eni, all waste cooking oil collected by Hera, once processed in affiliated plants, is sent to Eni's Bio-refinery in Porto Marghera (VE) where it is transformed into **biodiesel** fuel. Under this framework agreement, Eni supplies 600,000 litres/year of this green diesel fuel to the service station inside Hera's Modena headquarters, where it is used to power 20 compactors used for waste collection in the province of Modena. In addition, in 2020, we added another 15 compactors to the project, used in the areas served by Hera Spa and which have pictures and logos on the sides that highlight this initiative and, in line with the project, use biodiesel fuel produced by Eni.

Hera's partnership with Eni contributes to achieving **targets 9.4, 11.6, 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnership – contributing to achieving **target 17.17**.

McDonalds, Coprob, CAMST and DISMECO: four important partnerships signed to "close the circle"

In November 2019, at Ecomondo – Europe's reference event on technological and industrial innovation in the circular economy – McDonald's and the Hera Group signed an agreement to reduce the quantity and improve the quality of separate waste collection in the company's 30 restaurants served by the multiutility in Emilia-Romagna. The agreement, which starts on 1 January 2020, is designed to **increase the separate waste collection** of recyclable waste such as paper and organic waste, by implementing a monitoring action that constantly assesses the quantity, but above all the quality, of the waste produced. The project will last **two years** and will involve **30 restaurants in 14 different municipalities**, for an average of 45,000 McDonald's customers per day.

The project was launched as a result of a **trial project** that measured the quantity and quality of waste produced in McDonald's restaurants in **Ferrara**, by putting in place specific actions to raise awareness on the proper disposal of each type of waste. According to the surveys carried out by Hera during trial project, these restaurants achieved an average of around 90% separate waste collection. The very significant data led the two companies to set themselves the goal of achieving similar performance in the other restaurants under their collaboration agreement.

Although the development of the project was slowed down by the restrictive measures forced by the health emergency, we completed the process of measuring the quantity of waste produced in the 30 participating restaurants, thus providing a snapshot of the baseline situation. The results confirmed the suitability of the actions envisaged by the agreement. One of the most important actions we identified is providing information on the right way to separate waste, thanks to a new model of trash container, customised and designed specifically to help customers more effectively separate what is left on the tray at the end of their meal, so as to minimise errors in the disposal of the waste. Raising the awareness of customers, and engaging them will be fundamental to the project's success. To do so a dedicated campaign will be set up in the restaurants with communication materials that, thanks to illustrations and specific colours of the differentiated waste to which users are now accustomed, will help customers separate it more and better.

The project launched in 2019 **by Herambiente and Coprob**, the cooperative of sugar beet producers based in Minerbio (BO), the only sugar producer in Italy, continued in 2020. Herambiente's six quality-certified plants in Emilia-Romagna provided compost for the fertilisation plans of member farms, to restore the organic content that is essential for full soil fertility. During the first year of cooperation, between April and September 2020, the cooperative's members used 4,117 tonnes of compost.

The agreement among production sectors that are diverse but consistently representative of a concrete experience of circular economy, offers a complete response to environmental and production issues both

in Herambiente plants, with the production of biogas and biomethane, and in the agricultural sector, confirming the production levels of crops, the quality of agricultural production, and a significant improvement of the soil from a biological, chemical and physical point of view.

In 2020, **Camst** also joined **Hera's circular economy partnerships**. On 14 September, Camst and the Hera Group signed a 2-year, renewable framework agreement to collaborate on **circular economy and environmental sustainability projects** through innovative Business-to-Community-to-Consumers approaches. Among the actions that can be implemented are also **sustainable transportation** initiatives, such as the collection of waste cooking oil to produce biodiesel fuel (as part of the Hera-Eni partnership) and the collection of organic waste used to produce biomethane at Hera Group's Sant'Agata Bolognese plant. In addition, with the collaboration of Hera Comm, electric vehicle charging stations will be set up in the car parks of some Camst points. During 2021, the two companies will also collaborate to a study of **materials that can be used as an alternative to single-use plastics**, comparing the environmental impact of different materials on the market to identify the most sustainable. The study will also examine the entire **life cycle of all plastic packaging** used or sold by Camst, with a focus on identifying the most circular recycling options. Actions are also planned to reduce food waste by distributing unconsumed meals to disadvantaged people. To improve and encourage the separate collection of waste generated in eating places, raise awareness on prevention, proper waste management and recovery, Camst and Hera will also engage in extensive **environmental communication** activities aimed at both employees and customers.

In the second half of 2020, we started to define an ambitious project to regenerate end-of-life household appliances together with **Dismeco**, which operates in the WEEE recovery sector with a plant located in Marzabotto in the province of Bologna. The project aims to encourage disposal of used washing machines at separate waste collection centres, and select them to test, on the ones in best condition, a maintenance and repair process that can make them suitable for use again. The project, which involves collaboration with associations of manufacturers of electrical and electronic equipment (EEE), with associations of installers and repairers, with associations of large-scale retail trade and other interested parties, will also carry out studies and research to determine whether and under what conditions it is actually possible to envisage sales of washing machines (and in general of household appliances) regenerated this way. The project will also be a great opportunity for professional training and development and an opportunity to create potential new jobs to support and develop the Bolognese mountains and their communities. The Project will be formalised and launched in early 2021.

The major projects described above contribute to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnerships developed – contributing to achieving **target 17.17**.

Hera Business Solution, Hera's new multi-service proposal for the circular economy

Hera Business Solution is a memorandum of understanding through which the Group presents itself as a partner of large industrial groups, with a global proposal of integrated and sustainable energy and environmental solutions designed for individual companies and taking into account their complexity. The project's objective is to identify new growth opportunities, alongside companies, to reduce the costs borne by the community, the environment and future generations, focusing on the regeneration of natural resources, the extension of the useful life cycle of goods and resources, the development of skills for the efficient use of materials and to guide them towards increasingly challenging and consistent sustainability goals.

The project is characterised by the analysis of processes and impacts, implements improvement actions and fosters a complete and transparent reporting of information and data related to environmental performance. To do so, Hera provides the companies participating in the project with the Circular Economy Report, a customised sustainability report, prepared together with the client company on the basis of the offer it has subscribed to, with reporting indicators on the main services purchased/provided, and compatible with the Global Reporting Initiative Guidelines. The report consists of a set of synthetic

indicators on three key areas of sustainability (circular economy, energy transition, and energy efficiency) and more detailed information.

At the end of 2020, the first protocol was signed with Fruttigel, a leading Italian company in the food sector, for which the first Circular economy report on the services provided in 2020 by the Hera Group is currently being drawn up.

The Hera Business Solution memorandum of understanding contributes to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnership developed – contributing to achieving **target 17.17**.

Assessing and measuring circularity at Hera Luce

In 2017, Hera Luce developed an evaluation system to measure the circularity of public lighting systems in terms of life cycle, based on an analysis of material flows (materials used in relation to their origin and end-of-life destination) and economic flows (costs/revenues at the beginning and end of the life cycle). This approach to measuring circularity was already in line at the time with the guidelines of the Ministry for the Environment (MATTM), and was then confirmed to be consistent with the most recent international methodological approaches, such as the Circulytics tool developed by the Ellen MacArthur Foundation during 2019. As specified in another case study of this report, Hera Luce also participated in the beta testing of Circulytics.

The system used to evaluate the circularity of Hera Luce's installations also anticipated the requirements of the Minimum Environmental Criteria (MEC) for public lighting services, which since 2018 require that this evaluation be carried out in all calls for tenders. The MEC were approved by Ministerial Decree on 28th March 2018 and in paragraph 4.5.4 they require Bidders to provide the material balance. It should be noted that Art. 34 of Italian Legislative Decree No. 50/16 also states the mandatory MEC compliance for tenders by including in the design and tender documentation the technical specifications and contractual clauses contained in the minimum environmental criteria adopted in the decree of the Ministry for the Environment, Land and Sea Protection. Since then Hera Luce has won tenders in the municipalities of Ferrara, Lugo, Tavullia, and Cervia.

The drafting of the material balance was a winning evaluation criterion during the tender phase and enabled Hera Luce to win the tenders. For example, the call for tenders issued by the municipality of Ferrara awarded 10 points on the basis of the quality, durability, robustness of the proposed materials and on the environmental and social impact of the project and the materials. The call for tenders issued by the municipality of Lugo awarded 5 points for the preparation of the material balance and 6 points for the type of materials proposed, judged on the basis of quality, durability, robustness of the materials and environmental impact.

The evaluation system previously prepared by Hera Luce and the awareness raising process initiated with suppliers, enabled the company to win the tenders because it had built itself an advantage over the competitors who did not appear, at least until the MEC came into force, to be attentive to circularity and environmental sustainability issues. Hera Luce's efforts on circularity and sustainability have led the administrations to consider it a partner capable of conveying the topics of sustainable, smart and supportive development and therefore of fostering the achievement of the UN's 2030 Agenda targets.

The use of the Hera Luce tool contributes to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**.

Assessing and measuring circularity at HSE and ASE

In 2020 we extended our material circularity rate measurement project to other companies in the Hera Group, such as Hera Servizi Energia (HSE) and AcegasApsAmga Servizi Energetici (ASE), which specifically

deal with energy efficiency services for public administrations and private individuals. The circularity assessment tool enabled ASE and HSE to evaluate performance in terms of material balance and circularity of components such as boiler, circulating pump, fixtures, heat pump, insulation etc., also involving suppliers.

The system designed to assess and measure the circularity of the main technologies we use to carry out energy-saving measures, from a life-cycle perspective, is based on an analysis of material flows (materials used in relation to their origin and end-of-life destination) and economic flows (costs/revenues at the beginning and end of the life cycle). We developed this approach in compliance with the Ministry of the Environment's guidelines and also drawing inspiration from the Circulytics tool developed by the Ellen MacArthur Foundation during 2019.

The circularity assessment and measurement system is also consistent with the requirements of the minimum environmental criteria (MEC), which are increasingly present in PA calls for tender. This system has also been mandatorily included in the recent Relaunch Decree regarding the 110% superbonus, in which the companies are heavily involved in the condominium market.

The system will be gradually extended to all the markets in which ASE and HSE operate: PA, industrial and condominiums respectively in the form of tenders and project financing, service offers, energy refurbishment offers. We expect to see the first positive impacts resulting from the implementation of the tool during 2021.

As a result, we expect to improve the company's competitiveness, as well as consistency with the objectives of Hera's business plan and contribution to the Sustainable Development Goals.

The project to apply circularity at HSE e ASE contributes to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**.

Assessing and measuring the circularity of water and gas connections

The Hera Group has decided to pursue a circular economy model aimed at bringing greater competitiveness to its business. The company is committed to the UN's 2030 Agenda, which represents a fundamental contribution to guiding the transition towards an economic development model whose objective is not only profitability and profit, but also social progress and environmental protection. GPP (Green Public Procurement) is a guideline of the European Commission that aims to stimulate the development of a demand for goods and services with a reduced environmental impact by leveraging the purchasing power of governments to make an important contribution towards achieving the objectives of the main European strategies such as resource efficiency or circular economy. GPP was introduced in Italy in 2008 under the National GPP Action Plan, which mandated the adoption, via subsequent ministerial decrees, of the Minimum Environmental Criteria (MEC) for each category of products, services and works purchased or contracted by Public Administration bodies.

At present, the application of MEC in contracting services managed by the Group concerns public lighting and waste management, and in the future we expect their use will be extended to other businesses. In line with its corporate mission and sustainability objectives, Hera Group has initiated a dialogue with its suppliers to measure the material circularity of its assets and anticipate the future regulatory context.

To do so, in 2020, the tool for calculating material and economic circularity was implemented and applied to water supply connection operations. The analysis involved the characterisation of supplies both in terms of component materials (brass, steel, polyethylene, ...) and in terms of recyclability (virgin, recycled, and permanent recycled material), determining a material circularity index in input of the mechanical components of the connection, of 78%; i.e. almost 80% of the weight of the water network connection was found to be made up of recycled materials. By 2024, we plan to extend the circularity assessment model to

some simpler, repetitive assets, such as gas regulators, to optimise them for sustainability by redefining standards and procedures.

The process envisages the following steps:

- **Project circularity assessment system:** implementation of calculation tools to assess the material circularity of networks and systems throughout their life cycle, as already required for public lighting with the introduction of Minimum Environmental Criteria (MEC).
- **Process optimisation:** application of the analysis system described above to certain types of assets, to optimise processes in terms of choice of materials, construction technologies and maintenance methods, to minimise the impact on material consumption and maximise the use of secondary raw materials.
- **Development of new standards and procedures:** the results of the analyses so developed will be translated into new standards and procedures to design, build, operate and maintain the assessed infrastructure.

In addition, we plan to extend this circularity assessment methodology to specific engineering projects characterised by significant demolition works, by using BIM tools to precisely map the volumes subject to demolition in the actual condition.

The assessment and measurement of circularity in water and gas connections contributes to achieving the UN's 2030 Agenda **targets 12.2, 12.4, and 12.5**.

With Riciclandino we help the environment and schools

Ten years ago we launched Riciclandino, an environmental initiative for young people and families that involves the part of a town's residents that is tied to schools, considered as an institution and community of people. The project gives points for disposing of waste at drop-off points, giving one's school the opportunity to receive economic incentives. Families of students can use their Riciclandino Card to dispose of waste at drop-off points, obtaining a discount on their own bill, as per municipal regulations, and providing a matching incentive to their child's school. The added value of the initiative is raising environmental awareness and sharing actions that create and strengthen the civic and social sense of the community. In 2020, the 18 municipalities of Ravenna and 26 municipalities in the Modena area joined the project, for a total of 44 municipalities. In the 2019-2020 school year, Riciclandino involved 266 schools in the province of Ravenna and 185 in the province of Modena, for a total of 78,700 students (about 44,100 in the Ravenna area and about 34,600 in the Modena area). The participating schools were awarded prizes for their work, amounting to Euro 109,129 (Euro 72,686 in the Ravenna area and Euro 36,443 in the Modena area). As part of the project, more than 681 tonnes were delivered to drop-off points in the province of Ravenna, and 570 tonnes in the province of Modena, for a total of 1,251 tonnes of waste brought by children and their families.

The delivery of separated waste to the drop-off points by students and families contributes to achieving **targets 11.3, 11.6, 12.2, 12.4, 12.5, and 12.8 of the UN's 2030 Agenda**, as well as – by involving schools and residents – contributing to achieving **target 17.17**.

Cibo Amico (Food Friend): 110 thousand complete meals recovered in Hera's canteens since the beginning of the project

Launched in 2009 with the support of Last Minute Market, a an accredited spin-off of the University of Bologna that promotes environmental sustainability and the fight against waste, Cibo Amico is a concrete action our company took to promote the development of the circular economy, linking different businesses of the area for a shared social responsibility, addressing a concrete help to the neediest. Currently there are five company canteens involved: Bologna, Granarolo dell'Emilia, Imola, Rimini and Ferrara. The recovered

meals are donated to non-profit organisations in the area that provide hospitality and daily care for people in need.

Despite the health emergency, which led to greater use of remote working by employees, last year, compared to 2019, the number of meals recovered from the canteens fell only slightly, by around 16%.

In 2020 alone, in fact, more than 8,200 complete meals were recovered and given to five local non-profit organisations that assist about 130 people daily, amounting to more than 3.6 tonnes of food worth over Euro 35 thousand. This also avoided the production of 3.7 tonnes of waste, corresponding to the capacity of more than 8 bins and the emission of over 15 tonnes of CO₂ into the environment. In addition, the waste of water, energy and land consumption that was necessary to pack those meals was avoided.

After twelve years from the start of the project, around over 110,000 meals have been donated overall for an overall economic value of about Euro 452 thousand. This avoided the production of about 48 tonnes of waste (about 100 bins worth) and the emission of about 200 tonnes of CO₂.

Many non-profit organisations in the area are involved to guarantee increasingly important results, Fraternalità Cristiana Opera di Padre Marella - Pronto Soccorso Sociale of Bologna, Fraternalità Cristiana Opera Padre Marella Città Dei Ragazzi of San Lazzaro di Savena, Associazione Comunità Papa Giovanni XXIII of Rimini, and Associazione Viale K di Ferrara and Cooperativa Sociale Mano Tesa of Imola. In addition, the recovered meals are served at the many non-profit organisations involved in the initiative: the Pronto Soccorso Sociale of Bologna, the “Gemma Nanni Costa” therapeutic community of San Lazzaro di Savena, Capanna di Betlemme of Rimini, Casa della Donne, Casa Mambro and Mensa in via Gaetano Pesci of Ferrara and the Co-Housing facility for the elderly in via del Tiglio in Sesto Imolese.

At the end of 2017, *Cibo amico* also went beyond company canteens to involve a city market. The initiative, developed at the suggestion of HeraLab Modena, is jointly supported by the Municipality of Modena and carried out with the collaboration of the Consorzio di Mercato. While in the canteens the objective was the recovery of unconsumed meals, Hera’s collaboration with the Albinelli traders aims to avoid the waste of the fresh products that, at the end of the day, can be left over on the market stalls: food that is still perfectly edible but that, for various reasons, the next day could no longer be sold. Food recoveries from individual retailers takes place every Wednesday and Friday when the Mercato Albinelli is open, it is mainly bread and baked goods, and fresh fruit and vegetables. There is now a virtuous alternative for these products, which otherwise would be thrown away, thanks to the collaboration among the Municipality of Modena, the Hera Group, and the market itself. Traders can choose to donate their unsold goods to Fondazione CEIS, so they can be recovered and used to benefit people in distress. In 2020, more than 2,280 kg of food was collected and reused by 16 operators who collaborated in the project. The Italian Bike Messenger association is among the partners involved in the project, the headquarters of which is within the Mercato Albinelli. It provides support for the delivery of surpluses in case of need.

On an experimental basis during 2020, once again together with the Municipality of Modena, the recovery of surplus food also started at two shops in Modena, Agricola Prima Natura in Via Rainusso and the Agrodolce fruit and vegetable shop in Corso Canalchiaro. This made it possible to extend the cooperation network to Caritas Diocesana of Modena, which carries out the recoveries at its own premises in the city and in Caritas facilities in the parish. In 2020, taking into account that the initiative was launched in December, more than 450 kg of products were collected. We hope to conclude the experimental phase early in 2021, and extend the initiative to more organisations and companies in the city of Modena, also directly involving the local trade associations.

Waste prevention initiatives, such as *Cibo Amico*, contribute to achieving **targets 12.2, 12.4, and 12.5 of the UN’s 2030 Agenda**, as well as – thanks to the partnerships with non-profit organisations – contributing to achieving target **17.17**.

FarmacoAmico (“MedicineFriend”): more than 345 thousand packages of pharmaceuticals not yet expired have been recovered since the project started

FarmacoAmico is a project promoted by Hera to collect pharmaceuticals that have not yet expired and to create a charitable reuse network in the local area. The intact pharmaceuticals, which must still have at least six months to go before their use-by dates and which have been properly stored, are thus reused by non-profit organisations that operate in local or decentralised cooperation projects. The goal is to prevent the production of waste, spreading good practices on the decrease of waste and supporting the organisations that help the weaker sections of society.

Launched in 2013, in Bologna, FarmacoAmico is jointly organised with Last Minute Market and currently involves 31 municipalities in Emilia-Romagna (+24% compared to 2019) where there are about 1.5 million inhabitants (66% of the population served).

In 2020, more than 33,000 packages of pharmaceuticals with a total value of approximately Euro 459,000 were sent for reuse. Compared to 2019, there have been significant percentage decreases due to the health emergency that slowed down work on the initiative. Despite this, the projects have never stopped and the absolute value of the reused assets is high. A centralised management system for the collection, selection and distribution of pharmaceuticals was set up to overcome the hurdles encountered in some of the areas participating in the initiative. It is worth noting the new activations during 2020 (Rimini and Unione dei Comuni dell'Appennino Bolognese, as well as the expansion to two new pharmacies in Ravenna), which confirm the growth of the project as a whole. We plan further activations in 2021.

The project involved a total of 156 pharmacies (+10% compared to 2019) and 33 non-profit organisations, some of which operate in Italy and others abroad, as well as several partners, institutions, trade and business associations, for a total of 48 parties involved.

Since the beginning of the project, more than 345 thousand packages of pharmaceuticals for a total value of almost Euro 4 million have been collected and sent for reuse, saving that amount for the Italian National Health System. For the fourth year in a row, we cooperated with the ANT Association to promote an initiative to raise the community’s awareness of the FarmacoAmico project in the Bologna area, an initiative that involves students from high schools in Bologna, to support the joint school-work experiences required by the Italian education system.

Waste prevention initiatives, such as FarmacoAmico, contribute to achieving **targets 12.2, 12.4, and 12.5 of the UN’s 2030 Agenda**, as well as – thanks to the involvement of citizens and municipalities – contributing to achieving **target 17.17**.

Cambia il finale (Change the Ending) is an ongoing success: 697 tonnes of bulky waste collected in 2020

The project, now at its seventh year of activity, makes it possible to intercept all objects in good condition otherwise to be disposed of as bulky waste and allow their reuse, thanks to a network of non-profit organisations throughout the area, giving a new life to the goods donated by citizens. The project is linked to the specific memorandum of understanding signed by Atersir and Hera on the management of bulky waste, developed together with Last Minute Market. The goods can be donated by residents to a circuit of non-profit organisations in Emilia-Romagna that collect more or less bulky goods at their headquarters or door-to-door, giving them to second-hand markets, using them in their offices or donating them to people in need. All of Hera Group’s communication tools promote the collection of goods carried out by non-profit organisations, in particular through call centre operators, who offer users the possibility of donating bulky objects in good condition if they intend to dispose of them.

The initiative encourages good habits related to reuse and generates positive social effects thanks to the activities of the non-profit organisations involved, in line with Hera Group’s social responsibility and

environmental protection principles. It also responds to current developments in environmental regulations, which aim to establish a management model based on the concepts of prevention and reuse.

At the end of 2020, there were 18 participating non-profit organisations throughout the Emilia-Romagna region served by Hera, ensuring the coverage of all its main cities. In 2020, the organisations received over 8,990 phone calls from residents willing to donate bulky goods and performed over 5,100 collections, for a total of over 192 thousand items and about 697 tonnes collected. The majority of the goods donated were dispatched to be reused, with an average percentage close to 72%: from January to December 2020, the project avoided the production of more than **501 tonnes of** bulky waste. Although the figures are down from last year (-18.4% tonnes collected), they remain high. In fact, in spite of the impact of the health emergency, such as the closure of activities, the difficulty in moving and collecting goods from residents' homes, and the decrease of volunteer work, the results have nonetheless brought great savings for the environment, and lower charges for waste collection. More than **3.6 thousand tonnes of** waste have been avoided since the start of the project.

Moreover, as part of the "Cambia il finale" project, during 2020 a "reuse box" was set up in the municipality of Cesena, in addition to the "reuse boxes" installed in 2018 and 2019 in the municipalities of Ferrara, Modena and Ravenna. It is a real box inside the Hera Collection Centres, where residents can bring furniture and small objects that are in good condition, which are collected and sent for reuse by accredited non-profit organisations. In 2020, 144 donations were made by citizens, for a total of 596 items, corresponding to 2,145 kg of goods.

Waste prevention initiatives, such as Cambia il finale, contribute to achieving targets **12.2, 12.4, and 12.5 of the UN's 2030 Agenda**, as well as – thanks to the partnerships with the non-profit organisations – contributing to achieving **target 17.17**.

State-of-the-art meters made using recycled plastic

Aliplast will participate in a joint innovation project to improve the resource use, treatment, and processing of plastic waste as applied to a certain product, the NexMeter v.2.

Specifically, the possibility of determining which plastic components that make up the NexMeter v.2 gas meter can be replaced with components made of recycled plastic. This project also includes an analysis of how meters will be packaged, as well as a study of potential end-of-life meter recovery methods.

An essential part of the project's scope is also the definition of the full cost of the meter partially using some components made of the new plastics, in order to assess its overall costs and benefits (in terms of increased environmental sustainability and technological know-how), also with a view to determining whether to modify the specifications of the NexMeter V.2 product for its future massive installation in the field.

Aliplast will support:

- the identification of recycled plastics that provide equivalent performance to the materials currently used as components in the traditional meters;
- the identification of recycled plastics to be able to use them for the packaging of the raw material and the finished product.

The aim of the project is to develop an innovative product within the green transition and Circular Economy trend for the Hera Group.

Manufacturing latest-generation meters using recycled plastic components contributes to achieving **targets 12.2, 12.4, and 12.5 of the UN's 2030 Agenda**.

SCART®: the beautiful and useful side of waste

SCART® is the Hera Group's art and communication project that has been developing the combination of art and waste for over twenty years. It is a corporate waste art project created within one of HERAmbiente's industrial waste treatment and disposal plants. Today SCART® is a trademark registered throughout the European Community, designed to breathe new life into some of the many industrial waste products that are disposed of daily as waste and, thanks to the creativity of the artists who collaborate in the Scart Project, are transformed into unique, exclusive pieces of art while fully respecting circular economy principles. Its goal is to encourage responsible behaviour towards environmental matters, offering new stimuli to create art, design, fashion and entertainment objects using only and exclusively waste as a raw material. Sofas, armchairs, tables, chairs, lamps, chests of drawers, games, musical instruments, clothes, paintings, statues, as well as sets for shows and costumes have been made this way. SCART® is an invitation to work towards new styles of smart, creative and most importantly sustainable life.

Many initiatives at Italian and international level, such as the important conventions with the Academies of Fine Arts in Florence, Carrara, Bologna, and Ravenna, involve many students every year at the seminars and workshops held at the SMART® located within Herambiente's complex in Santa Croce sull'Arno and Pisa. These art and training initiatives focus on experimenting with the artistic use of industrial waste and involve not only enrolled students but also many artists that specialise in trash art.

Since 2012 the SCART® project has been the exclusive partner for the production of costumes and stage components for Andrea Bocelli's concert at the Teatro del Silenzio in Lajatico,(PI) the small Tuscan town where the great tenor was born. About 250 costumes are made for each edition using only industrial waste. In 2020 SCART® also contributed to the creation of more than 100 costumes for the choir and the participants of the event "Andrea Bocelli in concert for the Sicilian Unesco sites" held in Noto (SR).

Over the years SCART® has also participated in many Italian exhibitions – those held at Ravenna, Imola, Modena, Pisa, Udine, Bologna, Padua, and Trieste, to name a few – and international exhibitions (Berlin 2016). In 2020, in Milan, it was the star of "RoGUILTLESSPLASTIC", the event by design guru Rossana Orlandi for Milano Design City, held at the "Leonardo da Vinci" Museum of Science and Technology. In particular, SCART® was included in the "We are nature" exhibition with the "Business Wo/men" collection: fourteen life-size statues depicting businessmen and women. Through an emotional journey, the Hera Group's installation invites visitors to a broader reflection on the importance of pursuing economic and industrial development that is also sustainable.

Aliplast's business contributes to achieving **targets 12.2, 12.4, 12.5, and 12.8 of the UN's 2030 Agenda**.

Sustainable management of water resources

Hera, Iren, Smat and A2A together to improve the integrated water service

On 8 April 2014, Hera, Iren, and Smat **signed a five-year partnership agreement to carry out applied research** to develop joint research, **innovation** and training projects in the sectors and activities related to the integrated water service. During 2020, work continued by Hera, Iren, Smat, and A2A on the development of a **method for controlling Legionella pneumophila** in the water systems they run.

The working group coordinated by A2A has drawn up some chapters of a guideline for use by operators and has carried out some monitoring, by checking for the possible presence of Legionella throughout the supply chain starting from the resources up to certain points on the internal network. The results of these control campaigns highlight the absence of Legionella in drinking water.

Particular attention was also paid to the aspect of reporting to stakeholders in cases of proven contamination (usually concerning internal private networks of users). The work carried out significantly contributed to a guideline document for SII Managers developed on the subject by Utilitalia.

During 2020, activities continued on the project coordinated by Smat on chlorites and chlorates. Among the main topics for further study:

- criteria currently adopted for the purchase of sodium hypochlorite and sodium chlorite;
- data collection on chlorate concentration (in the supply, after storage and neof ormation during the treatment process);
- identification of the causes of degradation of the product during storage;
- definition of technical supply requirements;
- identification of innovative processes and technologies to reduce by-product formation.

The project investigated the presence of these disinfection by-products in the networks operated by our partners and identified the main causes. Possible control and mitigation actions were identified, as a result.

Another joint project, coordinated by Iren, concerns **sensors for early warning**. The main topics that will be worked on during 2020 concern:

- sharing the monitoring experience already acquired;
- examining online monitoring needs, with early warning functions;
- specifying the instruments used, the areas of use, the parameters monitored, the detection limits, and the installation requirements.

The project is dedicated to the research and evaluation of on-line systems for monitoring the microbiological characteristics of aqueous environmental media. The tests were carried out using parallel surveys, using established laboratory techniques, and assessed the degree of reliability of these instruments in relation to that required to monitor the different environmental media.

A further project to be developed during 2020 is the **study to produce bioplastics** by recovering polyhydroxyalkanoate (PHA) **from purification sludge**, coordinated by Hera. The project includes a phase of analysis and quantitative study of the application of full-scale technology (benchmark of the technologies available at the most advanced stage of development) and verification of the implementation of the process of biopolymer recovery and nutrient management (nitrogen and phosphorus) for some target plants (technical-economic feasibility).

All the projects slowed down in 2020 due to difficulties caused by the health emergency. A number of conclusions are therefore planned for 2021 during which the partners will define new projects to be pursued tentatively in 2022-2023.

The partnership signed by Hera, Iren, A2A, and Smat contributes to achieving **targets 6.3 and 17.17 of the UN's 2030 Agenda**.

The Rimini Seawater Protection Plan continues

The Seawater Protection Plan was created in 2013 to eliminate the bans on bathing at beaches following intense rainfall events, by implementing structural measures on the sewage-water purification system of the City of Rimini. Intense rainfall events, in fact, exceed the flow rate manageable by the sewage system, causing the emergency discharge of untreated water into the environment. The gradual implementation of the measures set out in the Plan will gradually eliminate up to 90% of the polluting impact, measured in terms of COD not discharged into the environment, compared to the initial state of the system.

From the very beginning of the Plan, mathematical modelling of the sewage system played an essential role in identifying possible synergies between the measures and systemically optimising works and management criteria. The modelling activities, in fact, being able to rely on an ever-increasing amount of data and the management feedback of the works as they were built, were able to significantly change the system structure that had been initially planned.

The development of the Plan, since its implementation start-up, has enabled us to pursue not only the environmental protection of the coastline as was initially foreseen, but also to protect the areas of the Rimini municipality that were subject to flooding. More specifically, in 2014, the following works were included in the Plan: “Mavone spillway”, “Via Santa Chiara sewer pumping station”, “Ausa backbone sewage collector” (the latter financed for Euro 8.5 million as part of the public funding for hydrogeological instability under the “Italia Sicura” initiative) as well as the modification of the management of rainwater in the plant system serving the Fossa Ausa. Subsequently, in the years 2019 and 2010, the plant systems serving the Colonnella and Rodella Ditches were further optimised, taking advantage of synergies with the sewerage system, which reduced the storage volumes of the tanks, accordingly reducing both the necessary investment and the implementation time, while strengthening the hydraulic protection of the area.

The Plan is essentially made up of the ten measures originally planned, plus additional measures due to the optimisations added subsequently, bringing the **total to 14 measures**.

The ongoing optimisations of the Plan, with the improvements to its design and the required permitting, made achievement of the environmental objectives, initially planned for 2020, slip to 2025. It should be noted that the works required to reduce the city's hydraulic risk will also be completed within that year. The slippage of the Plan's implementation is closely linked to the substantial improvement of its impact on the city which, as specified above, will benefit from a significant improvement in both hydraulic and environmental aspects, not only with respect to the pre-operational state of the sewage system, but above all with respect to that envisaged at the onset of the project.

The progress of the construction work does not lead us to expect any significant issues and assures the quantity goals we have set are in sight. All the other measures are in progress and in the design phase.

The situation of the 14 measures is as follows:

Measure	Progress at 31 December 2020	Expected/actual year of completion	Motivation/benefits
1. Doubling of the Santa Giustina purification plant	Completed	2016	Purification process improvement
2. Conversion of the Rimini Marecchiese purification plant into a collection tank	Completed	2018	Purification process improvement
3. Construction of the Dorsale Nord backbone, for drainage of the Bellaria purification plant into the S. Giustina treatment plant	Completed	2016	Purification process improvement
4. Completion of the separation of sewage networks in the northern area of Rimini	Construction of second portion in progress (first portion completed in 2018)	2023	Conversion of five sewage drains discharging into the sea into rainwater drains (of which three already done under the first portion)
5. Construction of the Dorsale Sud backbone	The third portion of the pressure unit and the third portion of the pumping stations are under construction (second portion completed in 2018)	2021	Reduction in the number of openings of the Ausa and Colonnella I drains into the sea

Measure	Progress at 31 December 2020	Expected/actual year of completion	Motivation/benefits
6. Completion of the separation in the Roncasso and Pradella basins	Construction in progress at Roncasso. Pradella in the planning stage	2022	Conversion of two sewage drains into the sea into rainwater drains
7. Construction of subsea pipeline and pumping station for the Ausa basin and reservoirs	Completed	2020	Reduction in the number of openings of the Ausa drains into the sea
8. Construction of hospital balancing reservoir	Completed	2016	Reduction in the number of openings of the Colonnella I drains into the sea
9. Construction of conduit between Fossa Colonnella I and Fossa Colonnella II; Vasca Colonnella II and Vasca Rodella and subsea discharge conduit	Design in progress	2025	Reduction in the number of openings of the Colonnella I, Colonnella II and Rodella drains into the sea
10. Isola sewage network restoration	Completed	2014	Optimisation of the sewage system
11. Filling the Ausa beach stretch	Completed	2016	Improvement of the usability of the area and of its environmental conditions
12. Sewage collector of Ausa backbone	Design in progress	2024	Reduction of hydrological risks
13. Mavone spillway	Completed	2018	Reduction of hydrological risks
14. Sewage pumping in via Santa Chiara	Completed	2020	Reduction of hydrological risks

The completion of nine measures has produced significant environmental benefits, reducing the quantities of organic substances (COD/BOD) discharged into the sea during intense weather events.

The measures completed in 2020, led to a major reduction in the pollution load discharged near the shore, improving the quality of the water on the coast. This will mean that the bathing bans that occur if discharges are opened up along a large part of the city's coastline, including both areas where the separation of the sewage networks has been completed and the stretch of sea bordering the Fossa Ausa, will no longer apply. From this point of view, since 2017, **5,584 metres of beach have been “freed” from bathing bans, which is more than 50% of the city’s coastline.**

Moreover, as a further proof of the Plan’s strong link with the City of Rimini, we must point out that a significant part of the measures planned are merging into the urban renovation project called Parco del Mare, so as to pursue synergies that can provide an overall improvement of the urban structure of the city.

The Rimini Seawater Protection Plan was included among the best practices in the SDG Industry Matrix report published by the Global Compact and KPMG in 2017, which reports on business opportunities linked to the objectives of the UN's 2030 Agenda.

By applying measures to improve the water and sewage systems, reducing marine pollution, upgrading the infrastructure, while involving municipalities and citizens in the project, the Rimini Seawater Protection Plan contributes to achieving **targets 6.2, 6.3, 6.b, 9.1, 9.4, and 14.1 of the UN's 2030 Agenda.**

A smart system to prevent pollution in sewer networks

in 2019, the Hera Group together with the Israeli startup Kando, developed a smart system made up of control units placed at strategic points in the sewer network, capable of continuously monitoring the level of pollution in the networks in real time. This new system of control units instantly reports polluting events, often of industrial origin, and provides information to help identify their source. The pilot project on the Castelnuovo Rangone network in the Modena area, which started in 2019, reduced the concentration of significant pollutants found in wastewater by 50%, and further reduced energy consumption.

In 2020, the project was extended and is currently also being implemented in Sassuolo, where it has already improved the quality of sewage sludge, maintaining the indirect agricultural recovery, and improving Arera's technical quality indicator. The aim of the project, which is included in the business plan, is to implement and monitor "critical" urban areas in terms of the quality of treated wastewater or sewage sludge.

This smart system to prevent pollution in sewer networks contributes to achieving targets **6.3, 9.1, 9.4, and 14.1 of the UN's 2030 Agenda**, as well as – thanks to the partnership developed – contributing to achieving **target 17.17**.

Protection of air, land, and biodiversity

Herambiente: bee biomonitoring starts in Pozzilli

In 2020, Herambiente launched an **innovative biomonitoring** project to continue analysing the environment around the Pozzilli waste-to-energy plant and any impacts it may have. The project aims to **use bees as bio-indicators** to assess the environmental conditions. Bees are particularly sensitive to environmental changes caused by pollutants, and are therefore able to signal at an early stage the onset of any imbalances in biodiversity, the ecosystem, and human health in general, thus enabling corrective action to be planned in good time.

Bees have particularly suitable characteristics for biomonitoring. First of all, they are social insects, living in large colonies and easy to breed. In addition, their hairy bodies and regular foraging activity (the collection of nectar and pollen) enable individual colonies to make around **10,000 daily withdrawals** from the air, water and soil with which they come into contact. A single bee normally travels over an area of 7 km². during its daily activity. Substances present in the environment then accumulate within the hive, on the bees and their products (honey, propolis, wax, pollen and royal jelly), **making it easy and quick to recover highly representative samples for analysis**. As bio-indicators, bees offer a lot of useful information in both the short and long term: honey, for example, can be used to assess pollution in the short term, as it is the first product in which contaminants can accumulate. Wax, on the other hand, can be used to assess pollution levels in the long term, as its lipidic nature can absorb and retain non-volatile, lipophilic and persistent contaminants.

In spring 2020, **three beehives** were installed within the perimeter of the plant, to monitor the eastern part of the Venafro Plain, between the Meta and Matese mountains, where, in addition to the waste-to-energy plant, there are chemical industries, private healthcare companies, abandoned building sites, and small inhabited agricultural centres.

The project, called "**Capiamo**", includes two annual sampling and analysis campaigns on the bee population of the three hives and their products, as well as medical-veterinary checks to check their health and productivity, limit swarming phenomena and position and remove the honeycombs. Samples collected from the hives (bees, honey and wax) will be chemically analysed in accredited laboratories using certified

methods. The information obtained will make it possible to know and quantify the possible effects of the impact of human activities on the environment.

The first results obtained so far, which will be further investigated, show an **overall good state of environmental quality**. As regards anions (chlorides, sulphates and nitrates), their presence in the harvested honey is in **line with the average values for honeys of Italian origin**. There was a substantial absence of dioxins, PCBs and pesticides, while analyses of polycyclic aromatic hydrocarbons (PAHs), whose main source is the combustion of fossil fuels, waste incineration, energy production or the production of asphalt and chemicals, show an environmental condition to which several emission sources contribute, such as traffic, industry, and domestic biomass heating, which are typical of the anthropisation of the area, **without showing any significant impact from the waste-to-energy plant**. The metals present can also be attributed to the presence of abandoned building sites, industries and infrastructure.

This biomonitoring project contributes to achieving **targets 11.6 and 12.4 of the UN's 2030 Agenda**.

More trees in town thanks to Hera's drop-off points

In 2020, the "**More trees in the city**" initiative continued in collaboration with some municipal administrations to launch an urban forestation project, promoting greater use of drop-off points by citizens, despite the fact that the health emergency has significantly limited their mobility.

In **Rimini**, the initiative donated a tree to the city for every 50 new households that disposed of their waste at the drop-off points. The target of donating 100 trees during 2020 has been met, and planting will take place during 2021.

In the Modena area, the 50 trees donated in 2020 will be planted in Vistarino Park in the municipality of **Sassuolo**: they are linden, plantains, and hornbeam trees that will be added to the 170 trees already planted in Chinnici Park in **Modena**.

In **Ferrara** the municipal administration will identify a suitable area so that the planting of around 50 trees can begin in 2021.

The initiative has many positive aspects: it encourages citizens to use the drop-off points and thus to recycle, it is beneficial for the environment and cityscape since it helps to reduce the waste dumping, and it offers an economic advantage to households since the Municipality discounts their TARI (local waste tax) for each kilogram of waste they deposit. Moreover, thanks to this project, city parks can once again be filled with greenery, with benefits for biodiversity and improved air quality; moreover, each tree can capture around 100 kg of CO₂e every year, helping to mitigate the negative effects of climate change and the warming of cities.

Some details of the initiatives are available at: www.ilrifiutologo.it/alberimodena, www.ilrifiutologo.it/alberirimini, and www.ilrifiutologo.it/alberiferrara.

The "More trees in the city" project contributes to achieving targets **11.3, 11.6, 12.2, 12.4, 12.5, and 12.8 of the UN's 2030 Agenda**, as well as – thanks to the involvement of citizens and municipalities – contributing to achieving **target 17.17**.

Local Area (and Business) – Enabling resilience and innovation

Objectives and performance

What we said we would do	What we have done	SDGs	Progress *	Geographic scope*
Innovation and digitalisation				
<ul style="list-style-type: none"> Continue to implement data analytics and artificial intelligence projects. Main objectives: to optimise gas leak detection, preventive maintenance of networks and plants, waste collection, the quality of separate waste collection, and the management of purification plants, improving results. 	<ul style="list-style-type: none"> We continued to implement many business intelligence/data analytics projects. Predictive models were applied to optimise waste water purification, detect gas and water leaks and, on an experimental basis, to monitor the quality of waste collection. (See page 176) 	9, 17		ER T
<ul style="list-style-type: none"> Prevent cyber attacks: activate new intrusion prevention solutions, protect vulnerable Internet business services and increase the security of workstations and digital identities. Implement new awareness and training campaigns for workers. 	<ul style="list-style-type: none"> We carried out several initiatives: a security framework for the centralised management and monitoring of devices in real time; e-learning training and simulated cyber attacks; new functionalities to make digital identity management more secure; platforms dedicated to recognising and blocking attempts at malicious use of websites and servers. (see page 199) 			ER T M
<ul style="list-style-type: none"> 45% of customers using online billing and 34% of customers using the online services by 2023. Promote customer digitalisation also through the "Digi e Lode" initiative that promotes the digitalisation of local schools. 	<ul style="list-style-type: none"> 34.3% of customers chose online billing and 28.7% of customers used the online services in 2020. The fourth edition of "Digi e Lode", a project that brings customers and the company together to digitalise schools in the area, has started. (See page 197) 	4, 12		ER T M
<ul style="list-style-type: none"> Innovate for circular economy and energy transition: continue the experimental production of bioplastics and the construction of a prototype "power-to-gas" plant. 	<ul style="list-style-type: none"> We have developed the biopolymer recovery and purification process and it will be analysed in 2021 with a view to starting up a pilot plant; in 2020 we designed the final layout of a power-to-gas plant to assess the impact on permitting requests, which are expected to be submitted in 2021 following Arera's resolutions. (See page 184) 	9, 12		ER

What we said we would do	What we have done	SDGs	Progress *	Geographic scope*
<ul style="list-style-type: none"> Promote and implement circular smart city solutions in municipalities and universities. 	<ul style="list-style-type: none"> In 2020 we developed the architecture of the “PuntoNET board” sustainability dashboards for the Municipality of Cesena and the Cesena Campus of the University of Bologna and signed an agreement for the provision of the dashboard to the Metropolitan City of Bologna. Two PUNTONet Bus and one PUNTONet Bike were installed in the municipality of Castel Bolognese (RA). The first prototype of PUNTONet H2O was built. (See page 178) 	9, 11, 12, 17		ER
Economic development and social inclusion				
<ul style="list-style-type: none"> Supplier selection: continue to promote the employment of disadvantaged people in waste management services 	<ul style="list-style-type: none"> Over Euro 67 million were awarded to social cooperatives for waste management services, amounting to 27% of the Group’s total awards for these services. (See page 217) 	8		ER T M
<ul style="list-style-type: none"> Spread awareness of tariff concessions and other initiatives to support customers facing financial hardship 	<ul style="list-style-type: none"> Tariff concessions and initiatives to support customers facing financial hardship were promoted through the online SOStegno Hera guide. (See page 216) 	17		ER
Job creation and development of new skills				
<ul style="list-style-type: none"> 2020 Learning Plan: training measures to develop the new skills required in the three reference axes (technical-professional, managerial, technological), to support the development of the reference context and of the businesses managed. The new skills included in the plan include: water safety management, circular economy and decarbonisation, new certification schemes, green and ESG finance, Office 365. Concerning digital skills, achieve 50% of employees with digital readiness, by 2023. 	<ul style="list-style-type: none"> Several training initiatives on new skills were implemented in 2020, including: remote working and Office 365, circular economy and SDG 12, data analytics and new business applications, and IT security. 44% of employees were found digital proficient by the new HER@futura survey carried out in 2020. (See page 229) 	4, 8		ER T M
<ul style="list-style-type: none"> Continue to apply the social clause to protect employment in the contracts for emergency services on networks and services relating to customer management (except for insourcing situations). 	<ul style="list-style-type: none"> Thirteen tenders, among the most notable, included a social clause to protect employment. (See page 222) 	8		ER T M
<ul style="list-style-type: none"> Continue to raise awareness on the enhancement of diversity and inclusion through training events and initiatives. Monitor Hera Group’s positioning in leading diversity stock indexes. 	<ul style="list-style-type: none"> We held internal and external online meetings on the topics of gender stereotypes, inclusion and “respect”. (See page 225) 	5		ER T M

What we said we would do	What we have done	SDGs	Progress *	Geographic scope*
Resilience and adaptation				
<ul style="list-style-type: none"> Continue to implement the resilience plan for the electricity grids in Modena: another 8 measures in 2020, in addition to the 2 carried out in 2019 (out of a total of 54 measures). 	<ul style="list-style-type: none"> The implementation of the resilience plan for the electricity grids in Modena continued: 7 measures were implemented in 2020, for a total of 9 measures implemented out of the 54 planned. (See page 236) 			

*  Result achieved or in line with plans.  Result with moderate deviation from planning.

** Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

What we will do	SDGs	Geographic scope*		
Innovation and digitalisation				
<ul style="list-style-type: none"> Continue to implement data analytics and artificial intelligence projects also to support the circular economy and energy transition. Continue to develop a system for reporting on digital transformation projects from a Corporate Digital Responsibility perspective, to highlight the risks mitigated and benefits achieved in the four dimensions: social, environmental, economic and technological. 	9, 11, 12, 17	ER	T	
<ul style="list-style-type: none"> IT security: <ul style="list-style-type: none"> implement specific solutions in 2021 to monitor the security of IT infrastructure of business plants continue vulnerability assessment in 2021, and raise awareness among the user population through Security Awareness and Ethical Phishing campaigns. 		ER	T	M
<ul style="list-style-type: none"> Innovation for the energy transition and circular economy. Main objectives: produce bioplastics from sugars and optimise purification processes from an environmental and energy point of view. 	6, 9, 11, 12	ER	T	M
<ul style="list-style-type: none"> 49% of customers will use online billing and 44% of customers will use the online services by 2024. Promote the digitisation of the billing also through a new reforestation campaign. 	11, 12, 17	ER	T	M
Economic development and social inclusion				
<ul style="list-style-type: none"> Supplier selection: continue to promote the employment of disadvantaged people in waste management services. 	8	ER	T	M
<ul style="list-style-type: none"> Continue to provide instalment payment for bills and other voluntary facilities for customers struggling to pay their bills. Propose to other municipalities to sign a protocol to preventing service disconnections. 	17			
Job creation and development of new skills				
<ul style="list-style-type: none"> 2021 Learning Plan: set up projects and training actions to strengthen the Group's culture oriented towards sharing and active regeneration of knowledge and continue developing the new skills required in the three reference axes (technical-professional, managerial, technological). New skills include: new business and value-added services; decarbonisation, energy transition and climate change; green and ESG finance, EU taxonomy; risk management; resilience and stress tolerance; digital workplace tools. Achieve digital proficiency for more than 60% of the corporate population (meaning full "digital soft skills") by 2024, 90% by 2030. 	4, 8			
<ul style="list-style-type: none"> Continue to apply the social clause to protect employment in the contracts for emergency services on networks and services relating to customer management (except for insourcing situations). 	8	ER	T	M

What we will do	SDGs	Geographic scope*		
<ul style="list-style-type: none"> Continue to raise awareness on the enhancement of diversity and inclusion through events and initiatives. (Inclusive language and STEM topics). Consolidate Hera Group's ranking in leading diversity stock indexes. 	5			
Resilience and adaptation				
<ul style="list-style-type: none"> Electricity service resilience: carry out a further 13 measures in 2021, bringing the compliant network to 22 km (33% of the overall Electricity Resilience Plan). Build the Modena Est primary substation in 2021. 	9, 13	ER		
<ul style="list-style-type: none"> Resilience of the water network service: <ul style="list-style-type: none"> implement innovative water network leak detection initiatives (cosmic rays, radar on aircraft, predictive algorithms for breakage risks) in various areas; work to optimise withdrawals, interconnect the network and boost sources in various areas including Trieste and Bologna; development of a system for monitoring and forecasting water availability and emergency status to optimise source management. 	6, 12, 13, 17	ER	T	M

* Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

Innovation and digitalisation

The term innovation traditionally is used to identify a process that turns an idea into a good or service that has a value. In addition, innovation must be repeatable at an affordable cost and must meet specific needs. Innovating does not mean inventing, nor planning, but rather seeking, perceiving, discovering, making progress, improving and knowing how to gain value in the present and future contexts.

Progress, change and development can take place both as a development and an improvement of the current condition, either by breaking with, or sharply diverging with respect to the present. We can therefore identify two types of innovation:

- **evolutionary innovations:** those that lead to the advancement of technologies, processes, products or services;
- **revolutionary innovations:** those that occur where there is discontinuity with the past, at times even disruptive, or that completely replace the current situation.

There is always an element of risk in innovation: it may not prove to be successful or have effects and interactions that were not initially expected. This requires us to carry out a detailed preliminary evaluation to minimise the possible waste of resources or unexpected negative impacts.

Digitalisation is a complex phenomenon that plays a key role in the innovation process. Digitalisation means abandoning traditional analogue tools and adopting new digital technologies to speed up work flow and automate activities, make production processes more efficient and simplify logistics procedures, creating new ways to participate and sharing information and data in real time. Not only that, digitalisation has now taken on an even broader connotation, namely that of a real tool that, through the use of new IT and technological possibilities, allows the company to grow and innovate.

Corporate Digital Responsibility

Two global trends that currently play a fundamental role in the innovation process are digitalisation and sustainability. On the one hand, digitalisation has transformed the way we live and work at an exponential speed; on the other hand, sustainability is an increasingly urgent and strategic element for facing the future, capable of influencing the business choices of companies. However, so far these two elements have travelled on parallel paths without strong elements of contact.

In this scenario, in 2020 the Group initiated an internal reflection on the concept of **Corporate Digital Responsibility**, wondering what variation it may have with respect to the Group's activities and what approach to adopt accordingly. Corporate Digital Responsibility is a unified analysis framework to address sustainability and digitalisation in a coherent and complementary way, with the possibility to anticipate and reduce future risks and seize the multiple synergistic opportunities of the two trends, laying the foundations for a new integrated reporting and responsible project development system.

Corporate Digital Responsibility is defined as a set of **practices and behaviours** that help an organisation to **use data and digital technologies ethically and responsibly**, from a **social, environmental, economic and technological point of view**. The latter are defined as dimensions of Corporate Digital Responsibility, important interpretations of the framework that find a consistent declination with the activities carried out by the Group in detailed topics, each of which is able to identify risks to be mitigated and opportunities to be seized.

The four dimensions of Corporate Digital Responsibility for the Hera Group

Dimension	<p style="text-align: center;">Social</p>  <p style="text-align: center;"><i>The company's relationship with people and society</i></p>	<p style="text-align: center;">Environmental</p>  <p style="text-align: center;"><i>The connection between digital technologies and the physical environment</i></p>	<p style="text-align: center;">Economic</p>  <p style="text-align: center;"><i>Responsible management of the economic impacts of digital technologies</i></p>	<p style="text-align: center;">Technological</p>  <p style="text-align: center;"><i>Responsible creation of technologies</i></p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">What it consists of</p>	<ul style="list-style-type: none"> ▪ Ensuring data privacy for customers and workers ▪ Promoting digital inclusion and moving past the digital divide for workers ▪ Promoting digital inclusion and moving past the digital divide for the customers and the public ▪ Ensuring health and safety for workers and customers thanks to digital technology 	<ul style="list-style-type: none"> ▪ Ensuring recycling and responsible management of products at the end of their working life ▪ Developing digital innovation solutions to pursue carbon neutrality and regeneration of resources ▪ Using carbon neutral energy (from renewable sources and/or high-efficiency gas systems with compensatory actions) for services and digital technologies 	<ul style="list-style-type: none"> ▪ Responsibly managing impacts on employment related to new digital technologies ▪ Sharing with stakeholders the benefits obtained thanks to the efficiency processes given by digital innovation 	<ul style="list-style-type: none"> ▪ Ensuring IT security and responsible use of technologies

The **social dimension** concerns the company's relationship with people and society and in the Group it is divided into four main themes: ensuring the privacy of customer and worker data; promoting digital inclusion and overcoming the digital divide for workers; promoting digital inclusion and overcoming the digital divide for customers and citizens, and ensuring health and safety for workers and customers thanks to digital technologies.

The **environmental dimension** concerns the link between digital technologies and the physical environment: the issues identified are the recycling and responsible management of technological products and the development of digital innovation solutions to support carbon neutrality and regeneration of resources.

The **economic dimension** encompasses the responsible management of the economic impacts of digital technologies and in the Group it consists of the issues of managing the impacts on employment and sharing with stakeholders the benefits deriving from efficiency solutions linked to digital innovation.

The fourth **dimension**, the **technological** one, concerns the responsible creation of technologies and finds application in the Group with the issue of information security and the responsible use of technological tools.

In order to ensure a greater understanding of the framework and to thoroughly evaluate the detailed issues described above, some **guiding questions** were also developed to support the analysis and grasp the different facets of the four dimensions.

The introduction of the new framework within the Group has the main objective of reporting, that is, to analyse and describe in the sustainability report how the digital innovation projects and activities already started and/or concluded respond to the four dimensions, and what their impacts on them are. As a result, the new framework will also respond to strategic objectives, providing support for the definition of new projects, initiatives and activities in the digital transformation field, finding application in the ex-ante evaluation of projects, in order to analyse social, economic, environmental and technological risks that

could arise from these activities if not properly managed, and transform them into opportunities and benefits. With the new Corporate Digital Responsibility, the Group acquires a cutting-edge tool that responds proactively and holistically to the challenges arising from digitalisation and innovation, consciously engaging in the development of a responsible digital transformation.

Innovation for the Hera Group

Innovation is the central element in the HERA Group's strategy. The model we use is based on widespread innovation: each department is responsible for its own individual innovation initiatives, from the review of processes to the identification of new services, from instruments for improving efficiency to the launch of new operating models.

However, there are guidelines, factors and tools that enable the innovation process, such as information technology and connectivity. This is why Hera has set up a specific **Central Innovation Department**, reporting to the Chief Executive Officer, with the goal of analysing the main market trends, identifying the areas of greatest interest, evaluating and proposing projects and solutions to the individual departments, and supporting developments with Information and Communication Technology methods and tools and promote the development of responsible innovation in line with the Group's Corporate Digital Responsibility.

The Central Innovation Department includes the IT systems, the connectivity and telecommunications services (through the Acantho subsidiary), and the Development department, which identifies scenarios and possible action areas, and proposes engineering projects, and technological and digital innovation projects.

During 2020, in parallel with the reflections on the application of the Group's Corporate Digital Responsibility, the Central Innovation Department developed a new variation of the concepts of innovation and digitalisation. At Hera, innovation and digital transformation are two areas with elements that intersect without totally overlapping:

This new conceptual interpretation leads to a renewal of the classification system of the Group's innovation projects, surpassing the previous one with a new structure in which there are three areas of innovation going beyond the one-to-one association between project and innovation area.

The main **innovation areas** within the Hera Group, also in line with its business plan and the renewed relationship between innovation and digital transformation, can be summarised as follows:



energy transition aimed at shifting from the use of non-renewable energy sources of fossil origin to the use of more efficient and renewable sources;



circular economy aimed at environmental sustainability, the optimisation of materials, and maximising the recovery of waste and scrap;



digital transformation aimed at the implementation of new technologies for the digitalisation, automation, and flexibility of processes, and the enhancement and efficient use of data;

To encourage and boost innovation in its businesses, the Group has also launched **social innovation initiatives**, involving both external stakeholders through HeraLAB (see the "Dialogue with our stakeholders" paragraph) and internal players, through the Heureka initiative (see the "Case studies" section of this chapter).

Investments in innovation

[203-1]

In 2020, the Hera Group invested about Euro 86 million (+10% compared to 2019) in innovation and digitalisation, a figure that is part of the total investments aimed at creating shared value (see the section on Shared Value in the "Sustainability, Strategy and Shared Value" chapter).

The main projects and the innovation areas to which they belong are listed below. Each project can relate to several innovation areas: the table shows the symbols of the different innovation areas in which the project is classified. There is also an initial analysis of the initiatives with the Corporate Digital Responsibility framework.

Main projects	Innovation areas	Dimensions Corporate Digital Responsibility
PUNTONet Board dashboard: dashboard for the analysis of sustainability indicators and the provision of smart services	  	  
Senseable Dep: treatment process monitoring dashboard	  	
Green Loyalty: incentives for virtuous behaviour and dissemination of sustainability objectives	  	  
Hera biomethane from waste (see the Case study in the section "Pursuing carbon neutrality" - page 80)	 	
Development of the hydrogen supply chain in the Hera Group	 	
Treatment 4.0: The use of predictive logic to manage treatment plants.	  	
Consumption diary: advanced analytics to improve the customer experience (see Case study in the section "Pursuing carbon neutrality" - page 79)	 	 
Smart multiservice islands for optimising city services	 	  
Resilient Water: water distribution networks more resilient to climate change	 	
HergoAmbiente: innovative IT system for the integrated management of environmental services	 	   
The production of bioplastic from sugars deriving from waste cellulose		
Ultrasound hydrolysis system to optimise the disposal of wastewater treatment sludge		
Greenhouse for drying wastewater treatment sludge		
Recovery of treatment water (see the section "Regenerating resources and closing the loop" - page 116)		

Main projects	Innovation areas	Dimensions Corporate Digital Responsibility
HergoReti: platform for managing the field activity of network systems		 
Digital Workplace change management plan		  
Heratech digitalisation projects		  
NexMeter: the counter 4.0 with advanced safety functions (see the Case study in the section “Quality, cost and safety of customer service” - page 324)		  
Forli remote control technology hub		  
HeraBoard: management dashboard for monitoring company performance		  
Connectivity enhancement (see the dedicated paragraph “The role of Acantho” - page 195)		 
Artificial intelligence to reduce gas leaks (see the dedicated paragraph “Quality, cost, and safety of customer service” - page 325)		  
Artificial intelligence to reduce water leaks (see the dedicated paragraph “Resilient aqueduct and water source management” - page 234)		 
Implementation of the Role Based Access Control model		  
Robotic & Intelligent Process Automation and artificial intelligence platforms for text recognition		  
IT security (see the dedicated paragraph “IT safety” - page 199)		 
Digitalised management of personal protective equipment		 
Systems for the digital payment of bills (see the dedicated paragraph “The digital channels for our customers” - page 197)		  
Data Community: community for the dissemination of skills in the field of digitalisation and data analytics (see the dedicated paragraph “The spread of digitalisation and the use of data within the Hera Group” - page 194)		 
Heureka +: social innovation platform for sharing ideas		

PUNTONet Board dashboard: a dashboard for the analysis of sustainability indicators and the provision of smart services

The dashboard for municipalities is a **tool to analyse and monitor sustainability KPIs**. They provide integrated views of the processing and correlation of data (Big Data) from various services and sensors strategically placed throughout the service areas.

The objectives that are monitored are based on the SDGs of the **UN 2030 Agenda**, Italian and international protocols or specific objectives of Administrations, Authorities or Companies that adopt the tool.

PUNTONet Board allows **constant and real-time monitoring** of data divided into three distinct areas: environmental, social and economic. By means of an analysis process, it will be possible to assess the qualitative condition of the area and therefore to implement improvement and change processes to achieve sustainability.

During 2020, the reference architecture in the cloud environment of the dashboards was primarily developed for the Municipality of Cesena and for the Cesena Campus of the University of Bologna. The data used for the two dashboards derive from open data, internal services of the Authorities, IoT sensors and third parties. During the year, through the company of the Acantho Group, a PUNTONet Board supply agreement was also signed for the Metropolitan City of Bologna (three platforms at the municipal level and one at the central authority level), which can monitor the environmental, social and economic status of the municipal territories. The supply includes several acoustic environmental sensors to be installed in the local area.

PUNTONet Board can also include the **Social media sentiment analysis service**, a platform that allows the near real-time monitoring of the interactions that take place on the web (newspapers, social networks, blogs, forums, etc.), categorised by different topics specifically chosen by the user, which activates monitoring.

In 2021 we expect to release the PUNTONet Board platform and **related smart services** (Sustainability Passport, IoT sensors, environmental mapping, sentiment analysis, etc.) for other municipalities and public and private organisations that aim to achieve sustainability objectives by digitalising their processes.

Corporate Digital Responsibility

- Environmental**  Real-time monitoring of environmental indicators, definition of reference targets and implementation of strategies to achieve them.
- Economic**  Identification of new strategic projects for sustainable development through the analysis of social, environmental and economic data collected and the assessment of the qualitative state of the territory.
- Technological**  Use of cloud-safe solutions and data analysis technologies.

Senseable Dep: treatment process monitoring dashboard

A **treatment process monitoring platform** has been developed for the 15 main treatment plants. It uses simplified dashboards that show just a few indices to summarise the health of the treatment process from the biological, hydraulic and energy points of view.

The development of Senseable Dep monitoring activities continued throughout 2020 as part of the broader digitalisation project of the management structure called Treatment Plants 4.0.

Starting from the month of July, and up to the end of 2020, the 15 main plants with a potential exceeding 100 thousand equivalent inhabitants measured each other through a competition called the First Championship among treatment plants. The championship was conceived as a **stimulus for the use of the Senseable Dep** and as a tool to accompany the change towards the Treatment Plant 4.0 both for plant engineering and, above all, for the managers and operators of the plants.

In this logic, **only values that came from the online probes** were used as criteria for the championship to encourage their correct maintenance, the critical analysis of data from the field and the evolution towards a digital management model, which, integrated with the data of the laboratory computer system, outlines the goodness of the treatment process.

The initiative has had considerable success, so much so that in 2021 the second edition is expected both with the territorial expansion to the AcegasApsAmga plants and the use, as comparison values, of KPIs linked to energy consumption and the consumptions of chemical products.

Corporate Digital Responsibility

Environmental



Optimisation of purification processes, useful to accompany the change towards the 4.0 purifier both for the plant engineering part and, above all, for the managers and operators of the plants.

Green Loyalty: incentives for virtuous behaviour and dissemination of sustainability objectives

The Green Loyalty initiative aims to exploit digital technology to reconcile its diffusion with the sustainability goals set out in the UN 2030 Agenda for Sustainable Development (SDGs). In particular, there is a strong awareness of promoting sustainable cities suited to personal life, characterised by a healthy production fabric, environmentally sustainable and capable of increasing collective well-being, introducing new intermediaries that enable innovative models of interaction and cooperation.

The project intends to fit into this context, favouring the establishment of a Smart sustainable community, to **aggregate the offer of sustainable products and services** in line with the SDGs, in a collaborative and democratic approach, creating the conditions **for creating an open community**, disintermediated and distributed, based on the use of blockchain and big data management. A community that makes it possible to read and give value to ordinary individual action, understood as the set of micro-actions that multitudes of individuals perform for the most varied reasons, to make them become a community.

The initiative makes it possible to **reward the sustainable behaviour of customers**, through the disbursement of a small reward (token) on a digital wallet (wallet). The sum of the prizes received can be used to purchase affiliated products and services, even other than the one that generated the prize. The circuit will be built using **blockchain technology** in order to manage the presence of multiple partner companies and to have an innovative tool for tracking the supply chain of sustainable behaviour.

In the future, the project envisages the construction of the infrastructure and a pilot experimentation; the increase of companies that will use the system will allow to increase the effectiveness of the initiative.

Corporate Digital Responsibility

Social



Guarantee of privacy requirements, digital inclusion and transparency of processes towards customers.

Environmental



Creation of a community for the aggregation of products and services in line with the SDGs, and encouragement of sustainable behaviour.

Economic



Creation of an economic incentive for products and services in line with the SDGs.

Technological



Use of innovative solutions such as blockchain for the secure tracking of the supply chain of sustainable behaviour.

Development of the hydrogen supply chain in the Hera Group

The hydrogen vector represents one of the solutions to **decarbonise the European economies** and in particular some of the final consumption. At present, however, there is no hydrogen supply chain, nor an adequate legislative and regulatory framework for the large-scale development of this vector. In this sense, the Hera Group is overseeing and supporting the work of the institutions, also through the trade associations to which it belongs, so that a favourable framework for a progressive development of the hydrogen supply chain is produced in the coming months.

From a technological point of view, the Hera Group is overseeing the development of the supply chain through a strategy aimed at exploring opportunities and impacts throughout the perimeter of company activities. Therefore, it has projects in place both on production methods and in relation to the impacts on distribution and on end users. Initiatives to develop hydrogen as an energy vector include:

- experimental injection into the gas distribution network of a mixture of hydrogen and methane;
- identification of possible technological solutions for energy intensive industries;
- construction of a power to gas plant in Bologna, for the use of hydrogen as storage for electricity and its injection into the gas networks after a phase of transformation to biomethane: in 2020 the final layout of the plant was designed in order to assess the impacts at the level of authorisation requests, which are expected to be advanced in 2021 following the Arera resolutions;
- assessment of the technological, economic and regulatory feasibility of “green” hydrogen production in Ferrara, in partnership with Yara.

Feasibility studies and preliminary design are underway for each of these project lines.

Treatment 4.0: The use of predictive logic to optimise treatment processes

The Modena purification plant has been equipped with a leading-edge system, the only one of its kind in Italy, which uses predictive logic to further reduce energy consumption and improve the quality of the outgoing water. The project was supported by the company AmmaGamma, and involved developing a **control system based on MPC (Model predictive control)** and artificial intelligence to optimise the oxygen supply to the oxidation tanks. The project has the following objectives:

- to improve the performance of total nitrogen abatement compared to the regulatory limits;
- to optimize oxygen delivery in the aerobic media;
- to minimise the energy costs of air blowers.

The line in which this control system is present, the Modena treatment plant, which has the capacity to meet the needs of 500 thousand inhabitants, **decreased the amount of energy** needed for in line oxidation process by 16%, compared to what was found in a similar situation with a traditional control system, and decreased the presence of nitrogen in outgoing water (a parameter already below the regulatory limits) by a further 8.1%.

In 2020, the project focused on extending the predictive system to the entire biological line 1. The extension allowed us to consolidate the performance of the controller, confirming the positive results.

Corporate Digital Responsibility

- Environmental**  Use of predictive logic to track and implement actions to contain energy consumption and improve the quality of the water leaving the treatment plant.
- Economic**  Greater efficiency of the treatment process (regulated service)

Smart multiservice islands for optimising city services

The aim of the project is to create a **technological infrastructure that can gather the services for the city** in a single point, to optimise the use of energy, environmental, economic and IT resources.

PUNTONet is the acronym used to describe the innovative technological infrastructures created by the Development Department of the Group's Central Innovation Department.

Although they have different structural characteristics, the PUNTONet technological infrastructures are united by the same principles of design sustainability, they host the same technologies on board and are compatible with each other. They are divided into three categories, described below.

PUNTONet waste is an **innovative container** capable of automated collection of differentiated urban waste, designed to:

- be accessible to people with disabilities;
- enable clean disposal without levers and pedals;
- recognise users, talking to them and helping them to dispose of their waste;
- reduce impact on the cityscape and improve urban décor;
- weigh the waste;
- call when it's full;
- enable gamification projects among people, communities or neighbourhoods;
- be eligible for the application of quantity-based tariffs.

The **first prototype** was used by 50 families in the municipality of Castel Bolognese (RA) for a whole year, until October 2019. The people involved were very satisfied by the pilot project and this showed that the constantly monitored waste collected was of high quality. The **second prototype** incorporated some aesthetic improvements to facilitate user recognition. In addition, an app was developed to open the containers and enable users to monitor their disposals, be always up to date on the quality of the waste collected and receive information on recovery of the material.

PUNTONet Bus/Bike is a **multifunctional urban shelter**, which can be installed with a simple support on the ground without the need for foundations, connected to the electricity and data network, with the ability to provide the following services:

- set-up for Pack station (like Amazon Locker);
- LED night-time lighting;
- set-up for city bike-sharing;
- photovoltaic cover;
- cycle-parking slots for recharging electrically assisted bicycles (e-bikes) or areas dedicated to micromobility (scooters, etc.);
- renewable energy production.

The first PUNTONet bike shelter was installed in 2018 at the Unibo University Campus in Cesena, while in 2020, two PUNTONet Bus and one PUNTONet Bike were installed in the municipality of Castel Bolognese (RA).

PUNTONet H2O is a **multiservice totem that allows you to fill your bottle** by means of a hygienic, intuitive and accessible system. You can choose between room temperature and chilled water, thus discouraging the purchase of plastic bottles. The totem is much more than just a public fountain; it combines the aspect of sustainability with numerous smart services for the cities of tomorrow. The product's design has allowed the simultaneous presence of the bottle dispenser and a practical dog-bowl to quench the thirst of pets, without compromising the hygiene of the station.

There is also an **information monitor**, useful for suggesting healthier lifestyles and promoting sustainable initiatives. Lastly, through the use of augmented reality it will be possible to access multimedia content directly from your smartphone. Usability of the system for users with motor disabilities is guaranteed by the appropriate water supply height.

The PUNTONets can be integrated with each other and this modularity enables the integrated provision of multiple smart services such as:

- Wi-Fi connectivity;
- video surveillance;
- electric charging of mobile devices;
- electric charging of mobile systems for the disabled;
- environmental sensors (air and noise);
- LED lighting.

All the infrastructures called PUNTONet are remotely controllable and manageable through computer-based applications that can be implemented in the dashboards for Public Administrations, Institutions and local area Organisations.

Corporate Digital Responsibility

Social



Inclusive digital innovation with smart solutions also accessible to people with disabilities in the field of waste collection and mobility.

Environmental



Solutions to improve separate collection, promote sustainable mobility, discourage the consumption of bottled water and monitor environmental quality (air and noise).

Technological



Improvement of the functionality of PUNTONet products with integrated technological solutions. All the infrastructures are remotely controllable and manageable through computer-based applications.

Resilient Water: water distribution networks more resilient to climate change

The main purpose of the study developed in 2020 was to quantify the impact of **potential climate change** on water distribution networks and identify **solutions to improve the resilience** of the network itself. To determine the probability of occurrence of intensive or prolonged droughts in Emilia-Romagna and to interpret their impact on Hera's supply sources, it was necessary to carry out an analysis of the statistical characteristics of the precipitation series as well as the series of surface runoff and of groundwater levels. The analysis was aimed at defining both the methods, in a statistical sense, with which droughts occur, and the delay with which these affect the various sources of Hera's supply.

The results consist of design indications regarding, for example, the optimal balance between surface and underground supplies, network connections, the need for additional reserves or alternative supply sources.

The data, the information collected and the studies carried out in 2020 are preparatory to the project planned in 2021 for the creation of a predictive model and a **digital remote control dashboard** on the

consistency of groundwater and surface water resources, by also collecting data in real-time coming from the environment (rivers, aquifers and climate) and their subsequent processing for better management of the water resource in the distribution networks in the event of environmental emergencies.

Corporate Digital Responsibility

Environmental



Future creation of a predictive model and a digital remote control dashboard on the consistency of groundwater and surface water resources with the aim of developing resilient water networks.

HergoAmbiente: innovative IT system for the integrated management of environmental services

HergoAmbiente is a real **ecosystem of systems and technology platforms**, capable of **supporting operational management** for the design, planning and execution of collection and sweeping services, and for monitoring the information detected in the field, with advanced business intelligence functionalities.

The main objectives of the project are to **improve efficiency, effectiveness and quality of services**, but also to **decrease the environmental impact**, because thanks to this new system it will be possible to use vehicles more rationally, consuming 150 thousand less litres of fuel every year, which correspond to the non-emission of 400 tons of CO₂.

In 2020, numerous innovative initiatives were launched with the goal of improving the quality of the data provided by HergoAmbiente and, consequently, better governance of operational processes. In particular, **Proofs of Concept** have been created for the control of field data in the phase of receiving them from the devices used by the operators, in order to act quickly on their remediation and validation, so as to reduce finalisation times following the work orders. The controlled data refer both to the services performed and to the routes of the vehicles.

The Proofs of Concept created were successful and the functions developed will be integrated with those already available in HergoAmbiente for the management of operational processes during 2021-2022. In addition, **experimental artificial intelligence initiatives** have been activated:

- to monitor the quality of waste during the emptying of the container inside the truck hopper, in order to identify the territorial areas in which the worst levels of quality are concentrated and to act promptly with training and information initiatives for customers;
- to support the drivers in the emptying phases of the container with single operator, with respect to the correct identification of the volume of the container and its centring before lifting.

The trials have produced good results and therefore, in the course of 2021, further developments will also be carried out in terms of new functions, such as, for example, recognising abandoned waste around bins and identifying breakages and damage to containers.

Lastly, the development of the **Rifiutologo** app continued, as an element of engagement with customers, **creating new features** such as, the connection with the Amazon Alexa skill, which responds to the voice requests of users regarding the door-to-door calendar, the directions, locations and opening times of the drop-off points as well as specific questions on where to throw a particular package.

Corporate Digital Responsibility

Social



Customer support through an increasingly interactive and easy-to-manage environmental service, and the development of new features that can be used via mobile apps (Rifiutologo). Dematerialisation of processes and documents to ensure greater customer safety.

Environmental		Monitoring of the quality of the waste collected and identification of critical areas in which to intervene with information initiatives for customers and citizens.
Economic		Efficiency of the waste collection process and development of new digital skill assets for environmental operators.
Technological		Responsible artificial intelligence initiatives developed to provide the operator with support for the correct and safe execution of environmental services.

The production of bioplastic from sugars deriving from waste cellulose

Since 2019, intensive research has been conducted to develop a technology capable of producing **bioplastics from the sugars obtained from waste cellulose** (e.g. pruning material).

The project activities carried out in 2020 had the main objective of acquiring and developing the know-how to scale up the bioplastic production process from the laboratory scale to that of a pilot plant.

On the one hand, a highly productive robust fermentation process has been developed, and on the other hand, we have worked to develop a biopolymer recovery and purification process with high yields and low environmental impacts, such as to make the entire biotechnological process sustainable both from the economic and environmental points of view.

The next goal of the project for 2021 is to increase the knowledge of the process and start the design of a pilot/demonstration plant to continue the technological development of the process.

Ultrasound hydrolysis system to optimize the disposal of sewage sludge

This project was developed after research carried out in 2017 to identify new technologies to **optimise the water cycle and dispose of the sludge from urban wastewater treatment**.

In the ultrasonic sludge hydrolysis system, a part of the thickened sludge from the treatment process (20-50%) is subjected to sound waves which, by cavitating the liquid media to be treated generate a cellular breakdown which makes more volatile solids available for biodegradation, increasing biogas production and reducing the final dry matter in the sludge and thus reducing the volume to be disposed of.

In 2020, the main goal was to monitor the operation and evaluate the technical and economic performance of the sludge pre-treatment system. The analysis of the plant's operational data showed that the impact of the ultrasound system on the anaerobic digestion process was an **increase in biogas production of over 10%** and a consequent **reduction in dry matter** leaving the digester. Therefore, on the one hand, the system has allowed greater energy enhancement of wastewater treatment sludge and, on the other hand, it has made it possible to reduce the amount of sludge to be disposed of. The ultrasound system therefore represents a valid option to **reduce environmental impact** in the water sector.

Greenhouses for drying wastewater treatment sludge

In 2018, we completed the technological scouting and technical feasibility analysis of using special greenhouses to dry wastewater treatment sludge.

As planned, the expansion of the solar greenhouse to 900 square meters was completed in early 2020, tested with the first batch starting in March. The greenhouse immediately confirmed **the good results previously demonstrated by** the pilot structure. In 2020, the Padua treatment plant produced **5,142 tons of sludge** compared to 6,000 the previous year. The negligible energy consumption (less than 1,000 kWh per month) confirmed the principle on which the greenhouse technology is based, namely the exploitation of thermal radiation from the sun.

HergoReti: platform for managing the field activity of network systems

In 2018 we introduced **Geocall, a new software platform** designed to manage the field activities of our network systems, from operation and maintenance, to technical assistance and emergency services. The first release, in November 2018, immediately **increased the efficiency of the emergency services, by simplifying operations** of network services (gas, electricity, water and district heating), providing an easy graphical interface and all the features made possible by smartphones.

Geocall has been fully integrated with our IT systems based on SAP and Esri technology, and overcomes the previous operational inefficiencies that were due to cumbersome consultation of documents offline, persistence of paper documents, the need for frequent phone calls with assistants, the possibility of accessing data only from fixed locations, and the need to use multiple devices for a range of functions.

Below is a summary of the **main features**:

- immediate access to technical information of user facilities;
- data entry and search with direct access to company databases (e.g. technical specifications of the instrumentation supporting a specific activity);
- creation, update, assigning, and reporting the various work phases directly from mobile devices;
- optimisation of the monitoring and scheduling of work orders, thanks to the quality of data on the traceability of individual activities (time and space);
- direct, in-field readings of meters;
- online and offline access to maps;
- access and visibility of the data concerning the staff in service (e.g. on-call time, unavailability bands, work calendars) in order to optimise the management of activities to be carried out on the area;
- road navigation to the address of the service call;
- acquisition and consultation of multimedia documents (images, pdfs, CAD files, etc.) which can be attached to the work order;
- booking management.

All this translates into three words that describe what has been achieved: efficiency, performance and satisfaction.

In 2020, **130,000 emergency reports** and **140,000 management and maintenance interventions** were managed, involving approximately 1,500 employees. At the end of 2020, the management of appointments was started, allowing optimisation of the resources involved in the work order management. The dissemination process is now going ahead to include management of meter-related work, planned in 2021.

Corporate Digital Responsibility

Economic



Efficiency of emergency response activities and optimisation in monitoring the field activities of network services and scheduling of work orders.

Technological



Use of an IT platform and information systems for the management of all field activities for protection and support for the correct functioning of gas, electricity, water and district heating services.

Digital Workplace change management plan

In 2020, in parallel with the further distribution of new workstations (activity completed with approximately 7,500 workstations replaced), the first phase of the **Digital Workplace change management** plan was completed, with the completion of the application workshops aimed at the digitalisation of micro-operational processes, the maintenance of the training opportunities guaranteed by the e-learning portal

on **Microsoft 365** digital tools and the campaign for maximum communication to the entire population involved.

In this way, a capillary **support network** for the progressive digitalisation of processes was established, consisting of 28 guides, over 1,000 Digital Workplace tutors (covering all territories and all the organisational areas of the Group) and a platform for sharing the knowledge and experience gained, called the Knowledge platform.

The digitalisation of the dynamics of collaboration and operations made possible through the availability of Microsoft Office 365 and the related change management, has allowed us, during the critical healthcare emergency, to **limit the impact** on the processes and services provided despite the rapid increase in smart working necessary to **reduce risks** for employees (more than 1,000 additional workstations distributed over the period).

At the end of 2020, the second phase of the change management plan was also launched, characterised by an **increase in the scale of the processes** subject to digitalisation (such as the closing of the financial statements), progressive **focus on specific tools**, differentiated company population target and related needs and peculiarities, and the improvement of the support network. In particular, an in-depth study on the Power platform is envisaged: a set of applications that allow the implementation of **automation** and **Business intelligence**.

Corporate Digital Responsibility

Social



Distribution of work tools and creation of a structured training plan for workers to acquire digital skills.

Economic



Implementation of automation, simplification of processes and increasing the scale of the processes subject to digitalisation with the relative training and change management path for all workers involved.

Technological



Extensive digitalisation network to support the management and performance of activities.

Heratech digitalisation projects

For Heratech, digitalisation is synonymous with an innovative change that involves the company's entire structure, by implementing an integrated system of new functions on corporate management system (SAP) and on portable devices. The objective is to bring together a range of diverse project initiatives, in order to rationalise and digitise end-to-end operational processes, particularly in terms of the services offered to customers.

The project, launched in 2018 and in continuous evolution, involves various areas:

- Customer quotes: a **centralised integrated dashboard manages all quote requests from customers** and dispatches the individual technicians via their mobile devices so they can perform the work in the field using a specific app, avoiding the need for the operators to stop by the company headquarters. All the data collected are immediately and automatically sent to the central system, where all the technical and commercial information is stored and from which the quotation is then automatically sent to the customer. In 2020, a system evolution and optimisation project was carried out in order to further streamline the process, introducing new features such as the calculation of the modelling of water connections and adapting to the regulatory changes;
- Execution of work for customers: likewise, a **dashboard has been developed to manage all work for customers**, which also includes the management of the permits needed. Again in this case, each work order can be assigned on a mobile device both to the technicians of Heratech's Work

Management office and to the subcontractors. Specific apps provide to these parties all the information they need to carry out the work requested. Once the job is completed, it can also be finalised in the app, automatically updating the central system. In 2020, the use of the app was started by qualified companies for final balancing activities and the recovery of photographic documentation. A web portal was also implemented for the management of work execution planning and the exchange of files between Heratech, external companies and the Safety Coordinators in the execution phase;

- **Usability of activity progress for customers:** an application has been prepared, available via the web with restricted access for each customer, which allows them to be able to check the progress of the technical activities they have requested and to receive a text message on the main progress of the activity. In 2020, the range of communication flows related to customer account processes was expanded;
- Back-office for technical work: a **Customer Relationship Management system** has been developed **for all back-office activities for technical work**. Tools have also been implemented to digitally manage paper-based documents which are needed for other technical customer account activities (e.g. supply activation/deactivation). In 2020, a system evolution and optimisation project was carried out, aimed at increasing the processes in the area with respect to the initial perimeter;
- **Complex order management:** the Oracle-based application manages complex orders, is integrated with the company's business systems, and has advanced **scheduling** and **reporting capabilities**. The program helps to **manage loads** on resources/structures and **plan the costs** of individual tasks, and **manage** technical and economic progress. It can be expanded to support all Business Units, and customised to address the complexity levels required. In detail:
 - the application can be used to program the individual stages and activities of a project, allocating time, costs and resources;
 - the tool features workload analysis and resource use optimisation capabilities;
 - the integration with SAP, that has already been implemented, provides the possibility of allocating the final results directly to the projects;
 - the cost and time performance of the orders can be analysed using tools provided by the application.

The application will be integrated with the suites mentioned in the two projects described below.

- Building Information Model (BIM), a **new model for the integrated and optimised design, construction, operation and maintenance of corporate assets** through the introduction of a whole-life collaborative management technology from design to operation and maintenance. In accordance with the regulatory constraint on the use of BIM for public procurement (Ministerial Decree 560/2017 Mit), the project aims, over the next three years, to gradually extend the BIM methodology within the Engineering structure for all engineering projects developed, moving from the experimentation scenario launched in 2018 to the business as usual one, reaching a complete integration of models and geographical data with their visualisation by collaboration tools on the GIS platform.
The main environmental benefits it provides are less travel for personnel involved, and therefore a reduction in the use of company vehicles and consequently lower emissions, and the digitalisation of a range of activities that were previously managed on paper, thus using less paper. In 2021, in addition to integration with the accounting and planning tools for Engineering orders, the BIM suite will be enriched with the implementation of the Group's Common data environment (CDE) for collaborative management of the design and construction of the works
- Work accounting management: the project, launched in 2020 and expected to be completed by 2021, envisages the implementation of a **work accounting management tool** focused on plant projects and estimates, integrated with existing company systems such as SAP, the Oracle P6 order management tool is the suite of applications for BIM design, aimed at a more effective and detailed

project management of the different work phases, increasing collaboration and sharing of activities and documents, increasing the depth of analysis and reducing management lead times. In particular, among various functions, the tool must allow the management of:

- Estimated metric calculation;
- Works accounting;
- Time planning and schedule;
- Creation of the economic framework;
- Data extraction and reporting to asset companies.

Lastly, in 2020, in the Laboratories area, following the award of the ENI tender, a new project concerning the LIMS (Laboratory Information Management System) was launched, which will continue in 2021, providing, in particular among other things, the following implementation:

- EDD (Electronic data deliverable) files, according to ENI specifications. The management of EDD files is linked to the request for information not only on the analytical results, but also on the procedure used to generate them. It is therefore necessary to record not only the actual samples that will be analysed according to a specific analytical method, but also samples such as blanks, calibrations, quality controls, standards, to report the results acquired for them as well, in addition to further information relating to the overall procedure used.

Corporate Digital Responsibility

Social



Development of integrated systems for sharing data and operations between workers and executive companies. Transparency of processes and inclusiveness for customers thanks to mobile monitoring of the progress of the required technical activities.

Environmental



Reduction of the need for movements by the personnel concerned, resulting in a reduction in the use of company vehicles and a decrease in emissions. Saving of resources thanks to the digitalisation of activities previously managed on paper.

Economic



Rationalisation and digitalisation of operational processes (budgeting, execution of works, usability, progress of activities) also in regulated services.

Forlì remote control technology hub

The Forlì remote control centre is a multi-specialised centre, unique in Italy and at the forefront in Europe: a room of almost 400 square metres, a giant screen of 60, a 3D system to represent the main systems, 160 monitors, 50 stations, a team of 70 operators, a 24-hour emergency technical call centre, double fibre-optic communication lines and an independent gas fire-fighting system. The Hera Group's aqueduct, sewer and gas distribution and district heating network is remotely controlled in real time, extending across all the managed territories of Emilia-Romagna, the Triveneto area and three Tuscan municipalities.

The centre is constantly growing, in terms of both quality and size: at the end of 2020 a total of **7,146 connected plants** was reached (492 more than in 2019). In terms of signals managed, the overall total is 612,885 (22,724 more than in 2019).

Among the main innovative development and evolution projects implemented in 2020:

- Development of a **dashboard** that provides the operational water service department with greater awareness of the progress of the construction sites, a total view of ongoing works, their progress and technical data; thanks to the interface with the software used by third party companies and

the use of filter fields, it enables the user to select the data to be displayed in the graphic views of the dashboard.

- Implementation of an **expert decision support system** for Rimini's wastewater drainage system (a project that started in 2018).
- **Weather Radar** at the Santa Giustina purification plant in Rimini: a system that forecasts weather and climate events in the Rimini area (with a range of about 50 km). The peculiarity of this radar is its remarkable accuracy at local level that makes it optimal for operational use, particularly useful in nowcasting, and especially for detecting violent phenomena (thunderstorms, convective weather, hail, wind shear) and essential to monitor thunderstorms and phenomena that can be particularly intense, but are of limited extent, that are missed by the public weather stations in the area. Since 2020, **the data are transmitted** to the company Radarmeteo for the generation of results at a local perimeter, also useful in forecasting terms.
- Extension of the **Senseable Dep** and creation of a series of treatment plants in order to develop a comparison on the best practices in the sector.
- Creation of the **Man down app**, designed for operating structures for staff working independently, and developed to increase the occupational safety level. Via a mobile device it sends an alarm to the remote control hub if certain dangerous situations occur: falls, fainting and accidents. The app therefore allows a faster and more timely management of emergency situations. The testing of the app in AcegasApsAmga led to the development of a trade union agreement for the future extension of the application to the individual business units and companies of the Group.
- Implementation of **anomaly detection tools**, through the preparation of an alarm filter and failure report, aimed at mitigating transient alarms or false alarms capable of generating negative and distracting effects within the remote control structure. The set of collected data makes it possible to identify critical or unusual situations and to implement preventive actions, and thanks also to the implementation of a new business intelligence tool, in 2020, the number of alarms decreased by 51% compared to December 2019 for the whole Group.
- Development of **cybersecurity systems** with the introduction of dedicated figures and specific systems for monitoring the matter and coordination with the corporate structures involved. Implementation of a pilot project at the Forlì treatment plant concerning the centralisation of operational technology safety, which will also continue in 2021.
- Implementation of the **Treatment Plants 4.0** project, aimed at optimising the operation of a line of the Modena treatment plant and reducing energy consumption, through the application of artificial intelligence tools and the development, by the remote control structure, of an integrated dashboard of the energy and process parameters.
- Implementation of the **container control room** project, in collaboration with Uniflotte for the management of waste collection containers and the analysis of various processes such as measurement acquisition and communication network management. The project involves the management of proprietary firmware in order to accompany Uniflotte in the evolutionary path of product development.
- Implementation of **artificial intelligence projects** including: development of integrated automations in collaboration with AcegasApsAmga water systems services for the replacement of classic automatic logics with artificial intelligence logics; a virtual assistant integrated with the company SCADA in continuity with the voice control project launched in 2019; an odouriser management tool to monitor the correct odouriser injection into the gas network, extended to 30 plants in 2020.
- Development of a **new overflow notification tool** for the Rimini basin: with this tool, **in agreement with Arpae**, all the e-mails sent following drainage into the sea are replaced when the floodgates are opened and everything is managed with notifications by transmitting the events to the Arpae public site.

- Development of a **Marche Multiservizi remote control integration project, started in 2020 with a study to draw up a technical-economic feasibility assessment, divided into: analysis of the current field situation, processes and IT architecture and evaluation of communication protocols.** The outcome, expected in the early months of 2021, will make it possible to highlight the methods of migration to the remote control of Forlì in line with the Group standard.
- **SCADA remote control system software**, in 2020 the safe mode activity was implemented to guarantee business continuity: through an anti-ransomware system that guarantees emergency recovery of SCADA in the event of a serious attack that puts connected computers out of use. For the Cloud part of the remote control, the release has been updated (version from 3.15 to 3.17); the activities were completed in December with the seamless update for business: the new release is significantly more performing.

Corporate Digital Responsibility

Social



Increase in the level of safety for customers and workers thanks to the constant monitoring of the Group's network systems, achieved through the integrated remote control structure and emergency response support.

Environmental



Monitoring, identification and intervention in the event of leaks (gas and water networks), to guarantee lower emissions into the atmosphere and responsible management of resources.

Technological



Development of cybersecurity systems with the introduction of dedicated figures and specific systems for monitoring the matter and coordination with the corporate structures involved. The technological remote control solutions are used responsibly, to ensure the safety of the area in which the Group operates.

HeraBoard: management dashboard for monitoring company performance

HeraBoard aims to provide an **automatic control tool for various corporate performance indicators** with a high level of aggregation across all the Group's businesses. The project is configured as a unique specimen in the corporate landscape, being the first with the core purpose of condensing sources and data on a single platform by nature with segregated purposes, and which until now had the resulting monthly reporting as the only aggregation tool from ad hoc mutual calculations.

The project was started in 2017. That year, the architecture was implemented, front-end solutions (hardware and software) were identified and the first data flows necessary to populate the home page KPIs were collected.

In 2018, the project saw the completion of flows on the home page and the implementation of flows and KPIs for a second level of representation that would allow each business area to propose a selection of its own KPIs. In particular:

- a dashboard for Hera shareholder and peer data;
- four dashboards for EBITDA and EBIT;
- a dashboard for district heating;
- a dashboard for waste management services.

In 2019 the following activities were developed:

- analysis of the user experience and design thinking, both for the always-on screen (directional dashboard) and for the development of a future app with the same contents via mobile;
- development of a dashboard for Inrete, the Water Department and Net Financial Position;

- creation of the HeraBoard app with the same contents as the management dashboard;
- implementation of data control systems.

In terms of activity, 2020 saw the latest version of the HeraBoard app and its distribution through the Company App Store as well as the development of three dashboards for Herambiente.

Corporate Digital Responsibility

Environmental		Support for environmental monitoring of the various business chains.
Economic		Support for economic monitoring of the various business chains.
Technological		Establishment of new horizontal monitoring processes across the entire Group through the automatic control of various corporate performance indicators with a high level of aggregation and transversal to all businesses.

Implementation of the Role Based Access Control model

RBAC is the acronym for Role Based Access Control. It is a concept that changes the **access management policy** for the better, the result of a push for renewal wanted by the Central Innovation Department and the Information Systems Department of the Hera Group. During the years 2019, 2020 and with continuation in 2021, in the collaboration with the Central Personnel and Organisation Department, all the minimum qualification sets necessary to work were mapped out by each corporate role, entrusting each employee with the majority of the qualifications for systems in automatic mode based on their corporate role. This paradigm shift has made it possible to **minimise, almost to zero, the system access forms** that before the advent of this initiative had to be filled out to request qualifications. In addition, the profiles of employees who have the same corporate role have been harmonised.

The Role based access control model was implemented in all the business units of the Hera Group that joined the model in 2019. As part of the initiative, the licensing sets for access to the systems were defined for each business/organisational role. Therefore, it was possible to automatically enable both access to the Group systems, in line with the organisational role held, and the onboarding/leaving activities and role changes.

Corporate Digital Responsibility

Social		Use of user-friendly digital tools that can be used independently by the employee.
Economic		Automation and efficiency of the IT qualification management process.
Technological		Increased level of control over qualification requests, ensuring requests consistent with the organisational role held and a simpler approval cycle.

Robotic & Intelligent Process Automation and artificial intelligence platforms for text recognition

The foundation of the Robotic & Intelligent Process Automation platform was completed at the end of 2019, a system designed to **automate processes** that involve interaction with information systems characterised by **high volumes, high effort, or high levels of expected quality**.

The industrialisation of the platform for the digitalisation and robotisation of business processes, has given extremely satisfactory results in the **seven identified processes** (management of the DURC of suppliers, management of communications between vendors and energy distributors, management of the vendor's Order Entry process, management of "expense reports", management of service notices related to waste management services, management of work orders for the replacement of measurement equipment in the networks, virtual assistant for planning meetings and booking meeting rooms), both in terms of speeding up the process, and resulting efficiency, and reliability of the operations carried out.

By adding special **dashboards to monitor automated activities**, we can analyse the main causes of waste and act effectively on business processes, continuously optimising productivity and efficiency. These tools also effectively facilitate man-machine operation and extend the scope of application of processes that can be automated, thanks to their continuous technological development (semantic text interpretation engines, OCR management, etc.).

The results in terms of potential efficiency on a Group scale are certainly significant, also considering the technological development that is rapidly expanding the scope of application of the platform which has been created and is managed with agile methods from a Competence Center perspective to support all the Group's Business Units. The findings collected in the years 2018–2019 confirm the opportunities for **using the company's resources in more qualifying tasks**, enhancing the intellectual skills applied to the processes that generate the greatest value for the company.

As part of the dissemination of business process digitalisation initiatives, through the use of advanced IT solutions, various initiatives aimed at identifying automation opportunities were completed in 2020, some of them becoming projects carried out during 2020. The remaining initiatives were included in a two-year implementation plan (2021-2022).

As part of the adoption of a new artificial intelligence platform with the aim of text recognition to activate system actions on the back-end systems, a competitive confrontation was concluded for the start of a project that will be released by the middle of 2021.

Corporate Digital Responsibility

Social



Digitalisation and automation of repetitive activities with a high impact in terms of time, with an improvement in the working conditions of workers, through the use of digital technologies.

Economic



Digitalisation of business processes through advanced IT solutions and greater efficiency of massive, highly manual processes with a beneficial impact on overall efficiency in regulated services as well. Involvement of workers in activities with greater added value.

Technological



Use of digital automation tools capable of guaranteeing data consistency and security, which could not be achieved otherwise.

Digitalised management of personal protective equipment

The EHS PPE system arises from the need to make the management of personal protective equipment in the company more effective, by digitalising it. After a year of development, in 2020 the project pilot was carried out in addition to the subsequent start-up for the perimeters of Hera Spa and Herambiente, involving about 3,500 workers with personal protective equipment.

The structure has its heart in the **SAP software** system, which allows a computer connection directly with logistics for the purpose of procurement and distribution of personal protective equipment and with the

human resources systems in order to be able to trace and correctly frame each worker. On a special SAP dashboard, each manager will be able to carry out the main operations required for the management of personal protective equipment and have an overall look at their employees, their equipment and relative deadlines in real time.

The employee interface, on the other hand, is made up of **an app that allows you to perform the main operations required**: collection, reporting/anomalies, creation of control checklists, real-time verification of your equipment. These activities can be performed from PCs, smartphones and tablets, as well as from special totems installed near the changing rooms of the offices where there are employees who do not need devices to be provided and who can therefore carry out all the required operations independently, and avoiding paper records.

The EHS PPE system is also interfaced with the information systems of the washing process and work clothing rental supplier in order to improve the service. Every single item of clothing is equipped with a barcode and radio frequency identification, and will be recognised at every stage of its useful life: from the use of the garment, to its first collection, to periodic deliveries for washing and finally its disposal.

To date, the system manages 3,500 workers, the related verification checklists and, on average, over 10 thousand collections of clothing from the industrial washing supplier and over 20 thousand collections of personal protective equipment not subject to the washing process.

Corporate Digital Responsibility

Social



Support for operators and managers in the use of the service and in the management of the activity, through the dissemination of mobile apps and installed totems.

Technological



Implementation of a digital structure, in connection with logistics, capable of ensuring the supply and distribution of personal protective equipment, necessary for proper execution of tasks.

Heureka +: the social innovation platform for sharing ideas

Heureka+ is Hera Group's social innovation platform created at the end of 2016 to give all of the Group's employees a space where they can gather suggestions and ideas that can improve and enhance products, services and business processes. Thanks to this initiative, employees have the chance to **submit their innovative proposals**, jointly develop ideas with colleagues, vote or **contribute the ideas of others**.

In October 2019, the third edition of Heureka + was launched, a new version that brought numerous innovations. First of all, the user experience was made more immediate and the navigation was renovated so that it could be accessed easily even from mobile devices, such as smartphones or tablets. In **terms of the presentation of ideas, the Ide@labs were introduced, i.e. five rooms characterised by a macro-category** to refer to in order to enter your idea. The Marketplace selection was also created, where **everyone can report their needs and** create new ideas, regardless of company requests. Innovation Coaches were introduced: a team of experts with the task of viewing, evaluating and following the most promising projects until their realisation. Lastly, a gamification mechanism was introduced, aimed at encouraging and rewarding the most involved and innovative workers.

This was a new edition, which in just over a year (from October 2019 to the end of 2020) was a great success: about **1,400 users** visited the heureka.gruppohera.it site, for a total of almost **36 thousand pages** viewed.

Ninety-four ideas were included in the various Ide @labs as well as **13 ideas** for a **thematic challenge** proposed by a business unit of the Group. Many people (almost 330 comments so far) discussed and voted

on the suggestions: the ones considered best were addressed by the Innovation Coach team. Besides, the team is working to create a real innovation community, outside the context of the platform, to share experiences, proposals, ideas and contacts.

Corporate Digital Responsibility

Social



Inclusion of workers in a bottom-up business innovation process in which everyone can present their ideas and be followed by a team of experts in their implementation. The renewed user experience makes navigation easier and more immediate, also accessible from mobile devices.

The spread of digitalisation and the use of data within the Hera Group

The change management path on digital transformation issues (called HER@futura) started in 2017, continued and evolved further on the axes of digitalisation, data analytics and smart working, integrating the implementation of the **Digital workplace - Microsoft 365** and coming to define a new **digital DNA** model with the Her@futura 2020 survey, updated with respect to technological and sector references in three new areas (soft, hard and job related skills, which were then integrated by specific views on organisational agility and data analytics). The redemption of the survey was equal to 63% of the total population involved, recording 44% of digital proficiency.

The HER@futura course, focused on the development of the dimensions of culture, processes, skills and tools through the identification, examination and enhancement of the needs and peculiarities of the various segments of the corporate population, considering the current context of reference and the relative complexity. The initiatives anticipated include: training capsules, webinars, participation in projects with workshops and application sessions, Action learning projects (digital lab and virtual factory), participation in master's classes and external interventions also in Massive Online Open Courses (MOOC) mode, envisioning events and celebration of the results. In particular, in the change management area relative to the Digital Workplace, a support network has been established for the digitalization of work and processes methods, composed of 28 guides and over 1,000 tutors, whose accrued experience and knowledge has been collected in a dedicated platform.

Parallel to the change management process, based on stimulus from top management, the Hera Group felt the need to pool the different data analytics experiences conducted at Hera to find a group vision, setting up a service called **Data Analytics & Intelligent Automation**, all within the **Central Innovation Department**. The main purpose is the coordination and development of D&A projects, operated directly or through the use of external partners whose regulated governance is a further objective of the service. Its contribution in terms of dissemination of data culture was fundamental for the issues addressed. In this regard the focus of 2020 was the strengthening of **Community Data Analytics**. This was primarily through a technological revamping by adapting the tools to support it. Digital environments were developed: a portal as a reference for community knowledge, access points for newbies and study points for experts, a repository of documents and tools, and a Social space to follow the flow of discussions, share insights, submit questions and requests for support and share articles, videos and material.

As of 31 December 2020, the community had 320 members working in 13 Group companies, coming from 33 different business areas.

The community interacts with other corporate initiatives aimed at measuring the level of digitalisation and understanding of the importance of data governance as a corporate asset to be valued in the same way as others. In this context, dedicated training initiatives were identified, submitted to the community in the form of webinars (e.g. knowledge of the concepts of artificial intelligence, process mining and data governance), created specifically with the involvement of external expert partners and Hera staff.

Internal meetings systematically continue to be held between the Group's top management, coordinated by its CEO, to update top management on the progress of the initiatives underway in the various business units area concerning digitalisation and data analytics. These internal meetings involved about 50 people within the Hera Group. In addition to monitoring the progress of interventions, they play an important role in sharing experiences in search of scalability and with the continuous stimulus towards new applications. In 2020 the work team met three times and monitored the progress of 13 projects, both as operations and as customer management. The main projects, some of which are still in progress, concern:

- development of a preventive maintenance system for gas networks (leakage search) that uses Internet of Things technologies, data analysis tools and artificial intelligence to collect present and past data and make future forecasts;
- business intelligence systems for energy efficiency and process quality of purification plants (Treatment Plants 4.0 project);
- use of deep learning and natural language processing technologies for the proper classification of emergency calls, to support the technical call centre operators;
- remote analysis and optimisation of assets by using augmented reality and experimentation with drones;
- use of Robotic Process Automation artificial intelligence systems to automate processes that involve repetitive and time-consuming activities, in particular in administrative work and back-office customer management;
- use of advanced analytics to improve customer service quality and customer experience through customer base clustering models and value extraction from consumption data to promote energy savings (Diario dei consumi).

Corporate Digital Responsibility

Social



Digital inclusion is promoted for workers thanks to the distribution of devices for agile work and through the potential of the data community aimed at the propagation and learning of skills in the digital field.

Technological



Corporate awareness of the importance of disseminating data culture among workers is a sign of a responsible digitalisation strategy aimed at transparency of processes and strengthening the Group's identity.

Digitalisation for our customers

The role of Acantho

Acantho is the digital company of the Hera Group that serves the main cities of Emilia-Romagna and Triveneto with a proprietary fibre optic network approximately 4,200 km long. The company has been developing an ultra broadband fibre-optic network for more than 15 years, on which it offers next-generation telecommunications services. Their data centres in Imola and Milan offer cloud services to our customers, providing high levels of service quality and data security.

The main services they offer include:

- connectivity services at up to ten gigabits per second;
- virtual private network services;
- voice services and virtual switchboard;
- video presence services;
- video analysis and video surveillance services;

- data centre services (housing, virtual servers, virtual data centre, storage and backup, business continuity and disaster recovery);
- IT security services;
- transport services to the world's leading Cloud providers (OTT – Over The Top).

Together with the Hera Group, Acantho also offers services for local smart cities, such as public Wi-Fi services, smart security systems, and digital signage.

In 2020, projects to upgrade the Hera Group network were launched, in order to increase the bandwidth available to users in critical or potentially critical locations (Pavullo, Vergato, Piove di Sacco, Castiglione delle Stiviere, etc.), to improve access to information systems and the internet, by replacing copper connections with more performing and reliable fibre optic connections.

The internet access service for the entire Group (+750 Mbps) was also enhanced to support the ever-increasing use of collaboration tools, also in correspondence with the healthcare emergency.

The main project KPIs are as follows:

- internet traffic before and after the intervention, from 1,030 Mbps to 1,780 Mbps (+73%);
- bandwidth increase per site, 11 sites upgraded for an average bandwidth increase per site of 20 Mbps;
- bandwidth increase for the Group's VPN to support the peak of 2,950 simultaneous VPN connections (April 2020);
- installation of 117 new Hotspots distributed across 32 Group offices.

In the market context and for business customers in particular, the connectivity services offered are based on fibre-optic technologies, radio links, and copper. The objective for the future is specifically to increase the number of customers connected to optical fibre, compared to copper technologies, also by integration with other operators (regional and national).

In the last quarter of 2020, a new service profile was integrated in collaboration with Open Fiber with reference technology entirely in optical fibre (FTTH) and can be offered to private customers, VAT number holders and small businesses. The profile was offered, in advance of the market and in promotion, to all employees of the Hera Group.

The Italian ultra-broadband network strategic plan has set specific objectives for 2020, and the implementation of the strategy is coordinated by the Ministry of Economic Development as follows:

- coverage at least at 100 megabits per second for up to 85% of the population;
- coverage at least at 30 megabits per second for the remaining population;
- coverage at least 100 megabits per second of public buildings and offices (schools, hospitals, etc.), areas of greatest economic importance and highest population concentration, industrial areas, major tourist resorts, and logistics hubs.

With its fibre-optics, Acantho provides ultra-wideband connectivity (with connection speeds of up to ten gigabits per second) to 15 thousand companies out of the 28,021 counted in its service area, thus covering 54% of them.

The expression "digital divide" indicates uneven distribution in the access to information and communication technologies between districts or areas, both in terms of public infrastructure and private equipment. Digital divide is synonymous with technological backwardness and in particular indicates the lack (or slowness) of the connection to the web.

Acantho participates, through a formal expression of interest, in the integration of other operators' fibre-optic networks in order to reach business users based in digital divide areas, with its commercial services.

In 2020, Acantho extended its commercial coverage to two new areas in digital divide in the municipalities of Bologna and Forlì-Cesena, by showing interest in another regional operator with positive results. In total, in 2020 there were **37 areas in digital divide covered commercially by Acantho**.

Corporate Digital Responsibility

Social



Guaranteed quality of cloud services for customers and the responsible and secure data management. Improvement of connectivity, in order to reduce the digital divide for workers and companies.

Technological



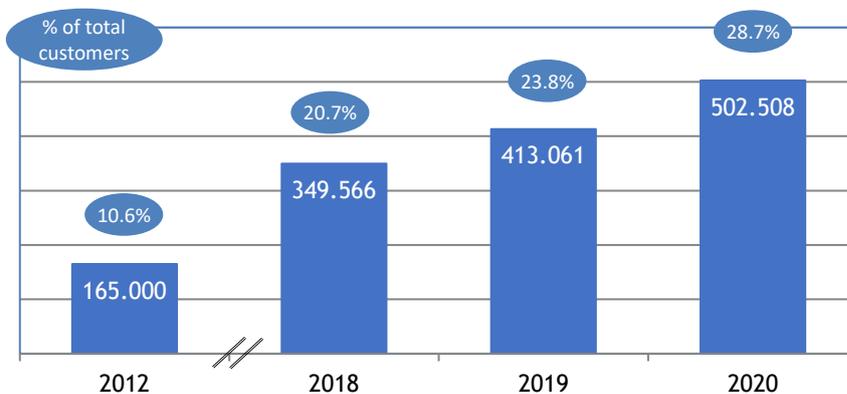
Creation of works and services in favour of greater connectivity of the territory (companies and citizens), capable of integrating agile working and promote smart city services within an inclusive digitalisation process.

The digital channels for our customers

The Hera Group continues to help its customers become more digital, both by developing and updating its **online services** and by providing **applications for tablets and smartphones** (Rifiutologo, Acquologo, and MyHera).

In 2020, the online services and the MyHera app were able to absorb, with high levels of satisfaction, the **strong impact of use by customers**, also caused by the healthcare emergency. The trends in registrations and accesses have been constantly growing and have made it possible to reach and exceed **200 thousand monthly accesses** over the course of the year. Development activities continued to improve the user experience in the management of services provided. Particular mention should be made regarding improved use of the chat contact channel, which allowed customers to communicate with the Group's consultants directly and in total safety.

Customers using the online services



Figures apply to Hera Comm

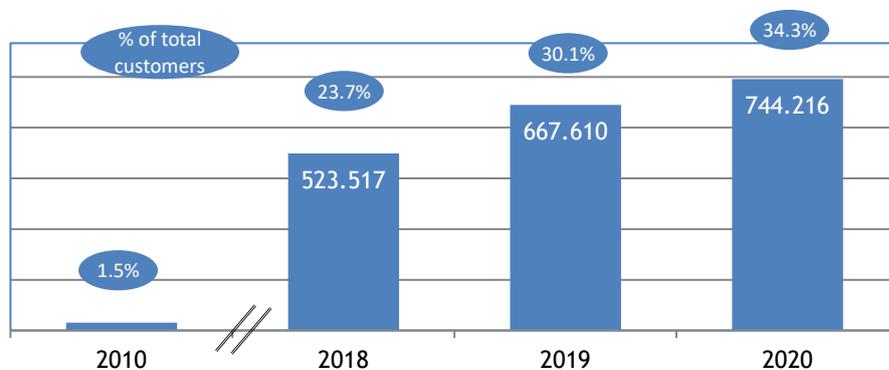
In 2020, 23.1% of Hera Group customers were registered for online services (compared to 20.5% in 2019), recording an 13% increase compared to the previous year.

In detail, the growth in users registered for **Hera Comm's** online services recorded in 2020 made it possible to exceed the targets: 28.7% of customers registered for online services, reaching over 502 thousand customers. Customers registered to **Estenergy** online services equal 25.1% (from 21.2% in 2019), while 7.1% are registered to **Marche Multiservizi**.

Hera Comm Marche 's customers are also continuing to grow towards digitalisation: in 2020, 19.3% of the total number of customers registered for online services (compared to 13.7% in 2019).

In 2020 **AcegasApsAmga** experienced strong growth in the number of customers who signed up for online services, reaching more than 18 thousand customers (compared to almost 13 thousand in 2019).

Customers with electronic billing



Figures apply only to Hera Comm

The interest of customers in receiving their **bills in electronic format continues**: 27.6% of the Group's participating customers have chosen to receive their bills via email, an 8% increase compared to 2019.

In detail, 34.3% of Hera Comm customers chose the electronic format for the bill, with 14% increase compared to 2019. The bills of Hera Comm, Estenergy and AcegasApsAmga customers who have not chosen electronic billing are printed on 100% recycled paper and delivered by regular mail.

Customers with electronic bills total 21.5% for Estenergy (compared to 19.3% in 2019) and 20.7% for Hera Comm Marche (compared to 17.1% in 2019); 7.2% of Marche Multiservizi customers preferred to have the paperless bill sent (compared to 4.3% in 2019).

In 2020 AcegasApsAmga recorded considerable growth for electronic bill submission: 18.5% of customers chose this method, compared to 13% in 2019.

In 2020, actions to promote the digital behaviour of the Group's customers continued.

The **Digi e Lode** project (see the "Case Study" section) continued to be promoted for the 2020-2021 school year. The project aims to promote digital services, such as electronic billing, online services, applications for mobile devices, and the use of digital self-care areas.

In 2020, the participation of **Acantho**'s customers in the digital billing service is 65%, making it possible to avoid printing approximately 243 thousand sheets of paper. Acantho does not print paper reports on its customers' electronic traffic, but customers can view them on the customer portal. Overall, the digitalisation of these two processes saved more than 826 kg of CO₂ equivalent per year (+33% compared to 2019).

Hera has signed several cooperation agreements with major banking players (Unicredit, CBILL, MyBank, Jiffy, Amazon Pay, Paga con Postepay, Masterpass and Satispay) to develop services that will significantly **simplify payments** and the related accounting management.

Under the agreement with Unicredit, **six million dedicated virtual IBANs have been generated** that Hera, the first company in Italy to do so on a large scale, has made available to all customers through a notification on the bill, or on the invoice. Customers can thus pay conveniently, even from their own internet banking service, without waiting in queues, and with automatic and unique identification of the

payment. In addition to the virtual IBAN system, Hera is developing **additional smart and mobile payment methods** for its customers, such as digital wallets, to make transactions increasingly simple, quick and user-friendly.

Specifically, **MyBank** supports making irrevocable online transfers simply and securely using the Internet banking service of the customers' bank. The service provides real-time confirmation of payment and 100% automatically speeds up reconciliation processes, and further reduces the risk of fraud. The **CBILL service**, on the other hand, using an innovative and advanced, multi-bank and multi-channel approach, enables customers to pay using their own **internet banking service**, and also using mobile devices, at ATMs and branch offices, providing security for the payer, real-time reporting, and complete and integrated coverage of the entire bill collection process, from the issue of the notice to reconciliation.

Using the **MyHera app** or the Group's **online services**, customers will also be able to pay bills by simply entering their mobile phone number in **Jiffy** (Bancomat Pay), without having to enter their credit card or bank account details.

Lastly, the **digital wallets Amazon Pay** (bill payment through an Amazon account), Masterpass, Paga con Postepay, Apple Pay and Satispay simplify payments via mobile devices or desktop computers, providing a simple and fast user experience.

The initiative is part of the broader **infrastructure and services digitalisation process** that the Hera Group started some time ago, with the aim, among other things, of addressing the needs of an increasingly "connected" and demanding public. This roadmap is fully consistent with the European Union's strategy for creating a digital single market based on three pillars: improving online access to goods and services for consumers and businesses, creating an environment conducive to the development of digital networks and services, and maximising the growth potential of the digital economy.

Corporate Digital Responsibility

Social



The multi-channel approach offered for digital payments allows the customer to manage payment transactions in a flexible and autonomous way, involving a wider user audience and thus reducing the potential risk of digital divide.

Environmental



Responsible management of resources with less use of paper for printing the bill. Air protection is reinforced thanks to the digitalisation of the payment process and the resulting reduction in the need for travel.

Economic



Development of collaborations with the main banking players and consequent simplification of payment transactions. Efficiency of operating processes with reduction of costs related to the dematerialisation of bills and less travel required.

IT security

The growing trend of recent years regarding increased cyber attacks was also confirmed in 2020. The healthcare emergency has also contributed to increasing this trend, allowing cybercriminals to take advantage of both the enormous increase in remote work and the uncertainty and difficulties of individuals due to the emergency situation. To demonstrate this, the latest data released by the Italian Postal Police show that in the first six months of 2020 there was a 600% increase in the number of phishing emails around the world, also using themes related to the coronavirus. In this context, it is essential to increase the level of attention towards cybersecurity risks, putting in place all the technological skills and resources available in order to counter the threats and minimise the consequences of possible attacks.

In 2020, organisational changes were made in the Hera Group, aimed precisely at creating a **new cybersecurity paradigm**, strengthening relations at Group level through the launch of new specific work tables between the various corporate businesses and the teams dedicated to cybersecurity, and the **extension of the safety control perimeter** to industrial controls (operation technology).

In continuity with previous years, the areas of intervention on which the Hera Group focused were:

- **device and user protection:** this measure aims to increase the security of workstations (desktop PCs, laptops, smartphones, tablets) and the users' awareness of cybersecurity risks;
- **identity protection:** the aim is to reduce the risk of digital identity theft (e.g., access credentials), unauthorised accesses, illegal activities;
- **infrastructure protection:** this measure aims to protect computer networks, including those of industrial plants, active equipment, and computer systems;

These three areas should be particularly monitored within the digital transformation process that sees users increasingly dependent on IT devices, and digital identities at the centre of employees' working lives.

With reference to user protection, with the aim of increasing the safety of workstations, the main objective achieved was to adopt an Endpoint detection and response solution. In this context, as expected, **a security framework was activated for real-time centralised management and monitoring of devices** to guarantee the integrity and confidentiality of the information processed. However, technological interventions must always be accompanied by sufficient attention to the human factor, and for this reason, in 2020, awareness-raising and training activities continued through e-learning training programmes and ethical phishing campaigns (realistic simulation of an email attack where an attacker tries to deceive the victim by convincing them to provide personal information, company data or access codes).

The disclosure assessment activities were also intensified **to intercept and correct any vulnerabilities present on systems** or applications that could be exploited by an attacker. Again with reference to digital transformation and the risks that accompany it in the use of IT tools, the **integrated ethical phishing and awareness programme dedicated to cybersecurity** was launched in 2020, also taking advantage of gamification methods, aimed at the entire company population.

In the area of identity protection, the Hera Group continued the process started in 2019 with the introduction of multi factor authentication, activating further functions aimed at **making management of digital identities and related IT accesses increasingly secure**, such as conditional access and identity protection. These controls allow the automatic recognition of abnormal access conditions, allowing their possible blocking, contributing to the general objective of reducing the risk of digital identity theft (e.g. access credentials) and unauthorised access.

In terms of infrastructure protection, in 2020 technologies and platforms dedicated to the **recognition and blocking of attempts to maliciously use websites**, server protection and analysis and protection of data traffic on the network were implemented. The disclosure assessment activities were also intensified to intercept any vulnerabilities present on systems or applications that could be exploited by an attacker.

The Group is certified under the ISO 9001 standard and the Group company that manages the network infrastructure, the data center and the disaster recovery services (Acantho) is also certified under the ISO/IEC 27001 standard.

Main initiatives in 2020	Main initiatives in 2021
Activation of a web application firewall service to protect the web services provided by the company	Implementation of the evolution model of the Security Operational Center based on the transition from a reactive to a proactive model and subsequent extension of the monitoring perimeter

Main initiatives in 2020	Main initiatives in 2021
Release to production of the Intrusion Prevention System Service to protect the services exposed on the Internet and with preventive blocking automatism in case of recognised attack attempts	Activation of specific solutions for safety monitoring of industrial environments (operation technology)
Activation of the new Security Operation Center service with evolution towards a proactive monitoring model	Consolidation of a threat intelligence service for monitoring the main bulletins provided by the various private and public authorities
Extension of the security control perimeter to industrial controls (operation technology)	Continued vulnerability assessment and raising awareness among the user population through security awareness and ethical phishing campaigns.
Cybersecurity training activities, regarding both general training topics and more specific topics such as cybersecurity in the operational technology field	
Implementation of ethical phishing campaigns to test and raise employee awareness of phishing	
Activation of new anti-spam service security features, for greater email protection	
Review of the cyber incident management procedure with the aim of making it more effective and operational, also with respect to the new company organisation	
Vulnerability assessment and pen testing activities, in order to identify in advance any vulnerabilities present on systems exposed to the internet or present on the company intranet	

Cybersecurity attacks [418-1]

	2018	2019	2020
Cybersecurity attacks and breaches to information systems	5	3	3
<i>Of which: breaches involving customer data and information</i>	0	0	0
Customers affected by the data breaches	0	0	0
Fines and penalties paid for the attacks and breaches (euro)	0	0	0

The trend linked to the number of IT security incidents in the last three years shows a decrease. In particular, in the last year there have been a total of three incidents with different severity levels, two with a low level and one with a high level, according to the incident classification model adopted by the Company. The two incidents with low criticality mainly concerned the risk of compromising the integrity and confidentiality of information, while in the case of the incident with the highest criticality there were also risks related to the availability of data. None of the three cases involved an actual compromise of the data with a consequent effective loss of confidentiality, while only in the most serious incident there were problems of unavailability of some secondary systems and services.

Corporate Digital Responsibility

Social



Worker data security ensured through the establishment of new information protection solutions. The introduction of the new training platform aims to increase user awareness and reduce the risks associated with cyber attacks.

Technological



Cybersecurity initiatives provide indispensable support in the responsible digital transformation process. All the IT security initiatives are developed to strengthen the processes and skills necessary for the correct use of technologies.

Economic development and social inclusion

Hera's contribution to the local economic development

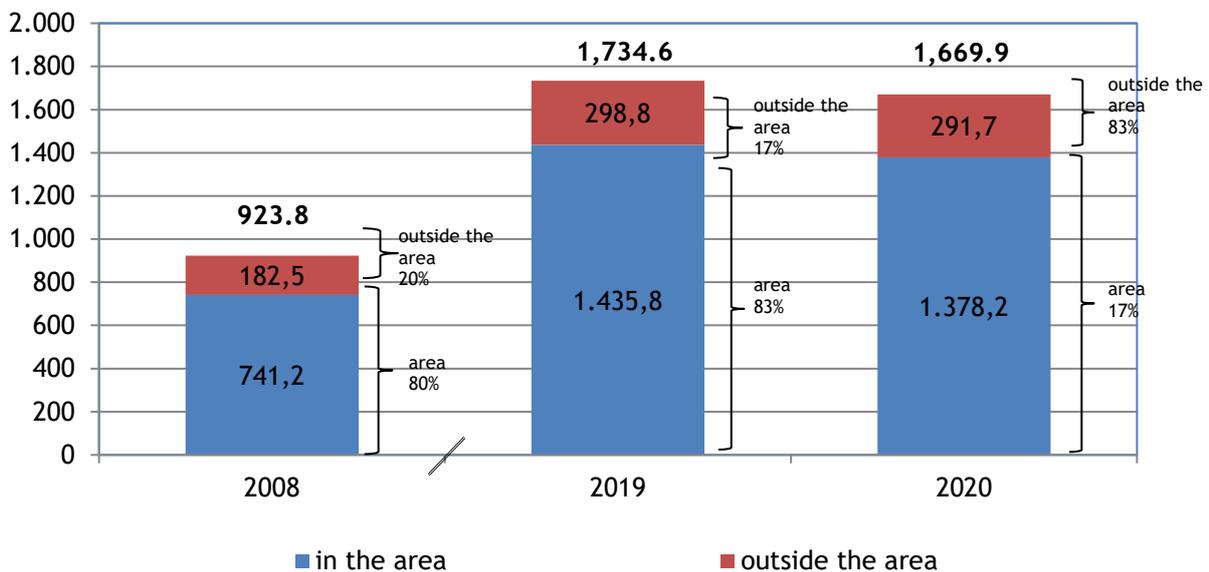
The economic value distributed to stakeholders

In 2020, the value added distributed to local stakeholders was Euro 1,378.2 million (-4.0% compared to 2019).

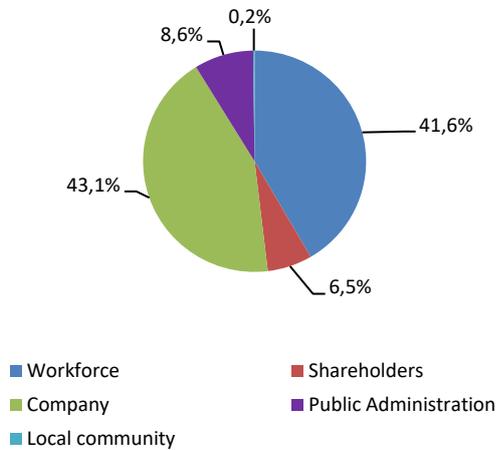
It includes:

- employee salaries (41.6% of the total);
- dividends to local Hera Spa shareholders (6.5% of the total);
- duties, taxes and fees to local authorities (8.6% of the total);
- donations and sponsorships (0.2% of the total);
- resources re-invested in the company (43.1% of the total).

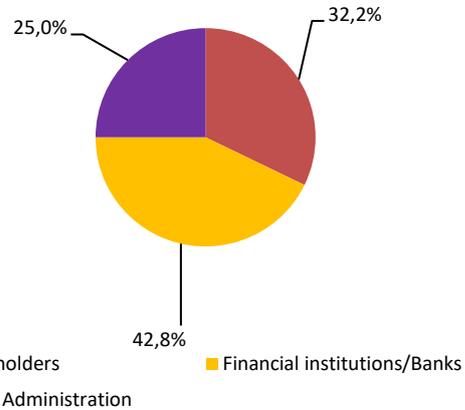
Value added distributed (millions of Euro)



Allocation of value added to local stakeholders (2020)

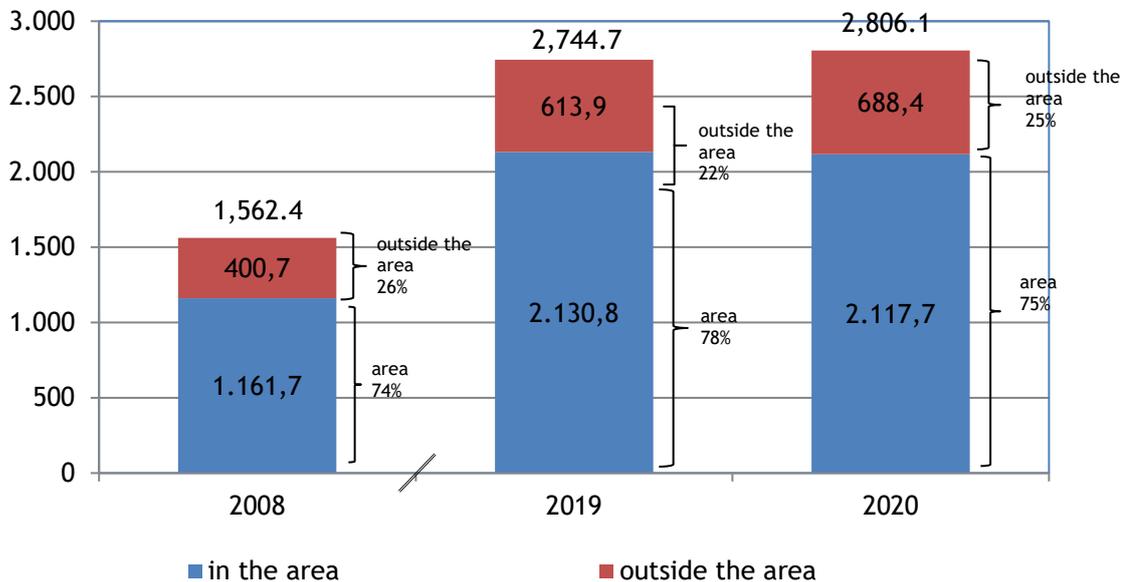


Allocation of value added to non-local stakeholders (2020)

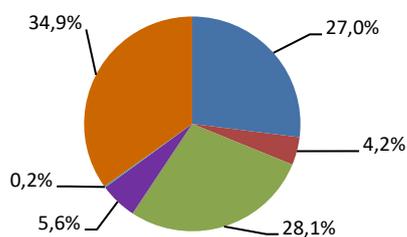


If we add to the added value distributed to the area the amount of supplies from local suppliers (which at consolidated level represent 65% of the Group's total supplies, worth Euro 739 million), the economic value that in 2020 was distributed to the local area can be estimated at Euro 2,117.2 million (-0.6% compared to 2019), equal to 75% of the total wealth produced, which was Euro 2,806.1 million.

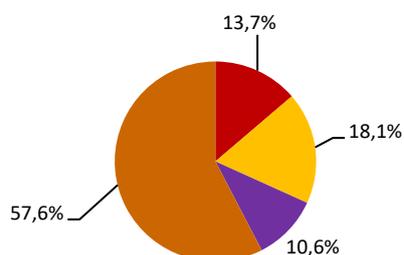
Economic value distributed (millions of Euro) [201-1]



Allocation of economical value to local stakeholders (2020)



Allocation of economical value to non-local stakeholders (2020)



The minority shareholders of the subsidiaries have not been taken into account to calculate the value added distributed to the local areas; as to the distribution of Hera Spa's dividends, reference is made to the share composition as of the 2019 dividend payment date.

Focus on economic value distributed to suppliers

[203-2]

Over 60% of the companies enrolled in the supplier register are **based in our service area** (Bologna, Ferrara, Forli-Cesena, Modena, Ravenna, Rimini, Triveneto and Tuscany).

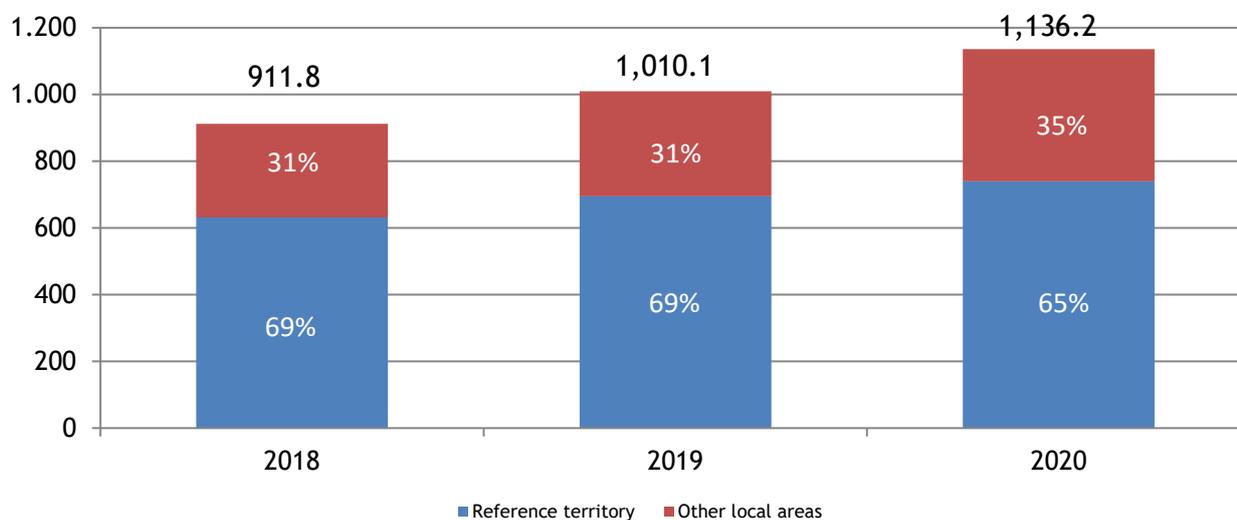
In terms of **economic value**, Hera issued purchase orders for Euro **740 million (65% of the total and up by 6% compared to 2019)** to businesses **based in its service area**, a percentage substantially in line with previous years.

Suppliers, by geographic area

number	2018	2019	2020	% of 2020 total
Bologna area	592	585	579	10.3%
Ferrara area	148	144	128	2.3%
Forlì-Cesena area	239	226	230	4.1%
Modena area	256	246	238	4.2%
Ravenna area	262	245	225	4.0%
Rimini area	175	168	155	2.8%
Triveneto	1,269	1,258	1,236	22.1%
Marche	125	280	372	6.6%
Molise	-	-	21	0.4%
Tuscany	-	-	275	4.9%
Total local area	3,066	3,152	3,459	61.7%
Other Italian regions	1,954	1,985	2,033	36.3%
Other European Union nations	65	95	80	1.4%
Other	25	169	30	0.5%
Total	5,110	5,401	5,602	100.0%

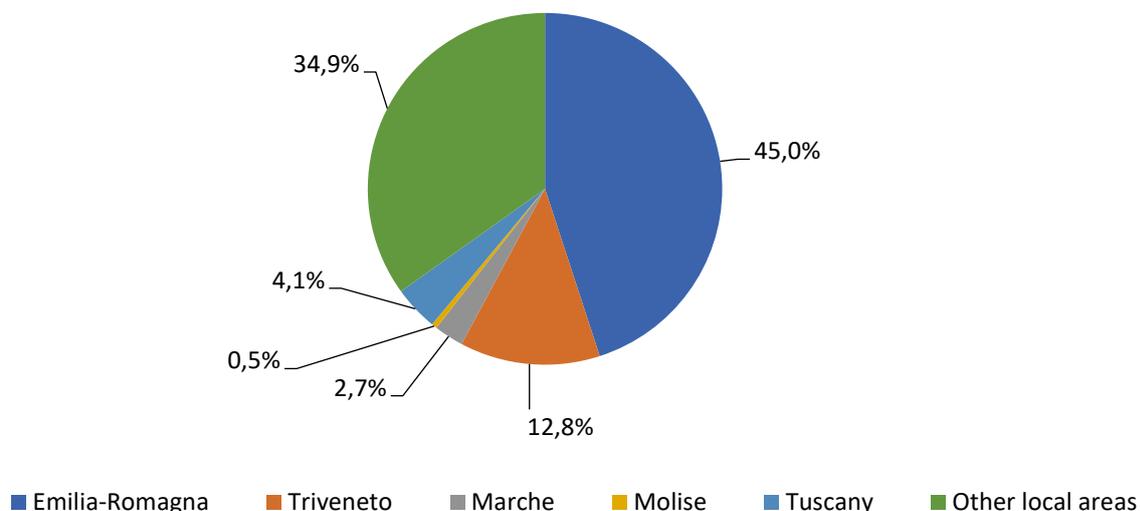
The data refers to the companies Hera Spa, AcegasApsAmga, AcegasApsAmga Servizi Energetici, Hera Luce, Herambiente, Fea, Herambiente Servizi Industriali, Hestambiente, Hera Comm, Inrete Distribuzione Energia, Heratech, Marche Multiservizi, and Uniflotte; intercompany purchases are excluded.

Value of supplies: breakdown by geographic area (millions of Euro) [204-1]



Purchases outside the European Union were made from suppliers based in Great Britain, Switzerland, the United States, Canada, Israel.

Value of supplies: breakdown by geographic area (2020)



Focus on distributed economic value with donations and sponsorships

The healthcare emergency was without a doubt the adversary of the events scheduled in 2020, generating a not insignificant impact on the actual realisation of the events scheduled and their intended use.

If, in many cases, the limitations introduced to contain the epidemic forced a delay or cancellation of the event, in other cases it was the opportunity to rethink its boundaries. It was certainly the year of the **advent of digital sector** and of a parallel reality which was also a place to meet and share many experiences and new targets.

In this sensitive context, the presence of the Hera Group assumes even greater significance: the multiutility represented not only a **valid support of the excellences of the local area** which contribute to guaranteeing a socio-cultural growth of the communities, but also a carrier of trust in the potentiality of an area which, despite a moment of great uncertainty, does not stop expressing and developing new prospects and languages.

Sponsorships

thousands of Euro	2018	2019	2020
Recreational activities	551	767	342
Culture	1,062	1,047	1,031
Sports	416	429	489
Social	51	71	114
Environmental	239	179	74
Other	110	129	158
Total	2,429	2,622	2,208
<i>of which in areas served</i>	<i>2,212</i>	<i>2,520</i>	<i>2,167</i>
<i>of which in areas not served</i>	<i>217</i>	<i>99</i>	<i>41</i>

Despite the strongly critical scenario, the HERA Group **shadowed** and **supported over 150 initiatives** distributed in 5 regions, with a total contribution of over EUR 2.2 million in favour of sectors hit hard by the healthcare emergency such as exhibitions, theatres, music, cinema and sports.

Exhibitions. During 2020 the HERA Group brand was linked with the most important exhibitions: in Bologna (Palazzo Fava) at the exhibition dedicated to **The Griffoni Polyptych, rediscovery of a masterpiece** for the restoration of one of the greatest works of the Italian 15th century, scattered in 9 museums around the world and brought together for the occasion; in Forlì (San Domenico Museums) in the exhibit **Ulysses, the Art and the Time**; in Ferrara (Palazzo Diamanti) for the exhibit **An artist called Banksy**, where over 100 original works and objects by the famous and controversial British artist attracted visitors from all over Italy. **Street art** was also the focus of two festivals, **Artù** in the municipality of Molinella (Bo) and **Restart** in Imola, which made it possible to carry out interventions of facade renovation of the urban landscape. Support also granted to the MAMbo (Museum of Modern Art of Bologna) which during the lockdown brought to life the project **Forno del pane (Bread Oven)** by transforming the exhibition space into an artist residence and centre of production of the works.

These and other exhibits, penalised by the restrictions of the healthcare emergency, were able to re-open to the public during summer and autumn. For this, the support of the multi-utility was not limited to pure support, but translated into a concrete commitment to relaunch the sector and in favour of the citizens, who could benefit from favourable conditions (free admission, social campaigns, etc.) which stimulated participation.

Theatres and festivals. The theatre industry has without a doubt been among the hardest hit by the restrictions introduced to contain the healthcare emergency: starting in March, the theatre seasons were suspended and the curtain came down on most of the stages. The most resilient modified their scheduling, some experimenting with the use of digital performances, others postponing or re-adapting the date. Among these, a special mention for the **50th Edition of the Santarcangelo Festival**; the Modena Summer Festival **I Giardini d’Estate**[The Summer Gardens] which staged over 30 shows promoted by ERT and, also in Modena, the **Festival della Filosofia**[Philosophy Festival] with the lectio magistralis HERA Group of Professor Telmo Pievani, **Imperfezioni**[Imperfections].

An innovation which was much appreciated by the public was the initiative supported by the multiutility and promoted by **Crinali**, which during the summer brought surprise theatrical and musical performances in the suggestive setting of the woods of the Bologna Appennines, encouraging both the enjoyment of shows, and the rediscovery of magical and unpolluted places of the Emilia Romagna area.

Hera Comm renewed the partnership with **Festivaletteratura** in an edition with many events online tied to the values of sustainability and circular economy with the involvement of journalists, scientists and authorities of the scientific world.

In Pordenone and Gorizia the Group, still thanks to Hera Comm, supported two important initiatives: **Pordenonelegge 2020** and the **XVIth edition of éStoria, International Festival of History**. The first one is the most important literary festival of the Northeast and this year it involved more than 200 authors in 21 physical locations. There were plenty of results: over 1 million digital and in-person spectators and other 2 million on-line views. Instead, in Gorizia took place **éStoria**, in-depth meetings focused on exploring the impact of pandemics on man from antiquity to the present. Over 40 dates are available on the dedicated channel of the raicultura.it site.

Udine instead was the setting for **Vicino/lontano [Near/Far]** and **Premio Terzani 2020**, and the on-line edition of the **Far East Film Festival**: the richest cinema show of the Far East in Europe now in its 22nd Edition, which has received over 3,000 credits from 45 different countries and almost 400 thousand contacts on the festival website.

In Trieste, AcegasApsAmga, renewed the sponsorship to the **Fondazione Teatro Verdi [Verdi Theatre Foundation]**: despite the fact that the healthcare emergency limited its activities a lot, the presence of the Group was maintained as form of closeness to the city, which so loves its theatre and its workforce.

Music. The first festival to start again was the **Ravenna Festival** with the first concert performed on 21 June. The festival was held in a single location with forty dates scheduled. Also this year, the Group promoted an environmental improvement operation that allowed the best citizens of Ravenna to win tickets to the sold out concert of the songwriter, Brunori Sas. The Group also supported the events **A Cielo aperto [Open Air]**, show in Cesena for artists of the Italian and international independent music scene, and **Ferrara Busker Festival**, international appointment for street musicians held in a limited edition with only fifteen bands in five locations. Hera Comm confirmed the partnership with the **Fondazione Toscanini**, well-established for several years: a value shared with the regional territory in particular with Emilia (Parma, Piacenza, Reggio Emilia, Modena) to support culture with quality music, which materialises in innovative projects for the spread of musical culture and the training of the new students of orchestra professors.

Cinema. Among the successful partnerships, Hera confirms its support for the promotion of film culture, capable of stirring involvement and excitement. Among the most prestigious partnerships, the one with the Bologna Cineteca, for the **“Il cinema ritrovato” (Cinema rediscovered)** and **“Sotto le stelle del Cinema” (Cinema under the stars)** shows, which during the summer offered great masterpieces, free of charge, in the attractive setting of Piazza Maggiore in Bologna and for the first time also in the Barca district. The successful partnership with **Biografilm Festival** was also renewed, this year online. Interest in the hall and the film was also confirmed through the support for initiatives held in other areas, including **Itinerant Shows** which involved ten municipalities of the Imola region; **the Summer Cinema at Sassuolo** and the **Seventh Artevent** in Rimini, while in Friuli-Venezia Giulia some of the most significant partnerships in this industry were **ShorTS Film Festival**, initiative widely attended also by the employees of the Group who actively participated in assigning the "Best Italian Short Film" award.

Sports and Social Activities. The HERA Group's partnership had a great impact in the area and high visibility during the **UCI 2020 Road World Championships**, the 2020 World Road Cycling Championships held in Imola in September: certainly one of the most important media events for the country. For over a week Emilia-Romagna, and Imola in particular, were the theatre and home for over 430 athletes from 55 different nations. There were forty-eight million hours of live transmission in the principal European markets with eighteen international broadcasters and particular attention on the event, one of the few completed given the complex environment. In the social setting, mention must be made on the initiative **Padova Capitale Europea del Volontariato 2020 [Padua European Capital of Volunteering]** and the support for the projects of educational poverty of the **Community of San Martino in Campo** at Trieste. Still in this setting Ascotrade, company of the HERA Group, supported the Veneto Paralympic Sports with the initiative **Mi piace di cuore [I like it from the heart]**, contributing to financing projects for abatement of architectural barriers and the purchase of equipment for athletes with disabilities.

Environment and electrical mobility. In Umbria (Perugia) and in Tuscany (Florence) the partnership with **Flowershow**, in a reduced version, was confirmed: the floriculture event is the opportunity to promote products, gather leads and raise awareness through events dedicated to natural ecosystems. In Friuli-Venezia-Giulia the healthcare emergency did not stop the activities of engagement to earth in the historic international sailing regata **Barcolana**, which is held every year in the Gulf of Trieste, with the support of Hera Comm and Estenergy. The ecogame **A Light Day**, with five Hera E-Bike at stake, involved over 550 players in the stand set up in Piazza Unità from 8 to 10 October and 8,657 in the online version, helping them to reduce the environmental burden of their daily actions and discover sustainable mobility on two Hera wheels. The subject of **electric mobility** was offered at other events such as the **week of sustainable mobility** at Bologna and Modena, the National Conference for Sustainable Mobility, E-MOB (Milan), the International Kite Festival at Cervia, the World Road Cycling Championship at the Racetrack of Imola. Environment and sustainability are central themes for the Group, which were also found in many initiatives carried out during 2020. Among these, the following should be mentioned: the **Sustainability and Management** research; the **National Zero Waste Campaign** against food waste and the reduction of waste; and the **Resilience Festival** with which Hera Immersive tackled the subject of environmental sustainability through the languages of art to explore alternative points of view.

Donations

thousands of Euro	2018	2019	2020
Recreational activities	27	29	1
Culture	46	70	140
Sports	6	24	5
Social	174	276	765
Environmental	6	1	26
Other	70	12	169
Total	329	412	1,106
<i>of which in areas served</i>	<i>284</i>	<i>301</i>	<i>655</i>
<i>of which in areas not served</i>	<i>45</i>	<i>110</i>	<i>451</i>

Donations represent another **opportunity of support to the area**, through which the Hera Group commits to promoting solidarity and support for social and environmental projects.

For this reason, at a time of extraordinary difficulty that involved the entire country, Hera reaffirmed its closeness to the institutions and the territory through a series of initiatives, including an important commitment to the **Regional Healthcare Service of Emilia-Romagna, Friuli-Venezia-Giulia, Marche and Veneto**.

In 2020, the Group donated over Euro **1.1 million**, 60% of which to its service area. About 82% of donations are for cultural and social purposes.

In 2020, the multiutility renewed its membership of bodies and associations engaged both in **scientific research**, such as LILT, and in **prevention within health-related projects**, such as UNICEF.

On the **social front**, the Hera Group supports the work of **Emporio Sociale il Mantello** in Ferrara, which provides income support by distributing basic necessities, and also by offering training opportunities, work orientation and social and health services, family budget management, education for responsible consumption, and promotion of active citizenship.

Also in the social setting, support was confirmed for other businesses involved in inclusion and socialisation activities, including the **AiAsport non-profit association** that offers an equestrian activities service for people with disabilities, and the **Mus-e project** for artistic courses aimed at schools located in difficult contexts, designed to accompany children to discover themselves and others, by experimenting with several artistic disciplines together with classmates and teachers.

[415-1]

Also in 2020, consistent with the provisions of the Group's Code of Ethics and protocol for Model 231, the Hera Group **did not make any contributions** of any kind to any party or politician. Among the trade associations in which Hera participates and contributes, we report Utilitalia, Confservizi and Confindustria.

Contributions to political parties and trade associations

thousands of Euro	2018	2019	2020
Politicians and political parties	0	0	0
Trade associations	1,326	1,336	1,304
Other associations/organisations (promotion and spread of sustainability, research and industry/themed studies)	87	117	153
Other contributions	0	0	0
Total	1,413	1,453	1,457

The investments

[203-1]

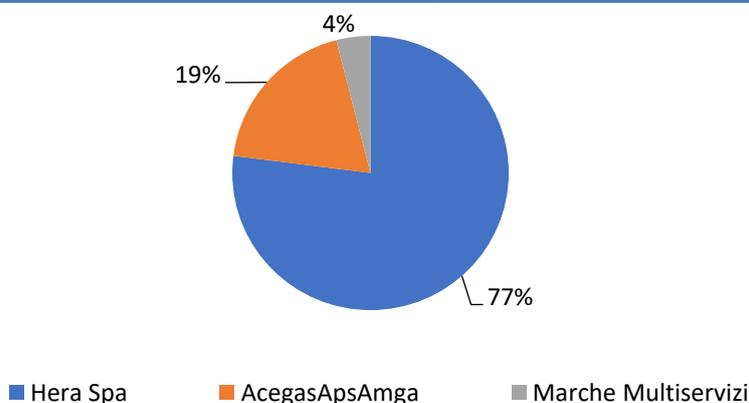
During 2020, the **investments of the Group** came to Euro 528.5 million, including Euro 46.9 million relative to the acquisition of financial investments that refer mainly to Ascopiave Spa.

The **contributions to capital account** amounted to Euro 24.8 million, of which 13.6 million for Fondo Nuovi Investimenti (FoNI), as envisaged by the tariff method for the integrated water service. Net operating investments came to Euro 481.7 million, a decrease of Euro 27.3 million compared to the previous year.

Gross of contributions to capital account, the Group's **operating investments, amount to Euro 506.4 million**, a decrease of Euro 27.1 million compared to the previous year and mainly concern work on plants, networks and infrastructures. In addition, regulatory adjustments were made, particularly on gas distribution for the mass replacement of meters and for the purification and sewage sectors.

Investments

millions of Euro	2018	2019	2020
Gas area	115.4	138.3	135.3
Electricity area	23.0	43.4	47.7
Integrated water cycle area	157.9	175.8	166.2
Waste management area	78.1	81.8	68.3
Other services area	18.8	16.0	11.1
Central structure	69.1	78.2	77.9
Total gross operating investments	462.3	533.5	506.4
Financial investments	0.3	0.2	46.9
Total gross investments	462.6	533.8	553.3
Capital grants	30.8	24.5	24.8
<i>of which for FoNI (Fondo Nuovi Investimenti)</i>	<i>12.5</i>	<i>13.4</i>	<i>13.6</i>
Total net investments	431.8	509.2	528.5



In 2020, the **net investments in the gas area** were Euro 134.1, a decrease of Euro 4.2 million compared to the previous year. In the distribution of gas, a decrease of Euro 3.2 million was recorded overall which derives mainly from the lower investments in the gas distribution branch of AcegasApsAmga Spa relative to the Atem of Padua 1, Padua 2, Udine 3 and Pordenone, effectively sold since 31 Decemehr 2019 as part of the Ascopiave operation and the fewer interventions in the area of Marche Multiservizi. The investments of Inrete Distribuzione Energia increased, mainly due to the larger investments for the massive replacement of the meters (Resolution 554). In gas sales, investments of Euro 9.0 million were made for activities related to the acquisition of new customers, an increase of Euro 0.7 million compared to the previous year.

Investments decreased overall by Euro 0.6 million in the district heating and heat management service, with a reduction in the district heating of Hera Spa and increase in the activities in the Hera Servizi Energia and CegasApsAmga Servizi Energetici companies. Requests for new interconnections are lower than the previous year in gas distribution, mainly due to the sale of the AcegasApsAmga branch and in district heating.

Investments in the **electricity area** for 2020 amounted to Euro 47.7 million, an increase of Euro 4.3 million compared to the previous year. The measures carried out mainly concerned the extraordinary maintenance of plants and distribution networks in the Modena, Imola, Trieste and Gorizia areas. Compared to the previous year, an increase of Euro 3.5 million is registered in the distribution of electricity and Euro 0.9 million in the sale of energy, for the activities connected to the acquisition of new customers. The demand for new connections also increased compared to the previous year.

In 2020, our net investment in the **integrated water cycle area** came to Euro 143.3 million, a decrease of Euro 8.2 million compared to the previous year. Gross of the contributions to capital account received, the investments made come to Euro 166.2 million, decrease of Euro 9.6 million. The investments were mainly for extensions, enhancements, and upgrades of networks and facilities, and regulatory compliance work, mostly for water and sewage treatment. We invested Euro 98.8 million in the **aqueduct** area, Euro 39.1 million in the **sewage** area, and Euro 28.2 million in the **purification** area.

Among the principal interventions in the integrated water cycle field we report: in the aqueduct, the increase in the reclamation activity on the networks and connections linked also to Resolution Arera 917/2017 on the regulation of the technical quality of the integrated water service, the improvement and renewal of the adductor conduits of two Bologna municipalities, the seismic adaptation and re-qualification of the areas of the suspended tanks; in sewerage the progress continues of the important works of the Rimini Seawater Protection Plan, even if in 2020 a lower impact of interventions by Hera is anticipated compared to the previous year. The maintenance activities of re-qualification of the sewer system are also continuing in other areas and the drain adaptation works to DGR 201/2016; in depuration, we highlight the adaptation of the treatment plant of Lido di Classe and Lugo with the creation of the rain line and the revamping of the Ferrara treatment plant. The demand for new water and sewer connections has also increased compared to the previous year. The contributions to capital account, equal to Euro 22.9 million, include Euro 13.6 million deriving from the component of the rate anticipated by the rate method for the New Investments Fund (FoNI) and show a decrease of Euro 1.3 million compared to the previous year.

Net investments in the waste management area concerned maintenance and enhancement measures on treatment systems and amounted to Euro 67.6 million, a decrease of Euro 13.9 million, compared to the previous year. The composting/digester sector decreased by Euro 3.6 million, due to major measures on the Sant'Agata Bolognese composting plant last year to build its biomethane plant, operational in 2019, besides other measures, including plant upgrades at the Tre Monti mechanical biological treatment plant.

The investments on the **landfills** decreased by Euro 6.3 million as a result of the interventions carried out in 2019 on Cordenons, on the tenth area of the Ravenna landfill and on the plant of the Marche Multiservizi company, only partially compensated by the works started in 2020 on the Pago plant.

The **Wte chain** shows investments in line with the previous year concerning the extraordinary maintenance activities of the main plants in the area.

The investments in the industrial waste plants chain increased by Euro 2.1 million compared to the previous year and mainly concern the revamping activities of the F3 plant of Ravenna and the interventions on the Tapo plant (organic production water treatment), also in Ravenna.

The **drop-off points** and **collection equipment** chain show a decrease in investments of Euro 2.6 million compared to the previous year, mainly in the AcegasApsAmga areas, while the reduction of Euro 3.0 million in the selecting and recovery plants chain depends mainly on the larger investments made the previous year by the Aliplast Group and by the delivery which took place in 2019 of the mobile soil washing plant of Chioggia.

During 2020 the investments in the **other services area** were equal to Euro 11.1 million, a decrease of Euro 4.9 million compared to the same period in the previous year.

In **telecommunications** investments of Euro 8.1 million were made in network and TLC and IDC (Internet Data Center) services, a decrease of Euro 2.0 million compared to the previous year. In the public lighting service, investments of Euro 3.0 million refer to the maintenance, re-qualification and modernisation interventions of the lighting systems in the areas managed, a decrease compared to the previous year mainly due to the different accounting method of the public lighting orders based on IFRIC 12.

In the **central structure**, the investments concern the interventions on the properties in the corporate locations, on the information systems, on the vehicle park, in addition to laboratories and remote control structures. Overall, structural investments decreased by Euro 0.3 million compared to the previous year, with a reduction in the company fleets and an increase in the interventions on the information systems.

Financial investments are equal to Euro 46.9 million, relative to the acquisition of financial investments which refer mainly to Ascopiave Spa.

Hera's contribution to social inclusion

The social bonuses for the family in economic and physical difficulty

The **social bonus** is the facilitation that **reduces the cost** incurred by the residential customers for the supply of electricity and gas. Residential customers with an **ISEE indicator not exceeding Euro 8,265**, or Euro 20,000 for families with more than three dependent children, are entitled to the reduction as defined by the Government in the Ministerial Decree of 28/12/2007.

The **electricity bonus** is designed to guarantee a savings on the annual cost for electricity to two types of families: those in financial difficulty and those with whom a person in serious health conditions is living on life support with electro-medical household equipment. For families that are struggling to pay their bills, the electricity bonus provides savings ranging from Euro 132 to a maximum of 194, while for families facing physical hardship, it provides savings of Euro 204 to 732. The amounts of the **Gas Bonuses** are determined differently depending on the climate areas. They provide savings ranging from Euro 37 to Euro 314.

Gas and electricity bonuses issued

	2018	2019	2020
Number of bonuses issued	65,305	77,628	113,164
Value of bonuses issued (thousands of Euro)	6,471	7,868	12,692

In 2020, the **gas and electricity bonuses** issued to Hera Group customers amounted to 113,164 for a total of Euro 12.7 million (+61% compared to 2019). On a like-for-like basis compared to 2019, the gas and

electricity bonuses dispensed to the customer were 88,136 for a total of Euro 9,681 million (+23% compared to 2019).

As regards Hera Comm alone, 76,421 bonuses were paid out, for a total of around Euro 8.4 million (+24% compared to 2019). The percentage of the electricity and gas contracts that received at least one bonus is equal to 4%. The percentage is a little higher for electricity contracts (4.7%) compared to the gas contracts (3.5%).

As far as the **water service** is concerned, starting 1 January 2018 a **social bonus** for the **supply of water** to residential users facing social and economic hardship was established by Resolution Arera 897/2017 of 21 December 2017. With subsequent Resolution Arera 3/2020/R/idr, the Integrated Text of the application methods of the water social bonus (TIBSI) was updated in order to further reinforce the previous mechanisms of support for the vulnerable consumers. In this regard, starting 1 January 2020, the right to request the bonus was extended also to those receiving citizenship income. The calculation of the bonus recognised in the bill, which for 2018 and for 2019 only concerned the aqueduct component, has been applied since 1 January 2020 also to the cubic metres of sewerage and purification, where that service is dispensed. The methods are confirmed for all of 2020 for the application for admission to compensation for water supply (presentation by the user of the application together with the applications for the social bonus for electricity and/or gas, and is valid for 12 months with the possibility of renewal within the month preceding the expiry of the aid). Starting on 1 January 2021, still from a point of view of simplification of the disbursement mechanisms, the users only need to apply for the ISEE certification. This will permit the automatic delivery of the bonus without the burden of any formal application. In 2020 there were 42,258 **water bonuses** distributed to the customers of the HERA Group for a total of Euro 2.1 million.

Atersir has instituted a **supplementary bonus** in the areas served by Hera Spa as an additional protection measure (Resolution CAMB 45/2018), while as far as AcegasApsAmga is concerned the new per-capita tariff structure for resident domestic users came into force in 2019 (Resolution 665/2017 - Ticsi) valid starting 1/1/2018. Both ATOs with territorial jurisdiction (Ausir and Consiglio di Bacino Bacchiglione) have set a more favourable regime than that established by the Authority, of 18.25 m³/year. In fact, a consumption of 24 m³/year per inhabitant is applied to calculate the reduced rate.

For **waste management services**, a total or partial exemption from the payment of TARI or the Punctual Corresponding Rate may be granted to subjects facing severe social and welfare hardship. The municipalities allocate the funds for this aid, according to the income of the applicants. In some areas of Emilia-Romagna, discounts apply to individuals living alone that are affected by over 60% of permanent invalidity.

HERA introduced **on a voluntary basis**, starting in 2010, a **bonus** to compensate for the cost for the remote heating **service**, to be allocated to customers with income needs with the same methods with which the compensation for the costs of gas and electricity services is granted. The bonus for 2020 is worth Euro 114 per year for households up to 4 members, and Euro 157 per year for households with a greater number of members. At the date of approval of this report, we estimate that, for the year 2020, approximately 1,030 applications were filed (1,033 in the previous year) for a total economic value of approximately Euro 129 thousand, a decrease of approximately 13.6% compared to the amount paid in 2019.

Per capita tariff rewards water savings and helps large households

In its Resolution 665/2017 of 28 September 2017, Arera introduced a **per-capita tariff for all resident residential users**, to be gradually applied in all municipalities starting in 2018, and to be completed by 2022.

In fact, a transitional period has been set, during which the Water Service Operator, lacking information on the actual number of components, can invoice according to a standard criterion (i.e., considering a typical three-member resident domestic household user) although the user may provide a self-declaration.

As of 2020, **Hera Spa** will apply a per-capita tariff structure to resident households based on the actual number of components for 97 municipalities. For the other 67 per-capita tariff municipalities, Hera applies the tariff structure based on the number of standard components (equal to 3).

At 2020 all the 16 municipalities of the **Triveneto** and the 47 managed in the **Marche** changed to the per capita type tariff.

Hera's initiatives to support users facing financial hardship: the payment in instalments of the bills

Hera allows customers **dealing with challenging financial** circumstances to pay their bills in instalments. Households **experiencing financial hardship** (but that are not behind with any payments, including any previously-granted instalments) are allowed to pay their bills in three instalments, applying an interest rate equal to the official reference interest rate at which the European Central Bank grants loans to other banks equal to 0% since 16 March 2016), increased by 3.5%. For amounts over Euro 2 thousand, Hera reserves the right to carry out more accurate checks before granting an instalment plan. In certain cases of financial hardship (customers using the temporary state unemployment fund, or on unemployment benefits, beneficiaries of the income support fund provided by Ente Bilaterale Emilia-Romagna, or customers who are unemployed as a result of the reduction or termination of their employment or workers with defensive solidarity contracts, with reduction greater than 30%) the number of instalments is increased to six, interest-free. In addition, subject to approval of the social workers, the instalments may be increased to nine. This procedure also applies to the **professionals** and **small condominiums**.

Businesses facing financial difficulty can **also** ask to pay Hera in instalments. In these cases, Hera grants similar conditions after checking their creditworthiness.

AcegasApsAmga grants, if requested, the instalment payment of the bill. The instalment payment may be requested through the contact channels listed on the bill. Should the request be made for bills already in default, the instalment plan will have a minimum term of 12 months with non-cumulative instalments and a frequency corresponding to that of invoicing. Possible customised instalment plans must be requested in writing or in another way that can be documented, as provided by Article 5.1 of Resolution Arera 311/2019 (Remsi).

In the areas managed by Marche Multiservizi the end client who has not received reminders and made their payments on time may apply for an instalment plan of the bill when it exceeds 80% of the average value of the charge referred to the bills issued during the last 12 months. This request can be forwarded to the call center, the customer service office or to the credit office via email or by telephone. The instalment request may be granted under the following conditions:

- the request must be received by the tenth calendar day of the expiry of the bill;
- there must not be any ongoing instalments for other bills;
- the customer must have paid all the previous bills.

The frequency of the instalments must correspond to the invoicing frequency, unless agreed otherwise, and it is not possible to authorise the instalment plan for expired amounts under Euro 50 if they concern residential supplies, for expired amounts under Euro 500 for VAT numbers and condominiums. The number of instalments granted varies, based on the amount divided into instalments, between two and six for residential customers and between two and three for VAT numbers and condominiums.

In 2020, **214,604 instalment plans** were granted (-4% compared to 2019), of which 208,729 were mass-market customers and 5,875 were business customers. Overall, the amount paid in instalments amounted to Euro 129.3 million (-0.2% compared to 2019). At the **geographical level**, more than 197,638 bills were paid in instalments in Emilia-Romagna, 13,374 in Triveneto and 3,592 in Marche, for a value of about Euro 124.6 million in Emilia-Romagna, Euro 9.9 million in Triveneto and about Euro 1.2 million in Marche.

Customers who requested **at least one bill to be paid in instalments** during the year, accounted for 5.2% of total customers (5.3% for residential customers and 2.8% for business customers).

Number and value of bills paid in instalments

	2018	2019	2020
Bills paid in instalments (qty)	214,618	223,431	214,604
<i>of which mass market (qty)</i>	<i>208,048</i>	<i>217,607</i>	<i>208,729</i>
<i>of which business (qty)</i>	<i>6,570</i>	<i>5,824</i>	<i>5,875</i>
Bills paid in instalments (thousands of Euro)	121,315	129,471	129,266
<i>of which mass market (thousands of Euro)</i>	<i>89,690</i>	<i>92,958</i>	<i>85,686</i>
<i>of which business (thousands of Euro)</i>	<i>31,625</i>	<i>36,513</i>	<i>43,580</i>

Hera's initiatives to support users facing financial hardship: the prevention of the suspension of the supplies

The Group's attention on the weak social segments continued in 2020 with the application of the **Agreements** aimed at preventing the suspension of services for assisted persons, reported by the social services of the Municipalities and the Bodies dealing with personal services. The collaboration carried out through these protocols with the social services of the municipalities and with the organisations that provide services to citizens is a distinctive aspect that sets Hera apart in the context of multiutilities and sales companies: a dedicated channel with operators that offer **support and counselling to social workers** through structured forms of relief for the most economically fragile portion of society. Collaboration with such authorities makes it possible to avoid **service disconnections or reactivation of the service if it has been stopped, optimising the** management of economic contributions by social services. In 2020, more than 21,000 requests were handled, as a result of reports from social workers, and 60% of suspensions were avoided. Agreements were signed with 83 municipalities. All the municipalities in the provincial capital city of Emilia-Romagna are involved except for Rimini, where energy contracts have a lower incidence. The protocols with the municipalities of Trieste and Padua were updated during 2020. For 2021, it is anticipated that the proposal will be offered to other municipalities to sign a protocol for preventing service disconnections in the metropolitan area of Bologna.

As regards **Hera** and **AcegasApsAmga**, the contracts state that if the **bill is not paid**, the **service may be suspended**.

In the case of gas, electricity and district heating customers with debts under Euro 150 or in the case of water service customers, the procedure anticipates that an initial reminder be sent approximately 20 days after the bill's expiry date and a subsequent reminder, after an additional 50 days, is sent by registered mail, to inform customers that the service may be suspended. If payment is not made the supply is suspended, on average two months after the bill's due date. Should the gas, electricity and district heating invoice be for more than Euro 150, a single reminder is sent by registered mail approximately 20 days after the expiry of the invoice, warning the customer that their service may be suspended. In this case, the service can be suspended about one month after the invoice's due date. The customer may request to pay the bill in instalments, up to the time the supply is suspended.

For the supply of **gas, electricity and district heating**, if it is not possible to suspend the service (e.g. the meter cannot be accessed) the customer is sent an additional notice to inform them that the service will be disconnected (connection cut off) should they fail to pay their bill in the specified timeframe. If disconnection is also not technically feasible, the selling party may terminate the contract and activate the last resort services.

As regards the supply of **water**, HERA, based on the Regulation on delinquency in the integrated water service (Remsi), in all the areas served of Emilia-Romagna and Triveneto, will start limiting the supply (for all types of users net of the non-domestic users for which suspension will be carried out directly), suspend

the supply or disconnect the valve at the street until the termination of the contract. Should the limitation of the supply not be feasible, as a more favourable condition to the customer, a notice will be sent that informs them of HERA's inability to limit the service. Afterwards, the subsequent delinquency actions will be undertaken (suspension of the supply, disconnection outlet on the street and deactivation of the supply).

All the initiatives supporting families in financial difficulty are summarised in the **SOSTegno HERA guide** available on the Group's website and periodically updated. The guide contains all the information necessary on the opportunities of reducing expenses for energy and water services, available to Hera Spa and Hera Comm Spa customers in difficult economic and/or physical conditions. It also provides information on how to pay bills in instalments and what to do in the event of late payments. SOSTegno Hera explains how users can benefit from the social bonuses for electricity, gas, water and district heating, and who to contact in the event of water leaks. Lastly, it provides advice on good practices for reducing consumption, actively contributing to the responsible use of environmental resources.

During the healthcare emergency, HERA, even before the provisions of the Government and the Arera National Regulatory Authority, implemented a series of initiatives to support users in difficulty (for more information see the paragraph "Management of the Healthcare Emergency").

Placement under supply contracts with social cooperatives

[203-2]

In 2020, the **value of supplies** by types of work or services requested by the Hera Group to social cooperatives was more than **Euro 67 million** (+1% compared to 2019.)

Around Euro 66 million was assigned for **waste management services**, corresponding to 27% of the Group's total awards for these services. Supplies involved 50 cooperatives or consortia of social cooperatives overall, hiring 864 disadvantaged people (pursuant to Art. 4 of Italian Law 381/91): 685 with open-ended employment contract, an increase compared to last year, and 392 with full-time contract. At the geographic level, 717 individuals found jobs in the Emilia-Romagna area, 102 in Triveneto, and 45 in Marche.

Supplies from social cooperatives

	2018	2019	2020
Social cooperatives or consortia (qty)	49	51	50
Value of supplied goods/services (thousands of Euro)	62,158	66,390	67,143
Disadvantaged people hired (qty)	816	875	864

Workers employed for less than one year were also counted among the disadvantaged people hired.

The "Valoris" economic evaluation model developed by the University of Brescia in 2013 provides a measurement of the value created by social entrepreneurship of job placement, based on the results of empirical research. **In particular, the model makes it possible to quantify the economic** impact for the Public Administration of the social integration of type B social cooperatives. The research showed that the benefits essentially are a result of lower welfare costs and greater tax revenues due to the payment of income tax on the employment of disadvantaged individuals. The lower revenues for the Government due to tax and contribution exemptions which type B social cooperative benefit from have been deducted from the benefits. All of this ends up being a benefit for the Public Administration and amounts, on average, to Euro 4,209 in the year for each disadvantaged person. The economic benefit for Public Administrations due to Hera Group awarding contracts to social cooperatives can, therefore, be considered to be around Euro 3.6 million, for 2020.

Hera contributed to the inclusion in the national collective labour agreement for waste management services (renewed in July 2016) of a specific protection clause for outsourcing to social cooperation. This

clause stipulates that a portion of outsourcing for the street sweeping, collection, waste transportation activities, septic tank cleaning and bin washing, is exempted from the requirement to apply the national collective labour agreement for waste management services, by defining socially inclusive projects. This portion is 5% and can be raised to 15% at the company level. Hera applies 15% on the basis of an agreement entered into in March 2012 with the trade union organisations and with the Group's union co-ordination.

Protected categories among Hera's workforce

In all the provinces it serves, Hera complies with Law 68/1999, which requires that personnel belonging to protected recruitment categories **be hired in the proportion specified by that law.**

According to the regulations on the rights to work of people with disabilities, companies that, due to the special conditions of their business, cannot provide jobs to the entire percentage of those entitled (disabled persons), may apply for **partial exemption** from the obligation to hire on condition that they pay to the Regional Fund for the Employment of Disabled People a sum equal to Euro 30.64 for each worker not employed and for each working day not worked; the maximum percentage allowed is 60%. Hera also uses this option, which requires payments to the provincial governments by the individual Group companies if they employ fewer disabled people than required by law.

This regulation, that promotes the recruitment and integration into the working world of certain categories of people (disabled people, orphans, etc.), also requires that the worker's employment placement must abide by solutions agreed among the company, the regional employment office and the worker.

At the end 2020 there were **369 people working in the companies of the Group belonging to the categories protected by Law 68/1999** of which **317 (231 in HERA, 64 in AcegasApsAmga, 22 in Marche Multiservizi)** present pursuant to Art. 3 of the Law (persons with disabilities).

Persons belonging to the categories identified by Law 68/1999

qty	2018	2019	2020
Persons belonging to the categories identified by Law 68/1999	394	396	369

The data refers to the following companies: Hera Spa, Acantho, Aliplast, Fea, Herambiente, Herambiente Servizi Industriali, Hera Servizi Energia, Heratech, Hestambiente, Hera Comm, Hera Comm Nord Est, Hera Trading, Inrete Distribuzione Energia, Uniflotte, AcegasApsAmga, Hera Luce, AcegasApsAmga Servizi Energetici, Marche Multiservizi, Estenergy, Ascotrade, Ascopiave Energie, Etra Energia, Blue Meta, Amgas Blu in which 97% of the employees of the Group work.

Job creation and development of new skills

Hera's contribution to creating jobs

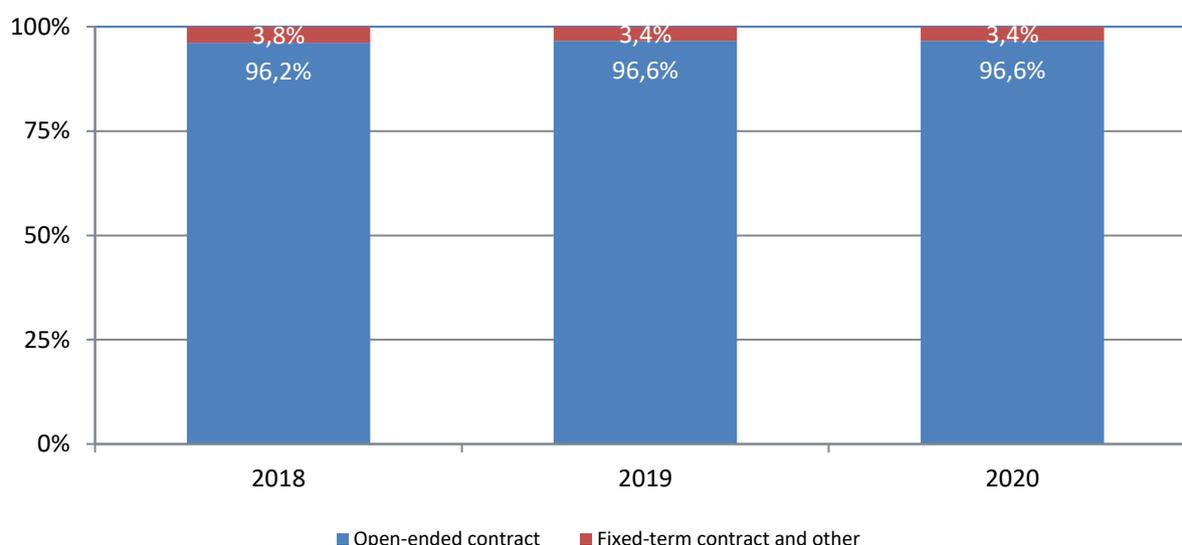
The importance that the Hera Group attributes to employment development, as highlighted in this paragraph, is not only reflected in the number of employees of the company itself, but also in indirect job creation and development of social responsibility initiatives in tenders. Adding to the Group's average number of workers the workforce employed by its suppliers, the **total employment impact is more than 18 thousand employees**.

Stable employment and turnover

[401-1]

Of the Group's average workers, **96.6%** have open-ended contracts. A **substantial stability** was recorded in the average number of open-ended contract employees compared to 2019, thanks to the completion of consolidation processes for employees previously on fixed-term contracts within the Group.

Workforce figures (average)



The total average number of workers of the Hera Group was 9,234, of which 8,918 were employees on **open-ended contracts**, 224 were **fixed-term** employees (2.4%) and 92 were **non-hired** employees (equal to about 1%), hired with other employment flexibility instruments (staff leasing contracts).

We hereby reiterate the Group's will to reduce the use of **flexible employment contracts, applying them only for urgent situations** (seasonality, extraordinary and temporary work peaks, substitution of workers who are absent temporarily). However, the employees hired under flexible contracts are given priority for hiring under open-ended contracts.

Personnel hired during the year, by position

Qty	2018	2019	2020
Managers	1	0	0
Middle managers	2	10	7
White-collar workers	238	266	286
Blue-collar workers	222	261	291
Open-ended contract workers	463	537	584
Fixed-term contract employees	361	331	393
Staff leasing contracts (temporary workers)	25	106	89
Seasonal workers and apprentices	5	2	1
Non-open-ended contract employees	391	439	483

New employees are generally **hired from outside** the company for top-ranking professional positions (both specialised and operative), which are difficult to cover with internal personnel. Most of the clerical and operational roles are normally covered by internal personnel.

In 2020 there were 584 **open-ended contract hires**, of which 22 are hires following changes in scope (entry of the Wolmann company in the scope of consolidation). In addition, there have been 275 consolidations of fixed-term contract employees.

Over the past three years, overall **1,584 open-ended contract employees were hired**, 749 of which following initial hiring within the Group under fixed-term contracts.

Women hired under open-ended contracts during the year, by position

Qty	2018	2019	2020
Managers	0	0	0
Middle managers	0	2	0
White-collar workers	111	115	121
Blue-collar workers	0	2	3
Total	111	119	124

In 2020, 124 **female workers were hired under open-ended contracts** (5 more than in 2019). The percentage of newly-hired female managers, middle managers and employees was 41.3% of the total number of hires.

Personnel hired with open-ended contracts during the year, by age and gender

qty	2018			2019			2020		
	F	M	Total	F	M	Total	F	M	Total
under 30 years of age	51	97	148	46	131	177	50	154	204
between 30 and 50 years of age	55	220	275	69	254	323	71	286	357
over 50 years of age	5	35	40	4	33	37	3	20	23
Open-ended contract workers	111	352	463	119	418	537	124	460	584

Among the hires, 204 were for new, open-ended contract employees **under 30 years of age** (+27 compared to 2019), 357 between 30 and 50 years (+34 compared to 2019) and 23 over 50 years old (+14 compared to 2019).

Open-ended contract employees leaving, by reason

qty	2018	2019	2020
Voluntary resignations	143	147	96
Retirements	266	292	415
Deaths	14	11	11
Dismissals	15	19	22
Inabilities	12	13	7
Transfers to other companies/demergers	74	97	4
Total	524	579	555

In 2020, 555 terminations were recorded, a decrease of 4.1% compared to last year, 75% of which is due to **retirements**. The figure increased significantly compared to 2019, while there is a sharp drop in **voluntary resignations**.

Workers leaving, by age and gender (2020)

Qty	Men	Women	Total
under 30 years of age	11	3	14
between 30 and 50 years of age	56	14	70
over 50 years of age	405	66	471
Total	472	83	555

In 2020, the age which experienced most terminations from the job is that of people over 50, almost 85% of the total, mainly due to retirement.

Turnover rate for workers, by role

%	2018	2019	2020
Managers	7.1%	4.5%	5.2%
Middle managers	4.3%	5.0%	5.4%
White-collar workers	4.4%	5.6%	4.8%
Blue-collar workers	8.2%	7.7%	8.5%
Average	5.9%	6.3%	6.2%

Turnover rate for workers, by gender

%	2018	2019	2020
Men	6.8%	7.3%	7.2%
Women	3.4%	3.6%	3.4%
Average	5.9%	6.3%	6.2%

Turnover rate for workers, by age

%	2018	2019	2020
under 30 years of age	4.2%	4.6%	3.2%
between 31 and 50 years of age	2.3%	2.8%	1.6%
over 50 years of age	9.6%	10.1%	11.3%
Average	5.9%	6.3%	6.2%

The **turnover rate** is calculated by dividing the number of employees leaving during the year by the number of employees at year end: in 2020, it was 6.2%, basically in line with the previous year.

The cluster most subject to turnover is the male workforce over 50 years of age, phenomenon due to the increase in retirements over the past years.

The **hiring rate** is calculated by dividing the number of hires that occurred during the year by the number of workers at the end of the year divided by age, gender and geographic area. For 2020, this index is equal to 6.5% (7.0% for men, 5.1% women, 46.0% for workers under 30 years of age, 8.1% for those between 31 and 50 years and 0.6% for those over 50).

Lead-on employment of the suppliers

In order to globally assess Hera Group's social repercussions on the country however, we should also take into account the **lead-on employment at our suppliers** who supply goods, various services or support certain stages of the company process, which can be estimated in the part of the workforce of the suppliers who perform activities for the HERA Group.

In 2020, lead-on employment generated an estimated **8,842 jobs** of which over 3,060 in Emilia, 2,072 in Romagna, 1,073 in Triveneto, 233 in Marche and 2,404 in other areas, not served. This figure was obtained by analysing the financial statements of the Group's leading suppliers which cover 80% of the volume purchased in 2020. To estimate the lead-on employment of the suppliers generated, we considered the **ratio between the value commissioned by HERA and the total turnover of the supplier**: this percentage was multiplied by the total number of employees declared in the financial statements of the suppliers.

The actions for social responsibility in tenders

Hera Group's employment impact is also due to concrete actions of **social responsibility in tendering**, which the Group continued to implement in 2020, consistently with the principles set out in the Group's **Code of Ethics** and attention towards the work conditions in the supply chain.

Also in 2020, we applied the **Memorandum of Understanding on tenders**, entered into on 26 October 2016, by the Hera Group and the Italian trade union organisations. This protocol is mandatory between the Hera Group and the unions, which implies an obligation for the Group to incorporate the protocol's requirements into the tendering rules.

The Tender Protocol, in addition to specifying the sector national collective labour agreement to apply to the main business sectors, the procurement protocol also governs aspects related to **employment continuity**, requiring the application of the **social clause**, which is of "voluntary" application (i.e., when not directly due to the specific labour agreement), in particular in the area of regulated and labour-intensive sectors, in labour agreements and services for activities after the initial measure on networks and services related to the management of the relationship with the end customer (meter reading and auxiliary metering activities), for new contracts for services that have been already outsourced. The social clause requires that the new contractor must **make a job offer that is consistent with the overall conditions in force at the time of the contract change** such as retribution, professional requirements and duration of the contract to the personnel that is employed on a permanent basis and employed directly and mainly in the activities covered by the contract in force at the operator leaving the company in the period of 90 days prior to the start of the new management. In all the other cases of takeover of tenders, a prior meeting must take place among the outgoing contractor, the new contractor and the local trade unions to assess any possible solution to **safeguard employment**.

Furthermore, we point out that also in 2020 the strengthening of the provisions relative to protection of the personnel of the contracting companies continued, following the publication, during 2019, of the **ANAC Guidelines No. 13 of 13/02/2019** regarding "**The discipline of the social clauses**". Thanks to the document

prepared jointly by the Central Personnel and Organisation Department and the Purchases and Tenders Department during 2019, we pursued the intent of increasingly **directing** the activity of the referent contract staff and **standardise** as much as possible the behaviours of those subjects, also by using special standard tender specifications, which in the article relative to the **salary compensation and contract terms** of the personnel of the contracting company anticipate five types of occupational social clauses in case of take-over contract of an expiring contractual relationship, from which the one adapted to the specific case must be identified. All this also in the light of the provisions of Art. 30, paragraph 4, of the Procurement Code, which establishes the obligation to apply in contracts the sector's "leader" National Collective Labour Agreement code, signed by the comparatively most representative trade unions, whose scope of application is closely related to the activity covered by the contract, in conjunction with the provision of Art. 50 of the Code itself, which establishes the obligation, with particular regard to labour-intensive contracts, to include in the tender documents specific social clauses aimed at promoting the employment stability of the personnel employed.

The most important tenders to which the Procurement Protocol rules described above were applied were the following:

Type	Description	Legal entity	Amount (millions of Euro)	Duration (years)	National collective labour agreement	Clause
Open procedure	Scheduled maintenance work, network redevelopment, extension networks, connections and accessory services in water and sewage mains in the area served by Hera Spa	HERA Spa	122.4	2	Construction companies and similar	Social of voluntary application
Restricted procedure	Call center services with personnel dedicated exclusively for the management of requests for information and orders of the customers of the HERA Group, and for the sale of products and services	HERA Spa	48.4	3	Telecommunication services	Social
Open procedure	Gully sucker services in Hera Spa's service area (Emilia area)	HERA Spa	47.1	4	Fise Assoambiente	Social
Open procedure	Sorting service, delivery and distribution of bills, documents and letters to the customers of the HERA Group	HERA Spa	44.0	3	Sorting and document distribution activity	Absorption project
Restricted procedure	Sweeping service, urban waste collection, monitoring and routine maintenance of waste collection centres in the territory in the Province of Rimini	HERA Spa	32.0	2	Social Cooperation	Social
Restricted procedure	Collection and transport service of urban and similar waste in the territory of the Province of Rimini	HERA Spa	27.6	2	Fise Assoambiente	Social
Open procedure	Internal cafeteria and bar services for the companies of the HERA Group	HERA Spa	21.6	5	Public services, and collective and commercial catering and tourism	Social

Type	Description	Legal entity	Amount (millions of Euro)	Duration (years)	National collective labour agreement	Clause
Open procedure	Waste collection, sweeping and adjunct services	Marche Multiservizi Spa	13.9	4	Waste management services Utilitalia, Fise Assoambiente Social Cooperation	Social
Restricted procedure	Maintenance and handling service of the roadside container fleet for waste spread in the territories managed by the HERA Group	HERA Spa	11.5	3	Metalworking Cleaning and multiservices	Social
Open procedure	Assignment of the environmental services in the territory of the Municipality of Trieste - Altipiano area	AcegasApsAmga Spa	7.4	5	Cooperatives	Social
Qualification system	Assignment of the cleaning and maintenance services and transport of waste water at the treatment plants and other plants/offices of AcegasApsAmga Spa and Hestambiente Srl and for the concrete pump service, and on call extraordinary interventions to be carried out as an emergency service in the territory managed by the companies belonging to the HERA Group	AcegasApsAmga Spa	6.2	3	Fise	Social
Qualification system	Assignment of additional activity service on methane gas, water and electricity measurement units with respect to the services provided by AcegasApsAmga Spa	AcegasApsAmga Spa	3.6	4	Gas Water	Social
Qualification system	Assignment of the massive replacement and enrolment/affiliation service on the gas meters related to the services provided by AcegasApsAmga Spa	AcegasApsAmga Spa	3.5	2	Gas Water	Social

It is hereby also pointed out that in the following tenders a **clause limiting the discount percentage was also introduced**, worded as follows "having taken into account the technical specificities of the tender and the economic analysis which underlies the price items which make up the unit price list under tender, the contracting body deems that reductions of the tender base higher than 25% may present critical elements of sustainability and reductions higher than 30% may be difficult to accept":

- tender for the massive replacement and enrolment/affiliation service of the Water Measurement Groups (drinking/industrial water aqueduct) operated by Hera Spa, to adapt to Ministerial Decree 93/2017, divided into three lots (Emilia area, Romagna area, Padova and Trieste area);
- tender for gully sucker services in Hera Spa's service area, divided into three lots (Bologna, Modena, Ferrara);

- tender for emergency response and scheduled maintenance work, network redevelopment, connections and accessory services in water and sewage mains in the area served by Hera Spa, divided into nine lots (the entire Emilia-Romagna area);
- tender for reconstructions works of the gas networks in non-compliant materials (basically fibre cement and PVC), as provided by Arera Resolution no. 569/19 of 27/12/2019, to be carried out on behalf of Inrete Distribuzione Energia Spa in the municipalities of Forlì (FC), Ravenna (RA) and Codigoro (FE), divided into three lots;
- tender for works relative to networks and systems for water, sewerage, gas and district heating services of HeraTech Srl, divide dinto two lots (Emilia area and Romagna area).

In 2020, in the standard specifications for the work and services categories used in the tender procedures, we maintained both the **clause that requires requesting authorisation to use temporary manpower**, and the clause that **prohibits using accessory work services** (so-called vouchers) under contracts for work or services.

Lastly, it should be noted that, as part of its corporate social responsibility, the Hera Group pays constant attention to **checking regularity of social security payments** through the automated and centralised tool that came into operation in 2018, which responsibly involves the entire corporate supply chain involved in the management of supplies, so as to make this control even more systematic and widespread.

Diversity and inclusion

Hera Group's commitment in the area of **inclusion policies and protection of diversity** started way back and was strengthened in 2009 with the **signing of the Charter for equal opportunities and equality at work**, through which the company committed itself, together with other public and private parties, in the fight against workplace discrimination. Furthermore, the introduction in 2011 of the **Diversity Manager** was essential, aimed at further encouraging processes for developing inclusion and diversity enhancement policies. A **working group** was also set up in 2011 composed of Group company employees of different ages, roles, professions and training which under the coordination of the Diversity Manager deals with diversity and inclusion projects, activities and initiatives. In the previous year, Hera also signed the "**Patto Utilitalia - Diversity makes the Difference**", a programme of principles and tangible commitments to promote inclusion in corporate activities. Promoted by Utilitalia (the Federation of Water, Environmental and Energy Companies) to its associates, the agreement supports: inclusive policies at all levels of the organisations; work/life balance measures; transparent management of merit that is neutral with respect to gender, age and culture; the adoption of progress monitoring systems; and internal and external awareness-raising policies.

In 2020 Hera received **important recognitions** from the principal financial, national and global indices, dedicated to investors who pay particular attention to policies of inclusion and enhancement of diversity: Hera in fact was included for the first time in the **Bloomberg Gender-Equality Index**, the global index which, by examining 11,700 companies in the world committed to the promotion and creation of equitable and inclusive workplaces, is a fundamental reference for the responsible financial community.

Further proof of the Group's focus on the subjects of diversity is the score obtained in the "**Diversity & Inclusion Index 2020**" of Refinitiv (formerly Thomson Reuters), in which Hera is 12th in the world, second in Italy and by far the first multi-utility out of a sample of more than 9,000 listed companies worldwide.

Workshops were planned and organised over the years across the Group's offices with top-level spokespersons on topics of interest such as: "**From CV to happiness**", to support the professional development of women who tackle the difficulties of the labour world on a daily basis. In 2017, the meetings focused on the topic "**Beyond gender culture**", regarding gender stereotypes; the meetings had great success, especially the satirical monologue by Alessandra Faiella "**Barbie's Version**".

In 2018, the “**Sconfinate Energie**” (Boundless Energy) event was organised to promote the culture of disability and inclusion in the Group, with the participation of the dancer Simona Atzori, the band Rulli Frulli and the storyteller Matteo Bortolotti who ably told the stories of some Group workers.

In 2019, cooperation with the associations involved in the **HeraSolidale** project led to an event to raise awareness of all types of short- and long-term diversity, **Who is more different? Let’s work on it together**. The event greatly involved the workforce and also included a speech by Prof. Stefano Zamagni on innovation linked to diversity: companies that pursue the ideal of innovation cannot ignore the fact that people need highly stimulating work environments full of different and diversified social relationships.

In order to raise awareness in all employees of **increasingly inclusive behaviour**, Hera put a game called **Diversity@Work** on the company intranet, which provides feedback on possible everyday situations in which the player has to make behavioural decisions. The **revision of the Code of Ethics** in 2019 implemented the principles of respect for diversity and inclusion with an even broader view and cutting across the various articles.

The Group has always been careful that its communication is free of gender stereotypes and in 2019 it took a further step towards inclusion. Since there is an increasing number of non-native Italian speakers among Hera Comm’s customers, a simple and convenient commercial offer was designed for them, accompanied by a **multi-lingual (Italian, English, French and Albanian) pre- and after-sales service** to make it even easier to use this offer.

In 2020 the Group's commitment continued on inclusive language by organising a cycle of online meetings for employees which will end in 2021, during which the subject is discussed emphasizing the **stereotypes** which are created in the words used to exclude and not to include, with practical examples and the possibility for the participants to self-evaluate their own forms of expression.

During 2020 a series of online meetings were also organised on the subject of **respect**, an increasingly important and fundamental subject also as a result of the emergency situation experienced during the year which brought to light individual frailties and personal complexities and the need to understand and respect all partners from both a professional and personal point of view.

In 2020 it was not possible to organise participatory in-person events and the activity in the schools “**Inspiring girls**” in which Hera actively participates was temporarily suspended. It is a project aimed at **fighting gender stereotypes** and designed for lower secondary school boys and girls: an opportunity for students to discuss with leading and successful female managers and professionals who share their daily experience and bear witness to how hidden gender-related prejudices can actually be overcome and how it is possible to build a satisfactory life both professionally and personally.

Women staff (breakdown by position) [405-1]

%	2018	2019	2020
Managers	19.5%	19.7%	21.7%
Middle managers	32.4%	32.7%	32.2%
<i>Total managers and middle managers</i>	<i>29.6%</i>	<i>29.9%</i>	<i>29.9%</i>
Management employees	33.6%	34.2%	34.0%
<i>Total managers, middle managers and management employees</i>	<i>32.3%</i>	<i>32.8%</i>	<i>32.6%</i>
Non-management employees	41.9%	45.2%	45.4%
<i>Total employees</i>	<i>39.4%</i>	<i>42.1%</i>	<i>42.2%</i>
Blue-collar workers	2.9%	2.9%	2.6%
Total	24.7%	26.6%	26.7%

Data as at 31 December.

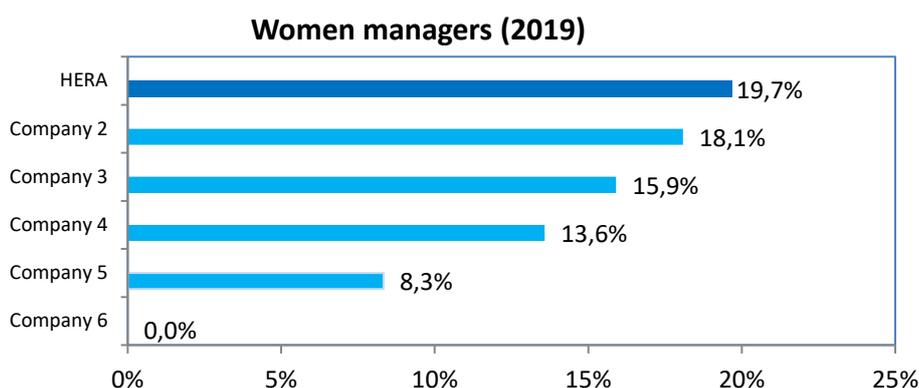
At the end 2020, women staff levels among open-ended contract workers reached 26.7%, compared to a national average in the energy-water-waste management sector of 15.9% (Eurostat 2014, most recent data available).

The impact of female personnel among managers and middle managers settled at 29.9%, stable compared to 2019. A slight decrease is noted considering all contractual qualifications that provide for a **managerial role** (managers, middle managers and management employees): women comprise **32.6%** in 2020. To complete the picture regarding roles of responsibility, 38% of women were involved in career advancements (middle managers and managers) in 2020 and almost 43% in the career advancements of managers, middle managers and employees. Finally, with regard to the composition of the Board of Directors, members are appointed in full compliance with the equal balance of gender required by Italian Law No. 160/2019: the share reserved to women is **2/5 of the Board of Directors in office**.

Of the 738 career advancements in 2020, 216 involved female workers; excluding blue-collar workers where female workers account for around 2.6% of the total, career advancements involving female workers accounted for 42.6% of the total. 37.5% of new middle managers e managers are women.

Women holding roles of responsibility in the main Italian utilities

In a comparison between the principal Italian utilities conducted by Utilitatis, Hera is in first place among the six multi-utility companies in terms of percentage of women managers.



Source: Utilitatis, 2020 Sustainability Benchmarking (2019 data)

Personnel by age group

%	2018	2019	2020
Under 30 years of age	4.2%	5.0%	5.6%
between 30 and 50 years of age	44.5%	48.1%	47.4%
between 50 and 60 years of age	46.1%	41.8%	40.8%
over 60 years of age	5.1%	5.1%	6.2%
Total	100%	100%	100%

Data as at 31 December.

There are 4,390 workers who are over 50 years of age: 578 of these are over 60 years of age. The 50 and over quota (47% of the total) remains stable compared to 2019. Instead the under 30 year old increases by 12%.

Part-time contracts

qty	2018	2019	2020
Men	47	49	44
Women	320	351	350
Total	367	400	394

Data as at 31 December.

Workforce by gender and type of contract (2020)

qty	Men	Women	Total
Full-time	6,668	2,129	8,797
Part-time	45	349	394
Total	6,713	2,478	9,191

Data as at 31 December.

Part-time arrangements, as regulated by current labour agreements, are considered a valid tool for responding to labour flexibility **needs** both in terms of organisational and employee needs. They are characterised by the voluntariness, reversibility and compatibility with the technical, organisational and productive needs of the company and the needs of workers. Family and health needs, the need to help others with disabilities, and cases of serious illness (duly certified as such) are our priority considerations in assessing applications. The persons to whom staff members report must consider how viable the contracts the applicants seek are in terms of corporate needs: if it is concluded that the contract is viable, the changes will be made.

In 2020, 71 requests for part-time arrangements were submitted; all were accepted. Preference towards part-time work among female workers continued to be strong.

Ratio of basic salary and remuneration of women to men (2020) [405-2]

%	2020
Managers	84.5%
Middle managers	96.3%
White-collar workers	92.2%
Blue-collar workers	99.6%

The **salary gap between men and women** within the management class is significant (84.5%): this figure is influenced by the number of female directors (5 out of 40). Much lower salary gap for middle managers, white-collar workers and blue-collar workers. The salary gap between men and women is due to the fact that 66% of management employees are male. Regarding middle managers, white-collar workers and blue-collar workers, the ratio of the remuneration of women to that of men is equal to 96.3%, 92.2% and 99.6%, and is higher than the national average of 95% and European average of 86% (Source: Eurostat 2018). The overall salary gap is equal to 101% for the basic salary and 102% for total compensation compared to an average of 92% in the gas and electricity sector and 96% in the water and waste sector (Source: Istat 2017). The gap is obviously influenced by the level of seniority as well as - as regards the qualifications of the blue-collar and white-collar workers - by the level of classification.

The Group's remuneration policy system is based on the ability to recognise the most appropriate remuneration package depending on the individual performance achieved, skills put into practice, organisational position held and specific comparison on the market. Any remuneration gap between individuals can be attributed exclusively to these factors and is in no way influenced, except as provided for by the relevant NCLA, by other elements (age, gender, culture, etc....).

Maternity, paternity and parental leave [401-3]

qty	2018	2019	2020
Maternity leave taken	142	138	148
Paternity leave taken	259	267	556

The number of mandatory maternity and paternity leaves taken in the Group during 2020 amounted to 148. The number of paternity leaves taken amounted to 556 and the average duration per capita was 10 days per year for men and 30 days for women. The increase in parental leave taken in 2020 is due to the request stemming from the healthcare emergency.

The percentage of women returning from maternity leave amounts to 100% like the percentage of women who are still employees 12 months following their return.

Development of new skills within the Hera Group

Starting in the past few years and with a further acceleration in 2020, the HERA Group has developed various training projects and initiatives for its employees in order to support their needed development of **new skills** and to embrace the **digital transformation**.

Every year, the "map" of the workers' skills is updated by analysing the evolution (new skills and those in transformation and declining); among the **principal initiatives** already launched or in progress regarding new skills and those being "transformed" we list the following:

- Distribution of training content aimed at supporting the increase in **remote work**, linked also to the health emergency situation, with specific focus devoted to **scheduling of the activities** and **remote cooperation** (for everyone) and the **delegation** and **management of the teams remotely** (for the managers);
- Distribution of the new survey **HER@futura** (63% of workers participating and 44% of workers with "*digital proficiency*", understood as complete possession of the soft digital skills) updated relative to the technological and industry references with the new model "Digital DNA" founded on three significant areas of skills ("soft, hard e job-related skills", then integrated with specific views on Organisational Agility and Data analytics); between 2018 and 2020, over 8,000 employees participated in at least one training initiative of the HER@futura programme;
- a change management plan related to the implementation of the **Digital Workplace Office 365**, continuing to provide training content focused on the use of digital instruments and application workshops designed for the digitalisation of operational micro-processes;
- specific training initiatives on skills in **data analytics** and **data visualization**;
- subscriptions and participation in initiatives specific to the **Digital Innovation Observatories** of the Politecnico di Milano for resources involved in innovation projects in the Group's various Business Units;
- **Action Learning** initiatives with Design Thinking and Lean Start Up (Digital Lab) approaches, aimed at the development of prototypes by transversal groups, for resources with high potential and strong propensity to digital innovation (four projects with 24 resources involved);
- training on the subject of circular economy, such as participation in various initiatives (including the workshop "Circular Economy and SDG 12" aimed at promoting the spread of the culture focused on knowledgeable and sustainable management of the resources and waste from the point of view of circular economy and the widespread initiatives connected to the presence of HERA in the CE100 network of the Ellen MacArthur Foundation);
- transversal training initiatives to strengthen **influencing and negotiation** skills, in particular for managers (leadership model, and speeches on advanced management negotiation techniques, institution training);

- vertical training initiatives on advanced skills related to **cybersecurity** for resources in the field of security and environmental quality and in the field of information systems; also on the subject of cybersecurity, the start of the program **Cyber guru** aimed at raising awareness and the widespread training of the entire corporate population;
- training on **new core corporate applications** (such as: Geocall, Salesforce, Oracle, YuBSC).

Further initiatives are planned for **2021** such as for example:

- Training initiatives connected to the development of new skills (new business and value-added services; decarbonisation, energy transition and climate change; green and ESG finance, EU taxonomy; risk management; resilience and stress tolerance; digital workplace tools).
- programme of widespread initiatives connected to the circular economy subject;
- consolidation of digital transformation and data analytics initiatives (Phase 2 of the HER@futura programme), with further evolution towards aspects of Intelligent Automation and focus on Artificial Intelligence;
- continuation of the change management programme related to the Digital Workplace – Office 365 project with possible evolution towards the Power Platform;
- change management programmes connected to the implementation of the new CRM application (Salesforce) and the development of skills relative to the "digital operator" in Operations;
- programme to further raise awareness and generate awareness of cybersecurity;
- initiatives to further disseminate the culture of innovation;

Development of digital skills

The principal initiative launched in the new digital skills area is the **HER@futura** course, focused on the development of the dimensions of culture, processes, skills and tools through the identification, examination and enhancement of the needs and peculiarities of the various segments of the corporate population, considering the current context of reference and the relative complexity. The initiatives anticipated include: training capsules, webinars, participation in projects with workshops and application sessions, Action learning projects (digital lab and virtual factory), participation in master's classes and external interventions also in Massive Online Open Courses (MOOC) mode, envisioning events and celebration of the results. In particular, in the change management area relative to the Digital Workplace, a support network has been established for the digitalisation of work and processes methods, composed of 28 Guides and over 1000 tutors, whose accrued experience and knowledge has been collected in a sharing environment called "Knowledge Platform". From 2018 to the present, over **8,000 resources** have been involved in at least one training initiative.

Concurrently with the change management process, **internal meetings are held between the Group's top management**, coordinated by its CEO, to update top management on the progress of the initiatives underway in the various business units area concerning **digitalisation and data analytics**. These internal meetings involved dozens of people within the HERA Group. During the year, the work team met three times and monitored the progress of 13 projects, both as operations and as customer management. The main projects, some of which are still in progress, concern:

- development of a preventive maintenance system for gas networks that uses Internet of Things technologies and data analysis tools to collect present and past data and make future forecasts;
- business intelligence systems for energy efficiency and process quality of purification plants;
- use of deep learning and natural language processing technologies for the proper classification of emergency calls, to support the technical call centre operators;
- remote analysis and optimisation of assets by using augmented reality and experimentation with drones;

- use of RPA (Robotic Process Automation) artificial intelligence systems to automate processes that involve repetitive and time-consuming activities, in particular in administrative work and back-office customer management;
- use of advanced analytics to improve customer service quality and customer experience through customer base clustering models and value extraction from consumption data to promote energy savings (Diario dei consumi).

Hera Educational for school-work alternation

In 2020, the Group continued its activities with the "Hera Educational" system with the creation of the **Pathways for transversal skills and orientation**, previously called joint school-work experiences, based on the joint design of company skills and educational plans for the individual courses of study. In 2020 a total of **13 courses** were carried out (10 in Emilia-Romagna and 3 in Triveneto), a decrease compared to the previous year because of the restrictions connected to the healthcare emergency. These courses were completed before the interruption of the in-person activities.

In the second half of 2020, the focus of the Group was the **redesigning for the 2020/2021 school year** of the annual courses for transversal skills and for guidance (previously called work-study courses) with activities that can be used remotely, such as project work, training capsules on digital skills, meetings on work guidance.

During 2020, because of the healthcare emergency, it was not possible to create interventions relative to the initiative "**Hera teaches you a trade...at school**", which was reconfigured to be given remotely for the 2020/2021 school year anticipating the participation of employees of the HERA Group as teachers at technical institutes of the reference territory (currently the territories of Forlì, Modena and Ravenna).

In 2020, the joint planning of the **three-year courses of curricular integration** from the point of view of strategic workforce management continued, which includes a teaching phase conducted by Hera staff at the school; then, from the second year of the project, the creation of pathways for transversal skills and for orientation which are designed in line with the topics addressed during the teaching phase. In particular:

- the joint planning of the training contents of the curricular integration pathway continued which was launched in 2019 in an institute in Ferrara relative to the "Mechanical Energy" articulation which will continue with remote teaching in the first half 2021;
- the joint planning was started with an institute in Bologna relative to the "Mechanical, Mechatronic and Energy" and "Automation" articulations of "Electronics and Automation", which will continue with remote teaching in the first half 2021.

Lastly, in 2020, the Group continued the activities in the international "**GrEnFin – Greening Energy Market and Finance**" project, financed by the European Commission and implemented by a broad international partnership of Universities and companies, coordinated by the University of Bologna. The aim of the project is the development of skills to support the **energy transition** and the **decarbonisation** of the European economy. Specifically, Hera will provide its expert contribution to the project in terms of content, methodologies and application experimentation. It will be directly responsible for implementing the "Professional module targeted to the Energy sector professionals" package within the scope of the partnership, and will participate by carrying out teaching activities in the international summer schools.

Sustainability among the "new skills" of young people: Hera Group's contribution

Environmental education

For years the Hera Group has been promoting many **environmental education projects**, in all the areas served, to raise awareness in schools and young people on issues related to its services making available a variety of company skills. Numerous activities and educational courses have been offered the contents of

which are **renewed and updated** every year, so they are always engaging and interactive, with scientific laboratories, shows, debates, challenges and guided tours to the Group's plants.

The project for the 2020-2021 year has completely renovated content and educational methods. Numerous **in-person** or **remote** activities are offered: interviews by the children as testimonial of innovative thinking, technological development and sustainable company visions, laboratories, streaming events, debates, and web journals, all on subjects referable to the **objectives** of Agenda 2030. "**ReActivate!**" is the title that serves as common thread for all the activities, to stimulate curiosity and ability of the children to act and re-act to the change and face the challenges of the future as participants. The **XV** Edition gives space to a large number of subjects, all handled from a perspective of integration of the various disciplines to be able to really capture the transition towards a model of society that is more circular and sustainable: the green professions of the future, research at the edge of the world, artificial intelligence, sustainable consumption, innovative technologies and solutions to counteract climate change, how to communicate science between opinions and scientific truth, the risks of the network and fake news, the connections with the environment that surrounds us.

The attention that the HERA Group dedicates to young people was further consolidated with the **tenth edition** in 2020 of the project **The Great Machine of the World** which involved schools from early childhood to secondary schools. It is a high quality educational project designed to support teachers in focusing, enriching and completing the school pathway of the youngest children, becoming over time an important reference point for increasing the awareness and knowledge of the children in the **most current environmental and social subjects** by stimulating them to render their own behaviours and lifestyles more sustainable for the planet. The increasingly rooted conviction that drives the HERA Group to continue to offer this initiative is in fact that we learn from when we are very young to be informed citizens focused on the environment, reason why the activity is improved and updated with care and attention year after year, designing new course and using innovative educational methods and languages. The Great Machine of the World did **not stop** even in 2020, despite the difficult context of the healthcare emergency and its strong impact on schools and education. Right after the schools closed, Hera in fact promptly made available 12 courses for early childhood, primary and secondary schools **specifically redesigned for remote use online** with the objective of remaining alongside teachers and students and to allow the classes to conduct activities, laboratories and meetings online with the help of in-depth materials and dedicated support instruments.

AcegasApsAmga, also, by interpreting the role of public utility not only as provider of public services but also as active all-around subject in the promotion of a culture of sustainability benefiting the quality of life and the protection of the resources, reinforces and expands its commitments in favour of environmental education in the schools, offering for example to students and teachers the possibility of **accessing the principal water and waste treatment plants**. Furthermore, following the problems that involved the world of the school during 2020, AcegasApsAmga also developed the educational projects "The Great Machine of the World" and "A Well of Science" in digital format, involving personalities known in the territory to promote the activities online. In the same spirit, during the year videos were produced to permit virtual visits to the company plants of Errera, San Lazzaro, the treatment plant of Servola and the aqueduct of Trieste and Padua.

Environmental education projects

qty	2018	2019	2020
Participating students	106,547	118,788	93,053
Schools involved	1,278	1,440	1,281
Teachers involved	8,821	10,128	8,039

Compared to 2019, in 2020 there was a decrease in the number of students (-22%), schools (-11%) and teachers (-21%) involved in the environmental education projects compared to previous years. This was the result of the healthcare emergency that reduced the possibility of conducting in-person educational activities.

In the area managed by **Hera in Emilia-Romagna** 82,286 students and 7,043 teachers were involved of 1,079 schools between early childhood, primary and secondary. Before the healthcare emergency period, 6,867 students of 149 schools were able to conduct the environmental education activities in person. 2,641 **laboratories** were held with the tutoring of expert educations with direct video lessons or, for the classes which were not able to connect directly, through the use of specifically created educational kits. About 24,000 students of 80 schools in Emilia-Romagna, 2,000 more than the previous school year (+9%) joined the **scientific dissemination courses** reserved for higher education institutes at the start of the school year, confirming that the interdisciplinary approach and the subjects offered which involve science, technology, innovation and sustainability are **topical, of great interest and high scientific level**. Before the healthcare emergency period, 8,750 students of 31 schools managed to hold 127 in-person activities. Following the closing of the institutes, the HERA Group **redesigned** nine "science stories" and three theme laboratories in virtual classrooms which could be **used online** on the Hera portal for schools, with capsule videos, experiments and digital in-depth materials dedicated to the institutes that could not participate in the in-person activities. The total views of the virtual classroom section were around 6000.

Resilience and adjustment

Resilient aqueduct and water source management

[303-1]

Our reaffirmed commitment to protection of water resources led us to identify **measures to enhance and renovate the aqueduct infrastructure**, to counter the effects of droughts, increase the reliability of supply and the overall resilience of the systems, increasingly called to support new operating conditions to best cope with current climate change. In this regard, various scenarios have been defined, which can be grouped on the one hand to the **supplementation or partial replacement** of the sources currently exploited, and on the other hand to the creation of **interconnections** to allow the exchange of resources and the possibility of dealing with emergency conditions.

In relation to the **integration of supply sources**, in the Emilia area, the design hypotheses of water withdrawal from the Emiliano-Romagnolo Canal to service the municipalities of the Bologna Plain, the construction of radial wells for uptake from the Po riverbed in Pontelagoscuro, the upgrading of the water supply system in Castel Bolognese, and the construction of a new treatment plant from the surface waters of the Secchia. Some of these project hypotheses have been included in the proposals for identifying the second list of necessary and urgent interventions for the water sector for the purpose of updating the "aqueducts" section of the national plan and in the hypotheses of interventions for the water service by Utilitalia reconnaissance for possible inclusion in the **Recovery Fund initiatives**, and will therefore be able to take on a greater definition, primarily in relation to the national recognition of the infrastructural strategic value of these interventions and, subsequently, also in relation to the results of the evaluation and approval of the local authorities in charge (Rer, Arpa, Atersir). **Interconnection** interventions between territorial aqueduct systems have also been implemented in various consolidated areas with the aim of ensuring greater system resilience.

In 2020, Hera consolidated its commitment to **drought risk prevention** measures, launching integrated projects and actions with other stakeholders for a better understanding of the **impacts of climate change** on the availability of surface and underground water resources. In this regard, the "**Climate Bologna**" project, developed by Nomisma and the Euro-Mediterranean Centre on Climate Change (CMCC) with the contribution of various stakeholders, including the Hera Group, made it possible to focus on water demand trends, correlating them to the current and prospective socio-economic analysis of the metropolitan area of Bologna and the expected climatic scenarios in the Reno river basin. It was thus possible to better identify the **water availability of the Reno river basin** in relation to trends of average areal temperature and precipitation entering the adopted hydro-geological model.

With particular reference to the **monitoring of underground sources**, a study was also conducted with the University of Bologna to analyse the propagation times of meteorological droughts and the phenomena of refilling and emptying the groundwater and to manage the response to any long-term droughts. With this project it will be possible to enhance the monitoring of underground sources by developing an **artificial intelligence system** to predict multi-year drought events, adopting progressive strategies for different alert levels. Another collaboration with the University of Bologna was started in relation to the **potential of the Apennine aquifers**, to evaluate possible improvement interventions on the catchments, with particular reference to the critical areas of Arpolli and Tolè/Vergato.

During 2020, the **sensitivity analysis on pipeline breaks** was also completed, which made it possible to identify the most critical factors for the risk of breakage, in relation to the most specific variables of the aqueduct infrastructure, as well as to exogenous variables such as soil type, groundwater depth, salinity, climatic conditions. This study made it possible to understand the **development of predictive algorithms on the risk of breakages**: in particular, on the Romagna perimeter predictive models with dynamic weights were positively tested which, by processing the information relating to the historical series of breakages

and the specific exogenous factors of the area, guided the search for leakages and renovations of the network with increasing effectiveness. In addition, the analysis of the behaviour of the materials according to the boundary conditions made it possible to redefine the **guidelines for the materials to be used** in the renovation of the network, in order to reduce the propensity to the risk of breakage, which can be affected by interactions with the soil type, salinity, groundwater level or climatic conditions.

In addition to the new work described above, we would like to mention what we have done **in recent years**, which has made it possible to cope with a particularly dry summer in 2017, an exceptional condition that could occur again in the future. In the Apennines, the **Modena area** has been equipped over the years with infrastructure designed to manage the water requirements and the original municipal aqueducts have been interconnected so that the physical integration of each of them makes up an infrastructure system capable of mutuality and subsidiarity. In the **Apennines area near Bologna**, on the other hand, the interconnection with the Modena system, the construction of two new storage and pumping plants made it possible to reduce reliance on tanker trucks to supply water tanks in the mountains in situations of particular criticality regarding the sources. In 2020, in Hera Spa's service area, 1,917 m³ were distributed to manage water shortages or drought of the source, which represent about 0.00064% of the volume fed into the network. In **Romagna**, where Hera operates mainly as a distributor, Romagna Acque Società delle Fonti built the "Standiana" drinking water plant (capable of treating a flow of 1,100 l/sec) in the Ravenna area in response to the problem of water reserves on the Adriatic coast, a major tourist destination, supplementing the Ridracoli feeding system.

The construction of the **Reno-Setta feeder channel**, in 2010, was a fundamental measure for the Bologna area, the substantial results of which can now be quantified. As requested by the Regional Government of Emilia-Romagna among the offsetting measures for the construction of the Variante di Valico, the feeder channel conveys part of the water from the Reno river to the Sasso Marconi drinking water plant, in order to supplement the abduction from the Setta torrent, increasing the volumes of drinking water purified from surface sources and thus reducing groundwater withdrawals from well fields in the plains. The analysis of past data on the water table levels in the Bolognese plain (average static levels of the five stations of Borgo, Tiro, S. Vitale, Mirandola, and Fossolo) and the monthly volumes taken from the water table, from 2002 to 2018, shows an **increase in the water table level** after 2010 and a **substantial decrease in volumes withdrawn**. In particular, it is noted that before 2010 the average static level was about -50 meters from the ground level, while from 2010 to 2018 the average was around -42/-43 meters, with an average level increase of 7/8 meters. With regard to the volumes before and after 2010, the difference corresponds to 531,000 cubic meters/month less withdrawn on average from the aquifers (6,370,000 cubic meters/year). It is therefore possible to estimate that about 50 million m³ less groundwater has been withdrawn in well over eight years, a volume equivalent to about seven months of the total production of the primary system. This is a **decisive contribution from an economic point of view of the circular economy of the water resource that benefits both the environment** (reduction of subsidence) **and the service** (increase in groundwater storage).

In the areas managed by **AcegasApsAmga**, the **Padua** and **Trieste** collection systems both draw from a mix of deep water aquifer, sub-aquifer and surface water, capable of ensuring a diversification of production to guarantee the reliability of the system. A **sensor system** has been installed in all the collection systems which, connected to the remote control system in Forlì, ensures continuous quantitative monitoring of the resource. Furthermore, a periodic sampling campaign is carried out to guarantee the quality control of the resource, as required by the monitoring plans.

Already in 2003 (the year of the historical minimum aquifer level), the main wells in the **Vicenza** and **Isonzo** areas were equipped with pumps on the well heads to guarantee collection even in critical aquifer conditions. In addition, in the two-year period of 2019/2020, two interconnections were made in the Piovese network in the towns of Martinelle and Comunanze, with the aqueduct system of the Veneto Region which will guarantee a further supply of up to 100 l/s.

Lastly, over the course of the plan (2021-2024), **innovative pressure regulation systems** will be implemented, making the Hera Group's water networks even more resilient to environmental stresses. For example, with the **Smart water grids**, which already make the water network “intelligent”, it is possible to exercise active remote control over the network with the possibility of acting on the pressure; in collaboration with Grundfos, systems capable of “self-learning” and optimally regulating the system pressure are currently being tested. In the Cento district, the project envisages the installation of two lifting systems with combined "self-learning" logic. The expected benefits from the implementation of this project include: **reduced energy consumption** without decreasing the quality of the service provided; reduced pressure, resulting in **fewer breakages and the need for network maintenance**; **reduced withdrawal** of water resources. In the Budrio district, the goal (currently undergoing a feasibility check with the supplier) is to apply the pumping control logics developed by Grundfos to pressure reduction units, developing a technology that is not yet present on the market. It is estimated that the implementation of this project would allow a **10% reduction in disruptions to the district network** compared to the previous three years.

How does the project contribute to responsible digital transformation? The benefits we obtained in the Corporate digital responsibility dimensions (see the dedicated section "Corporate digital responsibility")

Environmental



Use of artificial intelligence and sensor algorithms for the monitoring of water sources and the implementation of intervention strategies to strengthen the operational response to drought events.

Economic



Development of predictive algorithms on the risk of breakages that can more effectively orient the search for losses, aimed at greater efficiency of interventions, and a consequent reduction in operating costs.

Interventions in gas networks to deal with hydrogeological instability

In the face of the adverse climatic events and **hydrogeological instability** situations encountered in the Emilia-Romagna area, in recent years an intense **collaboration** has been undertaken between the company Inrete Distribuzione Energia, the Region of Emilia-Romagna and the Civil Protection Department with the aim of allocating some funds to restoring emergency situations and increasing synergies between infrastructure managers and public bodies.

In particular, the Civil Protection Department is responsible for carrying out a preliminary reconnaissance phase to intercept any problems on the regional territory. Following the collection of reports, which may come from infrastructure management bodies, municipalities, public authorities and reclamation consortia, the proposed interventions are examined and, if successful, financed. Inrete Distribuzione Energia manages about 2000 km of gas network in the foothill-mountain area, often subject to instability phenomena; this makes it necessary and desirable to collaborate closely with the bodies responsible for **safeguarding the territory**.

Numerous interventions are implemented in this context. Details are provided below, differentiating between interventions already approved (i.e. already accompanied by the financial coverage of the Region) and interventions yet to be approved (i.e. proposed in the recognition phase but still under consideration by the Region):

- approved interventions: in the year 2021 and out of a total of 16 interventions (15 in the gas sector and one in the electricity sector), 1.1 million euros were paid out against 2.3 million made available by the regional emergency plans, corresponding to the 46% of the amounts payable. The interventions that have already been approved must be completed within the current year.
- Interventions to be approved: seven interventions are under consideration (five in the gas sector and two in the electricity sector), totalling 1.7 million euros.

Resilience of electricity grids

Inrete Distribuzione Energia has developed the work plan to **increase the resilience of the electrical system** according to Arera's guidelines. The plan takes into account the risk factor arising from the **formation of ice and snow sleeves**.

The scope of the plan was defined on the basis of the mechanical stress and the mechanical characteristics of the conductors, the geometric characteristics of the lines and their geographical and altimetric location. It includes the municipalities of Fanano, Fiumalbo, Guiglia, Lama Mocogno, Montecreto, Montese, Pavullo nel Frignano, Pievepelago, Polinago, Riolunato, Sestola and Zocca, in the Province of Modena. We analysed the medium-voltage distribution network, identifying the secondary substations included in the perimeter of the plan that supply the most **critical users** and considering the best power supply route for them, along which all the sections of overhead conductors with an unsuitable section were identified and which must therefore be replaced.

The type of measure planned to address such critical issues consists mainly in **replacing** the sections of bare overhead conductors whose sections are not suitable to withstand the stresses considered, **with overhead cables with spiral reinforcements of an appropriate section**, initially expected to follow the same route of the existing lines. The plan consists of **54 interventions** on 15 medium voltage distribution lines to optimise activities, giving priority to the most critical areas and with a view to minimising the impacts on the distribution service, aimed in any case at reducing the risk of disruption and the strengthening of the electric power lines

To date, the planned and preparatory measures have been implemented on the primary/secondary substations, increasing the possibility of improving service continuity and the renovation of the first 7.3 km of network. In 2021, another **13 interventions are envisaged** in addition to the first nine completed by 2020

Furthermore, among the various projects defined over the course of the plan (2021-2024) in favour of the resilience of the electricity grid supply chain, there are also new operational methods of **inspection** and **remote management**. In order to manage the electricity distribution network more effectively, the Group is in fact implementing projects aimed at optimising the inspection and maintenance of assets through the use of technology. Among these, the **use of drones** will make it possible to carry out a significantly higher number of preventive inspections of overhead power lines, more frequently intercepting potential problems on infrastructures. The **robotic** interventions and **remote control extension** of the secondary substations and their fibre optic connection will allow remote intervention without the activation of the operating teams, reducing costs and intervention times. The project will play an even more decisive role in the Apennine areas, where atmospheric events often cause difficulties for technical operations.

Managing the healthcare emergency

For more than a year now, the Coronavirus pandemic, which has hit the entire planet, has been placing people, institutions and companies in front of new challenges: first of all, the healthcare challenge for the protection of people's health, but also the economic challenge for the effects on productive and social activities due to a sudden change in people's lifestyle habits.

Since the beginning of the healthcare emergency, the Group has adopted, thanks to its resilience in every strategic area, a structured and organic crisis management model, proactively committing itself to constantly updating operational plans based on the evolution of the situation, to ensure compliance with the measures in support of services and safety, to ensure continuous information to company personnel and stakeholders, and to implement all the containment actions to reduce economic and financial impacts. In relation to this last aspect, the management has equipped itself with a weekly report, which, through specific indicators, makes it possible to monitor the progress of businesses in relation to the impacts of the pandemic on the socio-economic fabric in which the Group operates. In particular, focus was placed both

on quantitative business data (consumption recorded, volumes managed, services performed) which, with their fluctuations, better represent the indication of the economic trend of the industrial sector, and on data relating to the management of customers to better understand the financial dynamics related to liquidity risk. This continuous monitoring allows management to promptly undertake the corrective actions necessary to mitigate or compensate for the negative effects deriving from the crisis. The Group has also been able to seize a series of opportunities from this context of crisis, especially in terms of digital transformation of services and processes, while at the same time managing the consequent emerging risks, especially in the area of IT security.

For each key area impacted by the crisis, the actions taken by the Group to deal with the healthcare emergency and adapt to the new context in which its operating processes must be implemented are illustrated below.

Continuity of service and stakeholder relations

To ensure the continuity of essential services for residents while respecting the safety, reliability and efficiency criteria, we revised the operation and maintenance schedules for networks and plants, limiting them to those that cannot be postponed and postponing those that are not essential according to the limitations set by emergency regulations. Physical contacts are limited only to activities that are essential for the service continuity, for which the physical presence of staff is actually required. Branch offices, following government regulations, were closed during the most critical periods of the emergency. During this period, the Group has always provided continuity of services to customers through the existing telephone and digital channels, which have been further enhanced. Appropriate prevention and protection measures for workers and users were put in place before re-opening the branch offices.

Together with the municipal administrations, we performed targeted street sanitation and set up dedicated waste collection services for Covid-19 positive or quarantined residents. For door-to-door collection, we gave customers the option to request an additional extraordinary collection run. For people in isolation, as specified by the municipalities we serve, we set up a home collection service with specialised suppliers.

The Group was involved in the pilot project launched by the Istituto Superiore di Sanità (Higher Institute of Health) to detect the presence of Covid-19 in urban sewage, to research and measure the concentrations of the virus in the samples collected, to enable monitoring to provide guidance on the progress of the epidemic. The Group's analysis laboratory was identified as the regional reference structure, responsible for sampling, analysis and sending the analytical results to ISS, for the entire Emilia-Romagna region.

Hera also provided its expertise free of charge to the Emilia-Romagna Civil Protection Department for the development of two software packages designed to manage stocks and distribute personal protective equipment, particularly gloves and masks.

Lastly, the Group actively collaborated with Utilitalia to provide the Civil Protection and the Ministry of Health with the data needed to determine the quantity of vaccine to be allocated to all the employees of Italian multi-utilities who provide essential public services.

In order to prevent critical issues related to the supply chain, we identified essential categories for the Group's activities, and established some monitoring indicators. Suppliers working with the Group must adopt the same protection measures for their employees as those already enforced at Hera. Access to premises continues to be restricted and reserved for necessary circumstances only. To support the small and medium sized companies that are creditors of supplies or services and to allow these companies to have an additional source of financing, the Group is continuing to offer the possibility of accepting the release of their receivables, providing all the support necessary to finalise the related factoring operations.

Customers are encouraged to use digital channels, also for taking readings. Arera has adopted specific regulatory provisions to protect users of electricity, gas and integrated water services. The Group had, however, decided to act in advance giving households and businesses in objective economic difficulty the possibility of requesting 30-day deferrals of bills due by 30 June 2020 or paying them in three instalments

over the subsequent three months. Hera is not charging any interest for late payment. In addition, payment in six instalments was offered to:

- customers who were unemployed or on unemployment benefits at the time the bill arrived,
- self-employed persons benefiting from income support measures,
- businesses that were subject to emergency-related closure measures at the time of the request.

In the municipalities in which Hera applies quantity-based charging for waste, the Group deferred the first instalment for 2020 for all non-residential users without applying any interest charges.

However, the deferrals granted did not have a negative impact on the Group's liquidity, thanks to credit management activities and the substantial improvement in the timing of collection of due credit.

Lastly, to support local farms, Herambiente donated more than 22 thousand tonnes of compost up to July 2020.

Health and safety

Implementing the Italian national protocol signed by the labour unions in the presence of the Government, a regulatory document was developed that represents the set of prevention and protection measures adopted to counter the spread of the virus. This document has been subject to several reviews by the competent authorities (Ausl/Ispettorato del Lavoro), which have confirmed the validity of its contents, and was presented and signed by the national trade unions on 15 May 2020. The protocol is continually updated on the basis of the progress of the pandemic, to maintain it consistent with the development of the national regulatory framework and the changes in prevention and protection measures.

Considering the specific nature of its business and its geographical presence, the Group has established criteria for identifying risk scenarios due to the spread of the Covid-19 virus using an Enterprise Risk Management approach. We used these criteria, together with the measures established in the Group's protocol to update the risk assessment document. Our decision to have a single Group model to assess risks and define prevention and protection measures enabled us to take an integrated and synergistic approach. After the protocol was drawn up, the measures adopted and their implementation are periodically monitored. In this respect, a specific check list was developed for periodic monitoring by the heads of the various organisational units. At the date of preparation of this report, approximately 5,000 checklists had been completed and managed.

In accordance with the indications of the health authorities and in order to safeguard and protect employees, we defined a specific procedure to deal with workers with particular frailties, i.e. those with current or previous illnesses that make them prone to particularly serious consequences in the event of illness. The company physicians cooperated to develop this procedure while fully respecting personal data privacy. To promptly cut off any chains of virus transmission in the workplace, rapid tests are carried out to detect asymptomatic positive persons. Forty-two accredited laboratories have been identified in the areas where the Group operates, that can be called upon if necessary with the active collaboration of the company physicians. The measures put in place by the Group since the start of the pandemic have proved effective in limiting the spread of the virus among our people, as shown by the fact that the incidence rate (number of cases per thousand people) in the Hera Group is in fact about 15% lower than the value found among the general population in northern Italy.

The Group has implemented additional cleaning and sanitising measures (compared to the standard ones) for its corporate premises, including the use of disinfectants, and has intensified the frequency of such measures. All our people that work in the field were constantly issued the personal protective equipment required to deal with the health emergency (e.g. respiratory protection masks, disinfectant gels, gloves, and disposable overalls). Disinfectant gel dispensers were placed in the company's premises at entrances and near common areas, and surgical masks were distributed to all employees. We defined rules of conduct for

company cafeterias and other common areas that entail staggered entry times and specific space management logistics that leave an adequate distance between people.

Lastly, the methods to carrying out services in the field have been defined by introducing health and safety regulations for workers, including the reduction of travel (also by extension of the “vehicle at home” method for maintenance workers) and eliminating of the use of changing rooms or, if not possible, reviewing the shift schedules to reduce the overlap of operational teams.

We supplemented our corporate welfare plan with new services in line with arising needs to support the individual well-being of our workers by providing video sessions with psychologists, coaches or counsellors, mindfulness tips, online personal trainers, support for families during the summer after-school period with an additional fee for homework help, baby sitting and summer centres, and by creating a dedicated Family Summer Point to guide employees among the various support opportunities available locally and created expressly by the Hera Group.

Lastly, fully borne by the company, Hera has activated a Covid-19 insurance policy to cover all employees who are infected by the virus. The policy provides, as an additional benefit, a package of guarantees and services and, in particular, provides hospitalisation allowances, convalescence allowances and post-hospitalisation assistance.

Work organisation and technology

The massive use of electronic work and communication tools required by the pandemic represented a major challenge for the Group, which immediately set itself the objective of enabling thousands of its employees to continue working remotely, in order to ensure continuity of service, but also to make it easier for them to cope with their private lives. Building on its past experience of using smart working for hundreds of its employees, the Group was able to extend it, effectively addressing the major technical and organisational impacts, while complying with IT security requirements and without disrupting operations. In particular, smart working has been confirmed to be a structural element of the company's work organisation and training activities have been aimed at further fostering an agile culture, based on flexibility, delegation skills, task scheduling and remote collaboration. This strategic approach has enabled a further roll-out of remote working, helping people work at home, or more in general in a place other than their assigned headquarters, for two days a week on a permanent basis.

to keep our IT systems secure, virtual private network (VPN) access control has been stepped up, and increasingly thorough automatic controls are being deployed. However, the greater use of remote working tools has increased the risk of hacking attacks. From an organisational point of view, the Group decided to set up central structures, specifically focusing on risk analysis, risk measurement and cyber security management for all our business areas. Our approach to cyber threat management focused on three main aspects:

- increasing the level of cybersecurity awareness among the corporate population;
- shifting from a reactive model of incident management to one that is as predictive as possible;
- identifying and applying targeted technological solutions capable of ensuring continuous development.

We have activated awareness policies using dedicated platforms, and our ethical phishing campaigns have been made routine, matching the outcomes of the campaigns with targeted training initiatives.

From a technological point of view, we have advanced tools to protect workstations and servers, as well as functions designed to make the management of digital identities and related computer accesses increasingly secure. We have enhanced protection by analysing data traffic on the internal network and, thanks to the optimisation of our intrusion detection system, we have switched from merely reporting intrusion attempts to automatically blocking them when certain conditions occur. We have intensified vulnerability assessment to identify any weaknesses in systems or applications that could be exploited by

an attacker. In addition, we launched a threat intelligence service which, by monitoring the main bulletins and establishing a direct relationship with the national Computer Security Incident Response Team, makes it possible to monitor the status of systems with respect to particularly serious vulnerabilities that require timely corrective action.

Finally, the pandemic has dramatically reduced business travel, cancelled internal events and, as a result, led to an exponential increase in remote meetings and virtual training rooms. Since the Group has been digitalising its processes for some time, adopting a digital workplace approach, our IT architecture was already suited to support the greater use of digital collaboration tools.

Continuity of environmental education programmes in local schools

The Group has re-engineered in a digital format the environmental education and science awareness activities that already took place in the 2019-2020 school year for classes. A rich and flexible offer of virtual classrooms suitable for distance learning was offered, supporting a variety of usage models and platforms, according to the needs of all school levels and in line with the Italian Ministry of Education's guidelines.

Support for healthcare and Caritas Italiana

Hera has launched two fundraising and donation initiatives:

- with "HeraSolidale, insieme per superare l'emergenza" (HeraSolidarity, together to overcome the emergency) employees supported the Regional Health Services of Emilia-Romagna, Veneto, Friuli-Venezia Giulia, and Marche, the areas Hera serves, by donating money from their salary or welfare benefits. Workers raised more than Euro 64 thousand, and the company donated Euro 550 thousand more.
- With "Insieme per Caritas Italiana" (Together for Caritas Italiana), Hera donated Euro 2 to Caritas Italiana for every new activation of the electronic bill delivery service, to provide meals to those in greatest difficulty, compounded by the health emergency. Over 41 thousand meals donated in two and a half months.

Thanks to our partnership with Caritas Italiana, the Insieme per Caritas Italiana project contributes to achieving **target 17.17 of the UN's 2030 Agenda**.

Case study

Innovation and digitalisation

Virtual Factory, the teams that produce innovation

The Virtual factory project was created to promote new ways of working in order to develop highly innovative projects within the company and at the same time to enhance people's individual characteristics as part of a professional growth process. The focus of the initiatives can be both on internal processes and on processes that have visibility outside the company with different goals aimed at innovation and/or process optimisation and improvement.

A virtual Factory is a **multifunctional team, consisting of 5 to 7 employees, which is called upon to implement innovative solutions in a short period of time**. The criteria for forming the teams take into account on the one hand the need to involve the people of greatest value to the company, and on the other hand the need to combine diversified skills, which together can amplify the value for the team. In fact, the initiative is not only a stimulus for corporate innovation, but also a professional opportunity for the employees involved, who get a chance to collaborate and develop new skills beyond their professional routine. The timeframe for completing the projects ranges from three to six months, with a commitment of one day a week and, in the final phase, the work is presented to top management.

Thirteen Virtual Factory experiences were set up between 2018 and 2020, involving a total of **65 employees**. The projects mainly focused on optimising/improving internal processes, on issues related to the **circular economy** or on improving our **customers' experience**.

The Virtual Factories that have been completed include the Level 2 Dashboard project, which developed and implemented the management's KPI dashboard, the BSC 2020: agility and cooperation team, which laid the foundations for the construction of the **new IT system** to support the management of the company's balanced scorecard. The Mobility Management group worked on strategies to promote the use of sustainable vehicles and behaviour inside and outside the company, while the **Hera LE(a)D** virtual factory designed and implemented the changeover to LED lighting systems at our Granarolo and Ravenna offices. The Rinowatt a km 0 project involves the **technical and economic analysis, design and installation of photovoltaic systems** on Marche Multiservizi's facilities, with the primary objective of self-consumption of the energy produced. The circular economy project entails creating a platform within the Group to develop sharing opportunities. The Fleet Management project includes the **installation of black boxes on company vehicles**, so as to monitor both their usage and consumption and the possibility of sharing vehicles. Lastly, the Idea Management project defined the "Hera model" for managing the idea management process and the related supporting IT tool.

In 2021, the initiative will continue with new projects in line with an approach for identifying objectives that is increasingly in line with the strategic priorities of the business units. In addition, all completed projects will continue to be monitored in order to highlight, at a later date, how the work carried out by the virtual factories actually contributed to achieving the agreed improvement targets.

The Rifiutologo, an app for separate waste collection and more: over 600 thousand residents use it!

The Rifiutologo is a **free app with several features**, available both online on the Hera website and on apps for smartphones and tablets. As of 31 December 2020, it has been **downloaded over 610 thousand times**, and there are more than **281 thousand active users** of the application, proving the usefulness of the tool.

By **Searching for waste**, users can find up-to-the-minute information on where to take their waste or the dates of door-to-door collections scheduled for their address, and even set up a reminder for the day and time of each collection. Thanks to geolocation, the Rifiutologo app also shows the user the **closest drop-off**

point, with complete information on the waste types accepted, the schedules, and any discounts provided by the Municipality. It also offers information on **Points of Interest** for residents, such as collection of special waste, mobile collection points, distribution points for materials, and underground drop-off points.

In addition, residents can use the **Waste management reporting** feature to report problems with the waste management services (such as excess waste or damaged bins) by sending a real-time picture to Hera's personnel, and correspondingly get a report back when the issue has been dealt with, besides customised push alerts. In 2020, the **number of reports concerning the emptying of bins**, street cleaning and abandoned waste reached **61,083** (+2% compared to 2019).

The other highly appreciated feature of the Rifiutologo is the **barcode scanner**, a feature which recognises materials by the barcode printed on products and shows how to properly dispose of each package, even if it is made up of multiple material types, accessing a **database of 1,680,000 barcodes of the most widely used products** as of 31 December 2020. If a code isn't recognised, or if a product is missing, residents can report the circumstance via the specific function so that the missing information can be added to the system. In 2020, also thanks to the **reports** sent by residents, the barcode database was expanded by 94 thousand codes of which **12,766** were reported by users (against 19,970 reported in 2019), while **requests made by scanning** barcodes increased to **851,080** against 654,108 in 2019.

In 2020, moreover, for the first time, the Rifiutologo literally began to speak thanks to **Alexa**, the artificial intelligence created by Amazon to give a voice to the smart devices we all own. In fact, Alexa users can now add the Rifiutologo skill, thus obtaining a friendly voice to which they can ask for fundamental information on the collection service provided by the Hera Group in their municipality, such as: **checking door-to-door calendars** and setting **voice memos** to remind them of the collection days scheduled on the calendar, the **"where should I throw it"** function, which allows them to ask the skill how to dispose of waste in the areas served by Hera, and lastly, information on **drop-off points** and on how to have **bulky items collected** at home.

Thanks to the information contained in the Rifiutologo and the reports from customers, its use contributes to achieving **targets 11.3, 11.6, 12.2, 12.4, 12.5, and 12.8, of the UN's 2030 Agenda** as well as contributing to achieving **target 17.7**.

With Acquologo, the entire water service is smartphone-accessible

Acquologo is a **free application dedicated to the integrated water service**, created to provide a communication channel between Hera and residents living in the areas we serve, helpful both for those who have an active contract with Hera for the supply of drinking water, but also for those who, for example, live in a condominium, and do not have a direct active contract. The number of **downloads(11,995)** and the number of **accesses(30,852)** prove the usefulness of this smart tool which provides information on the water used, on a daily basis.

So what can you do on the app? Its **features** range from self-meter reading to checking data on the quality of the water in their municipality, and includes alerts for water network interruptions for ordinary maintenance work and reporting breakage or leakage of water on public land.

In 2020, customers with **active water contracts** with Hera reported **5,636** meter readings through the Acquologo app, up 36% compared to 2019. The operator sent out 15,508 notifications concerning service interruptions, helping residents be more up to date on the service.

The most frequently viewed section continues to be the **Water Quality** section, which allows all residents to check the main data (average values) on the quality of the water supplied for each of the supplies provided by the multi-utility, comparing them with the regulatory limits.

In addition to the most commonly used features mentioned above, there is also the evaluation of the economic savings generated by the consumption of tap water instead of bottled water, in the **"How much**

you save” section, and the possibility to contact experts with questions and requests about the local water service or read the answers to the most frequently asked questions, in the **“The expert answers”** section.

As a **pilot project**, and only in some areas, the app can also be used to **report major water leaks** due to breaks in the pipes under the road surface; reports of water leaks sent in through the app (photographic reports and by calling the toll-free number) totalled **1,106** in 2020 and users uploaded a picture for about 600 of the reports.

Thanks to the information the Acquologo contains, its use contributes to achieving **targets 6.b and 12.8 of the UN’s 2030 Agenda**, as well as – by involving residents – contributing to achieving **target 17.17**.

Hera and digital contact channels: always available to our customers

Over the last few years, the Hera Group has undertaken a profound modernisation of its digital properties. The intention to update the way our public websites look and are used has been matched by the need to implement a new technological platform capable of facilitating this change. Our digital properties have been completely redesigned, in order to give them an aspect and a format that fully reflect the company's proximity to customers and residents who use Hera's services and to the areas in which the Group conducts business. The first sites to be developed were those of the sales companies, designed to present the range of products and services offered clearly and comprehensively. A number of facilities have been included to help customers choose the most appropriate electricity and gas offer and to sign the contract using a range of different methods, including a call-back and live chat service to put them in touch with the Group's energy consultants.

The self-care subscription process has been completely revamped, including the possibility of adding products from the sustainable solutions range to the commodity contract, designed to offer customers smart, innovative systems to help them become more aware of their consumption patterns and make energy savings tangible.

Ample space has been allocated to products related to sustainable mobility, from cars to electric bikes, as well as to all aspects of sustainable development, the circular economy and shared value. A support section was added, aimed at guiding customers and supporting them in managing their services.

During the year, work continued on developing new digital payment methods, on improving the registration process and on improving the user experience in the waste disposal area (for municipalities under quantity-based charging). To offer our customers the option of using a fully secure direct contact channel, we have completed a review of the chat support exposure. At the same time, thanks to a flexible management model, the Group increased the number of consultants assigned to the support chat, managing to cope with the number of contacts requested, which grew steadily throughout 2020.

Public websites have been a means of communicating the Group's actions to deal with the health emergency and have also been a fundamental channel for informing and supporting charitable campaigns to support those most affected.

The Hera Group has continued to act in the market as a **promoter of good practices aimed at sustainable growth and shared value**: digital channels have also played an important role in this effort. Hera Comm, the Hera Group’s sales company, completed the development of its new website by introducing new engagement and sales support tools for its electricity and gas offers, which have become 100% green. New products have also been introduced aimed at sustainable mobility such as Hera E-bike, the sale of electric bicycles, and energy efficient products such as boilers and water heaters. A new public sales support chat was also developed to connect existing and potential customers with the Group's energy consultants.

The year 2020 marked a sharp discontinuity in customers' habits and behaviour compared to previous years. The health emergency forced customers to make a decisive change in the way they contacted us. In

this scenario, the Hera Group's digital channels proved to be fully suited and capable of responding promptly to the impact of changing needs, ensuring the essential continuity of service and maintaining the high quality standards that customers are accustomed to receiving. The excellent results we achieved were made possible thanks both to the stratified development and continuous improvement process that the Group has been putting in place in recent years on its digital channels, and to the changing scenario.

The digital self-care tools, **Online Services** and the **My Hera app**, proved capable of fully coping with the substantial usage increase, while at the same time increasing the satisfaction declared by customers (which grew from an average satisfaction in 2019 of 77.1 to 78.8 in 2020), and who were able to continue, even during the lockdown periods, to **manage their supply contracts**. The dedicated areas had peaks in the number of registrations during the first lockdown, but an upward trend was also seen in the following months compared to 2019. In December 2019, the number of registered customers was 413 thousand (23.8% penetration of the customer base), while in December 2020 it reached 503 thousand (28.6% penetration of the customer base). The number of accesses is growing steadily and since December has exceeded the threshold of 207 thousand accesses/month (against a peak of 133 thousand in 2019). This figure is much higher than the accesses recorded during the lockdown period, a sign that the perception of the quality of the dedicated areas and the resulting use by customers is becoming increasingly stratified. The My Hera app is the main driver of this growth and in 2020 it was **downloaded 415 thousand times** (+30% compared to 2019), continuing to maintain one of the highest approval ratings compared to similar apps of competitors.

Digi e Lode, for more digital services and schools

For the Hera Group, innovation and digitalisation are fundamentally important, starting with its own services: development of online services, creation of interactive apps for customers and residents, and promotion of dedicated digital channels and services.

The Digi e Lode project, now in its **fourth year**, brings customers and the company together to digitise local schools by promoting Hera's digital services under the patronage of 101 local municipalities. Given the success of the past editions, starting from the 2019-2020 edition the project has been extended to the Marche and Abruzzo areas.

Digi e Lode consolidates the contribution that the Group wants to bring to its service area, as a continuation of the business strategies that identify innovation and sustainable development of the area and the **activation of partnerships**, as the leading drivers for the development of shared value, in line with the objectives of the UN's 2030 Global Agenda.

The project involves **all primary and secondary schools**, both public and private, in Emilia-Romagna, Marche, and Abruzzo and offers a total of Euro 50 thousand for the 2020-2021 school year to **finance projects benefiting students and promoting the digitalisation of 20 schools**. Since the project began in 2017, the Group has already donated Euro 325 thousand to 130 schools.

To take part, customers need to activate one or more of the free digital services offered by the Hera Group: by doing so they donate **points that can be assigned to a specific school** (and by doing so they are multiplied by five) or distributed among the schools in their municipality: the Hera Group rewards the schools in the area that achieve the highest score.

The Digi e Lode project contributes to achieving **targets 4.a and 12.8 of the UN's 2030 Agenda**, as well as – by involving residents and schools – contributing to achieving **target 17.17**.

Cyber guru, the new cyber security platform with video courses and online tests to learn to recognise web threats

Launched in 2020, Cyber guru is a new cybersecurity platform with video courses and online tests to learn to recognise threats from the web, through which we launched our ethical phishing and cybersecurity awareness programme.

The programme consists of two parts:

- Cybersecurity awareness (about 7,500 users involved) in which a cybersecurity topic is discussed every month for 12 months. The goal is to **help users increase their awareness of cybersecurity issues** (e.g. identifying possible threats from the web, avoiding the pitfalls of potentially dangerous e-mails and sites, protecting corporate and personal data, recognising phishing and fake news, etc.). At the end of each lesson, users are put to the **test to prepare** for the next lesson. The gamification mechanism of the dedicated platform means that each user is assigned to a team and takes part in a virtual competition to improve their team's score in terms of cybersecurity awareness. At the end of 2020, the **participation** in the training course was **about 30%**.
- Ethical phishing (approx. 7,000 users involved): **fake phishing e-mails** were sent to company e-mail addresses to test our users' ability to detect malicious e-mails and to train them to recognise them. The prerogative of this service is to adjust the difficulty level of the simulations on the basis of the recognition ability demonstrated by each user in previous simulations. In 2020 we carried out **three ethical phishing campaigns**.

Economic development and social inclusion

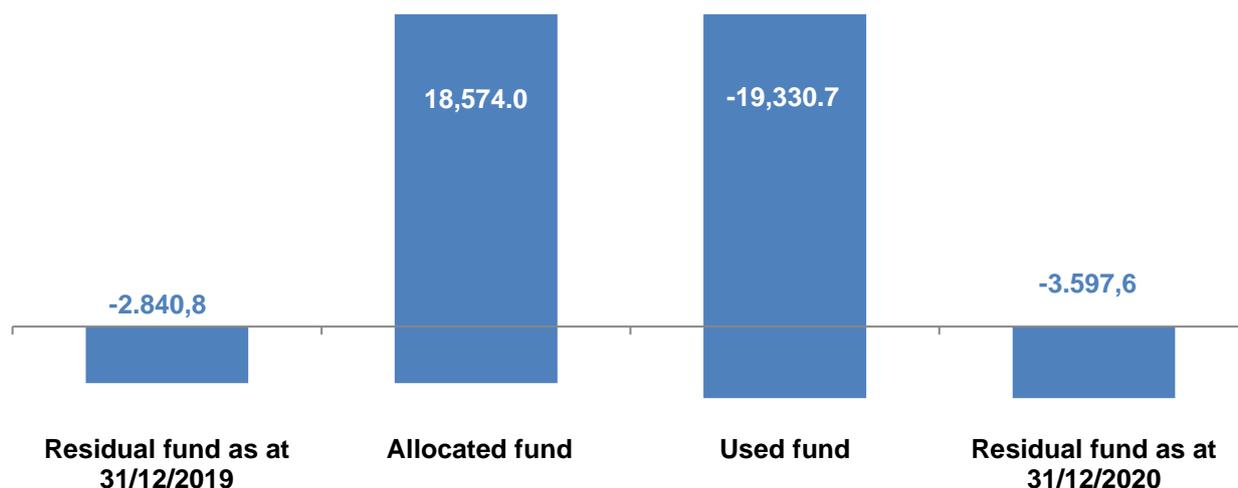
The leak fund for hidden water leaks

In 2014, **Hera Spa** defined a joint regulation across all the local areas it serves that sets up a "**leak fund**" to **protect customers in the event of water leaks in their plumbing system**, i.e., downstream from their meter. This voluntary instrument partially covers bills of even very high amounts that are due to accidental and unknown leaks within a customer's own plumbing system. By paying Euro 15 per year in their bill, participating customers can receive, for hidden water leaks within their system, a reimbursement for the entire amount for the volumes that exceed their usual average consumption by 80%, up to a maximum of Euro 10,000.

Participation in the fund is not compulsory, and customers may withdraw at any time by simply asking to do so.

The "leak fund" is exclusively designed to cover the additional costs incurred by customers that have a water leak.

Water leak fund (thousands of Euro)



Leak fund and customers that have benefited from the fund

	2018	2019	2020
Funds disbursed (thousands of Euro)	17,406	19,790	19,331
Customers that have benefited from the fund (no.)	12,146	13,576	12,996
Average reimbursement (Euro)	1,433	1,458	1,487

The fund's balance as at 31 December 2020 is negative, at about Euro -3.6 million, (including interest income for previous fiscal years). The balance, for 2020 alone, is negative by Euro 0.8 million. Approximately Euro 19.3 million were used against an allocated fund of Euro 18.6 million.

The effect of the growth in the number of leaks downstream of meters, which became apparent significantly from the summer of 2017, continued over subsequent years and was also confirmed in 2020. Despite the changes introduced on 01/01/2019 (a new method of charging the participation fee was implemented, which consists of a fixed fee of Euro 10/year per contract and a variable fee of Euro 5/year per property unit served) made it possible to increase the annual fee available to users, the number of events reported by users in recent years has been so high that it did not allow the planned recovery.

During 2020, in an attempt to reduce the economic impact on the fund as much as possible, a new company procedure was introduced to **streamline the time it takes to report** presumed leaks to users (following detection and analysis of the meter reading). The aim was to reduce water loss time and so reimbursement through the fund. However, this new procedure did not lead to the hoped-for outcome because during the health emergency period the meter reading process was first interrupted, and then reduced. This meant that a considerable amount of leaks was detected only months later, with a stronger impact on the fund than in an ordinary situation when the breakage would have been detected during the envisaged reading period.

Since the fund is exclusively designed to benefit its participating customers and since the monthly balances were almost negative in 2020, no interest was calculated. Since its creation, the fund has reimbursed overall more than **78 thousand users** and over **Euro 110 million**. During 2020, 12,996 users (-4.3% compared to the previous year) benefited from the fund with an average reimbursement of Euro 1,487 (+2%). Less than 4% of customers are not covered by the "leak fund". During 2020, just over 150 customers withdrew from the fund.

The leak fund contributes to achieving **target 6.b of the 2030 UN Agenda**.

When environmental and social sustainability go hand-in-hand

Hera continues to be committed to initiatives dedicated to the support and social inclusion of people in difficulty and in disadvantaged conditions, through the following initiatives that have proven to be effective.

The **RAEEbilitando** project, initiated in 2010 with the collaboration of Consorzio Remedia, Opera dell'Immacolata Onlus (OPIMM) and Tred Carpi Srl, continued its activity until 30 June 2018, when the protocol expired. The partners then agreed to terminate the activity, which had been carried out in the Bologna Laboratory, to allow OPIMM to plan and implement a set of measures to restructure the premises and to reorganise the logistical management of the spaces used for the various activities carried out within the Laboratory. In this period, children and adults in disadvantaged conditions worked in the laboratory providing their energy and their commitment to disassemble no less than **132,000 kilograms of small electrical and electronic equipment** into about 20 smaller categories of parts, thus ensuring for each of them the most appropriate type of recovery and/or recycling. At the end of 2019, the OPIMM Association had confirmed that it intended to resume operation of the Project in July 2020 and that it had started the procedures for obtaining the new authorisation. The difficulties linked to the health emergency of 2020 weighed heavily on this project, since the safe working conditions required for the assisted people could not be met; however, the agreements taken and the willingness to cooperate remain intact, pending the resumption of operations.

The **Manolibera** project commenced in 2011 thanks to the collaboration between the Forlì prison, Hera and the Techne training institute, drawing from the idea of local artists particularly interested in environmental respect, eco-sustainability and social rehabilitation. A large room available inside the Forlì prison was used to create a workshop, in the form of an original artisan paper mill. Inmates work here every day for 20 hours/week making greeting cards, Christmas cards, photo albums, picture frames, large and small notebooks and other paper products of high artistic value. The exclusivity of its production methods - entirely handmade according to an ancient Arab-Chinese technique - and the refined decoration make these products unique, refined and imbued with an important artistic, social, and ecological value that makes them particularly appreciated in the wedding planning field. Thanks to the collaboration with the Cils Cooperative of Cesena, which is responsible for monitoring and checking the work done in the workshop and with the Berti bookbindery in Forlì, which deals with the project's commercial management and marketing development, the workshop is able to support its own work and provide work placement for 4 inmates suitably assisted by an appropriate training course. The collaboration with the national network of prison economics "Freedhome", the concept store dedicated to the excellence of Italian prison economics, helps to give broad visibility to the project. The workshop has developed a wide range of products for weddings and important events: elegant invitations and refined thank-you cards, photo albums complete with boxes, precious wedding favours, frames and paintings. These products were presented at leading fairs and events for the "ceremonies sector" up to 2019, then it became impossible to continue these initiatives due to the health emergency situation. In 2020, the workshop continued to operate normally until 21 February and then stopped due to the health emergency until 31 August. The workshop started again in September, but with only one inmate per shift. During 2020, a total of 6 inmates were involved in the activities, while more than forty people have been involved since the start of the project.

The **RAEEincarcere** project, which was launched back in 2008, continued. The aim of the project is to promote the social and working inclusion of disadvantaged men and women who are detained in order to help them return to legality and the civil life of their community. Developed together with the prisons of Bologna, Ferrara and Forlì thanks to a study and joint collaboration between Hera and the Techne training institute, the project received support from the Regional Government of Emilia-Romagna and involved National Consortia of producers of electrical and electronic equipment, as well as economic actors

operating in the interested local areas. In the four workshops set up inside and outside the prisons, prisoners attend training and advanced training activities, learning the skills and knowledge necessary to disassemble small and large waste electrical and electronic equipment from the collection streams handled or organised by Hera. Since the project started, **no less than 35 former inmates** have been hired or helped to find jobs in local companies, and more than 110 have been able to attend internships and training courses for occupational integration. Considerable environmental benefits have also been obtained from the project: over this period, the workshops have treated **about 5,300 kg of waste electrical and electronic equipment**, which was fragmented into small pieces and sent separately and entirely for recovery.

Launched in 2018, the **Informatica Solidale** project, developed together with the Techne training institute aims to promote computer literacy and reintegration into work and society, with the further objective of promoting the reuse of assets with residual potential for use. Under the project, Hera will donate its IT equipment (no longer suitable for its own business and therefore to be disposed but perfectly able to satisfy the basic needs of users such as those identified and protected by the Project) and Techne will take care of the functional updating and testing, the identification of the recipients and the management of the deliveries. The recipients of such "regenerated" IT equipment have been identified mainly among institutional, public and private local organisations, whose vocation is to support the inclusion and integration of disadvantaged people through services and initiatives (educational, training, empowerment) that can find real benefit and strengthening from the availability of appropriate technological tools. In this context, the donated equipment made it possible to set up computer labs at schools, cooperatives/social enterprises, and social promotion associations, prisons, and education centres for adults at risk of "social exclusion". In 2020, the remaining 50 computers of the 100 donated by Hera in 2019, were assigned. Techne gave the equipment to organisations (cooperatives, social promotion associations, prisons) that had requested it on the basis of a suitable training project, but above all to schools that used it, with great benefits to all, in the remote learning courses due to the health emergency. The "Informatica Solidale" project once again contributed to social support and environmental protection.

The projects described in this case study contribute to achieving **targets 8.5, 12.2, 12.4, 12.5, and 17.17 of the 2030 UN Agenda**.

Thanks to cooperation with Caritas, 41 thousand meals donated to people in difficulty

Following a campaign lasting between mid-April and end of July 2020, customers who decided to switch from paper bills to electronic bills allowed the Hera Group to support people in difficulty. This was because, for each electronic bill request, the **Hera Group decided to donate two euro to Caritas Italiana**, which were turned into meals for people with the greatest difficulties, a number that has significantly increased with the health emergency.

The more than 82 thousand electronic bill requests were turned into **over 41 thousand meals for people in difficulty in Emilia-Romagna, Veneto, Friuli-Venezia Giulia, Marche, Lombardy and Puglia**, compared to the 25 thousand initially expected, i.e. over 15 thousand more.

As well as guaranteeing key **social support**, this project is also of **benefit to customers**, because electronic billing means that bills arrive promptly, and **to the environment**, in terms of saving paper and the amount of atmospheric emissions needed to produce and transport it.

Hera's cooperation with Caritas contributed to achieving target **17.17 of the 2030 UN Agenda**.

Job creation and development of new skills

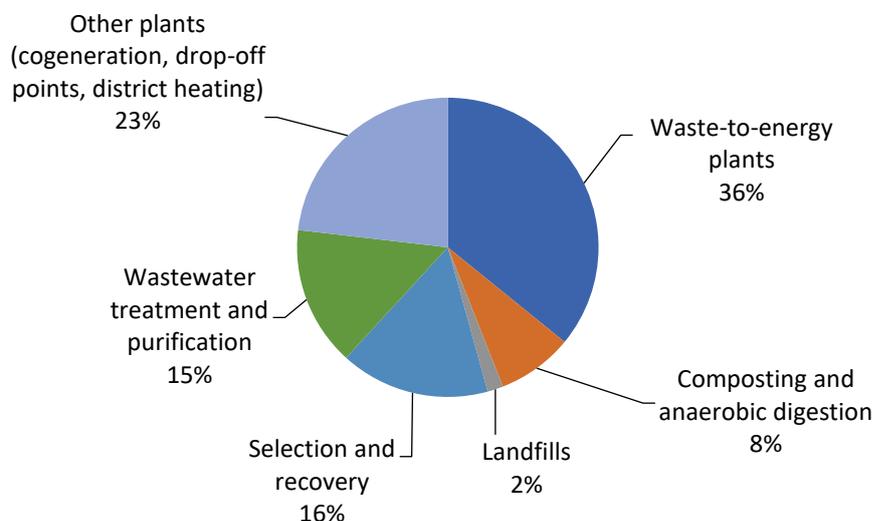
Plant visits for over three thousand people

Through its subsidiary Herambiente Spa, the Hera Group offers **guided tours of its waste treatment and recovery plants** as proof of its attention to environmental issues and the **spread of an environmentally responsible mindset**. The guided tours can also be booked online from the Herambiente website and are designed to spread knowledge about **one of the most advanced plants in Europe** in terms of operating and quality standards and to inform whoever is interested about how the plants operate and are run. The tour describes the methods used to ensure proper waste management, with full respect for the local area, and the solutions adopted to ensure a low overall impact on the environment.

In 2020, **1,347 visitors** spread over **82 days** visited the Herambiente Group plants. The visits involved waste-to-energy plants (837 visitors), composting and anaerobic digestion plants (190), landfills (54) and selection and recovery plants (266).

In addition, for several years Hera has been offering schools the possibility of organising "**virtual**" **tours of the plants**. This made it possible to continue activities even after the health emergency of 2020, when it was no longer possible for visitors to learn about the plants on site. By doing so, students can listen remotely to an environmental instructor who illustrates the various phases of the plant's operation. **1,832 virtual tours** were organised in 2020, as follows: 304 participants in waste-to-energy plants, 69 in composting and anaerobic digestion plants, 244 in selection and recovery plants, 479 in wastewater treatment and purification plants, and 736 in cogeneration plants, district heating and drop-off points.

Visits by plant type



Another interesting project worth mentioning is "**Oltrape 2020**": during the summer of 2020, the Herambiente Group was involved in a trip to Emilia-Romagna organised by Radio Immaginario, a radio station run by young teenagers aged between 11 and 17 interested in learning more about environmental issues. This 40-day tour of the region on board a biomethane-converted Apecar touched the Bologna waste-to-energy plant, the Bologna selection and recovery plant and the biomethane production plant in Sant'Agata Bolognese, hosting young people interested in environmental issues which are in so much need of attention and sensitivity.

The tours of the plants contribute to achieving **targets 4.7, 6.b and 12.8 of the 2030 UN Agenda**, as well as target **17.17** thanks to the involvement of citizens.

Bases and organisational levers

Governance and creation of value

Objectives and results

What we said we would do	What we have done	SDGs	Progress*	Geographic scope**
<ul style="list-style-type: none"> Euro 1,747 million. Value added to stakeholders by 2023 (+9.3% compared to 2019). 	<ul style="list-style-type: none"> The value added to the stakeholders in 2020 was Euro 1,670 million. (see page 262) 	8		
<ul style="list-style-type: none"> Euro 2.3 billion. Investments completed in the period 2020-2023. 	<ul style="list-style-type: none"> Euro 506 million. Investments completed in 2020 (-5% compared to 2019). (see page 211) 	8		
<ul style="list-style-type: none"> 2 new HeraLABs launched in two local areas in 2020 for dialogue with the local communities. Achieve by the end of 2020 the remaining 4 local initiatives jointly planned in 2018 with the Ferrara and Ravenna LABs (8 concluded during 2019) and realise the additional initiatives jointly planned with the Bologna and Rimini LABs, launched in 2019. 	<ul style="list-style-type: none"> The new Modena and Forlì-Cesena Hera LABs launched. Three of the remaining four initiatives in Ferrara and Ravenna completed. The joint planning meetings of the Bologna and Rimini LABs were rescheduled due to the health emergency and were concluded in the early months of 2021: the realisation of the jointly planned initiatives will be completed by 2022. (see page 277) 	6, 11, 17		ER

*  Result achieved or in line with planning.  Result with moderate deviation from planning.

** Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

What we will do	SDGs	Geographic scope*
<ul style="list-style-type: none"> Proceed with the growing attention towards the anticipation, mitigation and coverage of risks arising from climate change, also to guarantee ongoing service. 	13	
<ul style="list-style-type: none"> About Euro 1,900 million. Value added to stakeholders by 2024 (+14% compared to 2020) 	8	
<ul style="list-style-type: none"> Euro 3.2 billion. Investments completed in the period 2020-2024. 	8	
<ul style="list-style-type: none"> Continue to listen to and involve the local area's stakeholders by updating the HeraLAB model. Complete the five local HeraLAB initiatives in the Rimini area and the three initiatives in the Bologna area by 2022. 	6, 11, 17	ER

* Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

Sustainability and risk management

[103-2] [103-3]

Corporate governance

[102-18] [102-20] [102-22] [102-26] [405-1]

Hera is a multi-utility company with public sector majority shareholders and a markedly diversified shareholder base. Regarding corporate governance, the Group has adopted statutory procedures, with specific attention to the implementation of the principles contained in the code of conduct prepared by Borsa Italiana.

The main governance bodies of Hera are the **Board of Directors**, the **Executive Committee**, the **Board of Statutory Auditors**, the **internal committees** and the **Shareholders' Meeting**. The Board of Directors is supported in its duties by two committees: the Remuneration Committee and the Control and Risks Committee. The Board of Directors has also established a Supervisory Board pursuant to Italian Legislative Decree no. 231/2001, as well as an Ethics and Sustainability Committee to monitor, disseminate and implement the principles in Hera Group's Code of Ethics and the supervision of the sustainability aspects linked to the business activities.

All detailed information concerning the Group's corporate governance and the functioning of its main bodies is dealt with in the corporate governance report in the Group's consolidated and separate financial statements approved by the Board of Directors on 24 March 2021.

The Ethics and Sustainability Committee

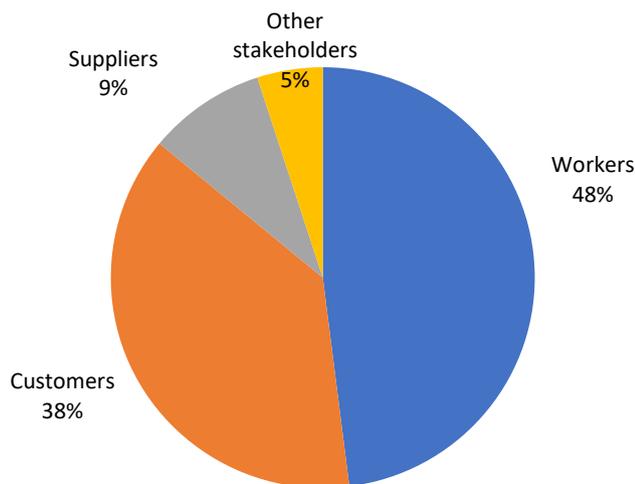
[102-17] [102-33] [102-34]

The Ethics and Sustainability Committee, renewed by Hera Spa's Board of Directors on 13 May 2020, has the task of monitoring the **divulcation and implementation of the Code of Ethics** and exercising the functions for the **supervision of the sustainability aspects** associated with the exercise of the business activities. In particular: it receives reports of violations of the Code and assesses whether or not proceedings may be initiated, monitors the implementation of sustainability policies, formulates, at the request of the Board of Directors, an opinion on specific sustainability issues, examines company procedures on social and environmental issues, and examines in advance the sustainability report to be submitted to the Board of Directors.

The Hera Ethics and Sustainability Committee is made up of four members, including at least one Independent Director of Hera Spa, the Director of the Shared Value and Sustainability Department and at least one external member experienced in social responsibility and sustainability. The Committee met six times in 2020. On 24 February 2021, the Ethics and Sustainability Committee submitted the annual report on the activities carried out and on reports received during 2020 to the Board of Directors of Hera Spa.

In 2020 the Ethics and Sustainability Committee received **17 reports**. Five reports came from **customers**, four from **citizens**, three from **workers**, three from **suppliers** and two from **public administration authorities**; 255 reports have been examined by the Ethics Committee since 2008.

Reports to the Ethics and Sustainability Committee for stakeholders (2008-2020)



The five reports received from **customers** regarded the clarity of communication with the customer, the business conduct of the sales agencies and delay in application of internal procedures. On the basis of the investigations concluded, the Committee found no violations of the Code of Ethics. The **Committee's contribution** concerning these reports: for all reports, the Committee audited the correctness of the internal procedures, facilitated dialogue with the whistleblower and promoted internal best practice towards the whistleblower, while with respect to one report, the Committee suggested the Department involved in the complaint avoid formal answers in order to show greater clarity and attention with the customer and to make it explicit when reports lead to improvements in internal processes. As a consequence of the reports received, AcegasApsAmga identified some improvements in internal processes in order to keep similar situations from happening in the future, while Hera Comm took specific measures towards the sales agencies/agents in question.

The four reports, one of which was anonymous, coming from **citizens** regarded the conduct of sales agencies in recruiting agents, impartiality towards customers and the conduct of suppliers' employees. On the basis of the investigations concluded, the Committee found no violations of the Code of Ethics. The **Committee's contribution** concerning these reports dealt with the audit of internal procedures and facilitated the dialogue between the company and citizens, also through the promotion of corporate best practice. Thanks to a report, the improper behaviour of a sales agency was singled out. Hera Comm warned the agency about carrying on with practices that do not follow the law or the mandate signed. A report was referred to the Central Legal and Corporate Affairs Department, consistently with that set forth in the Guidelines for the prevention and management of fraud, and led to the proper investigations by the Waste Management Services Department based on which no irregularities were found.

The four reports from **workers** concerned optimisation of human resources, protection of equal opportunities, communication between workers and efficiency. With regard to the three reports received from workers (two of which were anonymous), as at 31 December 2020, two investigations were completed and one is in progress. On the basis of the investigations concluded, the Committee found no violations of the Code of Ethics. The **Committee's contribution** consisted in facilitating dialogue between the departments/companies involved in the report and the whistleblower, ensuring proper application of internal procedures.

The Committee received three reports from **suppliers** about the correctness of application of employment contracts, the correctness of application of the regulations on tenders and working conditions. Regarding the two reports, the Committee referenced articles 73 "Committee power limits" and 85 "Relations between the Committee and company departments" of the Code of Ethics, and as a consequence

investigations were not opened. In both cases, the Committee moved forward with an audit of internal procedures anyway. The **Committee's contribution** with regard to the report received in the month of December 2020, specifically concerning aspects linked to working conditions, besides correctness of application of the employment contracts, consisted in suggesting the Procurement and Tenders Department add the supplier to the supplier audit plan on Corporate Social Responsibility for the year 2021. As at the date of drafting this report, the preliminary investigation for this report was still underway.

The two reports from officers of the **Public Administration** regarded correctness in the application of the internal procedures and the documentation issued to customers concerning the integrated water service. The Committee referred both reports to the competent Marche Multiservizi's Ethics Committee. The **Committee's contribution** with regard to these reports consisted in the help of the Marche Multiservizi's Ethics Committee on the means of carrying out investigations and thus in response to the two reports.

In the area of sustainability, the Committee defined a detailed **action plan** and **three areas for action for the three-year mandate** listed hereafter: replanning of the training programme of the Code of Ethics 5.0, updating of the Creating shared value framework and reporting and monitoring of adoption of the **Task Force Recommendations on Climate-related Financial Disclosure**.

Following the shared action plan, over the course of 2020, the Committee discussed the draft **Sustainability Report** and examined its main content before the Board of Directors, delved into **the activities** in the area of Group **Diversity Management**, delved into the **sustainability thematic reports**, discussed the **sustainability and reporting scenario**, examined the summary of the **suggestions in the Management Letter** drawn up by the **independent auditing firm Audirevi**, as a consequence of the auditing activity on the 2019 sustainability report and delved into the **process of updating the new CSV framework** and the impacts on the sustainability report.

Risk management

[102-18] [102-30]

Hera adopts an organisational structure that appropriately and conscientiously manages **the exposure** and **the risk appetite** arising from its business, defining an integrated approach aimed at preserving the effectiveness, profitability and sustainability of management throughout the entire value chain.

Top management plays a fundamental role in this process and is called upon to express the medium/long-term vision of the desired risk profile for the Group defining the risk areas within which the Group intends to move.

The Group's risk appetite is managed through three fundamental pillars which are:

- the establishment of a Governance system that through the definition of roles and responsibilities approves **risk limits** and the **risk management policy**;
- the development of a **method** to measure risk exposure with respect to which risk limits are set;
- the implementation of a **risk monitoring** and **management process** and remediation **actions** in the event of overrun.

The main risk categories that emerged from the Group's **risk management policy** and **risk model** and which were identified as having a potential impact on the company for 2020 are shown in the table below:

For a description of the corporate governance system for the management of the risk and for the nature of the risks and their handling, please see the Group's Corporate Governance Report and the Management Report included in the Group's Consolidated Financial Statements as at 31 December 2020. For a description of the risks linked to climate change, see section "Hera for climate" (chapter "Pursuing carbon neutrality").

Compliance system for corruption and fraud prevention

[102-17]

Importance for the Hera Group and monitoring of this aspect

Corruption and fraud pose a significant risk to business activities as they can significantly compromise the company's reputation and image and cause significant financial damage. HERA promotes the combating of corruption by taking a “zero tolerance” stance towards corruption and fraud in any form, reiterated both in the **Code of Ethics**, updated in 2019, and in the **Corruption prevention model**. Furthermore, Hera Spa, again in 2019, obtained **Iso 37001** certification for the Management system for the prevention of corruption.

Hera's commitment applies to both employees and third parties (e.g. consultants, suppliers and business partners), through appropriate preventive measures, a disciplinary system and specific ethical clauses that all employees and third parties must accept and adopt.

Hera has adopted a structured compliance system consisting of tools and policies designed to prevent and combat active and passive corruption, in addition to the matters envisaged in the Group's **Code of Ethics** and the **231 organisational model**.

Hera's anti-corruption system comprises the following:

- the Code of Ethics;
- the Quality and sustainability policy;
- **the Corruption prevention model** that supplements the existing **231 Organisation Model**, which already covered the types of corruption included in Italian Legislative Decree no. 231/2001;
- **guidelines** for the prevention and management of fraud;
- **periodic** audits and **training** activities with a view to corruption and fraud prevention;
- **“whistleblowing”** system for the handling of reports relating to offences concerning both corruption and those potentially significant for 231-related purposes.

The 231 organisational model

Italian Legislative Decree 231/2001 introduced a **regime of administrative liability** into the Italian legal system for crimes committed, in their own interest or to their own advantage, by natural persons acting as representatives, directors or managers on behalf of the entities, or by natural persons acting under the supervision of such persons or subjected to supervision or management on their part.

The Board of Directors of Hera Spa and the boards of the main Group subsidiaries have adopted the Organisation, management and control model (231 Organisation Model) aiming to ensure conditions of correctness and transparency in conducting business and company activities. The model includes the principles of conduct formalised in the Code of Ethics.

The companies provided with a 231 Model are: Hera Spa, Acantho Spa, AcegasApsAmga Spa, AcegasApsAmga Servizi Energetici Spa, Aliplast Spa, Amga Blu Srl, Asa Scpa, Ascopiave Energia Spa, Ascotrade Spa, Blue Meta Spa, Estenergy Spa, Etra Energia Srl, Feronia Srl, Frullo Energia Ambiente Srl, Hera Comm Marche Srl, Hera Comm Nord Est Srl, Hera Comm Spa, Hera Luce Srl, Hera Servizi Energia Srl, Hera Trading Srl, Herambiente Spa, Herambiente Servizi Industriali Srl, HERAtch Srl, Hestambiente Srl, Inrete Distribuzione Energia Spa, Marche Multiservizi Spa and Uniflotte Srl. All these 27 companies (75% of the total of the companies) include 97.1% of Group employees. Marche Multiservizi Spa got its own 231 Model.

The Group companies, supported by the Supervisory Board, after a mapping of company activities sensitive to the risks of offence included in Italian Legislative Decree no. 231/2001, have defined **26 protocols** to be followed when carrying out sensitive company processes given that they are exposed to the potential risk of committing 231-related crimes, and periodically make the resulting information flows available which

inform the Supervisory Board on the most sensitive events for the purposes of these risks. The protocols are widely distributed to all workers through their publication and periodic updating on the Company Information Portal. Their application is analysed and monitored during the audit phase. In 2020, the 231 protocol for the handling of the process for participation in integrated water service tenders and seven protocols (procurement, proxies, complaints sanctions warnings, shareholders statutory auditors external auditors, disposal of vehicles, environmental protection, occupational health and safety) were approved and published.

For further information on the 231 Model, please refer to the Corporate Governance Report included in the 2020 financial statements.

231-related risk assessment activities

[205-1]

The risk assessment activities (both standard and for 231 Model purposes) carried out by the **Internal Auditing Department** concern all the business processes implemented by the Hera Group. A mapping of the activities carried out by the business and staff units was carried out, determining whether they are exposed to risk. The risks examined are: regulatory compliance, reliability and integrity of information, protection of company assets and effectiveness and efficiency of operations. The risk map has logics and assessment scales in line with those used by the **Enterprise risk management**. It includes the **risks of fraud, corruption** and **the offence** referred to in Italian Legislative Decree 231/2001. Specifically, 564 risk scenarios were identified, initially the inherent risk and, downstream from the actions implemented by the internal control system for its mitigation, the residual risk. These activities were carried out on the basis of the results of the previous assessments, on the outcomes and the key aspects of the audit activities performed, the Enterprise Risk Management analysis presented to the Board of Directors of Hera Spa in January 2019 and in relation to the sector risks deriving from benchmarks of other companies. The assessments, referring to the risk event, were guided and gauged in relation to the type of the processes or the business: the drivers which supported the assessments and the prioritisation of the risk aspects also took into account the peculiarities of the Group. The risks as per Italian Legislative Decree no. 231/2001 have been identified by macro-processes, assessed ad hoc and included in the risk assessment within the sphere of the compliance risks.

As part of the risk assessment activities, the areas of risk from **the offence of corruption** are identified mainly in the dealings with Authorities and supervision and control bodies governed by public law that the Group maintains, for example, within the scope of participation in public tender procedures, in the application for licences, administrative measures and authorisations, in the sending of reporting documents, in the stipulation and execution of contracts with the Public Administration. These areas, together with spheres such as tenders, donations and sponsorships, entertainment expenses and the management of credit positions, are constantly monitored. In addition to these areas, there are areas exposed to the offence of corruption between private parties, such as the management of active contracts (preparation, participation in tenders, negotiation, etc.), commodity trading, dealings with third parties, the selection, recruitment and administrative management of personnel and the procurement of goods, work and services.

The risk assessment activities generated a risk-based audit plan for the Hera Group. Both the audit plan and the risk assessment, developed for the three-year period 2019-2021, were approved by the Board of Directors of Hera Spa in February 2019. The audit plan for 2020 was approved by the Board of Directors on 18 December 2019. On this date, the relevant annual audit plan for 2020 was approved. During the year the related audits were conducted, the most significant risk areas were identified and the related risk mitigation actions were agreed with management.

Based on the matrix identified in the risk assessment, the Hera Group's Internal Auditing Department specifically focused on the risk of **fraud and/or corruption**, examined in its implementation methods with respect to the various processes and stakeholders of reference (e.g., Public Officials or Hera business partners). During 2020, the audits envisaged in the plan that are significant for anti-corruption purposes were carried out. Over the course of this activity no major instances of corruption were found.

[205-3]

In the month of April 2019, the 231 protocol "Handling of reports to the Supervisory Board (whistleblowing), that governs the process of reporting offences to the Supervisory Board and the subsequent investigation activity that involves the Internal Auditing Department, with the involvement of the competent company departments (Central Legal and Corporate Affairs Department). There are channels for reporting to the Supervisory Board both by post and by email; these channels are made public through indications on the Group website. Over the course of 2020, three reports were received that were assessed as not pertinent or not relevant for 231 Model purposes.

Management and prevention of fraud

During 2017, the Hera Group drew up Guidelines, in application as from 15 February 2018, for the purpose of facilitating the further development and co-ordination of the **internal control system** supporting the prevention and management of fraud.

The Guidelines assign roles and responsibilities within the sphere of the prevention, detection and investigation of potential frauds and further conduct within the organisation consistent and in line with the principles expressed. They also provide indications with regard to the channels to be used, hard-copy post or dedicated e-mail addresses, to report any suspicion of fraud. The guidelines for fraud prevention and management envisage two channels for receiving reports: the Ethics and Sustainability Committee and the Central Legal and Corporate Affairs Department of Hera Spa as well as a specific way of managing the same. The management procedures require that after receiving a report, if deemed necessary, investigation activity will be conducted under the responsibility of the Central Legal and Corporate Affairs Department, which will acquire information from the competent Departments. All the Departments involved must ensure the confidentiality of the information received and handle it in a strictly confidential manner protecting the identity of the whistle-blower, without prejudice to the legal obligations.

[205-3]

The Central Legal and Corporate Affairs Department did not receive any fraud risk reports during 2020.

In the scope of fraud management and prevention, a work group was set up, under the co-ordination of the Law no. 262/05 Compliance Unit, which developed a method-based technical support, "self-assessment", for the company Departments and the Group companies, for the purpose of providing them with elements for self-assessment in the identification of risks and related prevention controls. This instrument becomes an integral part of the internal control system.

The "self-assessment" specifically includes:

- the types of fraud;
- the fraud risks, or which type of action is implemented;
- the fraud schemes, or how the fraud is implemented.

The document includes, by way of example but not limited to, practical examples, red flags and analytical controls.

During 2019, the Compliance Unit set up pursuant to Italian Law no. 262/05 took steps to integrate the control matrices (Risk Control Matrix) with the types of fraud (undue misappropriation, corruption and false accounting) in the various sub-processes, where the risk is present.

Main activities and results achieved in 2020

[102-33]

Since 2019 a comprehensive management system for the prevention of corruption and fraud has been operational which in 2020, after an audit by the third-party certification body Bureau Veritas, allowed to maintain the Iso 37001 certification obtained in 2019 by Hera Spa, the parent company that manages the most important services, also being the entity most exposed to the risk of corruption. The system is based on the Quality and Sustainability Policy which guarantees the Group's commitment not to tolerate any form of illegality, corruption and fraud and envisages a system of sanctions for such behaviour, also encouraging the reporting of illegal or even only suspicious events, without fear of any retaliation. All the Hera Group Companies which adopt the Group's 231 Organisation Model implemented the **Corruption prevention model**, which supplements the already existing model for the prevention of 231-related offences. This document defines the concept of corruption, both active and passive, and disciplines the measures to prevent corruption and unpermitted conduct in the various dealings subject to risk of offence: with public officials, customers, suppliers and all other business partners.

Moreover, the Compliance Unit is operational, supervising the anti-corruption management system, examining the results of the audits conducted to these end by the Internal Auditing Department and monitoring corruption risk and preventive and risk mitigation actions.

The cited procedure for "whistleblowing" envisages new measures to protect the confidentiality of those who makes reports and establishes a specific channel for receiving reports on 231-related corruption in addition to the one envisaged by the Group's Code of Ethics.

In May 2020, the Compliance Unit set up pursuant to Italian Law no. 262/05, in compliance with that set forth in the Guidelines for the Prevention and Management of Fraud, launched a self-assessment training/information activity, for self-assessment in the identification of fraud risks and related prevention controls, for the purpose of subsequently fill in the document; the activity drew to a close in June 2020. Twenty-two meetings were held that involved 14 departments and 9 companies, that is, all of Hera's central departments and the main subsidiary companies. It was decided to hold separate meetings for each department/company to be more effective, less disorganised and have the chance to nip any doubts or perplexities associated with the specific areas of responsibility.

The individual departments/companies then managed its compilation independently and internally, involving the contact individuals deemed most suitable, and when possible, sharing the document on occasion of the Department Committees.

Over the course of 2020, the Compliance Unit set up pursuant to Italian Law no. 262/05 completed the process auditing activities, as envisaged by the Financial Reporting Manager's Plan prepared for the year 2020. During 2019, the matrices used for this activity were integrated with fraud risks where the risk existed, so the result of the test for the purpose of proper preparation of the financial reporting also covers the linked fraud risk. The tests performed were passed; there weren't any anomalies found linked to fraud.

Managing sustainability

[102-20] [102-22] [102-26]

In order to ensure that **social responsibility** and **sustainability in planning** and **corporate management**, in May 2005, the Board of Directors of Hera Spa set up a Corporate Social Responsibility Organisation Unit, reporting to the CEO, which has become a Department since 2010. Hera has thus been one of the first companies in Italy to endow itself with a unit dedicated to corporate social responsibility. As from 1 March 1 2019, consistently with the development process undertaken in the last few years, the CSR Department was renamed the **Shared Value and Sustainability Department**. Management is responsible for proposing and defining the company guidelines on corporate social responsibility and on the creation of shared value

as well as the policies concerning reporting on the shared value and on sustainability; it oversees the **balanced scorecard** system, drafts the **reporting on sustainability** and on **shared value** and proposes initiatives and pilot projects within the CSR/CSV sphere; it works together on the stakeholder engagement initiatives and is responsible for the periodic up-date of the Group's Code of Ethics. The SVS Director is a member of the Group's Ethics and Sustainability Committee.

In **AcegasApsAmga**, the sustainability report unit is part of the Administration, Finance, Control, Sustainability Report and Regulatory Department. It carries out the sustainability accountability activities, laying down in the context of AcegasApsAmga the corporate guidelines related to corporate social responsibility, and ensures that top management is informed on the progress of the pertinent issues. It also guarantees the implementation of the balanced scorecard system in line with the Business Plan, the Budget and the Group guidelines.

The Code of Ethics

[102-16]

The Code of Ethics is the document that contains **the commitments** and **ethical responsibilities** to be implemented by the managers, the workforce and collaborators of the Group for the achievement of corporate objectives. The Code of Ethics guides the business management and the individual conduct towards the observance of the ethics values and the functioning principles of Hera which represent, together with the mission, the basis of the principles contained in the articles which make up the Code. **Supplier qualification** is subject expressly to acceptance of the Code and the supply contracts drawn up by the Group companies include **termination clauses** in case the suppliers fail to comply with the principles of the Code of Ethics.

The Code of Ethics was approved by the Board of Directors in 2007 and is subject to **checking and updating on a three-yearly basis** by means of a participative process which sees all the workers and the trade unions involved. The fifth and current version of the Code of Ethics was approved by the Board of Directors in December 2019.

All the new recruits and the new employees entering the Group further to corporate acquisitions are involved in a training session on the contents of the Code of Ethics via the ethical game **AlfabEtico**. Furthermore, since 2013 the Hera Group has undertaken an intense programme for raising awareness on the Code of Ethics addressing 25-30 managers (management white-collars, middle managers and managers) by means of the Corporate Social Responsibility and Code of Ethics in current operations seminars. In 2020, the seminar was cancelled due to the limitations for the health emergency, but a process was begun that will lead to its replanning in 2021.

The quality, safety, environmental and social responsibility management system

[103-2] [103-3]

In 2020, despite the health emergency, the activities with the certification body for the renewal and maintenance of the various certification schemes of the Group companies were conducted mainly using **remote auditing**, in any event managing to guarantee seamless continuity with last year. All the audit activities concluded positively with the **maintenance of the certification of the integrated quality, safety, environment and energy system** of Hera Spa and its direct subsidiaries including Inrete Distribuzione Energia, Uniflotte, HERAtch and Acantho, as well as the Herambiente, AcegasApsAmga and Hera Comm Groups.

[403-1] [403-8]

In 2020, all companies finished the activities for migrating the certifications of the workers' health and safety management system from the Ohsas 18001:2007 to the **Uni Iso 45001:2018** acknowledging,

throughout the Group, the philosophy, contents of the Enterprise Risk Management (ERM) risk analysis on health and safety and the outcomes of the Risk Assessment and the related context analysis.

In the scope of the Group's development strategies aimed at optimising the efficient resource use objectives, in 2020 Herambiente optimised its own energy management system obtaining the **ISO 50001:2018** certification.

In 2020, the Group Review was further consolidated, as a tool to submit the Top Management the results of the various management systems on the main environmental and safety issues, in order to provide at the same time the elements needed to identify new synergy opportunities.

To pursue the goal of increasing the **resilience** of its business, the Hera Group launched a pilot project in AcegasApsAmga, which led to the implementation of a **management system of the operational continuity of the services** in compliance with the requirements of the **ISO 22301** standard; consistently, the Group outlined the fundamental features of its **Crisis Management** system and **Business Continuity Management system** which will develop involving all Group companies according to an elaborate multi-year programme.

Definitely one of the important goals set for 2021 is the integration of the parent company's environmental management system with the requirements of the **Afnor XP X30-901** standard regarding the implementation of a project management system with a view to **circular economy**.

Hera's commitment to quality, safety, environment and social responsibility certification

The management systems adopted establish the requirements that are necessary in an organisation to improve corporate processes in order to increase the satisfaction of the end customer, who is the end beneficiary of the services provided by Hera, to develop and improve its environmental and energy performances, to improve workplace health and safety and its social performance. The high diffusion of the Group companies' certified management systems is shown in the following table.

Certified management systems at Group companies (2020)

Management system	Hera		AcegasApsAmga		Marche Multiservizi		Group	
	No. of companies	% of employees	No. of companies	% of employees	No. of companies	% of employees	No. of companies	% of employees
Iso 9001 - Quality	18	97%	6	100%	2	100%	26	98%
Iso 14001 - Environment	11	83%	5	100%	1	88%	17	86%
Iso 45001 – Health and safety [403-8]	11	83%	5	100%	1	88%	17	86%
Iso 50001 - Energy	4	63%	4	100%	1	88%	9	72%
Sa 8000 – Social responsibility	0	0%	3	92%	1	88%	4	23%

The percentage of energy consumed at Group companies that have **ISO 50001 energy certification** is 76% of the total (43% in 2019). The increase over the last year is the consequence of the certification that Herambiente obtained in 2020.

The Group's main waste treatment plants are **Emas registered**. Therefore, the new objectives envisage the maintenance of the results achieved to date for the plants registered and any implementation of the registrations for the new plants that will be created or that will enter the Group. The number of Emas sites registered by Hera Group as of 2020 is **29 units** and the percentage of waste treated at Group plants with

Emas registration compared to the total waste treated is 80%. 100% of the waste treated by the Group was treated at plants with Iso 14001 certification.

Economic value for the stakeholders

The production and allocation of value added

Value added, in this Sustainability Report, is understood as the difference between revenues and production costs not constituting corporate stakeholder remuneration and the purchase costs for goods and services useful for the production process. It is therefore the difference between the revenues and costs incurred for the purchase of the production factors from other businesses and thus represents the value that the production factors within the company, own capital and labour, have added to the inputs acquired from outside. The concept of value added adopted is distinct from the definition of value added strictly applying to accounting practices. Here, the methodology applied is that proposed in 2001 by the Gruppo di studio per il Bilancio Sociale (GBS). With respect to the GBS methodology, rental payments for use of assets owned by shareholder municipalities and sponsorship costs are considered, as they are deemed significant for stakeholders. In addition, in contrast to the proposal of the GBS, the portion of value allocated to financial institutions was calculated considering the balance of financial income and charges, as deemed a better quantification of the relationships with this type of stakeholder, as opposed to the sole figure of financial charges. With this framework, the gross overall value added distributed is almost equal to the gross value added produced by normal operations.

There are two important reasons for using the indicator of value added. Firstly, it enables quantification of the wealth generated by the company, and accounts for how this wealth was generated and how it is allocated to stakeholders; it is therefore useful for comprehending the economic impacts the company produces. Secondly, through this report it connects the sustainability report with the annual financial statements. In this sense, production and distribution of added value is an instrument by means of which we can reconsider the corporate annual financial statements from the vantage point of stakeholders.

Production of value added

millions of Euro	2018	2019	2020
Revenues [102-7]	6,118.9	6,910.9	7,053.8
Other operating and non-operating revenues	492.0	642.3	467.8
Grants received from public institutions	-40.3	-37.3	-35.2
Consumption of raw materials and consumables (net of changes to raw materials inventories and stocks)	-2,984.1	-3,458.2	-3,410.6
Costs for reclassified services	-1,955.1	-2,234.4	-2,340.4
Bad debt provisions	-89.3	-80.5	-83.4
Accruals to provisions for contingencies and other provisions	-46.4	-33.4	-32.8
Other reclassified operating costs	-28.5	-28.1	-26.0
Capitalised costs	43.2	37.6	43.3
Core gross value added	1,525.9	1,721.1	1,661.7
Portion of profit (loss) pertaining to associated companies and joint ventures	14.9	13.4	8.2
Gross overall value added	1,540.8	1,734.5	1,669.9

The values of the consumption of raw materials and consumables, costs for services and other operating costs are indicated net of the costs considered as stakeholder remuneration.

Gross overall value added generated for stakeholders in 2020 came to Euro 1,669.9 million, with a decrease of Euro 64.6 million on the previous year (-3.7%) mainly due to the share reinvested in the company (depreciation and undistributed operating profit) for the reasons detailed below.

Distribution of value added to stakeholders

millions of Euro	2018		2019		2020	
Workforce	551.4	35.8%	560.4	32.3%	572.7	34.3%
Shareholders	163.6	10.6%	165.2	9.5%	183.9	11.0%
Company	518.3	33.6%	665.5	38.4%	594.4	35.6%
Financial institutions/Banks	106.6	6.9%	139.4	8.0%	124.9	7.5%
Public Administration	198.2	12.9%	201.0	11.6%	190.7	11.4%
Local community	2.7	0.2%	3.0	0.2%	3.3	0.2%
Gross overall value added	1,540.8	100%	1,734.5	100%	1,669.9	100%

The amount of value added allocated the **workforce** increases by Euro 12.3 million over 2019. The increase is linked to the Euro 10.3 million in changes in scope and the salary increases under the National Collective Labour Agreement, but it is limited thanks to the benefits of the mass holiday-use plan adopted by the Group in relation to the health emergency and the reduced average presence.

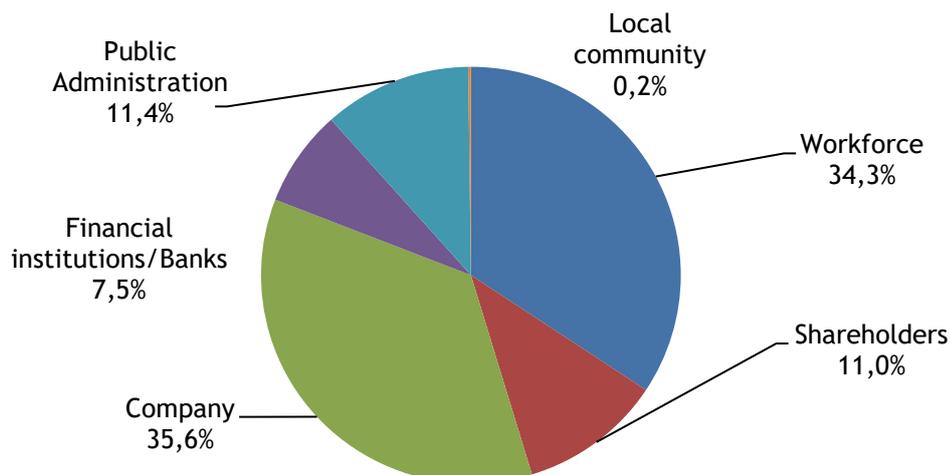
The portion allocated to the **shareholders** of Hera Spa and the minority shareholders of the subsidiaries rose by Euro 18.7 million (+11.3%) and equates to 11% of the total, up compared to the previous year. Of this portion, Euro 163.8 million was allocated as dividends distributed to Hera Spa shareholders (up with respect to 2019) and Euro 20.1 million was allocated as the portion of earnings pertaining to the minority shareholders of the subsidiaries of Hera Spa.

A portion totalling 35.6% of the value added generated in 2020 was **re-invested in the company**. This portion decreased with respect to 2019 (-10.7%) and includes the profit for the year not allocated to shareholders (Euro 138.9 million) and amortisation/depreciation of investments made (Euro 455.5 million).

The drop in the net profit over last year was determined by special items in 2019 totalling Euro 84.9 million linked to the acquisition of Ascopiave that considerably helped improve last year's total net profit. There was also a rise in **amortisation** made for about Euro 29 million compared to 2019 of which Euro 16.7 million in changes in scope due to the amortisation/depreciation of the lists of customers recorded following the acquisition of the commercial companies of Ascopiave and for the delta price of the disposal in landfills, partially offset by the review of the technical/economic useful lives of the assets in the integrated water cycle, which is substantially aligned with those defined by Arera for the 2020-2023 tariff period.

The portion of value added allocated to **financial institutions** in 2020 came to Euro 124.9 million (7.5% of the total, down by 10.4% compared to 2019). This share comprises Euro 198.3 million in financial charges (Euro 247.6 million in 2019), and Euro 73.4 million in financial income (Euro 108.2 million in 2019).

Allocation of value added to stakeholders (2020)



The portion allocated to the **Public Administration** came to Euro 190.7 million, 11.4% of the total (down by 5.1% compared to 2019), for an improvement of the Group's **total tax rate** compared to 2019, specifically thanks to the benefits gathered in terms of maxi and hyperamortisation/depreciation, in addition to the tax credit introduced by the Italian 2020 budget law, for major investments that the Group constantly makes in relation to the technological, environmental and digital transformation.

Duties and taxes amounted to Euro 131.0 million (7.8% of the total value added distributed) down by 8.9% compared to last year. Of the taxes and duties, Euro 93.5 million was allocated to the Government (Euro 102.6 million in 2019), Euro 29.5 million to the Regional authorities and Euro 8.0 million to the Provincial and Municipal authorities. The corporate income taxes decreased from Euro 126.0 million in 2019 to 111.8 million in 2020 following improvement of the Group's tax rate mentioned above.

[201-4]

The production plants and installations used by the company are in part owned by shareholding municipalities, and **rental payments** are made for their use; the portion for the Public Administration also includes environmental compensations paid to the municipalities regarding the waste treatment plants. In 2020, total rental payments for use of the assets of shareholder municipalities and environmental compensations came to Euro 89.7 million. There was also Euro 5.1 million relating to the running costs of the national (Arera and Agcm) and local authorities. **Public grants** received in 2020 came to Euro 35.0 million of which Euro 25 million **allocated as operating grants** and Euro 10 million as **plant grants**. The operating grants mainly include the incentives for renewable sources (RES) recognised by the Energy Services Operator (GSE) for the production from renewable energy sources and grants recognised by public bodies, authorities and institutions for specific projects and activities carried out by the Group. The plant grants refer mainly to investments made in the water sector and in the waste management sector.

Lastly, an amount of Euro 3.3 million was allocated to **donations** (Euro 1.1 million) and **sponsorships** (Euro 2.2 million); details on these items can be found in the **Innovation and contribution to development** chapter (section "Economic development and social inclusion").

Shareholders and financial institutions

Hera's commitment toward investors

Hera undertakes to **create value** by placing the quality and efficiency of the services managed and the growth by lines, both internal and external, at the centre of its strategic approach; at the same time, it pursues a balanced development of the strategic areas of its business portfolio. The stability of these strategic policies over time, the low risk appetite and the sustainable management approach have contributed towards producing economic-financial results constantly on the up over 18 consecutive years, also under adverse market conditions. **Total shareholders' return** with respect to the initial public offering (IPO), came to +253.4% at the end of 2020: a value which has always remained positive in periods characterised by considerable volatility on the financial markets. The average annual growth of the total shareholders' return was consistent with the average annual increase in earnings per share up until 2019; in 2020, because of the outbreak of the health emergency, the accumulated earnings suffered a drop in stocks which affected all the companies in the industry; nevertheless, Hera showed positive fundamentals in all quarters of the year, confirming the sound growth profile shown by its track record.

Hera stock closed 2020 with an official price of Euro 2,990, compared to a price of Euro 3,909 at year-end 2019 and after having touched new all-time high at Euro 4,494 on 20 February and outperforming both the Italian market and the average for local utilities. When the health emergency broke out, stock exchanges all over the world suddenly updated their values with heavy, widespread downward trends. Even under these conditions, Hera stock showed its usual resilience, with equity trends down less than the average for the market and maintained for the entire period a positive performance compared to the values in early 2019. In the last quarter of 2020, the share performance once again aligned with that of the industry, with a performance that however remains positive in the two-year period.

Official stock price and average traded quantities in 2020

	QI	QII	QIII	QIV
Official price at close of period (Euro)	3.28	3.37	3.17	2.99
Average volume traded (thousands of Euro)	5,005	3,386	2,582	3,731
Average volume traded (thousands of Euro)	18,588	11,280	8,426	11,076

The Hera official listed price at the end of 2020 disclosed an implicit valuation premium with respect to the local utilities sector. The multiple of the **enterprise value on the gross operating margin** (EV/Ebitda) was in fact equal to 6.9 compared with a 6.4 peer average, and also the multiple of the **share value on the net profit** (P/E), equal to 14.5, exceeded the 13.3 average. The greater valuation which the market acknowledged Hera with respect to the main listed local utility companies reflects: the persistent outperformance of the final results with respect to expectations, the future growth prospects of the business results, the low risk implicit in the mix of the strategic business areas, the stability of senior management over time, the diversified composition of the shareholding structure and the time series of the results undergoing continual growth. The historical series of the stock performance, which show a low volatility (beta) and a high propensity for "autonomous" positive trends (alpha) and justify the greater appeal included in the premium are particularly appreciated.

The **dividend policy** has been identified as the most important component of the remuneration of the invested capital. Hera has ensured a constant and rising flow of dividends since listing: it has distributed Euro 1.84 billion in total since its establishment in 2002. The stock has been included in the Etf Spdr S&P Euro Dividend Aristocrats since 2016, a basket of 40 European securities (only four are Italian, including Hera) which distinguished themselves due to the uninterrupted distribution of stable or rising dividends in the last 10 years.

In the five-year business plan, presented in the first few days of 2021, Hera increased the remuneration objectives for the shareholders envisaging a **minimum dividend rising up to 12.5 cents per share** by 2024, up +25% compared with the last dividend distributed. This policy, which confirms the path of growth already foreseen in the previous business plan, allows shareholders to have clear visibility on the minimum future return on their investment.

The consensus of financial analysts reflects the sustainability of the Group's dividend policy: it is consistent with the estimated cash generation, which is expected to increase compared to the previous business plan and which, after the payment of dividends, will be able to further improve equity soundness, already among the best in the industry, while maintaining ample margins to finance further growth opportunities not included in the business plan.

Complete transparency with the shareholders and the financial market on the creation of value

Hera promptly provides the market with significant economic-financial information, facilitating the correct assessment and the transfer of the value generated by operations to the listed shares.

In order to ensure the shareholders transparent disclosure, all the press releases which may influence the price of the stock are disclosed in real time. The communication is tailored and forwarded via various channels to all the categories of investors (institutional, SRI, private and retail, public institutions) and ensures accessibility to the main information both of an economic-financial and social and environmental nature.

Hera continues to make the greatest commitment so as to ensure a plurality of professional and independent appraisals on the company's value and on the Group's sustainable approach.

In order to offer professional third-party opinions on the Group and its results, under the direct control of the Executive Chairman the Group Investor Relations maintain constant monitoring of the analyses conducted by financial analysts, even ESG, that cover the stock in order to intercept any changes in sensitivity and the evolution of the best practice, not to mention to promote ongoing improvement of the fulfilment of investor requests.

At year end, all the brokers had a positive or neutral opinion on Hera stock, while sales recommendations were absent. Supported by the economic results presented quarterly by the Group, the analysts expressed upwards assessments during the year, with the average target price which rose from Euro 3.87 to Euro 3.93 at the end of the period. After the presentation of the new business plan, on 13 January 2021 the analysts once again improved their assessments, raising the average target price to Euro 3.96.

Appraisal and target price of the analysts which follow Hera stock

Company	2020		January 2021	
 Banca Akros	Buy	3.90	Buy	4.00
 BANCA IMI	Buy	4.70	Buy	4.70
 EQUITA	Hold	3.50	Hold	3.50
 Intermonte	Outperform	4.20	Outperform	4.20
 Kepler Cheuvreux	Buy	3.60	Buy	3.60
 STIFEL	Buy	3.60	Buy	3.70
 MEDIOBANCA <i>Banca di Credito e di Risparmio di Milano</i>	Outperform	4.00	Outperform	4.00
Average target price		3.93		3.96

The Hera stock forms part of the following **sustainable indices**: Dow Joes Sustainability Index World and Europe as Industry Leader, 6 indices of the STOXX Sustainability family, 17 indices of the EURO STOXX ESG-X family, 15 indices of the STOXX Low Carbon family, 7 indices of the EURO STOXX Low Risk family, 4 indices of the STOXX Climate Awareness family, 4 indices of the STOXX Climate Impact family, 7 indices of the STOXX Industry Neutral ESG family, STOXX Global ESG Governance Leaders, STOXX Global ESG Impact, STOXX Global ESG Leaders, Stox Global ESG Social Leaders, ECPI Euro ESG Equity, ECPI Global Blue Gold GD Equity, FTSE Environmental Opportunities Italy Index, Refinitiv Diversity and Inclusion Index, Bloomberg Gender Equality Index.

The ethical indices include securities of excellent companies from the standpoint of business sustainability in order to facilitate the investment choices of socially responsible funds (Sri). The organisation of these indices considers that the companies with sustainable management, from an environmental standpoint, as well as with regard to the dealings with the stakeholders and the corporate governance, obtain significantly higher results than their competitors over the long-term.

Consistent with the growing interest for Hera's sustainable approach on the market, the Group adopted a policy of coverage of the ESG analysts during 2019, selecting those most relevant in terms of their stature and research quality. The assistance provided to **ESG analysts** and the preparation of questionnaires have in some cases led to a significant increase in assessments. The coverage policy provides for the exclusion of activities for analysts not included in the coverage.

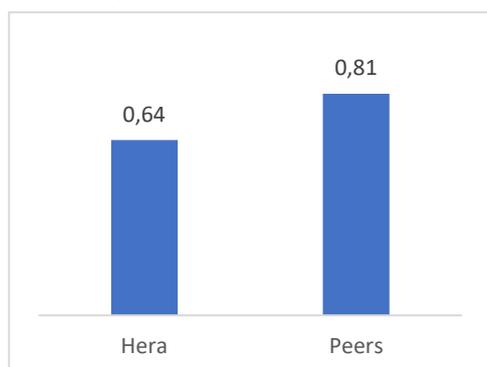
ESG rating of Hera stock

Company	Rating	Comment
 Dow Jones Sustainability Indexes	87 Industry leader	Hera earned an overall score of 87/100, an outcome that places it as the best multi-utility worldwide.
 FTSE4Good	Inclusion in the index (in or out)	In June 2020 the Hera stock entered the FTSE4Good Index Series, a series of ethical indices conceived by FTSE Russell to better group the best companies around the world that proactively commit to sustainable development.
	A-	Improved rating compared to 2019 (it was B)
	79 Outperformer	Rating improved by +4 points with respect to 2019, with inclusion in the class of the Outperformer companies
	A	Rating unchanged with respect to 2019, with outperformance in the assessment of the carbon footprint
	6th place / 1st place green finance	In 2020 Hera was ranked first in the area of surveying integration of the ESGs in company finances, and sixth in the overall ranking.
 Refinitiv Global Diversity & Inclusion Index	12th place	In 2020, twelfth global place (an improvement of two positions with respect to 2019 and first global multi-utility) in the ranking drawn up by Refinitiv on the promotion of diversity, inclusion and development of people.
	93.9%	Above average rating in the utility sector (92.73%) for Hera in the 2020 index

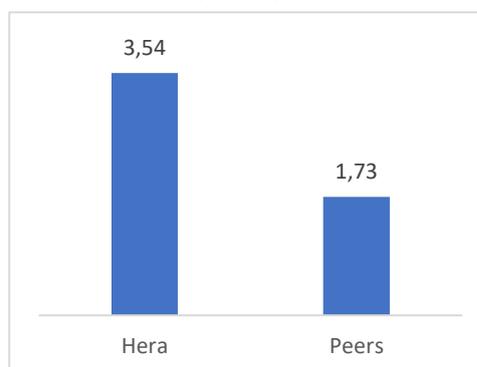
The commitment to reduce the investment risk

Hera pays great attention to the monitoring of the risk components associated with the trend of the stock on the stock market, such as the volatility of the listed prices (beta), the ability to generate value independently from market conditions (alpha) and the liquidity of the trading.

Hera and peer 3-year Beta (2020)



Hera and peer 3-year Alpha (2020)



In the three-year period the stock disclosed a **volatility index of the listed prices** (beta index) below the other local utilities and at the same time it also showed the positive ability to generate value (alpha index) irrespective of market trends.

These characteristics of the stock are consistent with the strong resilience of the economic results, the low risk profile of the portfolio of assets under management, the solidity of the governance and the business model, oriented towards constant growth also through M&A.

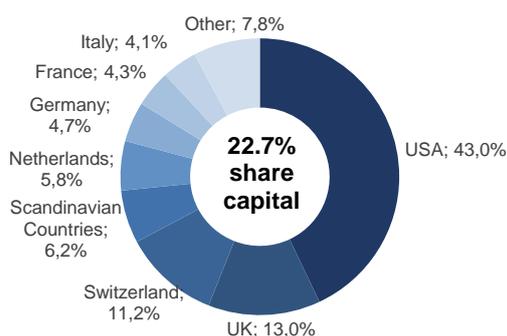
The **daily average volumes** in 2020 came to 3.7 million shares traded (+7.3% compared with 2019), while the average equivalent value of the daily trading came to Euro 12.3 million (+6.9% compared to 2019).

The **liquidity of the stock market trading** is also the result of intense dialogue with the financial market operators, which continued in 2020 online after the pandemic broke out, to maintain the usual transparency, granting visibility on the positive trend of the fundamentals of the company, guaranteeing the safety of employees and seamless continuity of services. These efforts were much appreciated by the main investors and stockholders, but they didn't help alter the stock performance compared to that of the local utilities, despite the financial results having exceeded the benchmark and the generation of cash flows was among the best in the entire industry in Europe.

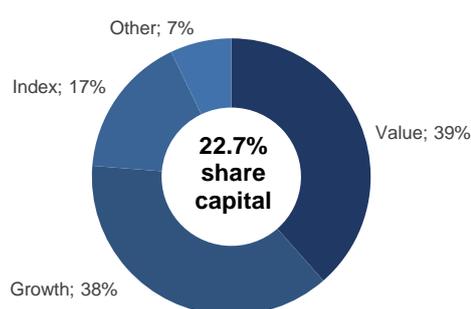
In 2020, the contacts were 484, including the launch of new relations with professional investors which have an investment style consistent with the Group's share profile. Management has participated in theme-based and sustainability conferences, meeting with investors who combine ESG aspects with financial assessments and now account for approximately 30% of total assets under management globally. Another road show was organised by Group structures in the pre-meeting period to guarantee timely, open and transparent dialogue with the investors involved in proactive direct engagement on the topics of governance.

The **diversification of the institutional investors** between the shareholders of the company is an important factor for facilitating an on-going evolution of the shareholding structure and a balance of the listed prices of the stock over time. As the following diagrams show, Hera presents a balanced geographic and investment style diversification of the professional investors, benefiting the resilience and low volatility of the stock.

Institutional shareholding structure by geographic area as at 31 December 2020



Institutional shareholding structure by investment style as at 31 December 2020



In the graph on the left the item "Other" includes: Australia, Austria, Belgium, Canada, Hong Kong, Ireland, Liechtenstein, Luxembourg, Portugal, South Korea, Spain, Taiwan

In the graph on the right the item "Other" includes: hedge funds, long/short, momentum, sector specific, speciality, yield

Source: Refinitiv

The Hera stock is included in the FTSE Mib, FTSE All Share and FTSE Italia Servizi Pubblici of Borsa Italiana share indices.

The last Shareholders' Meeting authorised the exercise of a plan for the repurchase of treasury shares for a maximum of 60 million shares (equal to 4% of the share capital) for the purpose of creating value for the shareholders, contributing to the liquidity of the trading, avoiding anomalous fluctuations with respect to the benchmark and serving M&A transactions with the intention of counter-diluting the shareholders.

Corporate Governance and safeguards for shareholders

Since its establishment, the Group has adopted a Corporate Governance system based on the traditional model, with a Board of Directors made up of executive and independent directors, which ensures - in line with the company mission - the protection of the shareholders, the return on invested capital and satisfying the stakeholder interests.

Hera's activities are handled by management in accordance with the Code of Ethics adopted by the Group and are in line with the Code of Conduct furthered by Borsa Italiana Spa.

Hera's management body has always been heedful of aspects of good governance and protection of the interests of the shareholder: any change to its structure which meets these objectives is promptly adopted without delay.

With this intention, in 2020 the minimum threshold for electing the less-represented gender on the Board of Directors was raised to 40% (from 33%), immediately accepted with the renewal of the officers of the shareholders' meeting on 29 April 2020.

Similarly, in 2015 the **loyalty vote** was established, an instrument which makes it possible to assign up to two votes for each share held by the same shareholder for a period of at least 24 months. Shareholders who demonstrate - with the stability of their investment - a greater sensitivity to the long-term growth of the Group and to the active participation in the appointment of the shareholders' representatives, are thus rewarded. However, in order to fully safeguard the interests of the minorities, the loyalty vote was applied in a reduced version with respect to that envisaged by legislation: in fact, it has exclusive efficacy for the appointment and/or removal of the Board of Directors and the Board of Statutory Auditors, for the changing of the limit to share possession, and for the amendment of the same article which established the loyalty vote.

During the same meeting which established the loyalty vote, the shareholders also approved the increase from three to four of the number of board directors appointed from the lists presented by the minorities: this innovation proposes to attract greater participation of private capital in the choice of the Group's strategies. Furthermore, to encourage greater participation of the minority shareholders, the percentage of share capital required to present a list for the election of the Board of Statutory Auditors has been reduced from 3% to 1%, as already envisaged for the election of the Board of Directors.

The composition of the shareholding structure

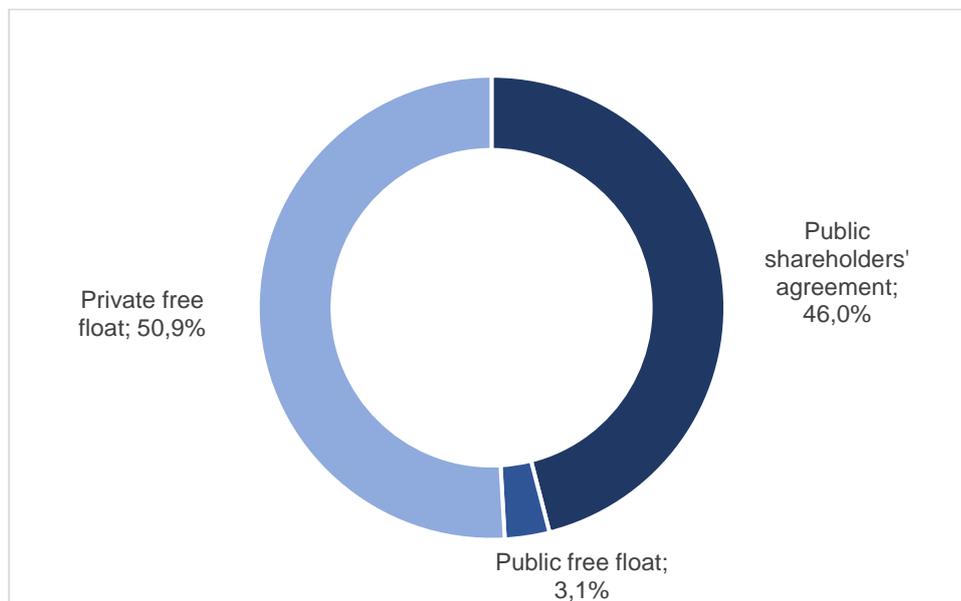
[102-5] [102-7]

Hera's past features a peculiar aspect: the Group is considered to be one of the main interpreters of the sector consolidation process with a combination model which has involved more than 43 utility companies since 2002, ensuring around 40% of the growth of the results in the last 18 years. The merger transactions have been financed mainly by the issue of new shares and have almost doubled the overall number of shares representing the share capital: from 789 million in 2002 they became 1,490 million at the end of 2020. These transactions have not had diluting effects for the shareholders, as the annual average growth of the earnings per share of around +9% bears witness to. The creation of value took place also thanks to the extraction of synergies and the increased economies of scale. The Group's capitalisation thus reached

almost Euro 5 billion (compared to Euro 1 billion in 2003) on average in 2020, i.e. an average annual growth of +9% in line with the growth in earnings per share.

The expansion of the shareholding structure maintained a constant balance between the public and private component, and extended the diversification of the shareholders both in terms of number and geographic origin.

Shareholding structure as at 31 December 2020



ESG financial instruments

Hera Green bonds

Green bonds are those which associate environmental-type investments and activities with the funds raised. The first financial instrument of this type was issued by the World Bank in 2008. Interest in Green bonds has grown over time and in 2020, according to the Climate Bonds Initiative, bonds were issued for a total value of US\$ 269.5 billion, just slightly above the figure of the previous year (US\$ 266.5 billion).

In Italy, the Hera Group was the first to launch this new financial instrument in 2014, and opened the way up for other operators in the utility sector or otherwise.

Five years after the issue of the first green bond in Italy, Hera launched its second Green bond. The financial instrument was presented by means of a roadshow in the main European markets, to illustrate to investors and analysts the allocation of resources in environmental sustainability projects in the fields of environment, water, energy. The Group's second Green bond (issued on 5 July 2019) amounts to Euro 500 million. The transaction saw a significant participation of international investors (France, Germany, Great Britain, the Netherlands), who were largely focused on the environmental and social performance of companies.

The funds raised will be used to finance or refinance numerous projects, already launched or planned in the Group business plan, which pursue one or more of the objectives of the 2030 UN Agenda:

- energy efficiency (SDGs 7 and 13): installation of innovative electronic gas and electricity meters (NexMeters), development of district heating networks, public lighting projects;

- circular economy and sustainable waste management (SDG 12): innovative projects in waste collection systems, extension of the quantity-based tariff, construction of facilities and infrastructures for recycling and energy recovery (including biomethane production);
- Sustainable management of the water service (SDGs 6 and 14): sustainable wastewater management infrastructures, sewage and mains water infrastructure projects for resilience and adaptation to climate change.

Green Bond 2019-2027: allocation of funding

	Total funds raised (millions of Euro)	% of total
Sustainable management of the water service	188.4	37.7%
Circular economy and sustainable waste management	188.6	37.7%
Energy efficiency and gas infrastructures	45.9	9.2%
Energy efficiency and electricity, district heating and public lighting infrastructures	77.1	15.4%
Total	500.0	100%

The definition of the funded projects was validated by a "Second Party Opinion", drawn up by ISS-Oekom, which ranked Hera "Prime" in terms of ESG performance (sixth in a panel of 43 global companies) and highlighted its particular excellence in the water sector.

With the first Green bond, issued in 2014, 26 projects belonging to the categories indicated in the table below were financed or refinanced for a total of Euro 500 million.

Green Bond 2014-2024: allocation of funding

	Total funds raised (millions of Euro)	Number of projects
Increase in energy production from non-fossil sources	57.1	10
Increase in energy efficiency	219.1	7
Increase in the use of waste-to-energy plants for the treatment of waste	173.2	4
Improvement of the wastewater treatment plants	31.9	4
Increase in separate waste collection and reduction in the use of landfills	18.8	1
Total	500.0	26

The first sustainable revolving credit facility in Italy

In May 2018 a new credit facility was taken out for Euro 200 million, entitled "ESG Linked RCF Facility", which introduces elements of sustainability by means of an incentive mechanism linked to the achievement of specific environmental, social and governance objectives. In the commitment undertaken with the banks, a number of sustainability performance indicators have been defined, by virtue of which the multi-utility company may benefit over time by more favourable rates.

The spheres of the identified indicators coincide with two Csv drivers: smart use of energy and efficient use of resources. In particular, they concern the following areas of Csv impact: promotion of energy efficiency, reduction of greenhouse gas emissions and transition towards the circular economy. The identified indicators are among the GRI indicators of this Sustainability Report submitted for external audit.

Dialogue with our stakeholders

Dialogue and consultation initiatives

[102-21] [102-42] [102-43] [102-44]

Hera's significant commitment to involving stakeholders is by now part of the operational structure of the departments that deal with the relations with various stakeholders. This strong commitment continued throughout 2020 despite the difficult situation.

The main engagement and dialogue activities carried out with the company's stakeholders and the method used for identifying the material issues that guided this activity are described in the methodological guide of this report in the section **The stakeholders and the materiality analysis**.

Customer satisfaction survey

Since 2005, the quality of our gas, electricity, water and environmental services has been assessed through annual customer satisfaction surveys aimed at defining improvement measures. Since 2014, as well as Hera's residential customers, the survey has included the customers of AcegasApsAmga (Padua and Trieste) and Hera Comm Marche (Pesaro and Urbino). In 2020 monitoring was also extended to EstEnergy and companies acquired with the "Ascopiave transaction".

Assessment of overall satisfaction of residential customers

CSI (from 0 to 100)	2018	2019	2020
Service satisfaction index (Services CSI)	75	76	78
Overall satisfaction index (CSI)	71	73	73
Global satisfaction	74	75	76
Satisfaction with respect to expectations	70	72	72
Satisfaction with respect to the ideal	69	71	71

The results include the Group Hera companies, Hera Comm, Hera Comm Marche, AcegasApsAmga and Amga. 2020 data also include Estenergy and , Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, Etra Energia joined in Hera from 31/12/2019.

In 2020 the satisfaction index reached the 2019 levels and once again settled at 73, exceeding the high satisfaction threshold. Average satisfaction for the services provided increased, reaching 78 points against 76 points of the previous year. All services widely exceeded the threshold of 70 points, confirming high levels of satisfaction.

The contact channels show an excellent level of customer satisfaction and above all are significantly high: the ratings of branch offices, call centres and online services are above 80 points, which means that customers will always find competent operators and appropriate procedures, regardless of the contact channel. The **app channel** started to be monitored in 2017, reaching a satisfaction rating of 83 in 2020. Customer loyalty confirmed an excellent rating of 83 points.

The percentage of satisfied customers (customers who expressed a satisfaction rating of 6 or higher) was 92% in 2020, confirming the result for 2019.

The most recent customer satisfaction survey for regulated services in the areas of Pesaro, Urbino and the other municipalities served by **Marche Multiservizi** was conducted in 2019. The overall satisfaction index increased by one point compared to 2018, settling at 73, while average satisfaction for the services provided increased by two points compared to 2018, reaching 71. A study was conducted among the local areas to analyse consistent satisfaction; Urbino continues to improve compared to previous years even if

the evaluations are still below the ideal threshold of 70 points (67 points), but well above the minimum threshold.

The methodology used for the customer satisfaction survey

The customer satisfaction survey is based on an internationally recognised methodology designed to assess the quality of services offered and customers’ overall satisfaction with Hera. The number of telephone interviews in 2020 settled at over 9,200 replies. The survey was conducted by Computer Aided Telephone Interviews (CATI) with a survey population chosen so as to ensure that the sample is representative of the customers of all of the Group’s services. Monitoring was carried out by interviewing the main contact individual for Hera within the household. The questionnaire, which lasts around 15 minutes, monitors satisfaction components and measures future behaviour (word-of-mouth, loyalty etc.) towards the company. The assessments of the results are expressed in numerical scales, divided into levels of satisfaction: under 50 points indicates insufficiency; up to 60, minimal satisfaction; between 60 and 70, a good level of satisfaction, and above 70, a high level of satisfaction.

From the second half of 2017, call centres, branch offices, online services and app are monitored as contact channels through daily interviews conducted the day after the contact has been made, in order to gain insight into the customer’s satisfaction while the experience is still fresh. Around 10 thousand interviews/month are carried out using IVR (by telephone with pre-recorded questions) and CAWI (by email) methods. Around 120 thousand interviews were carried out in 2020 to monitor the contact channels. The portal used for analysing customer evaluations allowed channel performance to continuously improve.

The survey was also carried out for **business customers** in order to monitor customer satisfaction levels both for the free market and protected market. In the case of companies, the contact individual for the gas, electricity, water and environmental services provided by Hera is interviewed. The results of the 2019 survey are reported since those regarding 2020 were being processed on the date of approval of this report. There is a cross-cutting increase in the number of customers contacted to monitor satisfaction. In particular, the CSI has risen above **70 points** for the first time since the start of the survey.

Assessment of business customer satisfaction

CSI (from 0 to 100)	2017	2018	2019
Service satisfaction index (Services CSI)	73	74	75
Overall satisfaction index (CSI)	68	69	72
Global satisfaction	71	72	74
Satisfaction with respect to expectations	67	68	71
Satisfaction with respect to the ideal	64	67	71

Other dialogue initiatives with customers

Our **web portal for consumer groups** has been on line since 2011: the section of the Group’s corporate website is entirely reserved for representatives of the main associations in the local areas Hera serves, who are key contacts for the company in its relations with end customers. For associations, this web channel is an important interface with Hera. They can use it to handle reports and procedures, prevent disputes and minimise the time needed to respond and solve problems. In 2020, **26,593 visitors** accessed the web, for a total of **75,635 page views**: these figures show a growth in traffic, with a roughly 30% increase in page views compared to the previous year.

In addition to the portal, the contact individuals and operators of the associations can use dedicated email addresses, and phone and fax numbers that, together with the web section, make up a real communication channel reserved to consumer groups. In 2020, 425 cases were managed through this dedicated channel

(797 in 2019), 99.65% of which were solved successfully; average case resolution time was 1.4 business days.

Furthermore, in order to build positive relationships and create an increasingly open dialogue, Hera organised specific meetings with consumer group contact individuals, again in 2020. Due to the health emergency, meetings were held online and once only, in October. A total of **six** meetings were held involving overall **33 representatives from the main consumer associations** operating throughout the local areas. Particularly interesting and current topics for the consumer associations were addressed during the meeting: Arera regulatory developments, the performance of the customer protection system, updated water leak fund data, the Hera channel dedicated to consumer associations, the main measures implemented by Hera for users in difficulty during the early stages of the health emergency and, lastly, focus on main waste collection system innovations for some of the local areas served.

The Hera Group continues to **cooperate with over 80 trade associations** which are therefore able to take advantage of innovative services and favourable supply conditions. Hera Group's cooperation with trade associations is geared towards building a long-term relationship based on the organisation of periodic meetings, the updating of agreements, and the offering of new services to members, with particular focus on the goals of the 2030 Agenda for sustainable development.

Hera started 2020 with its support to ARCI's Winter School as part of a two-day event on gender perspectives. The event talked not only about the tools to be used to overcome gender inequalities, but also addressed the issue of leadership management and finance from a gender perspective.

During the summer, ARCI Reggio Emilia organised once again, as in previous years, the "Cinema sotto le stelle" (Cinema under the stars) initiative: the choice of a location that was suitable for social distancing allowed the showcasing of first and second feature films, restored historic films and arthouse films.

Launched at the end of 2019 in cooperation with CNA Parma, the exhibition "Parma, the city of perfume" continued in 2020: the olfactory travelling photographic exhibition **Profumo, 30 anni di emozione** (Perfume, 30 years of emotion) was held in September, on the 30th anniversary of the Accademia del Profumo. This touching exhibition thrilled the visitors of Parma's Ape Museum by blending specific fragrances and signature photographs without the aid of computer enhancement.

Among its new projects in 2020, Hera Group was involved as partner in the 17th edition of the **Festival della Mente in Sarzana**, one of the leading cultural events in Italy: thanks to its new organisation, compliant with virus containment regulations, the event allowed meetings to be held with philosophers, anthropologists, writers, artists, psychologists, historians and scientists, and thoughts and opinions to be shared in live streaming mode.

Great success for **#Eviaggio italiano**, the project that relaunches sustainable Italian tourism: a journey spanning across art, culture, food and wine using the sun, energy and electric mobility to show us just how many opportunities we have to experience our local areas sustainably. As main sponsor of the Modena stopover, the Hera Group also supported the project with its own recharging stations in the area, supplying energy to the vehicles involved in the event: several electric cars, scooters, drones and electric bikes, a mobile solar-powered kitchen and a mobile studio equipped with a podcast station, cameras and live station.

In Marche, on the other hand, collaboration continued with Ascom Confcommercio of Pesaro and Urbino, for the **Itinerari della bellezza** project, joined in 2020 by **Itinerari delle Rocche**, which both included the following main initiatives: culinary weekends, economic agreements with members and a publication that tells the story of the tourist, cultural, environmental and culinary itinerary that makes its way through the province of Pesaro-Urbino.

Internal climate survey and other dialogue initiatives

The internal climate survey is carried out every two years. The most recent survey was conducted in 2019 and involved over 80% of the company workforce; the satisfaction target was exceeded, settling at 68 out of 100 (69/100 for women and 68/100 for men).

During 2020, **improvement actions** were implemented downstream of the survey both in terms of **centrally managed actions** (valid for all the Hera Group) and specific actions defined within each **structure or company in the following areas: Me, Team and Managers, Company and Culture**.

With the onset of the health emergency, some of the envisaged actions were applied immediately in the first half of the year (for example, the development of new communication channels and initiatives for employees) to ensure their prompt implementation. Other actions with a medium-term perspective, including those involving face-to-face activities, were planned for the second half of the year.

The actions implemented in the first half of the year include:

- **creation** of the information hub **Insieme per l'emergenza** (Together for the emergency) - which then evolved into **insieme per ripartire** (Together to start again) - containing news and information on the development of the health situation, on all of the actions put in place by the company, and on the instructions for the conduct to be followed both at work premises and at other places (e.g., smart working)
- the **definition** of **remote working** procedures with the creation of specific training content to make remote activities more effective
- the **provision** of **additional technological tools** for remote working (e.g., laptops, private virtual network- VPN, Microsoft Teams)
- **additional** welfare services (e.g., psychological support, family support, personal growth content)
- **creation** of specific training content and **provision** of further training content created by partners (e.g., courses for ongoing training, online remote learning courses, online courses related to the health emergency).

Innovative projects to measure employee satisfaction and improve employee engagement were launched in 2020. The **new climate survey** will be launched in August 2021.

Internal communication

Internal communication played a more pivotal role in 2020, especially in relation to the health emergency. Many initiatives were carried out aimed at informing, reassuring, guiding, creating and strengthening the bonding with others. Thanks to the use of a wide range of tools and the involvement of many workers through **storytelling**, not only was it possible to convey essential information about the emergency, but also to strengthen the pride in belonging to the Hera Group.

A constantly updated digital information hub was created to give information about the measures and initiatives introduced by the company during the health emergency. In order to respond to workers' requests, a specifically dedicated mailbox and a daily newsletter were set up so that everyone could keep up to date.

2020 featured two main communication topics: **workforce involvement** through storytelling and **digitalisation projects to promote innovation and cooperation** in a continually evolving professional and relational context.

The new **everyday life** at the time of the health emergency was also told through the testimonies of several workers. The stories were collected in a book and given to the entire Group workforce, with the intention of fixing in our memory the commitment and common effort we all delivered during this extraordinary year.

The digitalisation paths in support of the **Digital Workplace** (part of HER@Futura activities) continued, with a view to promoting its use and supporting workers in the change management process.

In 2020, the project for the new **intranet** makeover - designed to create an increasingly satisfying, customised and digital experience capable of integrating information, applications and social media - went live. The process that led to the development of the new intranet involved a large amount of people: about one hundred workers of different levels belonging to various geographical areas.

Pending the go-live of the new intranet, the current intranet continued to be constantly updated, as also the **digital HO** - the house organ for workers, with the publication of almost 400 articles and 70 videos during the year.

In 2020, it was not possible to involve workers in face-to-face events due to the health emergency. So as not to miss the annual meeting with top management, the **Facciamo il punto** (Let's take stock) meetings were organised in two videos in which the Chairman and CEO provided information about strategies, results achieved and future goals. The first streaming event open to the entire Group was also promoted to share and award the best projects developed using Digital Workplace tools. The meeting was a great success with around five hundred participants.

Relationships with the local community

[102-44]

HeraLAB, a tool for listening to the local communities

[413-1]

Hera LABs are local multi-stakeholder boards that Hera provides to the local areas in which it delivers its services to open a structured channel for listening to and discussing with local communities. The HeraLAB process lasts one year, during which the local stakeholder board meets five times. The aim of the meetings is to define a plan of actions that Hera undertakes to implement over the next two years.

In 2020 **two new HeraLABs were launched in Modena and Forlì-Cesena**; the Forlì-Cesena area is where the laboratory was set up for the first time when the HeraLAB project started in 2013.

The 24 members of the HeraLABs of Modena and Forlì-Cesena were appointed by the Board of Directors of Hera during the meeting held on 25 March 2020. Both LABs met twice face-to-face, while the third **#Ideare** (Concieve) meeting was held by videoconference due to the health emergency.

To facilitate the idea generation process before the third **#Ideare** meeting, eight thematic focus meetings were organised. The focus meetings were held by videoconference and four were organised for each LAB. They allowed a highly constructive exchange of ideas and involved LAB participants and Hera technicians and managers in highly relevant topics for the Modena and Forlì-Cesena areas (specifically, continuity of the integrated water service, separate waste collection quality, circular economy and energy efficiency, digitalisation and Z generation, smart cities and communities).

Due to the health emergency, the last two **#Co - progettare** (Co-design) meetings of the Rimini and Bologna LABs, set for March 2020, were postponed. These two LABs ended with the most recent two Co-design meetings held on 12 November 2020 and 13 January 2021, respectively.

As at 31 December 2020, a total of **113 meetings (equal to over 2,500 hours of listening)** had been organised for the HeraLAB project. Specifically, three meetings were held in 2020 and the first months of 2021 for the Modena LAB, two for the Forlì-Cesena LAB, one for the Bologna LAB and one for the Rimini LAB. In addition to the so-called ordinary meetings, eight thematic focus meetings were held remotely lasting one hour and a half each. This brings the community of HeraLAB **members to 116**. Due to the delays

caused by the health emergency that slowed down the planning of HeraLAB, seventy-eight projects were proposed to Hera, of which 55 have already been implemented.

In 2020, eleven of the twelve projects of the two Local Initiatives Plans of the Ravenna and Ferrara LABs were concluded. The two Ravenna HeraLAB projects **E scartoz** (Paper cornets) and **Dal rubinetto, please!** (From the tap, please!) were included in a single project called **Ravenna Futura** (Future Ravenna), which links together two issues: **promoting the consumption of mains water** and **preventing food waste** through the creation of green restaurants. The project **Consuma bene e raccogli meglio!** (Good consumption and better collection!), which seeks to integrate separate waste collection at shopping centres for the collection of quality plastic, was postponed to 2021 due to the health emergency.

Despite the fact that the co-design activity of the Rimini LAB had not yet been concluded in 2020, the development of one of the six projects of the Plan of Initiatives was brought forward in agreement with the Rimini LAB members. The initiative was, **Occhio a cosa butti!** (Watch out what you throw away!), a campaign supported by the Municipality of Rimini to raise awareness among citizens and tourists on the impact and effects of throwing waste into the sink and toilet drains. The other 5 initiatives will be implemented by the end of 2022.

- **Il Circolino** (The Club). The aim of the project is to set up a permanent and representative body involving leading stakeholders in the area. Local institutions, economic and voluntary associations, and the Hera Group will share project ideas with a view to sustainability and circular economy;
- **Environmentally friendly events**. The initiative aims to develop Guidelines for the Management of Sustainable Events. This will be a useful tool guiding various local players who choose to give their event a sustainable approach
- **Senza reti** (Without nets). The project is designed to create a virtuous network made up of institutions, environmental associations, harbour authorities, fishing operators, fishing cooperatives and Hera, and to work together to recover plastic from the sea
- **Riempimi d'immenso** (Fill me totally up). The initiative aims to promote the practice of refilling water bottles. With the involvement of public administrations and business associations, cafés and kiosks will join the project and fill up water flasks or other containers with the mains water for free
- **Testimonial dell'Acqua** (Water Testimonial). A campaign designed to inform citizens that tap water is safe and monitored, using the content of the In Buone Acque (In Good Waters) report. This will also be achieved by involving famous and local testimonials and especially focusing on the wastewater purification process that makes **water safe to drink**.

Three out of the four projects of the Bologna LAB - which concluded its co-design phase in January 2021 - will be developed by the end of 2022. As a consequence of the health emergency, the **Quality over Quantity** initiative, which envisaged the involvement of the residents of the Santo Stefano and Porto Saragozza Districts in a participatory project, will be suspended. The three projects are:

- **Giardini Margherita Plastic Free**. The project includes a number of actions to promote the mains water "as is" inside the Giardini Margherita Park in Bologna. Several businesses will be involved (cafés, kiosks, stalls) to boost refilling, and the drinking fountains inside the gardens will be revived
- **Acqua bene comune** (Water, a common asset) The project aims to create a social information campaign that will target young and very young people and increase their awareness that tap water can be trusted because safe and monitored
- **Raccolta differenziata dall'inizio alla fine** (Separate waste collection from beginning to end). The project intends to tell the virtuous cycle made by waste in the local area. It is the "story of a journey" from the dustbins in our homes to the selection and recovery plants (from beginning to end). The aim is to show citizens that their virtuous actions always have a 'happy ending'.

As set forth in the HeraLAB regulations, appointment as LAB member and attendance to the LABs are **free of charge**.

Hera has decided to pay an attendance fee of Euro 150 (Euro 100 during the first edition of the project) for each participant and for each LAB meeting. The overall attendance fees go into an annual fund that the LAB uses every year for supporting sustainability initiatives and projects promoted by local public bodies or non-profit organisations identified by the LAB. From the start of the HeraLAB project to the end of December 2020, Euro 97,750 attendance fees have been donated to 23 public bodies and non-profit organisations in the local areas.

Associations of which Hera is a member

[102-13]

The Hera Group is present at the highest levels of the organisations which represent the system of local public services, first and foremost Utilitalia. Hera participates actively in the association's activities and supports the institutional communication through the identification of its representative in the different round tables opened with regulators by the associations. At local level, Hera takes part actively in Confservizi Emilia-Romagna and Confservizi Tuscany and Confservizi Veneto (the Regional Association for companies, firms and both public and private bodies that manage local public services in their reference area), Confindustria, Unindustria and Apindustria in many of the local areas of competence.

In the **energy field**, the Group is also a member of Assogas (National Association of Gas and Energy Services Private Industrialists), Airu (the Italian Association for Municipal Heating), Fire (Italian Federation for the Rational Use of Energy), Cti (Italian Thermotechnical Committee), and it takes part in Cig (Italian Gas Committee) works.

In the **environmental sector**, the Group is also a member of the national association Fise Assombiente and the European association for hazardous waste Eurits, as well as the production-chain consortia Corepla, Comieco, Polieco, Conip and Cic. It also participates in the Emas Ravenna association, the first entity at national level to have obtained district Emas registration.

The Group contributes to **research activities** regarding the public utility services sector performed by leading institutions, both as a client for specific studies and by participating in the scientific debate proposed by them with contributions published under record (Agici Finanza d'impresa, Ref Ricerche, Florence School of Regulation, Leap Mater, and Cisp with specific regard to the urban waste management and circular economy workshop).

Hera is also a member of the **Asphi Foundation** (promotion and integration of the disabled via the use of Information and Communication Technology) and of **Impronta Etica**, (a business association to promote social responsibility). Hera is also a member of the **Circular Economy Network** (supporting and promoting circular economy development), the **Csr Manager Network** (sustainability issues), the **Aspen Institute** (an international non-profit organisation which has as its mission the internationalisation of business leadership and dialogue on major contemporary issues), **Aziende Modenesi per la Responsabilità Sociale d'Impresa** (Companies from Modena for Corporate Social Responsibility), the **Rubes Triva Foundation** (training and promotion of occupational safety in environmental hygiene companies), and the **Global Compact Network Foundation** (promotion of a culture of corporate citizenship).

Communication

Social and environmental communication

Social and environmental communication in 2020 was highly influenced by the health emergency. More than ever, therefore, the communication drivers adopted were: being close to the community, focusing on empathy and simplicity, and channelling the idea of **being there** for others. Information was conveyed using warm, easy-going and optimistic tones: communication typically seen as service-oriented (for

instance, how to separate waste properly) was an opportunity to bring a smile to citizens and make them know that the company was by their side. For this reason, many publications had the **Together for the emergency** logo.

The year began with the **#RgenHera** campaign, seeking to make young people take on a leading role in promoting their need to change lifestyles. Only a few weeks later, however, the health emergency really did change their lifestyles, and the campaign was suspended because within just a few days it was no longer relevant.

Yet dialogue with citizens was not abandoned: some formats were changed, such as the TV show **Tutta mia la città** (The city's mine) starring Giorgio Comaschi. The show was turned into a format suited to the times: it was entirely filmed at home and was a sort of call with citizens in which the company managed to talk in an easy-going and friendly way about how to sort waste properly, how to entertain your children, and where to throw away masks and gloves.

Speaking of gloves and masks, before their disposal could become a problem, a campaign was launched to clearly explain where to throw them away and how. Emphasis was given to the fact that we needed to be aware that this waste would accompany us for many months to come. The commercials shown on the local TV stations were accompanied by a flyer sent with the bill to all customers in the local area.

The perception of **environmental issues** increased during the health emergency, leading both young and old to show greater awareness about what we can do to make sure that the environment surrounding us is less affected by unsustainable behaviour.

As a result, the company moved from the **#RgenHera** campaign, where young people were the key players, onto a campaign in which the lead actors are the young and old alike, closely linked by the common aim of working to improve the environment in which we live, with small actions and day-to-day behaviour. The local and national **Rigenerazioni** communication campaign was thus conceived, with its **5Rs: recycle, reduce, reuse, recover and regenerate**. Ordinary people, in everyday situations, doing simple things for the benefit of all.

Starting from spring, a new line of waste management communication was created using drawings and comic strips to fashion an increasingly simple and essential language: calendars, brochures and posters to enter homes and say what matters ironically.

In the autumn, campaigns continued to focus on the **quality of the separate collection of paper and organic waste** in some local areas with considerable criticalities: Ferrara (paper only) and some municipalities in the Modena hinterland (paper and organic waste). In addition to standard communication tools (flyers sent with bills, posters, large-scale distribution, social networks, radio), leading local TV stations were again used to broadcast ironic commercials on these issues, also using company employees. For both campaigns, the claim was deliberately short and the visual was highly evocative and at the same time appealing, giving both words and images equal potential.

Again in the autumn, more than twenty single-operator vehicles were covered with waste management communication, with messages on the **circular economy** and giving a **second life** to objects in good condition.

Communication actions for external audiences were simultaneously conveyed on all internal communication channels dedicated to employees.

Hera in the Internet

Hera is continually committed to ensuring effective web communication, which fully meets the transparency expectations of its stakeholders. The portal www.gruppohera.it is an important

communication and interaction tool between the company and citizens, and is constantly updated and renewed.

Website traffic increased in 2020 compared to 2019: **website visits (+5.0%), single visitors (+7.8%)**. The most visited areas were the **customer area**, with over five million page views, and the **group area**, with almost 1.8 million page views. In the Customer area, the **waste management service** was again the most visited area in 2020, with almost 1.8 million page views.

In 2020, the **new company website** was developed. Designed with a shared focus and inclusive approach, it was aimed at simplifying content and making user browsing easier. Published in February 2021, it will continue to be enriched with further content even after going live, with a view to continuous improvement.

Website access

Qty	2018	2019	2020
Customers section	168,785	174,461	178,833
Suppliers section	10,000	11,347	10,857
Section on Corporate social responsibility, sustainability reporting and CSR initiatives	10,042	9,699	9,999
Investor Relations section	3,799	4,776	4,197
Other sections	65,823	70,403	78,136
Total average monthly visits	258,448	270,686	282,022
Total page views (monthly)	753,087	794,845	778,611
Total single visitors (monthly)	152,241	159,775	172,850

Excluding AcegasApsAmga and Marche Multiservizi

What is Hera's presence on the web?

Hera uses communication through social channels to broaden dialogue with the different local stakeholders and narrow the gap even further thanks to a simple language and daily life content.

The Group's online visibility increased in 2020 (+7%). Hera's presence on the web focuses on blogs, forums and social networks; topics relevant to the company's reputation and operations are monitored on these platforms.

Based on the over 6,500 posts referring to Hera, sentiment showed very positive ratings.

The Hera Group's **Instagram** page has 4,450 followers (60% more than 2019) and publishes three posts per week, getting on average 100 likes per photo and 1,000 views. In 2020, the **YouTube** channel had over 1,900 subscribers and over 2.1 million views; about one hundred new videos were published in 2020. The **Facebook** page for giving assistance with waste management issues and which was initially dedicated only to the Municipality of Ferrara, was extended to other local areas in 2020, reaching over 5,200 fans and helping citizens improve the quality of separate waste collection. Hera Group's **Twitter** account reached 6,661 followers in 2020, with an average of 144 tweets published each month (1,732 in total). The tweets had on average 502 thousand monthly views (a total of 6 million, 31% higher than 2019) and generated about 14 thousand shares. As to **LinkedIn**, Hera Group's account followers increased by 27% in 2020 compared to 2019, reaching a total of 77,727 followers. 657 posts were published on the profile during the year, reaching around 43 thousand shares and over 1.5 million people.

Media relations

The press office manages Hera Group's communication on the local, regional and national news media. This work is accomplished by continuously drawing attention to the company's many initiatives, through the dissemination of press releases and the organisation of press conferences and press tours at the Group's

main plants. This effort complements, in parallel, the promotion of the Group's activities with in-depth interviews with management on specific issues, as well as the preparation, based on the needs of journalists or on topical issues on the media agenda, of positions, photographs and videos related to the services provided and the various business areas. The press office also promptly answers any critical positions taken against the company or its services, and provides a direct line, through the media, for local communities and customers. These activities are carried out in collaboration with all the company's structures and with all the Group's companies. Lastly, the office handles relations with the press offices of public and private institutions, associations or third parties to promote joint activities.

A qualitative and quantitative analysis has been active for some time now to gauge this daily work. It is carried out by a specialised third party, which constantly and thoroughly monitors national, regional and local press (press, web and audio-video). All the articles are assessed and weighted according to specific criteria: for the press, for example, the circulation of the publication, the size of the article, the position on the page and the presence of any photographs. The pieces are then grouped according to their tone: positive, neutral, or critical.

Hera-related news items (national press review)

%	2018	2019	2020
Favourable or highly favourable articles	94.3%	97.2%	96.3%
Neutral articles	5.3%	2.6%	3.6%
Critical or extremely critical articles	0.3%	0.2%	0.1%
Total articles (no.)	448	752	641

Hera-related news items (local press review)

%	2018	2019	2020
Favourable or highly favourable articles	79.9%	84.9%	84.6%
Neutral articles	11.5%	9.8%	10.1%
Critical or extremely critical articles	8.5%	5.3%	5.3%
Total articles (no.)	6,032	6,486	5,625

Thanks to the work done, in 2020, Hera's positive visibility in the press (especially the national press) continued to be at very high levels, basically stable compared to the previous year. The number of articles published in the national press amounted to 10% of the total: 641 out of 6.266 articles published globally. This figure reveals the attention by the press and the Group's firm involvement in national and local dynamics, whether specific or general, and demonstrates the role of the company among the leading players in the sector, which has increased particularly in the national media in recent years following its inclusion in the FTSE MIB index. From a qualitative standpoint, the positivity concerning Hera is over 96% in national publications and almost stands at 85% in regional and local publications. Among the topics that contributed to this positive feedback: the business plan, the economic results - increasing despite the health emergency, market confidence in Hera shares, investments, the welfare and HR management corporate policies, the broad offer of educational activities for schools, the many projects aimed at increasing public lighting efficiency implemented by Hera Luce, the projects and results relating to sustainability, circular economy, resource regeneration and innovation, the waste management services set up in the various local areas, sponsorships and, given the difficult period the country was going through, all the actions implemented to protect stakeholders, whether customers, employees or suppliers.

For years now, the trend of critical articles has settled at very low levels: below 1% for the national press and stable at 5.3% for local press, quite a logical result and in any case very low if we consider the multi-business nature and the size of the Group's activities which cover an increasingly wide area, following the

most recent Merger&Acquisition transactions and partnerships such as the partnership with Ascopiave, which led to the creation of the largest energy operator in north-eastern Italy.

Pending legal proceedings

[307-1] [419-1]

In addition to the disputes involving customers and suppliers which are discussed in the corresponding sections of this report, at the end of 2020, an additional **574** disputes were pending mainly concerning disconnections of gas supplies to late-paying end customers who, having signed contracts with salespeople for the redelivery points on the distribution network managed by the distributor Inrete, were subject to administrative termination as governed by Arera legislation (specifically the Consolidated Law on gas delinquency). The remaining disputes refer to very different issues regarding claims for damages associated with the management of the services performed by Hera or Group companies. During 2020, 639 disputes were settled of which: 169 with energy customers, 18 with water service customers, 14 with suppliers, 5 with waste management service customers, 1 with customers using other types of services and the remaining 432 with other company stakeholders.

In 2020, **42 warnings** were received, mainly concerning disputes detected by controlling bodies and referring to violations of the provisions of Italian Legislative Decree 152/2006 (Consolidated Environmental Act). The warnings mainly concerned the integrated water services, particularly the failure to comply with the provisions set out in the relevant authorisation documents. After receiving these communications, Hera complied with all the obligations prescribed by the controlling bodies.

With regard to the networks and plants managed by the Group, the following litigation proceedings brought by associations, citizens and/or other parties/bodies are reported:

Flood in Rimini

With reference to the **flood** which, on 24 June 2013, following a violent storm, submerged the street Via Santa Cristina S.P. 69 in Rimini and caused the flooding of the Rimini prison and neighbouring dwellings (including that of an inhabitant who died on the same day due to illness), an employee of Hera Spa and two other external parties were served a notice for setting a preliminary hearing in which they were accused of disaster and involuntary manslaughter. At the date of drafting of this report, the investigation phase is underway.

Odorous and noisy emissions

Worthy of mention is the notification in July 2017 of the decree that ordered the committal to trial of two Herambiente managers, with which the Public Prosecutor of Rimini questioned, in particular, the **odorous** and **noisy emissions** from the recovery and storage plant in Rimini which allegedly caused nuisance to the owners of nearby lands. At the first hearing scheduled for 28 November 2017, a local committee was set up as plaintiff for damages. At the date of drafting of this report, the investigation phase of the proceedings is underway. The next hearing is scheduled for 11 May 2021.

Florence waste-to-energy plant

In ruling no. 1602/2016, Section II of the Regional Administrative Court of Tuscany (TAR) upheld the appeal on additional grounds in case no. 143/2016 brought by environmental associations (WWF and Italia Nostra) and the appeal no. 180/2016 brought by the Municipality of Campi Bisenzio and accordingly, ordered the annulment of the measure adopted on 23 November 2015 no. 4688 by the Officer for Environmental quality O.P. of the Metropolitan City of Florence, of the minutes of the related service conferences of and subsequent pleadings for repossession. The object of the measure annulled by the Regional Administrative Court is the granting of a Single Authorisation and Integrated Environmental Authorisation for the

construction, management and operation of **a waste incineration plant filed by the company Q.tHermo**. The aforementioned decision of the Regional Administrative Court of Tuscany was challenged before the Council of State which confirmed the objections of the first instance Judge, with specific reference to the fact that the location of the waste-to-energy plant at Case Passerini was closely linked to the implementation of environmental redevelopment projects and especially to the renaturalising works comprising the so-called “Boschi della Piana” which, instead, had not been built before the construction of the waste-to-energy plant. Q.tHermo started revocation proceedings of the aforementioned ruling in order to obtain its overturning. On 5 March 2020, a hearing was held before the Council of State and the company is waiting for the filing of the ruling.

The shareholding in the company Q.tHermo was sold by Hera in 2020, so the Group is no longer involved in the proceedings.

Expansion of the Imola landfill

With an action brought before the Regional Administrative Court of Emilia-Romagna in 2017 by WWF, Panda Imola - Non-profit voluntary organisation and Legambiente Medicina against the Region of Emilia-Romagna and against CON.AMI. and Herambiente, the claimants challenged the decision of the Regional Council of Emilia-Romagna dated 21 December 2016, no. 2262 entitled “provision for an Environmental Impact Assessment (EIA) regarding the project for **the expansion of the Tre Monti landfill**: volumetric recovery through raising of the 3rd lot in the municipality of Imola (BO) - Proposers CON.AMI and Herambiente” published in the B.U.R.E.R. on 9 January 2017 and related annexes. By way of the aforementioned resolution, the Regional Government issued the EIA ruling regarding the raising of the “Tre Monti” landfill and the claimants challenged its legitimacy, raising as main claim the fact that the Regional Government, since not taking into account the negative opinion expressed by the Ministry of Cultural Heritage and Activities and Tourism (MiBACT), did not set up the referral procedure to the Council of Ministers. Although this negative opinion was not necessary for the raising work, given that this area does not need to comply with any landscape protection obligations, the Regional Administrative Court, with ruling filed on 10 January 2018, upheld the complaint lodged by the applicants. Herambiente challenged the ruling before the Council of State which rejected the appeal of Herambiente and of the Regional Government of Emilia-Romagna on the main ground that the latter had obligated itself by asking MiBACT for an opinion, which when given was negative, even though such opinion was not necessary for the raising of the existing plant. According to the Court, this conduct gave rise in all the Authorities involved in the Conference of Services to the reasonable expectation of an existing relationship of interference between the protected areas and those not subject to restrictions. The judgement before the Council of State is final and unappealable.

In its final judgement, the Council of State confirmed the previous measure adopted by the Regional Administrative Court of Emilia-Romagna which annulled the acts aimed at raising the landfill.

2015 Economic and Financial Plan appeals

With distinct appeals in 2015 before the Regional Administrative Court of Emilia-Romagna against Atersir, and against Hera Spa as other party, the Sassuolo Municipality, on the one hand, and the Maranello, Fiorano and Formigine Municipalities, on the other hand, sought cancellation of Area Council Resolution 6/2015, issued on 10 June 2015, containing the **Economic and Financial Plan for 2015**. The municipalities that are applicants include the Municipality of Sassuolo, which, in addition to the above resolution, appealed against the Local Council of Modena's resolution no. 3/2015 of 13 April 2015 and every other prerequisite and consequential measure. The municipalities that filed the application complained, mainly, of the lack of discussion to agree on the Economic and Financial Plan, that the cost elements therein were expressed in an aggregated form instead showing the unit cost of services for each entry and the alleged unjustified increase of the costs of the service for municipal and similar-to-municipal waste. Hera Spa

appeared before the court disputing what had been claimed in fact and law by the municipalities that filed the application. With further appeals notified in 2016, again before the Regional Administrative Court of Emilia-Romagna against Atersir, and against Hera Spa as the other party to the proceedings, the above municipalities sought the cancellation of Area Council Resolution 25/2016, published on 11 May 2016 on "Approval of economic/financial plans for the municipal waste management service for the year 2016". Hearings were held before the Regional Administrative Court on 16 January 2020 as regards the appeal filed by the Municipality of Sassuolo and 28 January 2020 for the appeals filed by the Municipalities of Maranello, Fiorano and Formigine. The above appeals were dismissed by the Regional Administrative Court of Emilia-Romagna, with the exception of the appeals filed by the municipalities of Maranello and Formigine, which were settled out of court.

2017 Economic and Financial Plan appeals

With further appeals notified in 2017 before the Regional Administrative Court of Emilia-Romagna against Atersir, and against Hera Spa as the other party to the proceedings, the Municipalities of Sassuolo, Maranello, Fiorano, Formigine, Predappio, Tredozio, Rocca San Casciano, Bertinoro, Forlimpopoli, Galeata, Premilcuore, Meldola, Savignano sul Rubicone, Borghi, Sogliano al Rubicone, San Mauro Pascoli, Longiano, Gambettola, Roncofreddo, Santa Sofia, Castelnuovo Rangone, Castelvetro di Modena, Savignano sul Panaro, Spilamberto, Vignola, Guiglia, Marano sul Panaro and Zocca challenged, within their area of responsibility, resolution no. 27 of 24 March 2017 and resolution no. 17 of 15 March 2017 adopted by the Area Council of Atersir, through which the **Economic and Financial Plans for the 2017 municipal waste management service** covering the local areas related to the above municipalities were approved. Hearings on the merit were held before the Regional Administrative Court on 16 January 2020 as regards the appeal filed by the Municipality of Sassuolo and 28 January 2020 for the appeals filed by the Municipalities of Maranello, Fiorano, Formigine, Castelnuovo Rangone, Castelvetro di Modena, Savignano sul Panaro, Spilamberto, Vignola, Guiglia, Marano sul Panaro and Zocca. With the exception of the appeals filed by the municipalities of Predappio, Tredozio, Rocca San Casciano, Bertinoro, Forlimpopoli, Galeata, Premilcuore, Meldola, Savignano sul Rubicone, Borghi, Sogliano al Rubicone, San Mauro Pascoli, Longiano, Gambettola, Roncofreddo and Santa Sofia (still pending at the date of this report), the remaining appeals were dismissed by the Regional Administrative Court of Emilia-Romagna.

2018 Economic and Financial Plan appeals

With further appeals notified in 2018 before the Regional Administrative Court of Emilia-Romagna against Atersir, and against Hera Spa as the other party to the proceedings, the Municipalities of Sassuolo, Formigine, Castelvetro di Modena, Savignano sul Panaro, Spilamberto, Vignola, Zocca, Castel Guelfo, Maranello and Fiorano Modenese challenged resolution no. 9 of 19 February 2018 of the Authority Council and resolution no. 1 of 12 February 2018 of the Local Council, respectively, through which the Economic and Financial Plans for the 2018 municipal waste management service covering the local areas related to the above municipalities were approved. With a similar extraordinary appeal to the President of the Republic, then brought before the Regional Administrative Court of Emilia-Romagna, the municipality of Imola challenged Atersir resolution no. 19 of 19 March 2018 of the Area Council containing the Economic and Financial Plan for the 2018 municipal waste management service relating to the municipality of Imola, as well as, to the extent concerned, Atersir resolution no. 3 of 8 March 2018 of the Local Council of Bologna. Hearings on the merit were held before the Regional Administrative Court on 16 January 2020 as regards the appeal filed by the Municipality of Sassuolo, on 28 January 2020 for the appeals filed by the Municipalities of Maranello, Fiorano, Castelvetro di Modena, Savignano sul Panaro, Spilamberto, Vignola and Zocca, and on 19 February 2020 for the appeal filed by the Municipality of Formigine. With the exception of the appeals filed by the Municipality of Castel Guelfo and the Municipality of Imola (which are still pending), the remaining appeals were dismissed by the Regional Administrative Court of Emilia-Romagna.

2019 Economic and Financial Plan appeals

With further appeals notified in 2019 before the Regional Administrative Court of Emilia-Romagna against Atersir, and against Hera Spa as the other party to the proceedings, the Municipalities of Sassuolo, Formigine, Maranello, Fiorano Modenese, Castelvetro di Modena, Savignano sul Panaro, Imola and Castel Guelfo challenged, respectively, resolutions no. 18 and no. 19 of 13 March 2019 of the Area Council, and resolution no. 14 of 5 February 2019 of the Area Council, through which the **Economic and Financial Plans for the 2019 municipal waste management service** covering the local areas related to the above municipalities were approved. Hearings were held before the Regional Administrative Court on 16 January 2020 as regards the appeal filed by the Municipality of Sassuolo, on 28 January 2020 for the appeals filed by the Municipalities of Maranello and Fiorano Modenese and on 19 February 2020 for the appeal filed by the Municipality of Formigine. While the appeals filed by the Municipality of Castel Guelfo and the Municipality of Imola are still pending at the date of this report, the appeals filed by the remaining municipalities have mostly been dismissed by the Regional Administrative Court of Emilia-Romagna, with the exception of the appeals filed by the Municipalities of Castelvetro di Modena and Savignano sul Panaro, which have been settled out of court.

Finale Emilia landfill (MO)

In the proceedings before the Regional Administrative Court of Emilia-Romagna against the Regional Government of Emilia-Romagna, and against Feronia S.r.l. as other party to the proceedings, the Municipality of Finale Emilia challenged, subject to suspension, Regional Authority decision no. 356 of 11 March 2019 which approved the Environmental Impact Assessment of the project for **the optimisation of the technological area and the volumetric expansion of the existing landfill in the Municipality of Finale Emilia**. The Municipality also challenged, among other things, the Integrated Environmental Authorisation serving as single Authorisation for the construction and management of the plant as well as being an alternative tool to the municipal urban planning tool. The Regional Administrative Court rejected the request for suspension and at the hearing of 18 December 2019 the Municipality requested a deadline to file additional grounds. The **Regional Administrative Court removed the case from the register**; the proceedings, therefore, will terminate six months after cancellation and if the parties fail to act. The Municipality of Finale Emilia filed an application for scheduling a hearing on the merits, which was set for 12 May 2021.

No **new third-party disputes** were reported in 2020.

Relationships with the Public Administration

[102-44]

Integrity in relationships with the Public Administration

Hera is committed to ensuring the highest levels of integrity and honesty in its relationships with the Public Administration. This is why the Group has adopted, and regularly updates, an organisation, management and control model designed to identify specific risks associated with the crimes identified in Italian Legislative Decree no. 231/2001. The Group has supplemented it, as previously mentioned, by adopting a specific policy for the Prevention of Corruption. The 231 Model comprises protocols that strive to ensure transparency and a sense of responsibility in internal and external relationships. For each “high risk” process, the protocols identify principles, roles, and responsibilities which should be followed in managing the activities and define the periodic information flows for control. Each protocol ensures the constant monitoring of risk activities for the Supervisory Board, including: relationship management with the Authorities, public loans, sponsorships, donations and gifts, procurement, protection of the environment

and health and safety in the workplace, the management of activities regarding tenders for the concession of natural gas distribution and sanitation services.

The procedures adopted conform to the principles of the Code of Ethics and seek to guide Group management based on the values and principles defined in the Code.

Relations with Local Authorities

The Central Department for Strategy, Regulation and Local Authorities constantly and effectively supervises **relations with partner Municipalities and with Local Authorities** through its Area Managers, with a view to giving proper attention to the areas served by the Group. Despite having a good part of its activities clearly included in the local areas in which it operates, the Group is gradually growing in both industrial and organisational terms. All Local Authorities served, therefore, can always and easily reach a contact to receive a response, in due time, to questions and problems on the services provided by the Group, being certain they are talking with the right people and will obtain the required feedback within a reasonable time. After integration with Strategic Planning and Regulatory Affairs, Management introduced the Policy Making unit and acquired the coordination of HeraLAB. The information content available to Area Managers continued to increase, multiplying the opportunities for bi-directional dialogue between the Group and the area served.

In 2020, the new customer relationship management system, designed to support local relationship activities in Emilia-Romagna, Veneto and Friuli-Venezia-Giulia, became fully operational. This tool is gradually introducing customer experience logics (CRM) into the relations with Local Authorities to make interactions with them quicker and more effective, while also ensuring a far more streamlined management of available historical data.

Despite the provisions resulting from the health emergency, in 2020 the service model for monitoring relations with Local Authorities was further consolidated. In fact, during the year, **the Area Managers supervised over 3,700 relations with local stakeholders**, maintaining ongoing interaction even during the most severe phase of the emergency and despite shifting part of this activity to digital communication channels. Constant dialogue has also enabled the Group to intercept the new needs arising in each local area in real time, and to provide them with a timely response.

In terms of number, in 2020, **relations mainly concerned** waste management services (40%), which, due to the health emergency, required a high amount of extraordinary meetings with single municipal administrations. These were followed by the integrated water service (28.3%), other network services (10.3%), the customer area (8.2%) and business topics of general interest (7.9%).

With a view to increasing cooperation at Group level, the practice continued of exchanging views about Emilia-Romagna area issues on a monthly basis with the AcegasApsAmga department in charge of dealing with Local Authority Relations. This exchange of views facilitated the joint development of the new CRM and a more homogeneous approach to public administrators.

Lastly, of note is the continuation of the close collaboration with the Shared Value and Sustainability Department concerning the promotion and coordination of the HeraLABs.

The relationship with the Area Authority for water and waste services

The Water and Waste Services Regulator for Emilia-Romagna (Atersir) was founded by Regional Law no. 23/2011 and has regional competence since it has incorporated the previous provincial Water and Waste Regulatory Authorities. It deals with the governance of the water service and the municipal waste management services, with functions of service and investment planning, governance and management control, and management of activities that are inherent to the award of the water and municipal waste services.

As regards the water service, Atersir operates with second level functions as a result of the transfer to the Italian Regulatory Authority for Energy, Networks and the Environment (Arera) of regulatory and supervisory functions which occurred at the end of 2011, with Italian Law Decree no. 201/2011.

In 2018, Atersir started to operate with second level functions also for the waste service, following assignment to Arera of the regulation and control functions under Italian Law no. 205/17, which also includes the waste disposal and treatment activities.

The relationship with the Italian regulatory and supervisory authorities

[307-1] [419-1]

The Italian regulatory authorities that mainly affect the Group's management and activities are the **Regulatory Authority for Energy, Networks and the Environment (Arera)**, and the **Italian Antitrust Authority (Agcm)**.

The Arera proceedings that directly involved the Group in 2020, as part of the Authority enforcement activities, are reported below.

With reference to the preliminary investigation that was closed due to failure to comply with the obligations to **replace the cast iron pipelines with hemp and lead joints** (VIS 39/2011), after completing our commitment to rapidly replace them entirely in the Ferrara distribution system, Inrete Distribuzione Energia is going ahead with its commitment to inspect the entire hemp asbestos cement network that will involve the complete replacement thereof as per the timescales set by the Regulation of the quality of the gas distribution service (Rqdg).

Following the **audit** carried out in October 2018 at the offices of Hera Spa on the integrated water service tariffs with regard to integrated water system operators, that is, local area government bodies and other competent parties (resolution 170/2018/E/IDR), by way of decision DSAI/41/2019/IDR Arera started a sanctioning procedure, establishing a pecuniary administrative sanction of Euro 378 thousand and granting the right to waive the further formalities of the procedure by paying the administrative sanction reduced to one third. Hera Spa, however, decided to continue with the ordinary sanctioning procedure initiated by the decision: we are waiting for Arera's decisions.

[417-2] [417-3]

Finally, it should be noted that **no preliminary investigations were initiated** against the Hera Group in 2020 by Arera, Agcm or main controlling bodies, concerning non-compliant products, services and marketing activities which led to sanctions, warnings, investigations or the initiation of preliminary investigations by the relevant authorities.

Separation between the regulated activities and the deregulated activities in electricity and gas services

The legislation on functional unbundling plays a key role in the reform of the energy sector, since it aims to separate the management of regulated activities from deregulated ones, promoting the development of competition.

In particular, the rules for functional unbundling, governed by the Italian Regulatory Authority for energy, networks and the environment (Arera) by way of resolution 296/2015/R/com, set the requirements for vertically integrated companies that operate in the sectors of electricity and natural gas in order to guarantee:

- the **neutrality of the management** of the infrastructures under concession;
- the **non-discriminatory management of the commercially sensitive information**, relevant for the correct development of competition;

- the **absence of subsidies crossing over between activities**, in particular between those subject to tariff regulation and those carried out on the basis of the free market.

In compliance with the regulations, Inrete Distribuzione Energia Spa, AcegasApsAmga Spa and Marche Multiservizi Spa, vertically integrated in the Hera Group, set up the respective Independent Operators for natural gas and electricity distribution activities.

Independent Operators are tasked with the actual implementation of the functional unbundling of the activities, which they implement and guarantee by means of the arrangement of a Programme of Fulfilments, containing the measures for pursuing legislative goals. The Programme of Fulfilments is updated on an annual basis and submitted to the Authority within 30 June every year.

Pursuant to the current legislation, these companies also appointed their own Compliance Officers.

Compliance Officers check that the corporate measures and procedures adopted by the Independent Operator are appropriate, and draw up a yearly Reports of measures, which is submitted to the Authority within 30 June every year.

Litigation proceedings brought by the Group

Details are given below on some of the litigation proceedings brought by the Group against the Public Administration:

- By means of an appeal filed in 2014 before the Regional Administrative Court of Emilia-Romagna against the **Emilia-Romagna Regional Authority** and against **Atersir, Herambiente** requested the cancellation of Resolution 380 of the Regional Council of the Emilia-Romagna Regional Authority dated 24 March 2014, containing “Amendments to the Regional Authority Resolution 135/13 - Provisions concerning the definition, and handling of the increase limit, of the fee for the disposal of municipal waste”. Resolution 380/2014 was challenged with regard to the part where it has the effect of laying down the full deduction, from the waste disposal fee, of the revenues from incentives to generate electricity from renewable sources. The Regional Administrative Court of Emilia-Romagna rejected the appeal filed by Herambiente, which challenged the ruling before the Council of State. At the date of drafting of this report, the hearing is yet to be scheduled.
- By means of an appeal filed in 2015 by **Herambiente** before the Regional Administrative Court of Emilia-Romagna against the **Emilia-Romagna Regional Authority** and against **Atersir**, cancellation was requested of resolution 467 of the Regional Council of the Emilia-Romagna Regional Authority dated 27 April 2015, concerning the criteria to define the fee for the disposal of municipal waste and similar pursuant to art. 16(1) of Regional Law 23 of 2011. The filed appeal particularly objected to two aspects of resolution no. 467, considered illegitimate, i.e.:
 - the erroneous inclusion of revenue from incentives for renewable electricity generation among the amounts to deduct from fees expected;
 - the lack of specific mention of tax charges among the costs incurred by Herambiente that the contested resolution does not recognise.

The Regional Administrative Court of Emilia-Romagna rejected the appeal filed by Herambiente, which challenged the ruling before the Council of State. At the date of drafting of this report, the hearing is yet to be scheduled.

- With separate appeals, which were then united, **Herambiente** challenged the following acts before the **Regional Administrative Court of Molise**:
 - challenge of Regional Government Decree no. 231 of 19 May 2015 which identifies as substantial variations the introduction of the CER code 19.12.12, the adjustment of the authorisation for saturation of the thermal load and the introduction of a shredder.

- challenge of EIA regarding the plant of Pozzilli and, for additional reasons, the Integrated Authorisation.
- challenge of Regional Council resolution no. 341 of 28 December 2015 regarding the “Regional plan for waste management. Italian Legislative Decree no. 152/2006 Conclusion of the Strategic Environmental Assessment procedure. Adoption of Plan proposal.”

The Regional Administrative Court of Molise did not uphold Herambiente's appeals. Herambiente challenged the ruling before the Council of State. At the date of drafting of this report, the hearing is yet to be scheduled.

- **Hera Spa, Inrete Distribuzione Energia Spa, AcegasApsAmga Spa and Marche Multiservizi Spa**, as well as the other leading operators, challenged before the **Regional Administrative Court of Lazio**, the **ANAC Guidelines no. 11** containing indications for verifying the obligations required by art. 177 of the Tender Code (Italian Legislative Decree no. 50/2016). The Code lays down the obligation for public or private entities, holders of concessions for works, public services or supplies already in place on the date of entry into force of the Code, that were not awarded by a public tendering procedure, to award an 80% share of the contract for the works, services and supplies relating to concessions for an amount equal or exceeding Euro 150 thousand, through a public tendering procedure. The remaining part may be performed by in-house companies or by companies that are directly or indirectly controlled or affiliated. Separate complaints were filed for the waste management, district heating, gas distribution and electricity distribution services.

In June 2019, the Regional Administrative Court declared that the appeals were inadmissible, holding that the Guidelines challenged were not immediately harmful. The appellant companies appealed for overruling of the first instance rulings. The Council of State first declared the application initiating the proceedings and related additional grounds admissible, deeming the Guidelines to be immediately detrimental and, on the merits, considered the issues of constitutionality under art. 1, paragraph 1, letter iii), of Italian Law no. 11 of 28 January 2016 and art. 177, paragraph 1, of the Public Contracting Code to be well-founded with reference to articles 41, 3 and 97 of the Constitution.

The Council of State, therefore, suspended its ruling, and consequently the contested measures, and referred the case to the Constitutional Court. New ANAC resolution 570/2019 was also challenged before the Regional Administrative Court of Lazio, which updated Guidelines no. 11 with the new deadline (31/12/2020) for adapting the provisions of art. 177 laid down by Italian Decree Law no. 32 of 18 April 2019.

At the date of drafting of this report, the date of the trial hearing is yet to be scheduled.

- **Herambiente Spa** filed an appeal before the Regional Administrative Court of Emilia-Romagna in which it challenged and requested cancellation of Managerial decision no. 17621 of 30 September 2019 by way of which the Regional Government of Emilia-Romagna annulled ex officio the previous decision of 10 August 2018 regarding extension of the Environmental Impact Assessment in relation to the expansion of the landfill located in Baricella.

At the date of drafting of this report, the date of the trial hearing is yet to be scheduled.

- At the end of 2019, **Hera Spa** and **AcegasApsAmga**, as well as the other major operators, challenged before the Regional Administrative Court of Lazio the statement of the Chairman of ANAC dated 16 October 2019 containing “Instructions on the obligation to acquire the CIG (Contract Reference Number) and to pay the contribution to the Authority for cases excluded from the scope of application of the Public Contracting Code” and the statement of the President of the Authority dated 18 December 2019 containing “Instructions on the obligation to acquire the CIG, to submit the data and pay the contribution to the Authority for the special procurement regimes

referred to in Part II, Title VI of the Public Contracting Code". At the date of drafting of this report, the date of the trial hearing is yet to be scheduled.

In **2020**, no new disputes were initiated by the Group.

Sanctions imposed on the Group

[419-1]

With regard to the most significant sanctions imposed in recent years, it should be noted that:

- With reference to the sanction of approximately Euro 1.9 million imposed by the **Italian Antitrust Authority (hereinafter "AGCM")** on Hera and Herambiente for an **alleged abuse of dominant position** since it directly granted to a company of the Akron Group (which later merged into Herambiente) the service of cellulosic waste from separate waste collection taken away from the "Comieco Consortium system" in 2011, 2012 and 2013, the Regional Administrative Court of Lazio upheld Hera's and Herambiente's appeal and consequently cancelled the sanction imposed by AGCM. Basically, the Regional Administrative Court of Lazio stated that AGCM "did not carry out the required preliminary 'contextualisation' of the market and potential competition applicable at the time of the events, from the point of view of the actual distortions of competition". This because "at the time there was not a fully liberalised and competitive market for the recovery of cellulosic waste from municipal separate waste collection, since sector legislation at that time outlined an area of public service over which a monopoly could be granted following a tendering procedure for the market, which could include the recovery phase, but this was not compulsory", reads the ruling. Hera, therefore, as operator for the relevant public service, had to ensure - for reasons of public hygiene, health and environmental protection - the continuity, safety and efficiency of the entire waste cycle, including the final recovery phase. In the case in question, as pointed out by the Regional Administrative Court, Agcm did not examine Hera's position as a public service operator but, taking the local reference market for granted, simply asserted that the contested lack of competition had taken place because Hera had failed to implement any competitive procedures to select a party entrusted with the recovery phase and thus to compare the intra-group operator Akron with third parties. According to the Regional Administrative Court of Lazio, Hera and Herambiente provided solid evidence that entrusting the intra-group company with the recovery phase - yet exercising a higher-level control (of order, direction, planning, monitoring, etc.), which would be unthinkable with a third-party operator - was the only way to ensure service quality, for the benefit of the public interest in greater environmental sustainability of the waste cycle and, therefore, also for the benefit of users/consumers.
- In November 2015, the **Italian Antitrust Authority (AGCM)** imposed a **sanction** of Euro 366 thousand on Hera Comm for violation of the Consumer Code with regard to customer contracts. According to the opinion of the Authority, Hera Comm and other companies in the sector, concluded a number of supply contracts without the consumer's explicit consent and using methods that altered the consumer's freedom of choice because insufficient information had been given on the offers and on the nature of the contracts. Specifically, certain methods used for concluding the contracts through phone and sales agent channels were criticised and accused of increasing the pressure on customers and preventing them from making free and informed choices. During the proceedings, the companies submitted proposals for improving the procedures: for example, making the contractual documentation available to customers before binding them to the contract and making a second phone call to check the customer's consent. Moreover, Hera Comm challenged the sanctioning measure before the Regional Administrative Court of Lazio. The Authority Board decided "to refer to the EU Court of Justice the matter relating to the interpretation of art. 27, paragraph 1 bis, of the Consumer Code in relation to the Euro-unitary

measures applicable to the electricity and natural gas supply sector, as already implemented by the Council of State, for the telecommunications sector”.

The Court of Justice joined Hera Comm’s prejudicial case with other similar cases and, by order dated 14 May 2019, confirmed AGCM’s competence (instead of Arera’s) in sanctioning the conduct covered by the proceedings pending before the Regional Administrative Court of Lazio. Following an application by Hera Comm for continuation of the proceedings, the Regional Administrative Court of Lazio rejected the appeal with ruling no. 9764 of 24 September 2020. Hera Comm appealed against this ruling to the Council of State, which is still pending at the time of publication of this report.

- With reference to the sanction of December 2016 imposed by the **Italian Antitrust Authority (AGCM)** against Hera Spa for an alleged abuse of **economic dependence** consisting of violation of the provisions set forth in Italian Legislative Decree no. 231/2002, as amended and supplemented, regarding payment terms for the supply of latest-generation meters, Hera Spa paid a total amount of Euro 800 thousand. An appeal against this decision was lodged with the Regional Administrative Court of Lazio. At the date of drafting of this report, the hearing is yet to be scheduled.

With regard to **minor sanctions** reported in 2020, 110 administrative sanctions were imposed (amounting to approximately Euro 100 thousand) mainly relating to waste management issues. These sanctions, imposed by the controlling bodies, mainly relate to the infringement of the requirements under Italian Legislative Decree 152/2006 (Consolidated Environmental Act) and mainly concern the integrated water service with regard to plant operation, and the exceeding of the limits set out in the discharge tables. The infringements charged are of an administrative nature and usually require the filing of defence briefs by the complainant requesting withdrawal of the measures and, alternatively, the payment of a fine in accordance with the minimum amounts provided for by sector regulations.

Case study

The new AlfabEtico has evolved, with new and improved features

AlfabEtico was introduced in 2008 and addresses all new permanent Group employees. Its aim is to ensure that workers are familiar with the Code of Ethics and to promote positive behaviour, guiding workers towards proper and informed conduct.

In 2020, a redesigning process was launched that took into account both the important discontinuity presented in the fifth edition of the Code of Ethics and the changes in the external environment, including those related to the health emergency. The aim was to **further strengthen effectiveness** by guaranteeing the **distinctive traits** of the training process.

The classroom team game was turned into a virtual game lasting 2.5 hours, featuring dynamic, interactive and new content, in particular:

- **introductory video** of the **Chief Executive Officer** launching the training process;
- details about the **2030 UN Agenda**;
- integration of training content with **anti-corruption principles**.

The first renewed editions started in autumn 2020, achieving an average satisfaction rating of 4.7 points (on a scale of one to five). They will continue throughout 2021 thanks to the contribution of seven internal facilitators who have expressed their availability to become AlfabEtico trainers, after participation in the seminar "Corporate Social Responsibility and the Code of Ethics in day-to-day management" and in the Code of Ethics updating course. This new method allowed 337 people to be trained in 2020.

Hera best multi-utility in the Dow Jones Sustainability Index

In 2020 Hera received an extraordinary international recognition: after a detailed assessment based on 28 criteria divided into 141 questions relating to environmental, social and governance issues, S&P Global appointed **Hera as the best multi-utility in the world**, awarding the gold sustainability medal to it and including it in the **Dow Jones Sustainability World Index and Europe Index**, the two most prestigious global indices considered by sustainable investors. S&P Global also rewarded the clear improvement in the rating, which rose by 19 points, assigning Hera the title of "Industry mover".

Hera also broke all records, since it was included in the two above-mentioned indices after just two years of assessment, while on average it takes companies about 8.5 years to enter. This assessment gave the Group the opportunity to highlight the sustainable approach of its strategy over the last 18 years which: has provided the Group with a competitive advantage to fully use the market opportunities available; has enabled the Group to play a leading role in the field of the circular economy and carbon neutrality; and has also allowed the Group to achieve the goals set by the United Nations and European institutions, which will also be reflected in the capital made available by the Recovery fund.

Quality, cost, and safety of customer services

Objectives and performance

What we said we would do	What we have done	SDGs	Progress*	Geographic scope**
<ul style="list-style-type: none"> 82% electronic gas meters installed by end 2023. 	<ul style="list-style-type: none"> 64.7% of installed gas meters were electronic at end 2020 (were 43.1% at end 2019). (See page 310) 	9		ER T M
<ul style="list-style-type: none"> Emergency gas services: maintain a much higher level than Arera requirements for the percentage of calls with arrival at call location within 60 minutes. 	<ul style="list-style-type: none"> 97.8% arrival rate at the call location within 60 minutes (against a service requirement of 90%) (see page 314) 			ER T M
<ul style="list-style-type: none"> More than 40 thousand NexMeter meters installed by the end of 2020. 	<ul style="list-style-type: none"> About 20,000 NexMeter meters installed in Ferrara, Modena, and Udine by the end of 2020. (See page 310) 			ER T M
<ul style="list-style-type: none"> 10 minutes average waiting time at the branch offices and 30 seconds average waiting time for the call center 	<ul style="list-style-type: none"> 5.4 minutes average waiting time at the branch offices in 2020, 33 seconds average waiting time for the call center (see page 319) 			
<ul style="list-style-type: none"> Ensure compliance with commercial quality standards for gas, electricity, water and district heating services, in line with 2019. 	<ul style="list-style-type: none"> 99.6% of cases were compliant with commercial quality standards in 2020, in line with 2019. (See page 308) 			ER T M

*  Result achieved or in line with plans.  Result with moderate deviation from planning.

** Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

What we will do	SDGs	Geographic scope*
<ul style="list-style-type: none"> 88% new generation electricity meters installed by end 2024. 	9	ER T M
<ul style="list-style-type: none"> Emergency gas services: maintain a much higher level than Arera requirements for the percentage of calls with arrival at call location within 60 minutes. 		ER T M
<ul style="list-style-type: none"> More than 300 thousand NexMeter meters installed by the end of 2024. 	9	ER T M
<ul style="list-style-type: none"> 10 minutes average waiting time at the branch offices and 30 seconds average waiting time for the call center. 		ER T M
<ul style="list-style-type: none"> Ensure compliance with commercial quality standards for gas, electricity, water and district heating services, in line with 2020. 		ER T M

* Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

Customers

Energy services customers

Thousands	2018	2019	2020
Gas customers	1,462.5	2,049.5	2,076.2
Electricity customers	1,068.7	1,288.8	1,333.6
District heating customers	12.2	12.4	12.6

Integrated water service customers

Thousands	2018	2019	2020
Total customers	1,463.5	1,467.8	1,470.8

Municipal sanitation services

	2018	2019	2020
Municipalities served (qty)	174	187	188
Residents served (thousands)	3,136	3,204	3,209

In 2020, the Hera Group again recorded an increase in its total number of customers. This result confirms the effectiveness of our growth strategy, even in the face of the extraordinary events that occurred in 2020.

Our sales activity, supported by a continuously expanding portfolio of offers and services, together with the excellent results obtained in the last resort gas tenders, has enabled the Hera Group to continue to grow in both the gas and electricity sectors: in 2020 our energy customer base grew by over 70 thousand customers.

Commercial policies

Again in 2020, Hera Comm's focus on environmental sustainability drove the development of its commercial policies: it expanded the range of products linked to sustainable mobility with the launch of the sale of electric bicycles, it extended the **full offsetting** of carbon dioxide emissions to all electricity and gas offers and it broadened the range of Sustainable Solutions products.

The contact tools available to customers, both existing and potential, have improved thanks to a new live chat on the Hera Comm website, where customers can interact with energy consultants.

In general, during the lockdown period, the digital **contact channel**, which has been continuously updated over time, has been able to handle the support requests that customers could no longer place through physical channels, thus experiencing a sharp increase in utilization that has not, however, affected customer satisfaction, which is steadily rising.

Customer growth is the result of our sales activity conducted across **all our channels** with a sharp focus on **digital** channels, offering customers maximum flexibility in choosing among Hera Comm's solutions.

The **portfolio of offers** aimed at mass markets maintains the dual approach consisting of fixed-price and variable-price offers, offering customers the opportunity to reduce their carbon footprint thanks to a **100% green** offering, and expanding both with new offers (Hera Età Più) and new tools to support energy efficiency and sustainable mobility. Customers can choose the solution that best suits their path towards energy transition:

- **fixed price offers**, such as Hera Impronta Zero and Welcome Hera, or **variable price offers**, such as Prezzo Netto, all of which include the Nature Package, thanks to which electricity is guaranteed to

come from renewable sources, CO₂ emissions equivalent to the gas consumed are offset, paper waste is eliminated with the e-billing system and travel is reduced by debiting the customer's current account;

- **offers targeted at specific categories of customers**, such as Hera Bebè, which provides an updated insurance cover for children up to the age of 3, or Simply Hera, which provides a multilingual sales support service by phone, or the new Hera Età Più, with a discount proportional to the customer's age and an insurance service for 24-hour health care, home delivery of groceries/pharmaceuticals in the event of illness and access to a network of health facilities at special rates;
- a comprehensive range of sustainable **energy efficiency** solutions, some of which will be updated in terms of content during 2020, such as the Hera Led range of light bulbs or the Hera No Problem insurance content, for protection against faults in home electrical and gas systems.

2020 was also the launch year for **Hera Caldaia** and **Hera Scaldacqua**, the turnkey sales and installation of condensing boilers with access to tax deductions via a discount directly on the invoice and high-efficiency gas and electric water heaters.

Lastly, Hera consolidated its presence in the **sustainable mobility** sector with several initiatives. It launched the Hera E-bike offer, with a range of electric bicycles to meet the rising needs of customers, revised the range of electric vehicle charging stations and wall boxes for private households, updated the offer of electric car rentals, and continued to install charging stations in the public sector.

Hera Comm's Sales Network and Commercial Conduct

Hera Comm's commercial strategy for the sales of energy services to small and medium customers (households and companies) relies on **commercial partners that operate across various sales channels**.

In 2020, Hera Comm confirmed its fundamental guidelines, specifically:

- the **selection** of agencies according to the principles and methods defined in the Group's quality system;
- having all partners **sign** an agency mandate which includes the Group's Code of Ethics;
- specific **training** provided to agency managers and their agents by Hera Comm staff;
- **identification** of door-to-door agents who must show their company identification to customers they visit;
- periodical **shadowing** at end customer premises by Hera Comm staff to assess the conduct of the sales network;
- **end customer monitoring** of the quality of the sales network's operations.

In 2020, we also strengthened quality controls to further ensure the proper conduct of our sales network. The proximity to our customers and their protection remain the fundamental principles of Hera Comm's sales activity. These checks were extended to sales made through all sales channels, including customer relationship management channels (branch offices and call centres) as well as sales of VAS and commodities. In addition to measures to handle unwanted activations and contracts, as required by Arera's resolution 153/2012/R/com as amended, Hera Group added other safeguards to those already required by Arera such as afterthought management facilitated by email, simple letter or fax (not just registered mail).

For Hera, it is fundamental to acquire the customer's consent clearly, responsibly, and unequivocally. To do so, we have specific quality controls, in line with what is required by the Consumer Code:

- for **contracts offered by phone**, a second call must be made to check that the customer has received the contract and actually wants to accept it, and to monitor, at the same time, the quality of the sales effort carried out by our teleselling channel. In addition, customers can retrieve the telephone recording of their conversation via the web portal or automated phone system;

- for **contracts proposed following a visit to the customer's home**, besides the welcome letter that is sent to them, a phone call is made that assesses the quality of the sales channel and, by doing so, gives the customer a chance to exercise their right to change their mind.

The continuous improvement of sales processes, together with the constant monitoring of sales channels, led to significant results in 2020 in terms of reducing complaints for unsolicited contracts. The number of complaints has further decreased: six in 2020, for 376 thousand contracts concluded outside business premises, compared to 39 in 2019. All complaints for unsolicited contracts were accepted and remedial measures were applied in 100% of the cases.

Cost of services

Hera manages **services under concessions** and **free-market services**. For the services under concession (integrated water service, municipal sanitation, gas, and electricity distribution), the **tariffs Hera applies** are **set by the regulatory authorities** (Arera and the local municipal sanitation authorities), while Hera freely determines the tariffs for free-market services (waste disposal, sales of gas and electricity). Every quarter, Arera defines and updates the prices for the sales tariffs for customers that have not subscribed to a free market electricity service option and for residential gas customers that are under economic protection conditions.

The costs of Hera's services for an average customer (real consumption)

Euro	2019	2020	Ch. 2020/2019	Ch. % 2020/2019
Gas	658.43	596.67	-61.75	-9.4%
Electricity	380.52	363.61	-16.91	-4.4%
Water service	237.88	228.60	-9.28	-3.9%
Waste	242.73	243.85	1.13	0.5%
Total	1,519.54	1,432.73	-86.81	-5.7%
<i>of which attributed to Hera</i>	<i>709.29</i>	<i>695.53</i>	<i>-13.77</i>	<i>-1.9%</i>
<i>of which attributed to raw materials and generation</i>	<i>402.61</i>	<i>308.22</i>	<i>-94.39</i>	<i>-23.4%</i>
<i>of which duties, taxes, system charges, and other charges</i>	<i>407.36</i>	<i>428.98</i>	<i>21.62</i>	<i>5.4%</i>

Bill of a residential customer with an average annual consumption of gas, electricity, and water, and for a household of three people in a house of 80 m², for waste disposal.

The following table shows the average household expenditure in 2020 compared to the previous year for the four services provided by Hera based on the average consumption of gas, electricity and water over the two years considered: 778 m³ for gas in 2020 (-1.3% compared to 2019), 1,908 kWh of electricity (+3.4%) and 106 m³ of water (-2.9%). For the waste service, we considered a family of three people living in an 80 m² apartment.

In 2020, the average household spent a total of Euro 1,433 on the services supplied by Hera, 5.7% less than in 2019, amounting to about Euro 87. In particular, compared to last year, gas and electricity bills were lower due to lower costs for the raw material components of the bills (down by Euro 94 due to changes in the price of petroleum products). There was an increase in taxes, fees and charges of about Euro 22. For the water service there was a decrease of Euro 9 compared to 2019 due to the introduction of the new tariff set by Arera. Lastly, the increase in the waste services bill was about Euro 1.

48% of overall spending, amounting to Euro 695 (47% in the previous year), was attributable to the components of bills attributable to Hera. In 2020, this share decreased by around Euro 14, broken down as follows: Euro +1 for gas, Euro -7 for electricity, Euro -11 for water and Euro +3 for waste.

The costs of Hera's services for an average customer (constant consumption)

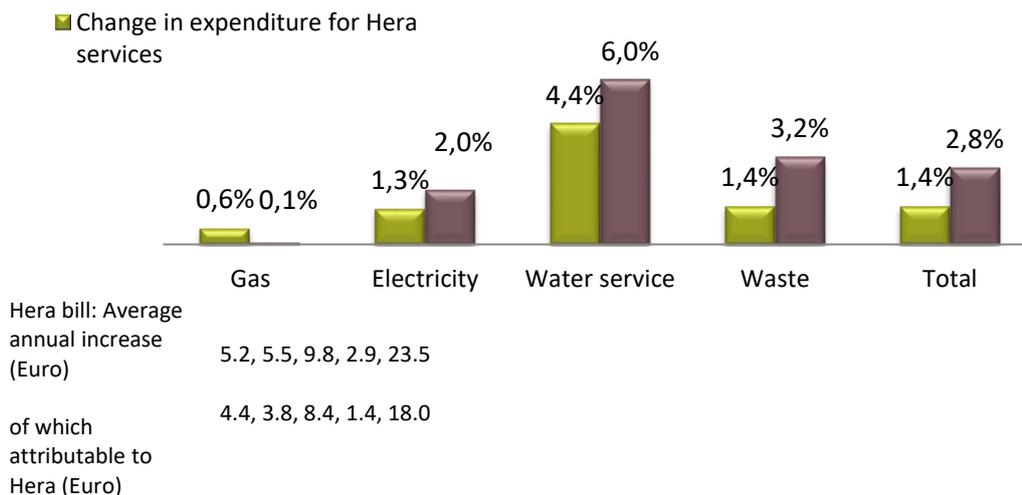
Euro	2019	2020	Ch. 2020/2019	Ch. % 2020/2019
Gas	1,009.04	895.62	-113.42	-11.2%
Electricity	552.61	476.01	-76.60	-13.9%
Water service	272.80	280.87	8.07	3.0%
Waste	242.73	243.85	1.12	0.5%
Total	2,077.18	1,896.36	-180.82	-8.7%
<i>of which attributed to Hera</i>	<i>775.97</i>	<i>770.09</i>	<i>-5.88</i>	<i>-0.8%</i>
<i>of which attributed to raw materials and generation</i>	<i>604.47</i>	<i>465.68</i>	<i>-138.79</i>	<i>-23.0%</i>
<i>of which duties, taxes, system charges, and other charges</i>	<i>696.74</i>	<i>660.58</i>	<i>-36.16</i>	<i>-5.2%</i>

Bill of a residential customer with an annual consumption of 1,200 m³ of gas, 2,700 kWh of electricity, 130 m³ of water, and for a household of three people in a house of 80 m², for waste disposal. For the other conditions considered, see the following pages.

Based on an analysis considering equal volumes used by an average Hera customer, for 2020, the overall cost of services decreased by 8.7%, amounting to about Euro 181 less, compared to 2019. This result is due to:

- a decrease of about Euro 138 of the cost of raw materials and generation, directly related to fuel price trends;
- a decrease of about Euro 6 of the bill components attributable to Hera. This decrease is equal to 0.3% of the total amount of the bills considered: it is due to decreases by Euro 11 for the electricity service, by Euro 2 for the gas service, an increase of Euro 4 for the water service and by Euro 3 for the waste service;
- a decrease of Euro 37 in taxes, duties, system charges and other charges not attributable to Hera as a result of the reductions of the two previous components.

Comparison between the changes of bills from 2006 to 2020 and inflation (annual average increase, CAGR)



The long-term analysis shows that, between 2006 and 2020, the gas, electricity, water service, and waste management bills in the Emilia-Romagna area served by Hera had an average compound annual increase below the Italian average: +1.4% compared to +2.8% for the whole of Italy (Source: Istat). This gap is even

more markedly beneficial for Hera's water service and waste service customers. In the field of waste, Hera's share increased by 0.8% year over year (Euro 1.4 compared to the Euro 3 total expense increase).

The gas bill [417-1]

Euro	2018	2019	2020
Raw material component	405.32	396.68	301.78
Retail sales charge	64.49	64.71	68.09
Distribution charge	121.65	126.00	121.21
System charges	28.85	41.80	40.77
Consumption tax	198.02	198.03	198.02
Regional tax	30.61	30.61	30.70
VAT 10%/22%	153.16	151.21	135.04
Total	1,002.10	1,009.04	895.62

21% of the bill's total attributable to Hera

Bill of a residential customer with an annual consumption of 1,200 m³ of gas, and with direct debit and e-billing. A customer under the highest protection market conditions was considered; based on the economic conditions set by the Regulatory Authorities: 35% of Hera's residential customers are in this category. Cities considered: Bologna, Ferrara, Forlì, Imola, Modena, Padua, Pesaro, Ravenna and Trieste (weighted average of residents). The grey areas show tariff components that are not attributable to Hera. The complete data on gas supply tariffs are available on the Group's website.

For the sales of gas, the Italian regulatory authority specifies the information that must be included in bills, including the sources of the gas sold and the service levels provided.

For the same consumption, on average, the 2020 gas bill of a Hera residential customer under market tariff protection conditions costs about Euro 113.4 less (-11.2%) than the previous year. The sales charge for raw materials portion decreased by about Euro 94.9, as a result of the decrease in consumption by non-residential users due to the health emergency, while the retail component rose by about Euro 3.40 (+5.2%). The distribution tariff decreased by about Euro 4.9 and system charges decreased by Euro 1 (-2.5%). The consumption tax and the regional tax were unchanged, while VAT went down by about Euro 16.2 as a result of the above changes.

Gas distribution charges are set annually by Arera. Resolution 570/2019/R/GAS of December 2019 defined the regulation of the gas distribution and metering service charges for the 2020-2025 regulatory period. Each of the country's seven macro-regional areas (Sardinia was added as a new area) has a different charge, and they are determined so as to ensure coverage at the macro-area level of the cost of capital and operating costs incurred by the distributors. The update is included in the Consolidated text of regulations on the quality and charges of gas distribution and metering services for the 2020-2025 regulatory period (TUDG) that establishes that, as per the previous regulatory period, the fixed rates of the obligatory distribution charges shall be structured by metering unit class (meter class) while the G4 metering class has been taken as the reference for an average household that lives in the municipalities served. Specifically, the obligatory charge levels for the distribution services and natural gas metering for January-December 2020 were approved by resolution 571/2019/R/gas of December 2019.

The distribution charge impacted on average 14% of the total bill in 2020. Part of the distribution charge includes components to cover general gas system costs (such as energy-saving promotion costs) which the individual distributors treat as contra-items, paying the resulting revenue to the CSEA (Cassa per i Servizi Energetici e Ambientali - Energy and Waste Management Services Fund). These bill components are included in the "system charges" item. In 2019, system charges increased by Euro 13, in particular for the energy efficiency share and the share for offsetting the difference between distribution and sales charges paid by customers and the costs incurred by operators and recognised by Arera (equalisation), in 2020 the amount of system charges remained approximately unchanged (Euro -1).

The **sales charge** for the economic conditions of the supply for the protected service, defined Arera, is governed by ARG/gas resolution 64/2009 (Uniform Code Governing Retail Sales of Natural Gas). This resolution defines the protected service economic conditions for entitled customers. In 2011, Aeegsi started a reform of these conditions. Its implementation started with ARG/gas resolution 116/2012, which, by transposing the indications laid down in Italian Legislative Decree 1/2012, changes the previous indexing mechanism (bound to a basket of oil products to which the purchase formulas of the long-term procurement contracts entered into by leading Italian importers refer) with gradually increasing indexing based upon the gas wholesale market. In 2016, raw material costs were indexed according to the gas price of the Dutch hub TTF, which reflects the costs of the European market. The tariff components that together make up the raw material purchase costs in 2020 account for 34% of the total bill. For payment of the amounts by direct debit and e-billing, resolution 610/2015/R/COM introduced, for the economic protection conditions, a bonus that is worth Euro 6 for the year 2019.

Lastly, in 2020, taxes account for 41% of the total, on average. These taxes are due to the State and regional government authorities (consumption tax, additional regional tax, and VAT). Taxes are set by specific provisions by the Ministry of the Economy and Finance and the regional government authorities, and vary according to the use of the gas, whether for heating or only for cooking, or industrial uses. Since January 2008, 10% VAT is applied for up to 480 m³ annually, and above that, VAT is set at 22% under Italian Decree Law No. 76/2013.

The electricity bill [417-1]

Euro	2018	2019	2020
Energy generation share	188.73	174.22	122.86
Dispatching share	29.93	33.57	41.04
Distribution and sales share	152.42	143.59	132.47
System charges	102.68	129.20	114.85
Taxes	21.79	21.79	21.52
VAT (10%)	51.14	50.24	43.27
Total	545.10	552.61	476.01

28% of the bill's total attributable to Hera

Bill for a residential customer with a 3 kW installed electrical capacity contract, whose yearly consumption totals 2,700 kWh, with direct debit and e-billing. A customer under the highest protection market conditions was considered; based on the economic conditions set by the Regulatory Authorities: 11% of Hera's residential customers are in this category. Cities considered: Modena, Imola and Trieste (weighted average of inhabitants). The grey areas show tariff components that are not attributable to Hera.

For sales of electricity, the Italian regulatory authority specifies the information that must be included in bills, including the source of the electricity sold and the services levels provided.

Considering equal consumption, the electricity bill of a residential customer to which the enhanced protection service is applied decreased by 13.9% in 2020 compared to the previous year (Euro 76.6). The **energy share** decreased by Euro 51.4, due to the sharp drop in the cost of raw material, partly offset by the Euro 7.5 increase in **dispatching costs**: the cost of raw material and dispatching were affected starting in February 2020 by the unpredictable drop in consumption due to the health emergency. The **marketing and distribution** components decreased by Euro 11.1, mainly due to the effect of the PPE equalisation cost component (accounted for in this item but to cover imbalances in the equalisation system for the costs of purchasing and dispatching electricity for the enhanced protection service). **System charges** decreased by approximately Euro 14.4 due to a reduction in charges at the beginning of the year and the permanent elimination of consumption brackets. The initial reduction in charges was maintained by the Authority throughout 2020.

Only the distribution quota and part of the sales quota are paid to Hera to cover the management and maintenance costs of the power grid incurred by the distributor Hera Spa and the costs for sales activities (invoicing, bill sending, etc.) which are incurred by the Hera Comm sales company. This share represents only 28% of the total bill.

The 2020 bill is calculated by using the twin rate tariff and the profile type defined by Arera (one third of consumption in the peak period, from 8 am to 7 pm from Monday to Friday, and two-thirds during off-peak periods), which causes no difference between the twin rate and single rate prices.

Electricity bills include the following costs: sales costs, costs incurred to purchase energy and for the dispatching service, which ensures a balance between electricity supply and demand at all times, costs to cover the service for transporting electricity on the Italian national transmission and local distribution grids through to the meters (transport, distribution and metering costs and system charges), and taxes. For payments of electronic bills using direct debit, resolution 610/2015/R/COM introduced a bonus for customers entitled to protective economic conditions, worth Euro 6 in 2020.

Costs for energy purchases and dispatching services were strongly influenced during 2020 by the drop in consumption by non-residential users due to the health emergency. The reduction in demand led to a decrease in the cost of energy commodities, while the unpredictability of consumption led to an increase in dispatching costs, which peaked in the third quarter of 2020 (Resolution 240/2020/R/EEL).

In January 2020, the process of reforming network tariffs and tariff components covering general system charges for domestic customers, which began in January 2016 implementing Directive 2012/27/EU on energy efficiency, was completed. As required by the directive, the tariff components have been updated according to gradual adjustments, to stimulate virtuous behaviour by residents and encourage actions to achieve energy efficiency objectives. The Reform was carried out in several steps. The new fees for network services (transmission, distribution and metering), came into effect on 1 January 2016 to mitigate the effect of progressiveness on consumption (first step), while the definitive non-gradual tariff structure called "TD" was adopted on 1 January 2017 (second step), and consists of network services fees that are the same for all residential customers and compliant with the criterion of consistency of the tariffs with the costs of the underlying services. The fees for general system charges were redefined on 1 January 2017 to mitigate the effect of progressiveness on consumption and to reduce the number of annual consumption brackets to two, and a fee expressed in Euro/year was introduced for non-resident residential customers only. The completion of the process (third step), initially scheduled for January 2018, was postponed by two years (initially by resolution 867/2017/R/eel and then by resolution 626/2018/R/eel). The reform became fully operational on 1 January 2020. System charges will also be subject to a tariff structure that is not gradual but rather split according to resident customers (to whom the energy shares will be applied in full) and non-resident customers (to whom it will be applied in part fixed and in the energy share). The first resolution updating the 2020 system charges is 572/2019/R/COM. Subsequent updating resolutions take into account the health emergency situation and do not set increases although they assess a reduction in the liquidity of the accounts with the Cassa per i Servizi Energetici e Ambientali (Csea).

The water service bill

Euro	2018	2019	2020
Water network	110.82	109.83	111.23
Sewer network	34.45	33.73	34.55
Purification	84.81	83.36	84.64
Fixed share	17.82	15.58	15.79
Equalisation components	5.51	5.51	9.13
VAT (10%)	25.34	24.80	25.53
Total	278.75	272.80	280.87

88% of the bill's total attributable to Hera

Bill of a residential customer (household of three) with a yearly consumption of 130 m³. Cities considered: Bologna, Ferrara, Forlì, Imola, Modena, Padua, Pesaro, Ravenna, Rimini, and Trieste (weighted average of residents). The grey areas show tariff components that are not attributable to Hera. The 2018 and 2019 data have been aligned with the 2020 calculation criteria.

The average bill of a residential customer with consumption of 130 m³ per year increased from Euro 272.80 in 2019 to Euro 280.87 in 2020: the increase was 3% in the last year following the application of the new equalising component in the tariff method set by Arera.

Since 2012, Arera has been responsible for the regulation of the water service. It first of all set up a provisional tariff method for the 2012-2013 period and subsequently a permanent tariff method for 2014-2015, later updated for 2016-2019 and, subsequently, with resolution 580/2019/R/idr, for the period 2020-2023. The 2020 tariffs also include the balances from previous years, determined in compliance with the rules of the tariff method.

The list of components falling under the macro item "equalisation components" is detailed below:

- UI components (equalisation rate components defined by the Authority that operators must apply for the three services: water, sewage and wastewater treatment services for end users). These components are allocated as follows:
 - the UI-1 component, to cover tariff concessions granted to the populations affected by the seismic events;
 - the UI-2 component, to promote the quality of water, sewage, and wastewater treatment services;
 - the UI-3 component, to cover the costs of the water bonus. This component is applied to all users other than those benefiting from the bonus; (with effect from 1 January 2020 integrated into the sewage and purification services);
 - the UI-4 component, to cover the operating costs of the Guarantee Fund for Water Works (effective 1 January 2020).
- Tariff component established pursuant to Article 36.3(b) of Arera Resolution 580/2019 to supplement the mechanism.

Average expenditure for the integrated water service varies among the areas Hera serves since it depends on the specific structure of the water resources of the various areas, due to the availability of water resources and to the distance from the withdrawal source.

The tariff mechanisms developed by Arera since 2012 helped us continue to make major investments, particularly in the sectors with a higher environmental impact, such as reclamation from sewer restoration and purification.

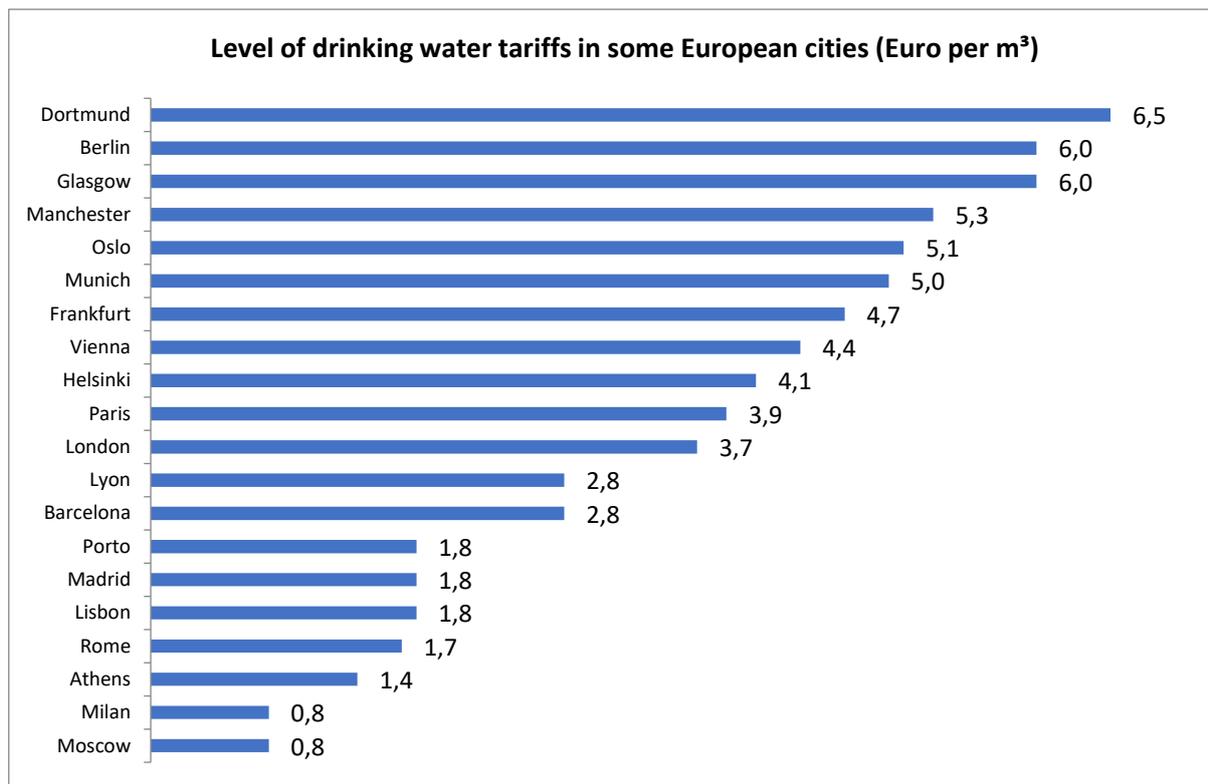
How much water costs

As well as benefiting the environment, drinking tap water instead of bottled water also saves money: considering an average daily consumption of 1.5 litres for a household of three people and an average price

of Euro 28 cents per litre for certain retailed mineral waters, yearly spending on bottled water comes to around Euro 457 a year. The cost for the same quantity of water from the water network, meanwhile, would be Euro 3.52 a year (calculated as the 2020 average of the bills in the nine main cities served by Hera). A family can therefore save around Euro 453 per year compared to bottled water. Italy is third in the world for consumption of bottled water with 190 litres of water consumed per-capita per year, after Mexico and Thailand (Source: Bottled water reporter 2019).

The cost of water in Europe

The European House – Ambrosetti conducted research on water pricing in 2018 in some European countries. In Italy, the cost of water is Euro 1.87 per m³ compared to Euro 3.67 in France, twice as much, and Euro 4.98 in Germany, just under three times as much. There are even higher imbalances for data of individual cities: for example in Rome the cost is Euro 1.7 per m³ while in Berlin it is Euro 6 per m³.



Source: The European House – Ambrosetti: White Paper Valore Acqua per l'Italia – 2020 Report

Regulation of the water service

Arera has been the Italian regulatory agency for water services since 2012. Its initial objective was to define a tariff method capable of supporting (efficient) coverage of costs, of increasing investments and also promoting the quality of service-oriented mechanisms.

The measures that followed, from 2012 onwards, were all focused in this direction. In particular:

- from a tariffs point of view, 2020 is part of the third, current, regulatory period (2020-2023) which, in addition to confirming the criteria outlined above, initially with the 2012-2013 transitional tariff method and then with the first regulatory period (2014-2015), introduced important new factors concerning regulatory and incentive aspects of contractual quality, requiring minimum service levels but also forms of recognition of levels higher than the minimum required;
- In 2019, Arera adopted the following measures, that applied from 2020: an integrated text that governs payment delinquencies, an update of the contractual quality discipline that requires a

mechanism of incentives and penalties also at Italian national level, and lastly the tariff method for the third regulatory period 2020-2023.

The bill for waste collection and disposal

Euro	2018	2019	2020
Fixed share	103.38	105.90	106.26
Variable share	89.66	93.27	95.85
Fixed and variable share not attributable to Hera	31.91	32.57	32.13
Additional provincial charges	12.92	10.99	9.62
Total	237.87	242.73	243.85

83% of the bill's total attributable to Hera

Bill of a residential customer (family of three people in a house of 80 m²). Cities considered: Bologna, Ferrara, Forlì-Cesena, Imola, Modena, Padua, Pesaro, Ravenna, Rimini, and Trieste (weighted average of residents). For Ferrara, where we introduced quantity-based charging on 1 January 2018, the respect of the limit of 52 disposals per year of 30 litres each of mixed waste was also taken into account. The grey areas show tariff components that are not attributable to Hera.

A family of three people, living in an apartment of 80 m², paid approximately Euro 244 for waste collection and disposal, an increase of about 0.5% (about Euro 1) compared to 2019.

The bill increase was mainly due to an increase in expenditure in Padua and Trieste. This dynamic is directly related to the resolutions of the municipalities, as they annually re-evaluate the fixed and variable quotas used to calculate the TARI waste tax tariffs for non-residential users.

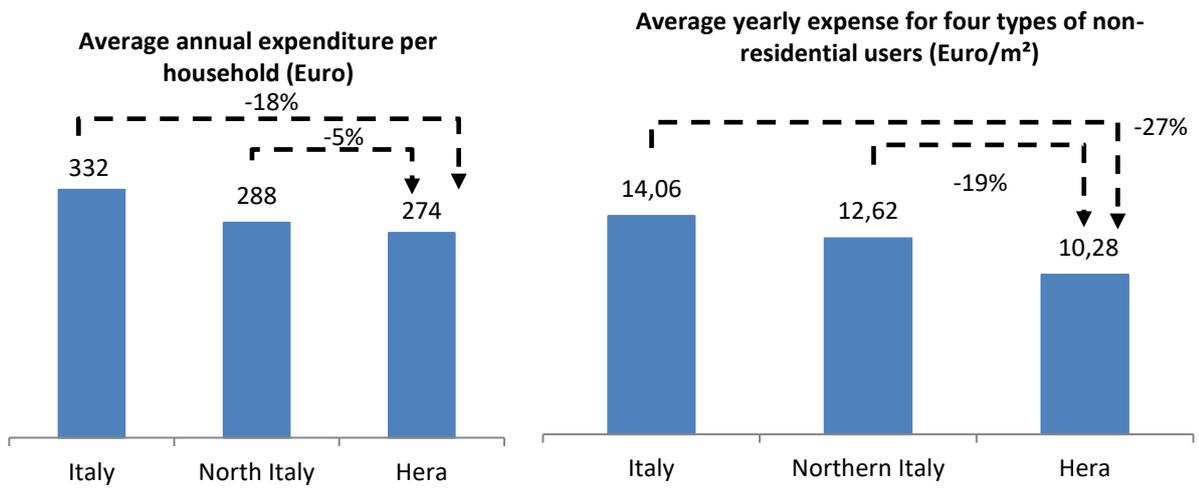
A waste tax (TARI) was introduced in January 2014 in both the municipalities where the sanitation tariff (TIA) was applied and those where the tax on waste and services (TARES) was applied. The new tax was added to ensure full coverage of costs for the waste management service, which includes street sweeping and washing, waste collection and transportation, separate waste collection, waste treatment and disposal, and administrative costs. Municipalities can entrust collection of the tax to the waste service operators. 24 municipalities have chosen to do so, for 2020. At the same time, 18 municipalities have now changed their collection charging method from TARI to quantity-based charging, including a major provincial capital, Ferrara.

The cost of waste management services for residential and non-residential customers

In 2020, Hera charged its residential customers waste management service costs that were 18% below the Italian average and 5% lower than the Northern Italy average: these were the findings of the Cittadinanzattiva Price and Tariff Study (Osservatorio prezzi e tariffe), which covered 112 province capitals. The study based its findings on a standard customer consisting of a family of three living in a 100 m² apartment.

Considering four types of non-residential users in 99 provincial capitals, in Hera's service area, hotels spend 21% less than the Italian average, and the saving was 28% for restaurants, 39% for the food industry and 23% for supermarkets. For non-residential users of restaurants, supermarkets, and food industry in Hera's service area, they are cheaper respectively by 24%, 24% and 15% compared to the average for northern Italy: for hotels Hera charges more than the average for northern Italy by 8%. The average of the four types of users considered by the research shows therefore that Hera's area is more competitive, with costs 27% below the Italian average and 19% below the average of northern Italy.

The cost of waste management services for residential and non-residential customers

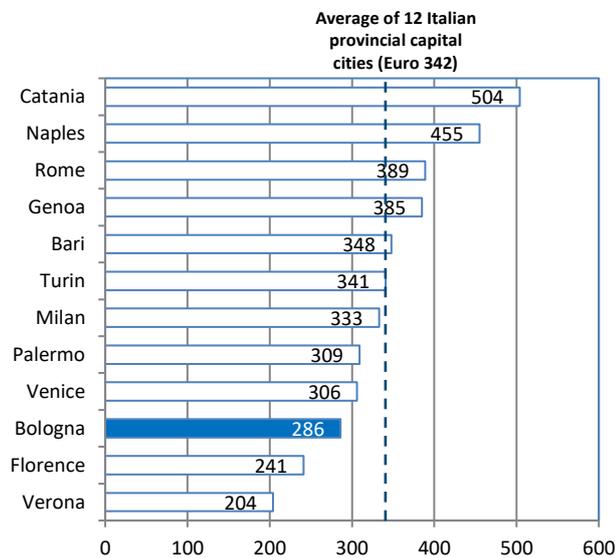


2020 data, 3 people in 100 m², Cittadinanzattiva.

2020 Data, Hera processing of data from websites of municipalities

Cittadinanzattiva’s 2020 report also compares the 2020 cost for the municipal sanitation service in the Italian provincial capital cities. Concerning the 12 large municipalities (over 250 thousand inhabitants), Bologna with a TARI waste tax of Euro 286 ranks among the cities with the lowest cost, together with Florence and Verona, and a level 16% below the average of the 12 provincial capital cities.

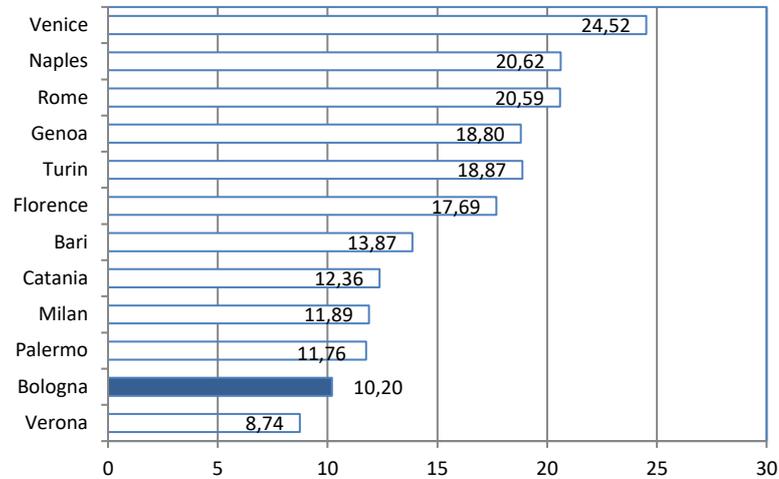
Total cost per user in cities with more than 250,000 inhabitants (3 occupants, 100 m², Euro)



2020 data, 3 persons 100 m², Source: Cittadinanzattiva

Among them, comparing the cost of the municipal sanitation service for non-residential customers in Italian provincial capital cities with over 250 thousand inhabitants, Bologna ranks as one of the cities with the lowest average costs for the four types of non-residential users considered by the study (restaurants, hotels, food industry, and supermarkets), with Euro 10.2 per m².

Waste management expenditure for non-residential users in cities with over 250 thousand inhabitants (Euro/m²)



2020 data, (Types of non-residential users covered by the research: hotels, restaurants, food industry and supermarkets.) Source: Hera Group

A new waste tariff for 13% of the residents served by Hera in Emilia-Romagna

During 2020, Hera managed the fourth year of application of large-scale quantity-based charging, ending the trial phase and becoming fully operational, thanks to an integrated management of systems and processes that have enabled its effective and uniform application in all its aspects and phases, from customer management to the measurement of mixed waste disposed of, and up to final invoicing. The new system is a fairer and more transparent way to finance waste management services and can promote virtuous behaviour and participation in separate waste collection.

In particular, the first year of application of quantity-based charging was completed in **two municipalities in the service area**, in addition to the 16 municipalities that already applied it in 2019, for a total of 18 municipalities using the method in Emilia-Romagna.

Municipality	Province	Residents at 1 January 20	Start year of quantity-based charging	SWC band (%)
Budrio	Bologna	18,248	2016	More than 85%
San Giovanni in Marignano	Rimini	9,467	2017	More than 85%
Bastiglia	Modena	4,197	2018	More than 90%
Bomporto	Modena	10,070	2018	More than 90%
Castelfranco Emilia	Modena	32,983	2018	More than 85%
Ferrara	Ferrara	132,899	2018	More than 85%
Monte San Pietro	Bologna	10,787	2018	More than 85%
San Cesario sul Panaro	Modena	6,566	2018	More than 90%
Cattolica	Rimini	16,996	2019	More than 75%
Coriano	Rimini	10,468	2019	More than 85%
Dozza	Bologna	6,585	2019	More than 90%
Marano sul Panaro	Modena	5,280	2019	More than 85%
Misano Adriatico	Rimini	13,485	2019	More than 85%
Mordano	Bologna	4,726	2019	More than 90%
Spilamberto	Modena	12,735	2019	More than 90%
Vignola	Modena	25,549	2019	More than 85%
Guiglia	Modena	3,932	2020	More than 70%
Morciano di Romagna	Rimini	7,100	2020	More than 75%

The new tariff system has thus reached about **332 inhabitants in 2020**, 13.4% of the residents of Emilia-Romagna served by the Hera Group through the integrated management of municipal waste.

For these municipalities, the new quantity-based collection services have been activated and personal equipment for disposal has been distributed to all residents and companies. For an effective and consistent introduction of the new tariff model and the new services, special control rooms have been set up jointly between Hera and the municipal administrations.

The necessary communication initiatives have also been taken to inform and involve users on how the new system will be introduced. Notable communication initiatives implemented include:

- articles and press releases to report the initial results;
- information meetings open to residents and dedicated meetings for trade associations;
- setting up additional information points to support residents and distribution of information materials;
- sending letters to homes to explain the introduction of quantity-based charging to residential and non-residential users;
- systematic updating of the customer website with dedicated information for each municipality.

The district heating bill

Euro	2018	2019	2020
Meter rental	26.64	26.64	26.64
Variable share	1,017.35	1,027.18	907.01
VAT 10%/22%	104.40	105.38	93.37
Total	1,148.91	1,159.20	1,027.02

Bill for a residential customer with a natural gas consumption of 1,200 m³ as measured by the meter and of 8,926 kWh of electricity under a residential monomial tariff (81% of Hera's customers falls within this tariff type and accounts for 20% of the residential volume sold). Cities considered: Bologna, Cesena, Ferrara, Imola, and Modena (weighted

average on the basis of the volume served). The bill for Ferrara was calculated excluding the tax incentives recognised due to the prevalent use of geothermal sources. The grey areas show tariff components that are not attributable to Hera.

Below is a reconstruction of the average cost of Hera's residential monomial tariff for district heating for its domestic customers. This rate varies quarterly according to the trend in the cost of natural gas, and is published on the www.gruppohera.it website.

The average expense for a typical household in 2020 for district heating was about 11.4% less than in 2019, due to the decrease in the wholesale cost of gas in the protected market, which is a factor of the tariff.

In 2016, Hera Group launched a new rate plan for the district heating service, aimed at families with individual heat meters and with an annual consumption under 25 kWh. The new rate plan, called "Nuovo Teleriscaldamento Hera", offers a price for district heating that is fixed for 30 months, and a free monthly meter rental fee for the first months of activation thanks to a special promotion. The offer also includes, free of charge, an innovative consumption analysis service called Diario dei consumi (Consumption Diary) that helps customers understand their consumption habits better, guiding them towards savings, through a simple and intuitive report sent to them by email. This rate plan is designed to protect customers, with a price that does not change for 30 months, from possible increases in energy costs, while providing them with a simple and effective way to understand their consumption. The 2020 editions of the Nuovo Teleriscaldamento Hera plan have incorporated, in the various updates of the fixed price, the drop in the cost of energy on the wholesale markets that marked the year, offering customers a fixed price value for heat that is particularly attractive, and able to protect future expenditure against a possible scenario of an increase in the cost of energy.

Service quality

Electricity and gas

The quality regulation divides the standards to be met into general and specific: failure to meet the latter due to causes attributable to the distributor requires the payment of indemnities directly to customers or through the sales company requiring the service from the distributor, which may vary depending on the type of customer (low or medium voltage for electricity, meter category for gas), the delay in executing the service, and the time required to pay compensation. Automatic compensation ranges from Euro 30 to Euro 140 based on the type of customer and supply, and can increase based on the delay in the provision of the service or the fulfilment times.

The specific quality standards for the distribution service include, in particular, the time for executing works, activating supply, and the failure to comply with the punctuality bracket for appointments scheduled with customers.

The reference resolutions of the regulatory authority are resolution 574/2013/R/Gas and resolution 646/2015/R/Eel.

Water and sanitation

Since 1 January 2019 the Service Charter for the municipal and similar-to-municipal waste management service applies in all municipalities where Hera Spa provides the sanitation service.

The Service Charter is a means to protect residents, as it sets the quality standards of the service, i.e., the characteristics of the main services provided by the operator and the timing within which they must be performed.

When managing the integrated water service and the municipal waste management service, the operator is committed to compliance with specific minimum quality standards required by the Service Charter. This

document is drawn up on the basis of a template prepared by the Regulatory Authorities and annexed to the signed agreements.

Arera's resolution 655/2015 has governed the contractual quality of the water service since 1 July 2016, defining minimum service levels that operators must respect for activities related to the requests of users, emergency services, billing, access to branch offices and to the call centre and the management of complaints. The resolution also introduced the payment of an automatic indemnity of Euro 30 to be paid if the operator fails to comply with the specific quality standards.

It also allowed operators to access incentives for their commitment to pursue quality levels that improve on the minimum levels required by said resolution 655/2015. Hera Spa achieved the incentive for the Bologna and Modena areas, applying the improved levels set by ATERSIR for 32 standards. The most significant standard parameters include: the **execution time for contract transfers** (improved from five to three days), the time to **provide quotes** for works involving inspections (improved from 20 to 12 days), and the **response time** for meter checks (improved from ten to seven days).

For the Ferrara, Ravenna, Forlì-Cesena and Rimini areas, branch offices are now open to customers on Saturday mornings, as an added convenience for users. The requirements of the contractual quality objectives must also be adequately monitored and reported to the Italian regulatory authority, to Atersir and to users by publishing them in the bills. The service charters were published with the update of resolution 655/2015.

In addition, a new resolution, 547/2019/IDR, was issued on 17 December 2019 to supplement the current regulations governing the contractual quality regulation of the integrated water service, which entered into force in 2020. This resolution includes an incentive and penalty system at the Italian national level, through an equalisation fund that will be distributed among the best-performing operators, identifying a mechanism that evaluates the performance of contractual quality, by grouping them into two macro indicators, weighted by the number of services; the performances provided in the reference year will be verified within the respective minimum standard specified by Arera (compliant services) with respect to all the services provided (compliant and non-compliant services). It also establishes that where improvement standards have been envisaged (as in the case of the Bologna and Modena ATOs), the minimum standards set out in the Arera resolution apply for the Italian incentive mechanism in question.

District heating service

In July 2019, the Arera commercial quality discipline came into force, also for the district heating market, under resolution 661 of 2018. This resolution thus also included the services previously monitored by Hera on a voluntary basis, since 2008, and governed by the District Heating Service Quality Charter which also required the payment of automatic compensation to customers in the event of non-compliance with the commitments concerning key services. Arera's resolution amended the economic values of the automatic indemnities set for the various categories of customers, as well as some of the quality levels covered by the regulations, within an overall framework that, however, confirmed the main quality indicators that Hera had already adopted on a voluntary basis, such as, for example, the time taken to activate the supply, to terminate the supply, to reactivate it in the event of disconnection due to payment delinquency, or the times for providing quotes.

Compliance with quality standards

%	2019	2020	Number of services provided (2020)
Gas	99.6%	99.7%	3,672,501
Electricity	98.1%	98.4%	51,728
Integrated water service	98.2%	98.9%	182,700
District heating	95.6%	91.7%	918
Total	99.5%	99.6%	3,907,847

Includes the services for which customers must be automatically compensated if the company does not comply with the standard. The data on sales quality standards do not include EstEnergy.

The overall data have improved over 2019: in 2020, in 99.6% of cases, the Group provided the service requested by the customer within the timeframe set by Arera. This percentage has increased, on a like-for-like basis, from 95.8% in 2008 to 99.6% in 2020. Quality standards are close to full compliance for the gas services of Marche Multiservizi (99.8%) and those of AcegasApsAmga (99.9%). For the district heating service, there has been a variation of 4 percentage points, mainly caused by the worsening of the performances concerning the supply activation, which change from 92,1% in 2019 to 89,9% in 2020.

Compliance with specific gas and electricity quality standards

%	2019	2020	Number of services provided (2020)
Gas sales	99.7%	99.9%	10,631
Gas distribution (end customers and sales companies)	99.6%	99.7%	3,661,870
<i>Total gas</i>	<i>99.6%</i>	<i>99.7%</i>	<i>3,672,501</i>
Electricity sales	99.7%	99.8%	10,840
Electricity distribution (end customers and sales companies)	97.6%	98.0%	40,888
<i>Total electricity</i>	<i>98.1%</i>	<i>98.4%</i>	<i>51,728</i>
Total	99.6%	99.6%	3,724,229
<i>Of which gas and electricity distribution</i>	<i>99.6%</i>	<i>99.6%</i>	<i>3,702,758</i>

Includes the services for which customers must be automatically compensated if the company does not comply with the standard. The data on sales quality standards do not include EstEnergy.

In all cases, the individual gas services consolidated their good results compared with the times recorded in 2019. In particular, this year there was a confirmation of the highly frequent services provided: frequency of collection of meter readings for billing purposes (99.7% as in 2019), punctuality range for appointments (99.4%, as in 2019) and activation of gas supply (99.9% compared to the 99.8% in 2019). For the supply of electricity, one of most provided services, activation of the electricity supply, rose from 98.6% to 99.2%.

For the water service, the high standard of the most provided services was confirmed: compliance with the punctuality range for appointments (99.3%), transferring (99.6%), activation of the supply (97.3%) and deactivation of the supply (99.4%).

Initiatives for improving the quality of readings

As regards the **gas service**, Arera's resolution 117/2015/R/gas changed the frequency of readings, including a reading every four months, and the concept of periods relevant for meter reading. In response to this resolution, Hera Group has presented an improvement plan, approved by Arera, to maintain the benefits added by the new regulation and, at the same time, optimise meter-reading workloads throughout the year. Starting 1 January 2016 a new meter reading plan is therefore operational, that includes:

- twelve attempts per year for customers with a consumption of more than 5 thousand m³;
- four attempts per year to take a meter reading for all customers with annual consumption between 501 and 5 thousand m³ instead of the two required for customers with annual consumption between 501 and 1,500 m³ and the three required for customers with annual consumption between 1,501 and 5 thousand m³;
- two attempts per year to take a reading for all customers with annual consumption between 0 and 500 m³, instead of the single meter reading required.

The improved meter reading plan adopted by the Hera Group makes it possible to increase the number of meter readings collected by the distributor, optimise the reading workloads and reduce the number of estimated readings.

Starting in 2017, the meter reading plans for the various product sectors have been gradually redetermined in all our service areas, to synchronise the schedules and thus achieve significant synergy among the various businesses. This new system has reduced the number of visits required at customer meters to obtain the readings required by the improvement plans previously introduced.

In 2020, a distinctive dress code for meter readers was defined, including a red vest with high-visibility bands and a white cap, to make them more easily recognisable to users. The meter readers operated in the field according to the provisions for the health emergency.

As regards the **water service**, Arera's resolution 218/2016/R/idr added new meter reading frequencies, and the concept of a minimum time between readings. In the face of this resolution, and thanks to Hera Group's orientation that had already gone in the direction of maximising the collection of measurement data, the new meter reading plan, initiated on 1 July 2016, includes:

- twelve attempts per year to take a reading for all customers with annual consumption above 1,800 m³ instead of the two required for customers with an annual consumption between 1,800 and 3 thousand m³ and the three required for customers with annual consumption above 3 thousand m³;
- four attempts per year to take a reading for all customers with annual consumption between 500 and 1,800 m³, instead of the two required;
- two attempts per year to take a reading for all customers with annual consumption between 0 and 500 m³, in line with the requirements of the resolution.

Two reading attempts are also made on meters off contracts to identify potential irregular withdrawals or other losses.

By doing so, the meter reading plan has made it possible to increase the number of readings actually taken, making it easier to identify leaks, and improve the quality of the billing (a smaller percentage of consumption is estimated).

During 2018, the provisions of Arera's Resolution 218/2016 were also followed up concerning the advanced notification of a second pass to read meters for non-accessible water meters, when the first pass failed. For those who have not opted for a specific notification system, the reading companies have implemented preventive notification with leaflet distribution using stickers, which also give users the opportunity to leave a self-meter reading if they expect to be absent. At the end of 2019, devices to allow remote reading were installed on a limited number of meters on a trial basis and on a limited number of meters also for the water service.

Moreover, from 2020, during each monthly collection campaign, an SMS is sent to customers of meters for which the reading attempt has failed, reminding them how to provide the reading independently. A video tutorial describing the activity of the reader was also produced.

Also **in the field of remote readings**, intense operational and control and monitoring activities were carried out during the year from the remote reading systems control room, which is also fundamental for

optimising maintenance activities in the field, thus ensuring an excellent availability of meter reading data. An optimisation introduced during the year was the systematisation of the management of the electronic meters undergoing temporary maintenance, by means of a manual reading run, always with the aim of minimising the use of estimated readings.

In 2020, the Hera Group is on track to meet the targets it has set itself, with over 1 million electronic gas meters in its fleet, accounting for 64.7% of the total. If electronic electricity meters are also taken into account, this percentage rises to 72.1%; there are more than 465 thousand electronic electricity meters, or 98.2% of the total.

It should be noted that the service requirements for 2020 have been postponed to 2021 by Arera, in relation to the impacts of the health emergency, with resolution 501/2020/R/gas of 1 December 2020.

In 2019, the new meter NexMeter with advanced safety functions designed and developed by Hera Group began to be fully part of the Group's equipment fleet. The electronic meter was presented in November 2019 during the prestigious European Utility Week event. We expect to install more than 80,000 NexMeter meters in Ferrara, Modena, and Udine in 2021.

Initiatives for improving the quality of billing

In 2019 we launched a project that is profoundly changing the Group's billing model. The technological development of the new generation of meters, which offers the opportunity to access almost in real-time to detailed information on customer consumption, becomes the enabling factor to define a new billing model, linked to reading cycles, and based on automation and integrated control management.

In 2020, the first part of the project was completed. For a selected set of customers, the billing frequency was changed to take advantage of the greater availability of actual readings at the end of the month. With this project, the customer focus is reflected in distributing the cost of utilities better over time, making it easier for them to manage their financial deadlines and reducing any need for instalments. No other contractual conditions are changed and the multi-service bill is maintained.

Given the positive result, in 2021, we will continue to develop advanced offers based on our customers' actual consumption trends and define the billing model for the coming years.

Safety and continuity of the service

[416-1]

Safety and continuity of the electricity service

In 2020, the distribution networks operated by Inrete distributed approximately 1,980 GWh of electricity to around **262 thousand users** in 24 municipalities of the provinces of Bologna, Modena, and Ravenna in Emilia-Romagna. Also, we distributed about 835 GWh of electricity to **more than 163 thousand users** served by AcegasApsAmga, in the municipalities of Gorizia and Trieste.

The electricity grids operated by Inrete at 31 December 2020 are 10,425 kilometres long; 73.3% of them carry low voltage, 26.4% medium voltage, and 0.3% high voltage. 41.7% of the lines are underground, and the rest are overhead lines.

In the **Triveneto** region, AcegasApsAmga operated 2,283 kilometres of network, 65.4% of them carry low voltage, 34.4% medium voltage, and 0.2% high voltage. 69% of the lines are underground.

Arera's provisions on the service quality of distribution, metering and sales of electricity (resolution 566/19/R/eel) govern the continuity of the electricity distribution service for the 2016-2023 regulatory

period. The resolution also identifies the indicators to use to measure power cuts, the monitoring systems, and the reference standards.

The indicators related to power cuts originating in the medium and low voltage grid express:

- the total annual duration of long power cuts without advance notice, for low voltage customers;
- the total annual number of long and short power cuts without advance notice, for low voltage customers.

For the 2016-2023 regulatory period, and both geographical areas, Inrete and AcegasApsAmga have approved the reduction of power cuts originating from the medium and low voltage grids attributable to external causes. The above indicators, therefore, are calculated inclusive of external causes. For these indicators, target levels and trend levels have been set for the districts managed by AcegasApsAmga and Inrete, by Arera.

For 2017, resolution 605/2018 awarded about Euro 1 million overall as incentives to **Inrete** for electricity distribution service continuity recoveries. For 2018, as a result of the investigation on Inrete in the proceedings for the definition of the measure on service continuity, Inrete was awarded total incentives of about Euro 1 million. For 2019, Inrete was awarded about Euro 0.5 million overall as incentives for electricity distribution service continuity recoveries.

AcegasApsAmga also takes part in the incentive/penalty system for continuity recoveries for the electricity distribution service, set out in resolution ARG/elt 646/15. In 2020, based on the quantity and duration of outages without advance notice in 2019 as a reference, we were entitled to two incentives for the two areas for a total of about Euro 240 thousand.

Continuity of the electricity service

	2019	2020	2019-2020 average	2020 trend
Average number of power cuts per customer in high concentration areas	1.42	1.06	1.24	1.22
Duration of power cuts (minutes) per customer in high concentration areas	13.32	15.19	14.26	28.00
Average number of power cuts per customer in medium concentration areas	1.52	1.10	1.31	2.78
Duration of power cuts (minutes) per customer in medium concentration areas	16.21	18.13	17.17	45.00
Average number of power cuts per customer in low concentration areas	4.93	4.76	4.85	5.01
Duration of power cuts (minutes) per customer in low concentration areas	47.11	35.97	41.54	68.00

The average figure applies to power cuts of the low voltage service, without advance notice and due to causes for which the operator is responsible. The power-cut duration minutes apply to power cuts that last more than three minutes.

The 2020 figure confirms the high level of continuity of the electricity distribution service, settling, for all the reference indicators, below the trend and/or target levels set by Arera, with the exception of minutes of interruption per customer in high and medium concentration (15.19 and 18.13 respectively, compared with a 2020 trend level of 14.26 and 17.17).

Gas distribution service safety and continuity

The Hera Group manages the gas distribution service with the objective of ensuring high safety and service continuity levels.

The network, classified as having a high probability of leakage, is defined as the sum of:

- the high-pressure network;
- the network made of materials that are not compliant, according to Arera's Resolution;
- the network laid in areas subject to hydro-geological instability.

For this type of network, 100% of the network must be inspected annually.

The resolution mentioned above governs the quality of the gas distribution service and has further increased the safety standards for the current regulatory period (2020-2025). This increase was substantially in line with the previous standards observed by Hera and with the company's mid- and long-term objectives. The changes to the regulations did not therefore have any particular impact on Hera or any significant negative impact on the continuity of its objectives and activities. Specifically, the resolution added more stringent requirements on the inspection of networks, on odorising and on incentives to upgrade the odorising systems.

Since 2010, gas distribution companies have been required to participate in a system of incentives for safety improvements in the service defined by Arera, which assesses four aspects:

- compliance with **service level requirements**, **no gas-related accidents** falling under the responsibility of the operator, **no breaches** in this area related to Arera's controls or inspections;
- the number of **measurements of the gas odorising level** compared to the required minimum;
- the number of conventional **leaks** reported by third parties compared to the objective set by Arera for the period;
- the number of upgraded **odorising plants** (flow-proportional, remote-controlled injection-type odorising plants).

For 2019, the regulatory authority has not yet approved the economic values of **incentives and penalties** for Inrete. For 2020, Inrete Distribuzione Energia is estimated to have a positive balance between premiums and penalties of approximately Euro 1.250 million, relating to the recovery of continuity of the gas distribution service for the districts managed. Specifically, Inrete Distribuzione Energia achieved positive results both for the component relating to leaks reported by third parties (Euro 0.710 million) and for the component relating to gas odorization (Euro 0.540 million).

For AcegasApsAmga, under the TUDG for the 2020-2025 regulatory period, premiums for odour measurements are estimated at Euro 0.194 million and premiums for reducing leakage reported by third parties at Euro 0.556 million.

Gas emergency services

	2018	2019	2020
Average arrival time at the call location (min)	36.5	32.6	35.3
Calls with arrival time at the call location within 60 minutes (%) (service requirement 90%)	96.7%	97.0%	97.8%

Arera's resolution 569/2019, the Consolidated Law for the regulation of the quality and rates of gas distribution and metering services for the regulatory period 2020–2025 (TUDG), establishes that the distribution company must comply with the minimum annual percentage service requirement of 90% of calls with arrival time at the call location for emergency services within no more than 60 minutes.

Our gas emergency services reports confirm full compliance with the regulatory requirements, as 97.8% of all calls arrived on site within 60 minutes (compared to Arera's service requirement of 90%). For this indicator, Inrete recorded 97.7% while AcegasApsAmga recorded 99.3%, and Marche Multiservizi recorded 94.7%.

Inspections and leaks in the gas network

	2018	2019	2020
Percentage of the total high and medium-pressure network inspected (service requirement 100% in three years)	60.5%	62.4%	54.9%
Percentage of the total low pressure network inspected (service requirement 100% in four years)	78.9%	85.0%	81.9%
Number of leaks on distribution network located upon inspection, per kilometre of network	0.071	0.105	0.098
Number of leaks on distribution network located upon notification by third parties, per kilometre of network	0.035	0.031	0.033

In 2020, **the percentage of the network that was inspected was significantly above the minimum** required by Arera (100% for the high and medium pressure network in three years and 100% of the low pressure network in four years). In fact, at the Group level, we inspected more than 55% of the high and medium pressure network and 82% of the low pressure network.

In 2019, we launched **the new system for planning and managing the scheduled leakage detection** for the gas network; the work is scheduled using machine learning algorithms aimed at optimising the effectiveness of the checks (maximising the number of leaks found) and minimising inspection routes to maximise daily productivity.

The system is made up of an artificial intelligence platform with machine learning models to schedule and optimise inspections, complemented by a web service for the operational management and reporting of the activities performed. The aim of the system is to maximise inspection activities to ensure an ever-increasing level of safety and quality of the distribution service. The criteria for planning and carrying out gas network inspections are confirmed as set out in the Group's operating instructions that implement Arera's resolution 569/2019. As in 2019, activities are planned using machine learning algorithms aimed at optimising the effectiveness of inspections (maximising the number of leaks found) and minimising inspection paths to optimise daily productivity by increasing effectiveness and reducing the environmental impact of searches.

The actual figures at the start of the new management system used to manage scheduled gas network leakage detection show the consistency between them and the objectives of the scheduling tool. In fact, the number of detected leaks in relation to the inspected network has always been higher than in the years before using the new leak detection planning system. In addition to pursuing industrial efficiency objectives, this performance aims at constantly improving the company's safety standards, which are already in themselves better than the reference values stated in the sector's technical regulations.

While the quantity of network inspected in 2020 in Emilia-Romagna was about 12% higher than in the previous year, the number of detected leaks decreased by about 11% compared to 2019 (the number of leaks per km of network inspected decreased from 144 to 115).

In 2020, in the Group's entire gas distribution network, **33 leaks were reported by third parties**, per thousand kilometres of network, compared to 31 in 2019. On the other hand, **in 2020, 98 leaks were identified** by means of inspections on the Group's distribution network per thousand kilometres of network, compared to 105 in 2019.

In 2020, Hera's distribution company, Inrete, continued to plan and execute a series of inspection campaigns for underground and above-ground connections.

Scheduled searches for gas leaks continued throughout 2020, also applied to above-ground system components, in particular:

- **systematic checks to ensure there are no leaks** on network elements (valves, vents, crossings, etc.) are carried out during scheduled periodic operating/maintenance activities;
- concurrent with routine operations on meters, (e.g., activations, closures, checks on metering assemblies), a **check using instruments is carried out on the above-ground connection** and on the **meter being worked** on to ensure that there are no leaks.

In particular, we developed a new method for calculating network losses, based on the quantification of gas flow rates lost from breaks and the time between the moment of the breakage and the moment of fixing the leak.

Leaks in the gas distribution network can be estimated using a calculation method based on the quantification of the gas flow rates leaked by the breakage found during leak detection activities and on an estimate of the time between the time of breakage and the time the leak is fixed. In 2020, the percentage of leaks in the gas distribution network calculated using this method was 0.034% of the total volume of gas injected into the network.

Arera resolution 569/19 of 27/12/19 requires all gas distribution service operators to replace gas networks defined non-compliant by 2025. As of 27/12/19, Inrete Distribuzione Energia Spa manages just under **160 km** of non-compliant network, consisting of asbestos cement pipelines, located in the municipalities of Forlì (120 km), Ravenna, and Codigoro. The replacement work should be fully implemented by 2025 with intermediate production results of at least **40% by 2022 and 75% by 2024**. To this end, agreements are gradually progressing, especially with the Municipality of Forlì, to streamline permitting procedures to comply with the highly challenging requirements of this resolution. To achieve this objective, a **multi-year plan of measures** was planned and proposed, which envisages the execution of works also by using new specific programmed maintenance contracts for the replacement of gas networks and connections made of non-compliant material. In drawing up the intervention plan, the probability of breakage calculated for each individual pipeline was evaluated, as well as the many context conditions that must necessarily be considered when working in densely inhabited contexts, such as: road networks, the presence of schools, hospitals and sensitive users, areas subject to constraints, and the feasibility of construction. During 2020, Inrete has already replaced **8,850 metres** of asbestos cement pipes, and made **383** new connections. In 2021, a further **12,000/13,000 metres** of new gas network is expected to be laid and **700/800** connections to be rebuilt at the same time.

The technical call centre

Receiving and diagnosing the telephone calls made to the toll-free emergency services numbers is of key importance, since the calls can be used as actual reports of disruptions to the service being provided.

The technical call centre service has toll-free numbers for each service (gas, integrated water service, and district heating), and district (Emilia-Romagna and Triveneto) in addition to a joint toll-free number for the entire Group for public bodies (fire brigade, municipalities, provincial administrations, prefectures, police stations, AUSL local health authorities, ARPA environmental protection agency, law enforcement agencies, port authorities, etc.). In 2020, Marche Multiservizi became part of the centralised technical call centre in Forlì for the management of customers for emergency intervention, both for gas and water services in the area.

To deal with the health emergency, since March 2020, the technical call centre has been **completely reorganised** with various measures (logistical decentralisation, new customer relationship management

infrastructure, etc.) with the **priority aim of ensuring continuity of service** while ensuring the safety of operators and complying with regulatory provisions. A fundamental element to safely perform the above was the upgrading of the system to create a more open and flexible architecture allowing for **remote working** by adapting the operations of the technical call centre to a remote location (mobile or fixed).

Percentage of calls received by the technical call centre and answered (within 120 seconds) or abandoned within 120 seconds

	2018	2019	2020
Gas	98.7%	98.6%	98.5%
<i>of which for the gas emergency services (minimum percentage required by Arera is 90%)</i>	97.4%	97.4%	96.2%
Water service	98.1%	98.0%	97.4%
<i>of which for water emergency services (general level 90%)</i>	94.7%	95.0%	92.5%

Excluding Marche Multiservizi. The percentage of calls for emergency services for gas and water was calculated according to criteria defined by Arera, considering the calls received, answered, or abandoned within 120 seconds.

Average technical call centre waiting times

s	2018	2019	2020
Gas	54.5	54.6	49.0
Water service	60.2	69.9	61.4
Number of calls	339,361	317,956	340,364
<i>of which for the gas emergency services</i>	104,579	100,006	105,895
<i>of which for the integrated water emergency services</i>	234,782	217,950	234,469

Excluding Marche Multiservizi.

In 2020, the technical call centre in Forlì received about 340 thousand calls, slightly down compared to 2019. The percentage of calls answered by the technical call centre within 120 seconds was substantially unchanged for the gas service and slightly decreased for the water service.

Overall, the call indicators increased significantly compared to 2019, despite the decrease during the lockdown.

In 2020, the customer satisfaction survey, carried out at the end of the conversations with operators by means of an automatic post-call system, showed 8% participation and an overall satisfaction level of "very satisfied" or higher in 90% of the surveys. Development of the technical call centre continued in 2020, aimed at improving the performance and quality of the services it provides. Work continued on implementing the Speech API and Text Mining voice analysis tools, aimed at monitoring operator behaviour and call quality, developing a dynamic workflow tool for listing safety requirements to gas service customers, creating an online support tool for E-mobility for detailed call procedures, developing a new operational flow within the NexMeter project to manage user calls with new gas meters, and lastly fine-tuning the testing of the Man-Down app with AcegasApsAmga's laboratories.

Safety downstream of the meter

As a result of Arera's Resolution 40/2014/R/gas, when a request is made to activate a gas supply, and in some cases to reactivate a gas supply, the safety of the gas system must be checked. The scope of application of the inspection applies only to user systems with non-technological use of gas (e.g., domestic use, boilers for heating, etc.).

In 2020, a total of 4,275 safety inspections were carried out for **Inrete**, of which 3,421 were for new systems, and 854 were inspections of modified or transformed systems. Of the 4,275 inspections, 3,463 passed and 818 did not pass. In addition to the work done by the assessment department, 131 cases were also found to not be subject to assessment and were cancelled by the seller dealing with the case.

AcegasApsAmga handled 1,217 inspections of which 1,092 on new user systems and 125 on modified or transformed user systems. Of the 1,217 inspections, 1,018 had a positive outcome and 199 a negative outcome; in addition to the inspections, 346 cases turned out not to be subject to inspection, of which 183 were cancelled by the reference seller, 79 were cancelled after 30 working days from the date of notification of disconnection due to a request for supplementary documentation without the required supplementary documentation having been received, and 84 were cancelled after 120 calendar days from the date of the gas activation/reactivation request without the required documentation having been received.

When activating or reactivating gas supplies, Inrete carries out another key safety check: the inspection of the actual seal of the meter and of user's gas system (downstream of the meter) also to ensure that there are no gas leaks from the customer's system, before activating the gas supply. Also, if a fault occurs downstream of the meter, and Inrete's emergency service identifies a gas leak in an end customer's system, it immediately cuts off the supply to eliminate the dangerous situation. The supply can be reactivated only after a qualified installer fixes the system so that it no longer leaks and issues the resulting technical documentation that proves the integrity of the user's system, as required by the Italian Gas Committee's Guidelines 12.

Since 1 January 2017 and until 31 December 2020, a new enhanced insurance policy for end customers was in force to cover accidents caused by the use of natural gas and LPG supplied through the network. The new policy lasts four years (from 2017 to 2020) and has higher limits for fires and lost time injuries. The changes were introduced by Arera's resolution 223/2016/R/gas. In particular, under the policy, anyone using combustible gas (natural gas or LPG) provided by urban distribution or transport networks, automatically receives insurance coverage against accidents that is valid throughout Italy. End customers other than residential or condominium customers using meters above G25 class and users of automotive natural gas are not covered. Coverage is provided for civil liability towards third parties, fires, and lost time injuries that originate in the systems and/or devices downstream of the meter. The insurance policy is stipulated by Comitato Italiano Gas [Italian Gas Committee].

Starting 1 January 2021, a new insurance policy will be in force for the 2021-2024 period, based on the provisions of Arera resolution no. 167/2020/R/gas, containing Provisions on insurance for gas end customers, for the four-year period from 1 January 2021 to 31 December 2024. The policy, like the preceding policies, covers accidents, material damage to real estate and/or property and all the civil liability consequences for the insured parties due to accidents that are the direct consequence of gas leaks and/or leaks caused by any event, resulting in fire, bursts, and explosions.

The insurance cover is valid throughout Italy and includes accidents due to intoxication and asphyxiation caused by gas, carbon monoxide, etc., however it occurs.

Basically, the policy covers all damage to movable and/or immovable property and to well-being, for any reason whatsoever, caused and suffered by anyone, originating downstream of the redelivery point (generally the gas meter) on utilities served by transport or distribution networks, even if caused by suicide or attempted suicide. Therefore, anyone using combustible gas (natural gas or LPG) provided by urban distribution or transport networks, automatically receives insurance coverage against accidents. End customers other than residential or condominium customers using meters above G25 class and users of automotive natural gas are not covered and do not benefit. The insurance policy is stipulated by Comitato Italiano Gas [Italian Gas Committee].

The continuity of the water service

The water network control activity index is expressed as a percentage of the network inspected for leaks.

In 2020 a total of 11,945 kilometres (+10,4% compared to 2019) of network were inspected by the Group, corresponding to 34.1% of the total. In Emilia-Romagna the organisation of the leak detection activity was based on a criticality analysis in terms of network losses, breakage indexes of the pipes, and possible issues concerning the availability of water resources (in particular during the summer).

The continuity of the water service

	2018	2019	2020
Percentage of network subject to active leak detection	27.7%	31.1%	34.1%

Customer relations

The call centre

The increase of informative and commercial contacts confirms our customers' appreciation for this channel, which they use to resolve their needs practically and effectively. The growing number of customers that call the call centre from a mobile phone testifies to the success of the company's decision in 2016 to make this method free of charge.

Quality of the call centre for residential customers

	2018	2019	2020
Average waiting time at the call centre for residential customers (s)	36	27	33
Calls with satisfactory outcomes for residential customers (%)	95.6%	95.9%	94.7%
Number of residential customer contacts at the call centre (thousands)	4,496	4,859	6,026

The average waiting time, based on a telephone call by a customer that wishes to speak to an operator, is the time between the moment a request is made to talk with an operator and the beginning of the conversation. It does not take into account the initial information provided by the automatic answering system. The data refer to the call centres of Hera Comm (including Ascopiave Energia for 2020 data), AcegasApsAmga, and Marche Multiservizi.

The health emergency, which began in early 2020, has significantly changed the use of contact channels by customers who have preferred call centres and digital channels to physical branch offices.

Waste management requests for free pick-ups and home collection services for Covid-19 cases and reports of self-readings, encouraged by email and text message campaigns to customers, contributed particularly to the increase in calls, allowing the receipt of actual readings leading to accurate billing and reducing bills based on estimates.

In 2020, for the **residential, household market call centre** technical indicators remained stable, despite the strong impact generated by the 24% increase in calls handled by call centre operators, with the sole exception of the level of service, which fell slightly, by 1.2 percentage points (from 95.9% to 94.7%). The average waiting time increased by 6 seconds (from 27 to 33), and the waiting time over 2 minutes increased by 0.9 seconds, partly as a result of new sales companies in the reporting scope. **On a like-for-like basis as previous years**, the average waiting time increased by 4.8 seconds (from 27 to 31.8), while the average waiting time over 2 decreased slightly (from 6.2 to 6.1).

In 2020, the health emergency radically changed the call centre's set-up, with over 90% of operator workstations being remoteised in just three weeks, providing an important example of partnership between Hera's corporate departments and suppliers. This reactivity made it possible to protect call centre staff and ensure continuity of service, which customers rewarded with an improvement in the satisfaction indicator to 88.7 (+0.6), and a decrease in dissatisfied customers (from 6.8% to 6.4%)

In 2020, we completed the business continuity project, bringing Hera Comm's telephone platform up to the highest standards in terms of performance and reliability, reaching the highest level of technological development existing at the time, and bringing benefits in terms of call management capacity (increased volumes) and ensuring the accessibility of telephone services.

In 2021 we will add new customer relationship management features, which will drive Hera Comm's customer operations to change its approach to customer management aimed at more effective interaction and process efficiency.

Among the actions identified to improve customer satisfaction and at the same time make contacts more efficient, the main project in 2021 aims to improve problem solving by reducing repeat calls for the same reason (recall) and reducing contacts that can be prevented by revising certain processes.

Quality of the business call centre

	2018	2019	2020
Average waiting time at the call centre for business customers (s)	31	24	25
Calls with satisfactory outcomes for business customers (%)	95.5%	96.0%	95.6%
Number of business customer contacts at the call centre (thousands)	379	348	370

The average waiting time, based on a telephone call by a customer that wishes to speak to an operator, is the time between the moment a request is made to talk with an operator and the beginning of the conversation. It does not take into account the initial information provided by the automatic answering system. The data applies to the call centre of Hera Comm.

It should be noted that the number of contacts to the call centre for business customers for 2020 includes the total number of incoming calls, while the figure for 2019 only includes the number of calls to operators. For the corporate segment, in 2020 the calls decreased again, also driven by the situation related to the health emergency. In fact, the total volume of calls in the segment fell by almost 18% (from 449,917 to 369,984), with a slight drop in technical indicators due to the anomalous distribution of traffic compared to historical levels. Analysing the same perimeter as in previous years, the volume of calls to operators was down by 19.5% (from 348,233 to 279,886).

The Service Level worsened by 0.4 percentage points (from 96% to 95.6%), the average waiting time increased by 1 second (from 24 to 25) and the percentage of calls waiting over 2 minutes decreased by 0.7 percentage points (from 5.2% to 4.5%).

The satisfaction indicator for the business call centre also improved (by over 1 percentage point, from 84.4 to 85.6) with a 1.2 point drop of dissatisfied customers (from 10% to 8.8%).

As regards Hera Group's commercial call centre, calls are handled by the staff of specialised Italian companies whose operations are located mainly in Italy and in particular in the provinces of Bologna, Padua, Venice, and Turin.

Our trade promotion is carried out by Italian-based and Italian-owned sales agencies, that rely on operating units both in Italy (predominantly) and abroad. Their staff is employed directly by these sales organisations, who have signed a standard agency mandate with Hera Comm.

Considering also the operations of the emergency services call centre for gas, water, and district heating services, which is always staffed to respond to breakdowns, and is located in Forlì, in 2020, over 98.2% of calls were handled from Italy.

The branch offices

The average waiting time at branches has improved compared to 2019 both at the Group level and in each individual company (except for Marche Multiservizi).

Average waiting times at branch offices

Min	2018	2019	2020
Hera	8.2	8.0	4.8
AcegasApsAmga	12.3	11.4	4.6
Marche Multiservizi	9.4	13.2	14.0
Weighted average on contacts	9.6	9.4	5.4
Number of contacts	915,921	998,358	632,469

The 2020 column excludes data for Ascopiave Energia.

Overall, during the year, inflows to branch offices fell by around 37% (including the 2020 tally inflows to smaller branches not equipped with a queue management system), mainly due to customers being less inclined to go to branch offices due to the health emergency.

Quality and technical indicators increased, with an increase in the level of satisfaction from a score of 88.7 in 2019 to 89.4 in 2020, a reduction in the average waiting time from 8.0 minutes in 2019 to 4.9 minutes in 2020 and a percentage reduction in customers served with more than 40 minutes waiting time from 2.2% to 0.6%.

The branch offices remained open, except for the required lockdown period from mid-March to the first week of May, and were equipped with all the preventive and protective measures required by regulations:

- limited access and occupancy of waiting rooms;
- enforcement of distancing measures and identification of specific routes for entry, stay, and exit at branch offices, with appropriate signage on the floor;
- requirement for customers to use masks;
- protective equipment (e.g. plexiglass shields for customer reception and branch office counters, masks for operators, sanitising products at the entrance and at counters, sanitising spray, custom touch pens);
- doubling of cleaning shifts for rooms and counters;
- air exchange provisions;
- behavioural rules to protect the health of operators and customers;
- new organisational arrangements for training and coaching activities;
- multimedia information campaigns.

This enabled the Group to provide service to approximately 632 thousand customers during the year. Amongst other things, the branch offices were involved in greater promotion of efficient behaviour, specifically sending bills electronically, with the dual objective of reducing environmental impact and providing a more effective delivery system, also taking into account the health emergency. The increase in customer satisfaction, first and foremost, is the result of continuous assessment of processes and

procedures, daily sample analysis of requests entered into the customer relationship management system, and critical review of the few cases of dissatisfaction expressed by customers, with continuous improvement approach.

Other factors contributing to the performance increase were the new, more demanding criteria included in the tender for outsourcing branch management, which took effect on 1 July 2020, and a new operational training model, which provides more up-to-date and timely training for customer service operators.

At the same time, the operators of the main branch offices, in the light of the decrease in contacts and also for a short period of the total closure of the office, had the opportunity to be trained on new activities in the area of customer operations, with excellent qualitative and quantitative results and without changes in working conditions.

In total, considering Hera's entire service area and those of its subsidiaries AcegasApsAmga, Marche Multiservizi and EstEnergy, there are 118 branches. Adding those outside the service area brings the total to 124 branches throughout Italy.

Complaint management

In 2020, the volume of complaints decreased significantly, reporting just over 33 thousand cases, down 42.2% compared to 2019, thanks to continuous monitoring of customer relationship management processes with a gradual reduction (volume and seniority) of cases in progress. The decreases vary by type of service: waste management (-45.8%), water (-27.9%), electricity (-38.7%), and gas (-47.6%). In addition, the ratio of complaints to contracts managed improved significantly from 1.6% in 2019 to 1.0% in 2020 (-38%). The outcome from the point of view of quality was very positive: the average handling time decreased by approximately 1.8 calendar days, from 13 days in 2019 to 11.2 days in 2020 (-14%) while maintaining a 99.9% compliance with standards (in line with 2019).

Complaints received

	2018	2019	2020
Average complaint response time (days)	13.7	13.0	11.2
Percentage of complaints that were dealt with within the standard timeframe (%)	98.9%	99.8%	99.9%
<i>of which electricity and gas complaints relating to sales</i>	<i>95.3%</i>	<i>99.7%</i>	<i>99.8%</i>
Number of complaints received	56,861	57,449	33,166

Excluding AcegasApsAmga and Marche Multiservizi. The complaint response time is specified in calendar days, with a reference standard of 40 days.

In 2020, we continued to improve our communication style towards end customers, by implementing a "new language" project and by standardising reply letters to complaints. Moreover, as for prior years, in 2020 Arera repeated a survey on energy-related complaints to assess the quality and validity of the replies provided to customers.

In 2020, the health emergency year, **AcegasApsAmga's** external service operators switched to remote working. This enabled continuity of service, but slowed down processing times slightly (remaining well within Arera's standards). The average time required to respond to complaints was 11.5 days, up compared to the 10 days of last year and 100% of complaints were answered within the standard time, up compared to 2019. In **Marche Multiservizi's** area, the average time required to respond to complaints was 14 calendar days (up compared to 2019) and 95% of complaints were answered within the standard time.

Dispute resolution

Alternative dispute resolution (ADR) arbitration is increasingly used to solve problems without resorting to ordinary courts. This method is not costly for clients, who can participate in the resolution of disputes either in person or by delegating a representative. Most of the meetings take place by computer on IT platforms, thus avoiding the need to travel. The high percentage of positive outcomes proves the success of this procedure, which is increasing more and more every year and proves to be a tool that satisfies the vast majority of those who have experienced it.

Since January 2017, the sector's regulations make it compulsory for the gas and electricity sectors to turn to arbitration in an attempt to resolve disputes. The attempt is a prerequisite for the admissibility of any subsequent legal action. The arbitration bodies must have the requisites set out in the Code of Commerce and be registered in the Register kept by Arera. Since July 2018, arbitration has been extended to the integrated water service, and the participation of the operator became mandatory on 1 July 2019. The last step towards a complete equalisation with the other gas and electricity services took place on 1 July 2020, when it was considered a condition required for prosecution also for the water service.

In 2020 ADR arbitration was used as a tool for out-of-court dispute resolution, which more and more customers are turning to in order to resolve problems that are not solved at the complaint stage.

For the Hera Group, the success rate (i.e. cases of conclusion with an agreement report) was around 82%, several points higher than the national Italian data published by Arera. However, in 2020, there was a trend towards longer completion times, from 53 days in 2019 to 59 in 2020. The health situation in the spring of 2020 certainly affected the progress of the arbitration, not so much in the conduct of the meetings, which were already taking place remotely (and which continued without any difficulty), but in the inevitable delay in the on-site verification of circumstances, where inspections were necessary.

In 2020, we received a total of 474 ADR arbitration requests (slightly more than in 2019); 208 of them were for the gas service, 127 for electricity, 38 for both services, and 101 for the water service. Of the 439 arbitration requests concluded during the year, 344 concluded with a settlement, 78 (18%) without a settlement, six were terminated due to inadmissibility, 10 for a waiver of the request, and one for non-participation.

In addition to ADR arbitration, there is also **joint arbitration**, an instrument based on an agreement between Hera and the main consumer associations, which also aims to resolve disputes out of court. The number of requests for joint arbitration by consumer associations is decreasing year on year, largely replaced by alternative dispute resolution ADR, which is now consolidated as the tool of preference for resolving disputes over gas, electricity and water services. The need for face-to-face meetings, and the required assistance of a Consumers' Association (chosen by the customer or established ex officio on a rotating basis among the signatories to the memorandum of understanding) certainly discouraged recourse to this method; the small number of requests, as well as the even smaller number of procedures concluded, bear witness to this.

In 2020, we received 37 requests for joint arbitration, 24 of them were for the water service, three for electricity, and ten for gas. Eighteen have been concluded, 11 of them with a settlement, and seven with a failure to reach an agreement, while seven are in progress.

Litigation with customers

[307-1] [419-1]

At the close of 2020, there were 548 disputes pending with customers (268 of which initiated during the year) mainly on the application of the tariffs applied to the services we provide, and on the recovery of payments. Of these 268 disputes, 228 concern the gas, electricity, and district heating service, 30 the water service, and 10 the waste management service. Litigation with customers mainly concerns the energy

sector, and in particular objections to the protective system which customers are assigned to by the competent distributor, cases arising from the opposition to injunctions served as part of the compulsory collection of receivables, further disputes concerning billing, and complaints requesting the reactivation of electricity or gas supplies that had been suspended due to the customer paying late. In the water sector, instead, disputes mainly concern customers objecting to injunctions.

During 2020, 196 disputes were settled.

Information security and protection of personal data privacy

The management of information security right from the design phase, to achieve security by design is a consolidated asset within the Hera Group. It makes it possible to protect all the data relevant to the business and, in particular, the personal data of the persons involved, in an increasingly effective manner, pursuing privacy by design in a synergistic manner.

The governance of information security has been consolidated by means of a complex document management system consisting of the "Information Security Policy Guideline" and a "Policy for the protection of personal data" and a set of information security policies that establish the guiding principles for all information security activities, including the attribution of responsibilities, both general and specific, to clearly defined organisational roles.

The Top Management is involved in the definition of an acceptable level of risk, through meetings of the Risk Committee focused on the results of annual information security risk assessment processes, which identify the most effective mitigation and security improvement initiatives, in the face of an increasing level of external threats, the implementation of which is constantly monitored.

Compliance with policies and the level of maturity of countermeasures is ensured by annual technology assessment programmes and periodic audits of the security vulnerabilities of systems and networks.

Case study

NexMeter: the 4.0 gas meter with advanced safety features

The **new gas meter 4.0** not only allows gas users to **monitor their consumption in real time**, but also offers **advanced safety features**, an aspect of fundamental importance for the gas service.

The innovative meter is the result of the Group's experience and the application of its know-how in the management of the gas distribution service. NexMeter is equipped with an advanced technology that can monitor the pressure and flow conditions of the supply system and the network in real time, **immediately signalling any anomalies and irregularities** (small latent leaks, large and immediate leaks), and interrupting the supply, immediately securing the system. Once corrective action has been taken it can perform a test to check that the user system works properly, to promptly resume the service. Moreover, it is able to detect earthquakes in real time, and stop the gas supply, taking action to ensure greater safety. It is made of materials containing **recycled plastic** and is already designed or "clean gas" such as **biomethane**.

The benefits of using this innovative device are in the following respects:

- enhanced **security and reduction of incidents**, including those caused by faults in the network downstream of the meter and the users' equipment;
- resident protection against earthquake risks, mitigating the risks of fire and explosion through immediate, targeted and timely cut-off of damaged gas user systems;
- higher **service quality**, thanks to network and supply pressure measurement with possible correction of measured volumes also based on pressure values;

- greater **protection of the environment**, by promoting the smart and rational use of energy and resources and reducing greenhouse gas emissions thanks to the possibility of detecting even micro-leaks.

During 2020, **20 thousand meters were installed** in the areas of Ferrara, Modena and Udine, for a total target of 300 thousand installations by 2022, aiming to avoid an estimated **3,500 tonnes of greenhouse gas emissions per year**.

The NexMeter project contributes to achieving **targets 7.3, 11.6, and 12.2 of the UN's 2030 Agenda**.

How does the project contribute to responsible digital transformation? The benefits we obtained in the Corporate digital responsibility dimensions (see the dedicated section "Corporate digital responsibility")

Social



Greater level of safety for gas customers, thanks to advanced meter functions capable of detecting anomalies immediately and securing the system.

Environmental



Fewer emissions thanks to real-time monitoring technology that enables the detection of leaks and micro-leaks and rapid intervention. The use of recycled plastic to manufacture the meter incorporates circularity into the creation of the technological product.

Technological



The 4.0 meter's advanced technology supports the proper and enhanced safety performance of the gas service, contributing to the resilience of the Group's service area.

Artificial intelligence to reduce gas leaks

In 2020, in line with 2019, Hera Group's subsidiary Inrete Distribuzione Energia continued the inspection campaigns of the gas distribution network, using the machine learning optimisation system deployed starting in 2019.

The system consists of an **artificial intelligence platform with machine learning models to schedule and optimise inspections**, complemented by a **web service for the operational management and reporting of the activities performed**. The aim of the system is to maximise daily inspection activities to ensure an ever-increasing level of safety and quality of the distribution service. The work is carried out entirely by internal staff, while **the scheduling is defined by maintenance algorithms that dispatch schedules to the teams with mapping support as optimised road routes to minimise mileage** and inspection times so as to increase effectiveness and reduce the environmental impact of the operations.

The final figures for 2020 confirm the positive trend shown in the first year of operation of the scheduling method. In fact, with the same amount of effort and inspection sessions as in 2019, the **quantity of network inspected** in 2020 in Emilia-Romagna **increased by about 11%**, maintaining a high performance on the number of leaks detected. In addition to pursuing industrial efficiency objectives, this performance aims at constantly improving the company's safety standards, which are already in themselves better than the reference values inferable from the technical regulations of the sector and from the **37% ratio between the leaks detected during inspections and the leaks reported by third parties**.

The Digi e Lode project contributes to achieving **targets 7.3 and 11.6 of the UN's 2030 Agenda**.

How does the project contribute to responsible digital transformation? The benefits we obtained in the Corporate digital responsibility dimensions (see the dedicated section "Corporate digital responsibility")

Social



Increased health and safety for residents and workers, achieved by using artificial intelligence systems to support inspection and detection of fugitive leaks. The activity is aimed at pursuing increasingly advanced levels of safety and quality of service.

Environmental



Improved air protection due to more efficient leak detection and the resulting less travel required by operators. The decrease in fugitive emissions from the grid translates into a decrease in greenhouse gas emissions into the atmosphere.

Economical



The efficiency of leak detection operations, supported by artificial intelligence algorithms, reduces operating costs and accordingly increases the effectiveness of the work done.

People

Objectives and performance

What we said we would do	What we have done	SDGs	Progress*	Geographic scope**
<ul style="list-style-type: none"> Increase the number of people involved in smart working: 50% of workers involved in 2023 (excluding blue collar workers) 	<ul style="list-style-type: none"> 77% of workers were involved in smart working at the end of 2020 (excluding blue collar workers) (see page 356) 	5, 8		
<ul style="list-style-type: none"> Launch the fourth edition of HeraSolidale in 2020 to support the achievement of the goals of the Non-Profit and Partner Organisations through donations from employees and customers. 	<ul style="list-style-type: none"> The fourth edition was launched in July 2020: Euro 83 thousand donated in 2020 to 7 Non-Profit Organisations and Partner Organisations of the fourth edition of HeraSolidale 2020-22. (see page 359) 	17		ER T M
<ul style="list-style-type: none"> Continue to develop Hextra by making best use of related opportunities in terms of knowledge, dissemination and application of the services offered; incorporating education and family support services; and further strengthening the health and well-being proposal. 	<ul style="list-style-type: none"> Hextra was further developed to provide a set of initiatives, free services and on-demand arrangements, to increase the sense of bonding during the health emergency and to positively affect the psychological, physical and financial well-being of workers. (see page 343) 	4		ER T M
<ul style="list-style-type: none"> 24.7 training hours per capita in 2020. 	<ul style="list-style-type: none"> In 2020, an average of 26 training hours per capita were delivered. (see page 333) 	4		ER T M
<ul style="list-style-type: none"> Internal mobility project: 30% of workers changing roles or organisational structure in a year in 2023 (excluding blue-collar workers) 	<ul style="list-style-type: none"> Internal mobility project: 26% of workers changed roles or organisational structure in 2020 (excluding blue-collar workers). Over 400 workers made use of the internal mobility project. (see page 339) 			
<ul style="list-style-type: none"> -4% reduction in the lost time injury frequency index in 2020 (16.3) compared to the average for 2015-2019 (≤ 15 in 2023). Launch a "Safety Culture" training project in 2020 to promote a culture of health and safety at all corporate levels. 	<ul style="list-style-type: none"> the lost time injury frequency index was 12.6 in 2020 (-26% compared to the average for 2015-2019). The "Cultura della Sicurezza" (Culture of Safety) training project was launched. (see page 345). 	8		ER T M

*  Result achieved or in line with plans.  Result with moderate deviation from planning.

** Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

What we will do	SDGs	Geographic scope*
<ul style="list-style-type: none"> Implement MyAcademy, the new online training platform that will allow all workers to customise their learning experience and continuously update their skills. 22.5 hours per capita of training in 2021. 	4, 8, 9	

What we will do	SDGs	Geographic scope*
<ul style="list-style-type: none"> Promote the new welfare portal which has been further adapted to the interests and uses of each worker in order to further improve the opportunities provided. This will be achieved also through the creation of a dedicated Hextra app. Include a new psychological, physical and financial well-being plan in Hextra. 	4	
<ul style="list-style-type: none"> Further reduction in the lost time injury frequency index (10.6 by 2024). Continue with "Culture of Safety" training and awareness-raising initiatives. Gradually extend the use of the "man down" app in BUs with lone working risk. 	8	
<ul style="list-style-type: none"> Continue to promote the fourth edition of HeraSolidale in 2020 to achieve the goals of the 7 Partner Organisations through donations from employees, customers and the company. 	17	

* Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

Strategic planning of sought-after and future skills and roles

The five strategic levers of the Business Plan steer the action of the Central Personnel and Organisation Department towards building a corporate environment supporting business strategy.

The rapid changes in the competitive context, in technology and in the regulatory framework require that organisations adapt and respond in an ever faster way. The diffusion of **agility** is a goal shared by several areas of intervention and also extends to relations with the ecosystem.

The current and constantly evolving market scenario, therefore, also leads the Hera Group to adopt systemic intervention models that are able to support the implementation of the strategies of individual businesses and to identify supply and demand for both current and future roles and abilities.

In this context, as part of the 2020 business planning cycle, **the approach to the workforce planning process** was continued. Drawing on greater integration between the business strategy and the strategy for roles and skills, the approach examines HR numbers and costs, and steers the development of the personnel management strategy in the long term, supporting Group strategy implementation. This is achieved by analysing workforce dynamics both from an internal and external viewpoint. The goal of strategic workforce planning is to identify and bridge the gap between the current and future situation by finding the best solutions in terms of quality, quantity, timing and location of the workforce, through an integrated action plan.

Within the context of this approach, reflection and analysis involve five main aspects:

- **Dimension:** is workload rising or falling? Will there be roles that will no longer be necessary or will be able to be replaced by automation? Will there be emerging roles that will be included in the organisation?
- **Cost:** will cost change in line with the increase in results?
- **Geographical location:** are the various professional families located where they are really needed? How does the external context influence the current geographical location of resources?
- **Skills:** Do we have the right skills to implement key processes in the future? Are there any obsolete skills? Do we need to develop new skills?
- **Configuration:** Is distribution by seniority and position consistent with the organisation's demands? Will the demographic structure be appropriate? Is the balance between operational/management positions consistent with future challenges?

Hera Group's workforce

2020 confirmed the consolidation of the Group's organisational and corporate structure, both through expansion of the scope of reference and through ongoing attention towards simplifying the operating mechanisms.

[102-7]

As at **31 December 2020**, the total workers with **open-ended contracts** in Group companies amounted to **9,011**, while workers with **fixed-term contracts** amounted to **180**.

Staff figures at year end

qty	2018	2019	2020
Managers	149	156	155
Middle managers	536	565	570
White-collar workers	4,648	4,929	5,005
Blue-collar workers	3,289	3,332	3,281
<i>Open-ended contract employees</i>	8,622	8,982	9,011
Fixed-term contract employees	129	96	140
Apprenticeship contracts	0	1	1
<i>Fixed-term contract employees</i>	129	97	141
Staff leasing contracts	26	92	39
Total	8,777	9,171	9,191

Data as at 31 December

The decrease in one manager is due to seven moves from the role of middle manager to manager, and the exit of eight managers during 2020. The number of middle managers increased by five, which is the result of 7 new entries, 36 moves from the role of white-collar worker to middle manager, and 38 exits (7 of which as moves from the role of middle manager to manager). The increase in white-collar workers is due to the entry of 351 new workers (65 of which as moves from the role of blue-collar to white-collar worker) and 275 exits (36 of which as moves from the role of white-collar worker to middle manager and 1 move from white-collar to blue-collar worker). The number of blue-collar workers decreased by 51 units compared to 2019 due to the entry of 292 blue-collar workers (including 1 move from the role of white-collar to blue-collar worker) and to the exit of 343 blue-collar workers (65 of which as moves from the role of blue-collar to white-collar worker).

Workforce by function

qty	2018	2019	2020
Grid services	2,661	2,648	2,676
Waste management services	2,726	2,839	2,841
Other services	832	812	820
Sales	891	1,117	1,081
Coordination activities	1,667	1,755	1,773
Total	8,777	9,171	9,191

Data as at 31 December

Basically in line with 2019, 29% of the workforce operate in the grid services (gas, electricity, water service and district heating) and around 31% operate in the waste management sector. 12% of the workforce were employed in the commercial structure and a further 9% in other services (information technology systems, fleet management, laboratories and public lighting). The remaining 19% of the workforce are involved in coordination activities.

Workforce by type of contract and gender (2020) [102-8]

qty	Men	Women	Total
Open-ended contract	6,598	2,413	9,011
Fixed-term contract and other	115	65	180
Total	6,713	2,478	9,191

Data as at 31 December 2020

Workforce by type of contract and geographical breakdown (2020) [102-8]

qty	Italy	Abroad	Total
Open-ended contract	8,841	170	9,011
Fixed-term contract and other	180	0	180
Total	9,021	170	9,191

Data as at 31 December 2020

The 170 workers posted abroad refer to Aresgas, which distributes natural gas in Bulgaria, and three companies that run plastic selection and recycling plants in France, Poland and Spain (Aliplast France Recyclage, Aliplast Polska and Aliplast Iberia).

Workforce by workplace

qty	2018	2019	2020	% 2020
Emilia-Romagna	5,686	5,864	5,818	63%
Triveneto	1,780	2,171	2,195	24%
Marche	511	612	625	7%
Other	800	524	553	6%
Total	8,777	9,171	9,191	100%

Data as at 31 December

Open-ended contract employees by educational qualification and position (2020)

qty	Managers	Middle managers	White-collar workers	Blue-collar workers	Total
Primary education	0	0	5	32	37
Junior secondary education	1	5	569	1,715	2,290
High school diploma	20	165	2,639	1,492	4,316
University degree	134	400	1,792	42	2,368
Total	155	570	5,005	3,281	9,011

Data as at 31 December 2020

The overall percentage of employees holding high school diplomas and university degrees is equal to 74%, one percentage point higher compared to 2019.

Workforce by type of contract and gender (2020) [102-8]

qty	Men	Women	Total
Full-time	6,668	2,129	8,797
Part-time	45	349	394
Total	6,713	2,478	9,191

Data as at 31 December 2020

Average age and average seniority of total employees by role (2020)

Years	Age	Years of service
Managers	53.0	17.2
Middle managers	50.2	18.5
White-collar workers	46.4	16.6
Blue-collar workers	47.9	14.4
Total	47.3	16.0

Data as at 31 December 2020

The average age of employees is 47.3 years (lower than 2019 when average age was 47.7). Average seniority is 16 years.

Hours of absence and hours worked per capita for employees with open-ended contracts (by type)

Hours	2018	2019	2020
Illness	65.0	61.2	61.9
Maternity/paternity and parental leave	11.3	12.2	16.5
Lost time injury	5.4	4.5	4.9
Strikes	1.0	0.1	0.0
Union meetings	0.3	0.3	0.1
Union leave	5.3	5.4	4.3
Other	33.4	33.5	40.1
Total absences (h)	121.6	117.2	127.8
Regular hours worked	1,534.8	1,555.8	1,545.2
Overtime hours worked	31.9	34.5	27.3
Total hours worked	1,566.7	1,590.3	1,572.5

The figures refer to the following companies: Hera Spa, Acantho, AcegasApsAmga, Fea, Herambiente, Herambiente Servizi Industriali, Heratech, Hestambiente, Hera Comm, Hera Comm Nordest, Hera Luce, Hera Trading, Inrete Distribuzione Energia, Marche Multiservizi, AcegasApsAmga Servizi Energetici and Uniflotte. The hours worked are calculated net of overtime hours for recovery.

2020 figures are strongly affected by the **health emergency situation** and the widespread use of **agile working practices**. **Per capita hours of absence** show a slightly upward trend compared to the last three years, mainly due to the increased use of parental leave following the introduction of specific emergency measures at national level; the "other" item also increased, which refers to leave requested to assist family members with disabilities or illness, leave for medical check-ups and therapy, and leave for academic purposes. There was a slight rise in the absence rate due to lost time injuries, while the number of hours of sick leave was almost in line with last year. On the other hand, the number of hours for strikes and meetings decreased.

With regard to **hours worked**, there was a sharp drop in overtime hours compared to the previous year due to the extensive use of **agile working**.

The selection and onboarding process

Recruiting, selecting and effectively **onboarding** the best talents on the market is a challenge that is tackled by Hera with a **data-driven strategy** that is fully **integrated with its business**.

The analysis of market trends and of main process indicators is now common practice which, alongside the business plan and the accompanying **strategic workforce planning** process, leads to targeted **employer branding** and **process** actions, including the choice of specific recruiting tools.

This is the framework of reference we used to tackle a difficult year, as 2020 was, which certainly put our selection and onboarding activities to the test; and it is thus that the levers we have long used for these processes, i.e., namely **digitalisation, simplification, agility** and **people analytics**, enabled us to deal with these rapid changes in a highly effective manner.

The first significant change regarded the **digitalisation of interviews and assessments**; this process has been underway for years and includes online tests for **soft** and **digital skills**, as well as live and pre-recorded **video interviews**, thus improving both candidates' experience and process effectiveness.

To appropriately accompany this **technological** and **cultural transition**, an **e-learning training** process was designed for around **800 workers** including line and human resources managers who have or may have a key role in the selection process.

With regard to Employer Branding, the **Potentialpark ranking** placed Hera on the podium of the **most attractive companies**, in 3rd place, further improving on last year's result and consolidating 1st place for its online application platform and 2nd place for its careers page.

From a reputational perspective, the improvement of Hera's popularity as an **employer** was confirmed on the **Indeed** and **Glassdoor** platforms, which benefited from a restyling of the company page and served as **recruitment catchment areas**.

The result of these initiatives was that the **use of internal tools accounted for around 92% of selections**, with significant savings on the costs incurred for entrusting these tasks to external companies (only 8% of selections), net of the needs covered by **internal mobility** (see paragraph on internal mobility). The **careers page on our website** which contributed to cover 34% of needs, continued to be the leading channel, followed by **social channels** (7%) and **job portals**:

Selections contributed to a significant **generational change** (average age of 33 years for new hires) of the company workforce, and to the increase in the number of **women** (43% of hiring excluding blue-collar workers regarded women) and the percentage of **graduates** (73% excluding operating profiles).

With regard to the **areas of recruitment**, the majority of the selections were recorded in the Operations area (37%), particularly in the waste sector, followed by the water sector. Needs in the AcegasApsAmga area were also significant (22%). Staff areas account for about 11.5% of total needs, and the Market area for 6%.

Management of the skills and training

The **Group's value proposition relating to learning** is applied using a process that starts by understanding the context of reference and interest trends (global macro-trends, business plan, personnel management strategy) and takes shape by reviewing the main features resulting from company management's listening activities and by subsequently achieving strategic training goals for the current year.

Training initiatives

[403-5] [404-1] [404-2]

During 2020, also as a result of the restrictions on face-to-face training introduced from the start of March due to the health emergency, the **replanning of training initiatives in digital mode** was strengthened in order to proactively and effectively respond to the changed circumstances. Indeed, the past year was a year of **resilience** and **training transition**. We experienced a further spread of **lifelong learning** practices and a **steady growth in remote learning**, enabling us to surpass the **50%** share of digital training in relation to the total training hours provided in 2020.

The acceleration in 2020 was undoubtedly also due to the initiatives planned in response to the health emergency:

- creation of the “**Lifelong training**” web page, useful for viewing the training activities available for individual use in e-learning mode
- organisation of “**A day of remote training**”, an initiative that gave the opportunity to every employee to spend one working day using the available online training content, with a focus on developing digital skills.

With regard to the various types of training activities provided during 2020, in the area of **institutional and managerial training**, of note are initiatives related to the **Leadership Model** (with a new digital format), and the **HerAcademy Workshop** "Back to the future: new frontiers for people, businesses and industrial systems", with the aim of reflecting on the complexity generated in contexts of great uncertainty by analysing it through the perspective of scientific research, long-term trends and practical cases of application.

With regard to **information systems**, of particular note is: the implementation of the **Digital Workplace** change management plan for the effective use of **Office 365 tools**; the **Geocall** cascade training programme dedicated to resources operating in the General Operations Department, District Heating Department and AcegasApsAmga, to learn the operation of the new system supporting on-field emergency response; and, as part of the change management plan connected to the **Salesforce** project, training sessions addressing 36 Herambiente resources and 68 Hera Comm resources, aimed at reviewing the experience of customers and processes with the new CRM application.

With regard to **technical-professional training**, of note, the initiatives planned and implemented within the training activities of the **professional Academies** continued, such as the organisation of the first pilot training course "Basic Credit Management Processes: principles, logic, time frames and information tools" as part of the **knowledge sharing** project on the basic transversal skills of the Administration, Finance and Control professional family. Lastly, the **Circular Economy and SDG 12 Workshop** was held to promote the dissemination of a culture steered towards informed and sustainable management of resources and waste from the perspective of the circular economy; on-the-job training activities were carried out, particularly in Operations, compatibly with the health emergency restrictions and in compliance with the prescribed behavioural rules.

In the **quality, safety and environmental** area, the **Culture of Safety** project was consolidated. The project seeks to increase the culture of health and safety at all company levels by designing a training model with more innovative and engaging communication tools, and by strengthening the internal monitoring activities on the training content of the main training projects under the State-Regions Agreement.

The project **Ripartiamo in Sicurezza** (Let's start again, safely) was launched in May, with the aim of examining the procedures, operating practices and correct behaviour to follow in order to start again after the most severe phase of the health emergency.

In the **ethical values and corporate culture** area, the **AlfabEtico** training project was replanned in digital mode and addressed all new permanent Group employees, to help them become familiar with the Group's Code of Ethics and promote behaviour in line with the Code. Thanks to the work of internal facilitators, 17 training sessions were held and over 300 resources equipped with IT tools were trained transversally. The satisfaction rating for the initiative was 4.66 (on a scale of 1 to 5).

[205-2]

In 2020, **940** resources were involved in **anti-corruption** training, amounting to a total of **423 hours** of training delivered through the following initiatives: "AlfabEtico" which included issues on corruption, e-learning on anti-corruption (37001), training activities on the 231 model, self-assessment on fraud prevention, and training courses on fraud prevention issues.

Total training hours per area of intervention

Hours	2018	2019	2020
Sales and market	14,874	9,638	4,463
Managerial	32,338	27,138	25,271
Quality, safety, environment and SA 8000 social responsibility	67,612	74,459	82,959
Information systems	23,937	30,813	41,420
Technical-operational	88,388	81,407	76,746
Ethical values and corporate culture	23,907	20,820	4,995
Total	251,055	244,275	235,854

The indicator does not include Aresgas. The workers of this company account for 1.5% of the total.

The increase in total training hours on Information Systems is due to the change management in the Digital Workplace area, while the decrease in hours as regards Managerial and Ethical Values and Corporate Culture is due to health emergency restrictions, such as the lack of annual "Facciamo il Punto" (Let's Take Stock) meetings.

In 2020, **55%** of training was delivered in **digital learning** mode, **30%** with **face-to-face** activities and **15%** with **on-the-job training** activities. This result is also due to the particular circumstances in 2020, mainly associated with restrictions in terms of face-to-face training due to the health emergency.

Training hours (average, per capita)

Hours	2018	2019	2020
Managers	50.4	40.0	40.9
Middle managers	63.3	50.4	35.2
White-collar workers	28.4	28.0	22.4
Blue-collar workers	26.2	25.4	30.3
Average	29.8	28.6	26.0

The indicator does not include Aresgas. The workers of this company account for 1.5% of the total.

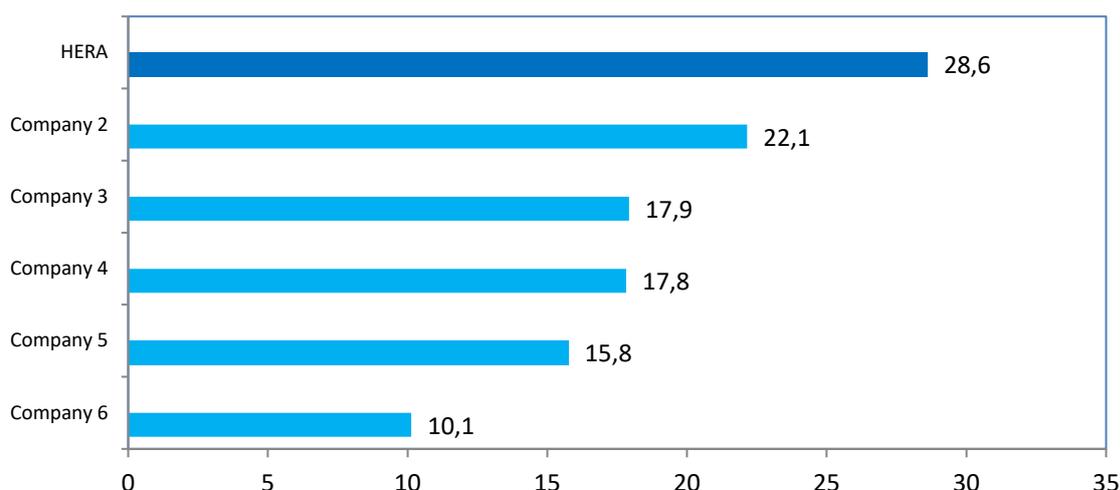
Despite the restrictions due to the health emergency, the activities carried out for re-planning the training activities, as well as some extraordinary initiatives related to the health emergency, still allowed a level of 26 hours per capita, for both men and women (30.3 for workers) to be achieved, higher than the target expected at the start of the year, and almost in line with the levels of previous years (28.6 in 2019).

The 2021 target will be to maintain the level of hours per capita at a minimum level of 22.5 hours.

Professional training in the main Italian utility companies

Hera is in first place among the six leading Italian multi-utilities considered in the comparative analysis between the main Italian utility companies carried out by Utilitatis in terms of training hours per capita delivered to workers.

Professional training, hours per person (2019)



Source: Utilitatis, 2020 Sustainability Benchmarking (2019 data)

Percentage of workforce attending at least one training course

%	2018	2019	2020
Managers	100.0%	97.4%	100.0%
Middle managers	100.0%	100.0%	100.0%
White-collar workers	99.6%	98.6%	98.0%
Blue-collar workers	98.5%	97.1%	90.0%
Total	99.4%	98.2%	95.0%

The indicator does not include Aresgas. The workers of this company account for 1.5% of the total.

Workers involved in at least one training event amount to **95%**. Despite the restrictions due to the health emergency, which led to reducing face-to-face activities, the involvement of operational staff was 90% of the total.

Assessment of training

%	2018	2019	2020
Degree of satisfaction of trainees (quality perceived on a scale from 1 to 5)	4.36	4.39	4.30
Outcomes (correspondence with needs) (% of replies with assessment score of 4 or 5)	73%	75%	73%

Excluding AcegasApsAmga and Marche Multiservizi.

Training, including hands-on training, is planned based upon a needs analysis in accordance with the Group's roles and competences model. This analysis is followed by detailed planning which includes related cost forecasts. The activities are monitored and assessed during the year and downstream the training delivered.

Hera uses a training assessment system that considers the degree of satisfaction expressed by the workforce attending the courses, alongside the assessments of the department managers with respect to the impact of training actions on the skill profile development of co-workers and their application in the performance of the working activities.

The degree of satisfaction is generated by assessments conducted by trainees once the course is over, on a scale of 1 to 5. The above table shows the overall average assessment measured: the degree of satisfaction is in line with 2019. The outcomes are the result of the assessments carried out by managers in terms of collective impact of the training provided for each role. The reported percentage values indicate assessment scores of 4 or 5 (on a scale of 1 to 5).

Total training cost per area of intervention

Thousands of Euro	2018	2019	2020
Sales and market	81	27	65
Managerial	552	534	326
Quality, safety, environment	580	567	459
Information systems	46	75	54
Technical-operational	486	447	375
Ethical values and corporate culture	25	8	21
Other	80	93	460
Total	1,849	1,751	1,760

The indicator does not include Aresgas (Bulgaria). The workers of this company account for 1.5% of the total.

The financial investment made by the Group in 2020 was around Euro 1.8 million, net of costs for personnel undergoing training and internal teachers.

Scuola dei Mestieri and the knowledge management system

[404-2]

The **Scuola dei Mestieri** is a consolidated system that for over ten years has developed, strengthened and enhanced the technical and operational skills of the Hera Group, also with a view to knowledge management. The purpose is to raise the level of awareness of professional conduct and of know-how transfer within the company.

Since its creation, the Hera Group has felt the need to arrange the distinctive skills of the various operational trades which are typical of the company (for example workers dealing with network services and workers dealing with remote control and management) in **trade notebooks**. Seventeen notebooks have been created to share and preserve the Group's distinctive know-how over time: in 2015, they became available in digital format and are updated continually.

Furthermore, two new professional Academies were created in 2020, giving priority to knowledge management process innovation: "**Environment**" and "**Compliance & Auditing**", while the "Engineering", "Purchasing and Procurement", "Water", "Energy Distribution" and "Administration, Finance and Control" Academies were consolidated.

HerAcademy: Hera Group's corporate university

[404-2]

In 2020, the process continued for consolidating **HerAcademy** as a **University Stakeholder**, capable of interacting with all partners of the national education system in order to set up Public Private Partnership projects and to define projects seeking to support innovation processes within the ecosystem of reference.

In particular, the **workshop** "Back to the future: new frontiers for people, businesses and industrial systems" was held in live streaming. It was aimed at reflecting on the complexity generated in contexts of great uncertainty by analysing it through the perspective of scientific research, long-term trends and practical cases of application. Furthermore, the ninth edition of the **university orientation** initiative for the

children of employees approaching university enrolment was carried out remotely and in collaboration with the University of Bologna with the participation of academic guests, company representatives and H-Farm. Finally, the seventh edition of the **job orientation initiative** was organised to support the children of employees approaching the employment market.

Also as part of HerAcademy, the cooperation and initiatives set up with **H-Farm** continued. H-Farm is the largest European innovation centre, designed to develop partnerships for implementing innovation, digital and circular economy projects especially for students, employees and employees' children.

Agreements with universities, business schools and research centres

The Hera Group - through its Corporate University HerAcademy - has entered into several framework agreements over the past years with leading universities in the Emilia-Romagna area, such as the University of Bologna, the University of Modena and Reggio Emilia, and the University of Ferrara, which include the assignment of six-monthly scholarships for final year students and for recent graduates. The Group also works actively with various business schools including the Bologna Business School (Bbs), the Consorzio Mib School of Management in Trieste, The Adriano Olivetti Institute (Istao), the MIP-Polytechnic in Milan, the Safe Study and Research Centre, and the National School of Administration of the Presidency of the Council of Ministers; it is also a member of the Assoknowledge-Confindustria scientific committee - Innovative and Technological Services.

With regard to the University of Bologna, in 2020, activities connected to the Framework Agreement (renewed in 2019) continued. The Agreement places further focus on the need to give continuity to a broad partnership aimed at fostering multidisciplinary activities and projects in the following areas: research, development and innovation; education, advanced training and lifelong learning; job orientation and placement; internationalisation; technology transfer; development cooperation, sustainability and social innovation.

Furthermore, scientific cooperation with the University of Milan – Bicocca and Crisp (Inter-university Research Centre for Public Utility Services) continued, with the general goal of supporting the development and implementation of activities within HerAcademy.

Development of the individuals

The development process

[404-3]

People are the true asset to achieve differentiation and competitive advantage: the quality and efficiency of both internal processes and results depend on people. Effective personnel management and human capital enhancement is therefore of strategic importance for the Group.

The development process is based on the evaluation of performance and managerial skills. It is applied consistently throughout the company: it involves over **5 thousand people** including employees, management employees, middle managers and managers. A distinguishing aspect is the **dialogue on performance**: a "two-way" exchange between manager and employee, where the duty to provide clarity and effectiveness by managers is accompanied by the commitment of each individual to use the feedback as an ongoing learning tool. This experience has led to a growing ability to assess oneself and others, while also showing the desire for reciprocal listening and the request for feedback for individual and professional growth.

In 2020, over **5,200 Group workers** were assessed.

Within the development process, the definition of **individual development actions** is of key importance. Starting from dialogue between manager and employee, they are defined on the basis of a portfolio of carefully planned and developed initiatives which are subsequently monitored and updated.

Career progress

Career progress during the year (breakdown by position for workers with open-ended contract)

Qty	2018	2019	2020
Managers	7	7	7
Middle managers	27	35	39
White-collar workers	279	309	449
Blue-collar workers	176	193	243
Total	489	544	738

In 2020 there were 738 promotions. **Career progress** involved 216 female personnel, totalling 29.3% of all cases (increasing compared to 2019 when it settled at 27.4%). Excluding blue-collar workers, where women are around 2.6%, career progress involving female personnel represented 42.6% of the total.

Internal mobility

The speed of changes combined with digital transformation is deeply changing the way people work. Many roles will change and it will become increasingly important, for organisations, to promote the **updating of skills** and, for workers, to step up their game and take charge of their professional growth.

Hera's multi-business nature is the ideal for accessing a wide range of professional opportunities; the broad spectrum of activities allows us to enhance our professional expertise in different sectors and areas.

During 2020, despite the pandemic circumstances, this awareness prompted the Hera Group to invest in a range of initiatives involving citizens and cultural involvement events which began at the end of 2019 through a **listening project**. Initially, employees' opinions were collected about the current system through **surveys** and then, during a second phase that began in early 2020, a structural **listening channel** was created in which each employee had the opportunity to indicate areas of interest for possible job rotation: **more than 400 employees** took part in the project over the year, undoubtedly contributing to the increase in **internal mobility** recorded during the year.

274 mobility opportunities were taken in 2020 (50% more than in 2019), a record number for the company, covering **40.8% of open permanent needs**. The credit for this must certainly also be given to another initiative, i.e., the creation of a **new job posting platform**, which led to an overall improvement in the process, both in terms of ads published (+79%), applications received (+86%) and positions filled (+74%). In 2020, 26% of employees (excluding blue-collar workers) changed their role or organisational structure.

At the end of 2020, employees' opinion on the new features introduced was heard again: their **overall satisfaction** with the mobility process increased from 62.5% at the start of the year to **75%** at the end, with particular appreciation for the listening channel (86.5% satisfaction).

The leadership model

Since 2011, the Group has been provided with a **leadership model**: a compass that steers our behaviour and describes the skills we need to develop the mission and values and to achieve strategic results.

In 2016, a shared and participatory process was launched involving over 700 employees, to review the model as a result of the new challenges. The new model has inherited exemplary leadership from its

predecessor, in terms of style, and has included agility as its approach. It follows two lines, a temporal today-tomorrow line and another line involving I-us, thus defining four areas of objectives each containing two skills.

In 2020, the usual process for spreading and further examining the new contents of the model, which involves around **650 people including managers and middle managers**, was entirely conceived and designed remotely, alternating plenary moments with small discussion groups in virtual classrooms. The process was built by considering what had been experienced and by interpreting the health emergency as a testing ground putting our leadership to the test. Subjects were proposed which were considered individually and collectively in order to build on the experience gained in the months of the emergency for the future.

Multimedia and interactive content **through specific e-learning platforms** were made available to the entire workforce, over **5 thousand employees, including white-collar workers, middle managers and managers**.

Hera, therefore, continued to promote the knowledge and daily implementation by all employees of the conduct defined in the model.

Remuneration and incentives

[102-37]

The Hera Group defines and applies a remuneration policy aimed at attracting, motivating and retaining resources having the professional qualities requested to achieve the Group's objectives.

The policy is defined so as to align the interest of various stakeholders and to achieve the priority objective of creating value in the medium-long term period and increasing the shared value generated, through consolidation of the connection between remuneration and performance, both individual and Group-related.

[102-41]

All Group employees are hired through national collective labour agreements.

With reference to the labour agreements that govern the employment relationships of Group workers, the table illustrates the gaps between gross monthly remunerations (net of accrued 13th and 14th monthly pay and of performance bonus) and those specified by the labour agreement. Comparison between the minimum pay/salary conditions of all the national collective labour agreements applied in the company and the minimum ones actually applied in the company was conducted by considering the minimum classification conditions for the three employment classes.

Ratio between minimum monthly pay and salary conditions according to labour agreements and Hera monthly pay and salary levels (2020)

Euro	Minimum monthly salary according to labour agr.	Minimum monthly Hera salary	Average monthly Hera salary
Middle managers	3,104	3,257	4,834
White-collar workers	1,526	1,694	2,837
Blue-collar workers	1,229	1,490	2,334

The average salary applied is higher than the minimum labour agreement conditions for all three classes: +56% for middle managers, +86% for white-collar workers and +90% for blue-collar workers. Even the

minimum salary applied is 5% higher than that envisaged by the national labour agreement for middle managers, 11% higher for white-collar workers and 21% for blue-collar workers.

These differences are directly related to the average age level of the corporate population and to seniority, and are connected to the policies aimed at favouring internal professional growth.

Ratio between top management minimum monthly pay and salary conditions according to labour agreements and Hera monthly pay and salary levels (Utilitalia contract)

Euro	2020
Monthly minimum Hera Group	5,308
Average monthly Hera Group salary	9,982
Average monthly market salary for managers	10,723

The table illustrates the gaps between average gross monthly salary levels for managers in Hera (net of the accrued 13th monthly pay and variable remuneration) and those envisaged by the national collective labour agreement. The agreement of reference for this qualification is the Utilitalia labour agreement. The average salary of Hera managers is 6.9% lower than the market average for manager salaries, as reported in Hay Compensation Report-Total Cash Italia 2020.

For this position also, the differences between the salaries applied and labour agreement references are the result of the application of previous economic schemes, also with regard to age (on average 53.0 years) and of years of stay in the Group (on average 17.2 years) for the category of managers.

In 2020, the ratio in the Hera Group between the gross annual salary (excluding performance bonuses and variable remuneration) of the person with the highest salary and the median value of workers was equal to 10.

Gross performance bonus (per capita)

Euro	2018	2019	2020
Middle managers	2,137	2,314	2,309
White-collar workers	1,851	1,999	1,996
Blue-collar workers	1,699	1,840	1,789
Weighted average on workers	1,812	1,959	1,939

The figures refer to the following companies: Hera Spa, Aliplast, Amgas Blu, Ascopiave Energie, Ascotrade, Blu Meta, Etra Energie, Hera Comm Nord Est, Acantho, Fea, Hera Comm, Hera Luce, Hera Trading, Herambiente, Herambiente Servizi industriali, HERAtech, Inrete Distribuzione Energia, Uniflotte, AcegasApsAmga, AcegasApsAmga Servizi Energetici, Hera Servizi Energia, Hestambiente and Marche Multiservizi.

For 2020, the performance bonus of middle managers, white-collar workers and blue-collar workers was defined within a supplementary collective labour bridge-agreement and is based on profitability (gross operating margin and gross operating margin/worker) and productivity (understood as a decrease in sick leave of up to five days).

Starting from 2018, as required by current legislation, employees have the opportunity, on a voluntary basis, to convert their performance bonus paid in cash into corporate welfare services up to a maximum value of 50% of the yearly bonus, with significant tax advantages for workers.

Bonus system related to short-term variable remuneration

Starting from 2006, the bonus system of the Hera Group has been linked to the balanced scorecard system: according to this system, the variable annual remuneration component of each manager and middle manager is calculated as a percentage value of gross annual salaries and is defined on the basis of results

obtained relative to the objectives defined at the start of the year. The balanced individual scorecard is structured in three parts:

- the first consists of specific **target projects** deriving from translation in operating terms of the objectives contained in the Group's strategic map;
- the second contains the **economic objectives** defined in the budget for the year;
- the third involves an assessment on the **behaviours** set forth in the Group **leadership model**.

The structure of the balanced individual scorecard, or the weights assigned to the three areas, vary according to the seniority of the employee and the department he/she belongs to.

The final assignment of the bonus is weighted, furthermore, according to the results reached insofar as certain Group parameters: financial-economic business results and customer satisfaction index for residential customers. The shared value EBITDA at Group level will also be added to these indicators, starting from 2021, as resolved by the Management Remuneration Committee in its meeting of 27 January 2021, confirming the increasing relevance of the 2030 UN Agenda goals in the Group's strategy.

The assignment of the objectives to employees and the assessment of their achievement take place through a clearly defined process which is based on the decision of top management for the individual balanced scorecards of directors and managers and of the directors for the individual balanced scorecards of middle managers. The activity takes place with the coordination of the Balanced Scorecard System Management unit of the Shared Value and Sustainability Department.

In 2020, 51% of the variable remuneration of Hera Group managers was linked to the completion of the target projects planned in the balanced scorecard system: 32% was linked to the achievement of the economic and financial budget objectives and the remaining 17% to compliance with the behaviours set forth in the leadership model. The balanced scorecard system involves 97.5% of Group middle managers and managers.

For middle managers, 70% of variable remuneration was linked to the completion of the target projects planned in the balanced scorecard system and/or achievement of the economic and financial budget objectives, while the remaining 30% to compliance with the behaviours set forth in the leadership model.

In 2020, application of the **bonus policy for the Hera Group sales staff** continued, to enhance the effectiveness of the offer for customers. The purpose of these dedicated tools is to ensure a competitive commercial incentive offer and to steer sales staff towards working more by goals.

Pension funds

The number of employees participating in the pension funds as at December 2020 is 5,286, or 58% of total Group employees. The main contractual pension funds are: Pegaso for employees under the gas-water and electricity national collective labour agreements; Previambiente for employees under the Federambiente national collective labour agreement; and Previndai for managers.

Yield of the main pension funds (balanced sub-fund)

%	2018	2019	2020
Pegaso	-2.0%	8.1%	2.5%
Previambiente	-0.8%	8.2%	1.6%
Previndai	-5.3%	12.3%	6.4%

Welfare

Hera Group's welfare system, Hextra, continued in 2020. This highly positive experience of significant economic and social value continued in a particular year that changed the scenario also in the field of corporate welfare due to the health emergency. A flexible welfare share of Euro 385 was assigned to each employee, to be used for the Hextra offer. Furthermore, all employees were offered the option to **convert part of their 2019 performance bonus** paid in 2020, into a further welfare quota. This option is convenient also from a tax viewpoint and in terms of increased purchasing power for each employee.

Hextra counted on **8,894** members in 2020, equal to **99.2%** of the potential population, with over **Euro 4.5 million** used by employees. This result was achieved thanks to clear information and presentation of the services, to the usefulness attributed to each of them and to the positive impact on work-life balance. Increased purchasing power, customisation, easy to use and quick service: a winning combination for a fully comprehensive welfare experience. This can all be achieved **digitally**, with low environmental impact, both from the office, smartphone or comfortably from home.

Moreover, in a year marked by the health emergency, Hextra showed great resilience and ability to adapt to the immediate situation and to the emerging needs with the **Hextra Distanti ma Vicini** (Distant but Close) project. A range of initiatives, free services and on demand agreements which could be used directly from home to help increase the feeling of being close and bonding during lockdown and which could positively and thoroughly affect all well-being spheres: psychological, physical and financial. Mindfulness lessons, video clips to explore the world of emotions and relationships through to the entire social network, offering ideas, exercises and extracts from literature to better address the situation. Free sessions with coaches, counsellors or psychotherapists and video clips to keep fit with the help of a personal trainer. Strengthening of the non work-related training offered on the welfare platform: courses such as foreign languages, photography, lifestyle and personal development and growth, as well as access to free individual training platforms for employees. Digital stories for children, digital stories on how to take care of the elderly or non-self-sufficient, creative recycling workshops, eco-friendly games, and eco-friendly readings to raise awareness of environmental issues among children. Finally, video testimonials of entertainment celebrities offering suggestions on how best to get through lockdown: from organising the day, finding the right balance between food, music and breathing, to resilience with a touch of irony.

This was all achieved without forgetting the services and the distinctive and traditional initiatives of Hextra which were developed in 2020, including: the fourth edition of university **scholarships** offering 53 scholarships worth Euro 750 each (three assigned ex-aequo); the fourth edition of the language study courses **In the world with Intercultura**, with three scholarships worth Euro 2 thousand each for summer programmes; three scholarships worth Euro 4,5 thousand each for a term; and four scholarships worth Euro 7,5 thousand each for an entire school year abroad. The management of the seventh edition of the summer camps with the opportunity for each employee to choose the summer camp best suited to their family needs.

Furthermore, in line with the previous year, the allocation of an instruction quota for employees who have school-age children for a total investment of over **Euro 617 thousand**. In detail, among all the projects set up to support the education of employee's children, 3,230 applications were received. Of these, 204 shares were used by employees for **crèche services**. Twelve applications for attending crèches with which the Group has agreements (in Bologna, Cesena and Imola) must be added, for a total of 216 children. Also in the area of additional education, in order to deal with the health emergency situation and help families with school-age children for the summer holiday period, an additional quota was introduced for help with homework, baby sitting and digital summer camps. A dedicated Family Summer Point was also created to inform employees about the various support opportunities available either locally or specifically set up by the Hera Group.

[403-6]

In the area of health and prevention, confirming its constant focus on protecting the health and wellbeing of its employees, the Hera Group has set up a **Covid-19 insurance coverage policy** for all employees. The policy provides a package of guarantees and services as an additional benefit to help workers cover any medical complications following hospitalisation due to Covid-19. The coverage includes the following guarantees: hospitalisation indemnity, convalescence indemnity and post-hospitalisation assistance. Furthermore, a web portal has been introduced that allows all Group employees to benefit from discounted rates at **leading healthcare facilities** and receive the services of medical and healthcare professionals.

As part of the activities managed by mobility management, it was once again possible this year to include in Hextra the reimbursement of the expenses incurred by all employees or their family members who travel using the regional or interregional public transport service. A new important feature in 2020, seeking to promote and support sustainable mobility when travelling to and from work, was the introduction of a further additional contribution - **Additional Mobility Quota** - for all Group employees who use public passenger transport to get to work.

Once again in 2020, with 'In Hera Energy is Worth More' users could have access to a promotion for the **gas and electricity supply** of free market and could benefit directly from the value that all employees, day after day with their jobs, help create with a view to reaching an increasingly shared and participated welfare. Furthermore, the promotion **An extra-ordinary connection** for internet connection and calls was activated, in collaboration with Acantho. A call to action for all employees which during the year, once again, led to significant use of the **Welfare Voucher service**. Thanks to a local map of the area, each employee can identify with which partner they can carry out their welfare activity among those available: sports, wellness, culture and leisure, and medical check-ups. This service was highly appreciated and was undoubtedly one of the Hextra services most used by employees. Yet there is more: travel and tailor-made holidays. Hextra offers travel agencies, water and theme parks, museums, exhibitions and galleries.

This all-embracing and continuous path of combined, shared and highly felt development of the welfare plan makes Hera a national leader in the field of corporate welfare and well-being. As also confirmed by the **Top Employers Italia 2020** certification, achieved by the Group for the twelfth consecutive year and which confirms last year's first place ranking. The Group confirms its place as a leading company in terms of working conditions and best practices focused on the development and well-being of its people. Its commitment and constant focus on the ongoing improvement of its strategies in the field of human resources is also recognised.

[403-6]

In addition to the Hextra corporate welfare measures, the Hera Group offers several forms of supplementary healthcare for workers in compliance with the collective bargaining agreement applied. In particular:

- employees to whom the Gas/Water National Collective Labour Agreement applies: with effect from 1 January 2012, supplementary healthcare has been provided by the FASIE fund;
- employees to whom the Electricity National Collective Labour Agreement applies: with effect from 9 July 1996, supplementary healthcare has been provided by funds managed by corporate CRAEMs;
- employees to whom the Waste management services National Collective Labour Agreement applies: with effect from 1 October 2014, supplementary healthcare has been provided by the FASDA fund;
- employees to whom the Chemical industry National Collective Labour Agreement applies: by National Agreement dated 29 July 2003, between Federchimica and the National Industry Trade Unions, supplementary healthcare has been provided by FASCHIM;

- employees to whom the National Collective Labour Agreement for Managers of Public Utility Services Companies applies: with effect from 1 October 1996, supplementary healthcare has been provided through registration with FASI and Unisalute. The FASI Fund and FASI Supplementary Policy may be extended to the family members of managers. In 2021, the supplementary policy for managers will be activated with Poste assicura.

In 2017, upon renewal of the National Collective Labour Agreements, insurance policies were also set up in case of premature death (Electricity National Collective Labour Agreement) and of premature death and permanent disability (Gas/Water National Collective Labour Agreement).

Health and safety

Ever since its establishment, prevention and safety at work have been among Hera's founding principles; improving conduct and strengthening corporate awareness at all organisational levels towards health and safety is an ongoing target for the Group. **Preventing and minimising health and safety risks** is one of the commitments of the Hera Group's Policy that is inspired by the values for sustainable development expressed in the 2030 UN Agenda.

Working to make the workplace safer and healthier is essential to **improve quality and working conditions**, but also to promote the Group's sustainability and competitiveness.

Investing in health and safety contributes to the well-being of workers and is cost-effective. According to recent estimates, this type of investment can generate returns equal to average 2.2 times the value invested (source: International Social Security Association- ISSA).

Throughout these years, various occupational health and safety projects have been implemented, especially with regard to the culture of safety and to risk awareness. These initiatives - together with ongoing training and coaching of staff, specific actions for the improvement of vehicles and equipment, and timely analysis and investigation of lost time injuries and near misses - have allowed us to achieve important results. The specific indicators, reported below and illustrated, are a tangible sign of the improvements attained by the Group in this important field.

[403-2]

The process for identifying hazards and assessing health and safety risks is carried out in accordance with the requirements of articles 17 (non-delegable obligations of the employer), 18 (employer's and managers' obligations), 28 (risk assessment purpose) and 29 (procedures for carrying out risk assessment) of Italian Legislative Decree no. 81/2008 **Consolidated Law on Occupational Safety**. More specifically, according to art. 17 of Italian Legislative Decree no. 81/2008, the employer has the non-delegable obligation to assess all occupational health and safety risks. To perform this process, the Employers of various companies or Organisational Units rely on the help of the **prevention and protection service** and the **company physician**, providing them with all necessary information about the nature of the risks, work organisation, and the description of the production processes.

The prevention and protection service is used by the employer to develop the **process for identifying hazards, assessing risks and identifying prevention and protection measures**.

In the Hera Group, specific occupational health and safety management system procedures are adopted to define the roles and responsibilities of the hazard identification and risk assessment process. The risk assessment goals are the following:

- **identify all sources of hazard and assess the possible impact on workers** in order to remove the hazards at source or at least reduce them as much as possible;
- if the hazard cannot be removed, adopt **appropriate prevention and protection** measures, giving preference, where possible, to collective measures over individual ones;

- **plan and implement** the necessary information and training courses on risks.

In order to effectively conduct the risk assessment process, the **likeliness** of occurrence of the event and the **seriousness** of its consequences need to be estimated. Criteria for estimating likeliness and severity indices were identified to limit any uncertainties when assigning the values and are shown below in the table.

Prevention measures aim at lowering the **likeliness of an unfavourable event occurring**, while **protection measures** lower the severity of the consequences of the event.

The company is strongly committed to reinforcing workers' **awareness of the risks** associated with their job. For this reason, it identifies ever more training courses that encourage people to develop greater self-awareness by changing their own behaviour in the way they perceive risk and by being an example for others. The project **safety in the field**, aimed at achieving this goal, also had an educational purpose with regard to the correct application of the procedure **Management of lost time injuries, near misses and occupational diseases**. The procedure literally states that: employees who become aware of a near miss, in the event of serious and immediate danger and should it not be possible for them to contact their direct superior, must take measures to avoid the consequences of such danger. All company figures are responsible for enforcing this instruction.

Lost time injuries and near misses are recorded via user ID and personal password on the IT system. The aim of the IT system used by Hera Group's main companies is to manage relations with Inail in a timely, fair and complete manner. The Prevention and Protection Service is quickly provided with the information included in the first medical certificate and with an exhaustive description of the event, which is automatically notified via the system. A first analysis of the event is carried out just as quickly and leads to identifying the cause of the event; if necessary, a second level analysis is carried out to establish the corrective actions. The system ensures that information is fully shared, tracks the entire process and keeps its history. To gradually promote the active reporting of hazards, Hera is seeking to develop **The culture of reporting**: an integral part of a full-fledged system that excludes, due to its intrinsic value, the **punishability** of whoever may have made a mistake and whoever **has reported errors committed by third parties**. The system instead makes sure that replies are given and it adopts effective prevention and protection measures, provides information and enhances the process.

The **persons to whom staff members report** are responsible for recording accidents. A manual on the use of the system, which is published in the Corporate Portal, is also available for all those involved. System updates are followed by revisions of the manual and training meetings.

Lost time injury indices (including lost time injury with less than three days of absence from work)

	2018	2019	2020
Frequency index	18.4	17.6	14.2
Severity index	0.5	0.4	1.5
Rate index	3.0	2.9	2.3
Number of lost time injuries	260	257	206

The frequency index is the number of lost time injuries per million hours worked. The severity index is the number of days of absence per lost time injury divided by thousands of hours worked. The rate index is obtained by dividing the number of lost time injuries by the number of workers, multiplied by 100.

The lost time injury frequency index (including lost time injuries with less than 3 days of absence from work) has been steadily improving over the last three years, while the severity index worsened in 2020 due to two fatal accidents involving, respectively, a Hera Spa worker in the Bologna area driving a waste collection vehicle and an AcegasApsAmga worker in the Padua area involved in an accident at an integrated water service worksite.

Lost time injury indices (excluding lost time injury with less than three days of absence from work)

	2018	2019	2020
Frequency index	15.7	14.1	12.6
<i>of which for ongoing lost time injuries</i>	4.1	2.9	1.6
Severity index	0.52	0.43	1.50
Rate index	2.6	2.3	2.0
Average lost time injury duration (days)	32.9	30.7	119.2
Number of lost time injuries	223	206	183
<i>of which for ongoing lost time injuries</i>	58	42	23

The frequency index is the number of lost time injuries per million hours worked. The severity index is the number of days of absence per lost time injury divided by thousands of hours worked. The rate index is obtained by dividing the number of lost time injuries by the number of workers, multiplied by 100. The data referring to lost time injuries reported to Inail which lasted more than three days were considered.

The lost time injury trend in 2020 recorded an improvement compared to the previous year in terms of total number of events (an approximately 11% drop compared to 2019). The Group lost time injury frequency index improved compared to the previous year (decreasing, in this case also, by around 11%). In 2020, lost time injuries were highly influenced by the health emergency. In fact, months during which there were very few lost time injuries, corresponding to the period in which the health emergency restrictions were in place, alternated with months showing a marked increase in lost time injuries, corresponding to the summer months and the month of December.

On the other hand, the number of days of absence grew, returning to 2018 levels. Even without considering the fatal accident at Hera Spa and the one at AcegasApsAmga Spa, the overall number of absences is higher than in the same period in 2019. The behavioural factor was once again the leading reason for lost time injuries and accounts for around 60% of days of absence.

The health emergency and resulting lockdown led to introducing significant organisational changes (extension of smart working and departure from home for operational staff), which had a positive impact on ongoing lost time injuries. Ongoing road accidents at Group level fell from 42 in 2019 to 23 in 2020. The number of ongoing lost time injuries, as a percentage of total lost time injury, decreases, especially for Hera Spa and Hera Comm.

The target for 2021 is to further reduce the lost time injury frequency index (10.6 by 2024).

All the events that occurred (lost time injuries and near misses) were analysed by the company lines together with the Prevention and Protection Service. The most complex cases are analysed using the in-depth Systematic Cause Analysis Technique. In the Hera perimeter alone, 124 corrective actions for improving prevention and protection measures were identified in 2020.

Despite 2020 recorded an increasing number of days of absence, the long-term trend rewards the many initiatives implemented by the Group in recent years. In order to further reduce the number of lost time injuries, medium- and long-term measures have been conceived and implemented, which affect the culture of safety and risk awareness.

With regard to the accident that occurred in Padua on 14 October 2020 to two AcegasApsAmga employees (one of whom died) while they were working on a water pipeline, the Padua Public Prosecutor's Office served a notice of investigation on three senior managers and three employees of the company (as well as on external parties). Non-repeatable technical investigations are underway.

With regard to the fatal accident in 2009 that occurred at the waste-to-energy plant of Forlì, following the committal to trial of three Hera Spa employees and one Herambiente employee, the preliminary hearing was held on 3 April 2014. At the hearings of 13 May and 30 May 2016, the witnesses and experts were examined. On 31 March 2017, the judge ordered the conviction of the defendants granting suspension of

the sentence. On 28 June 2017, the convicted employees filed an appeal against the first instance ruling. At the date of drafting of this report, the date of the hearing is yet to be scheduled.

[403-3]

The **occupational health service** is provided within the Hera Group in accordance with the requirements of Section V (Health Surveillance) of Italian Legislative Decree no. 81/2008. In particular, several **company physicians** operating in the various local areas have been identified and appointed. They have drawn up a **health protocol**, on the basis of the information set out in the health and safety risk assessment document. This document establishes, for each organisational role, which health checks are necessary for monitoring workers' health status and for expressing an opinion on their fitness to carry out the specific task assigned to them.

Medical check-ups are carried out periodically on all the workforce during **working hours**. The **employer** is responsible for the planning and for the costs of the check-ups and of any clinical and biological examinations considered necessary by the company physician. In the cases provided for by current legislation, medical exams are also conducted to make sure that there is no alcohol dependence and that psychotropic substances and narcotic drugs are not used.

The Group's **health monitoring service** is assigned following a public tendering procedure with awarding of the most economically advantageous bid, i.e. technical and economic evaluation of the offers received from the market with the technical part accounting for 70%.

The Hera Group periodically assesses **the quality of the service** provided by the supplier via specific checklists and organises special technical coordination meetings with the company physicians as well as with the coordinating physician specifically identified for this purpose. During 2020, **all employees for whom a medical check-up had been scheduled** were subject to health monitoring in accordance with the relevant health protocol.

The development of electronic **health files** for employees will be planned in 2021. This will make it easier to manage the health surveillance process and to abandon paper-based document management, helping the work of both employees and physicians.

The "**Hera cardioprotetta**" project was also consolidated in 2020. The installation of a new automated external defibrillator (AED) was extended to the Sasso Marconi (BO) operating sites. **29 defibrillators** have currently been installed in Hera Group's offices.

During the 2020 **health emergency**, the Group's prevention and protection services, together with the competent physicians, coordinated the definition of the **measures for preventing infection** and for **assisting and supporting fragile workers**. A Group protocol to prevent infection was developed and drafted, and then shared with the workers' representatives. The prevention protocol is based on an **Enterprise risk management approach** and was updated as the health emergency evolved.

[403-4]

A safety management system is effective when it can count on the **support** and **commitment** of all participants in the company's activities. Employees often have detailed knowledge of their work and of how to make it safer. Workers' Safety Representatives involve staff, so that employees can therefore constructively contribute to the application of effective safety management and to its continuous improvement, by providing suggestions and observations. Consultation is understood by the Company as an opportunity set forth in Italian Legislative Decree 81/2008 for **Safety Managers and officers** to obtain and receive opinions from workers and Workers' Safety Representatives about their occupational health and safety decisions.

Hera perimeter workers are involved in the hazard identification and risk assessment process through **prior consultation** with their representatives (Workers' Safety Representatives). The representatives are

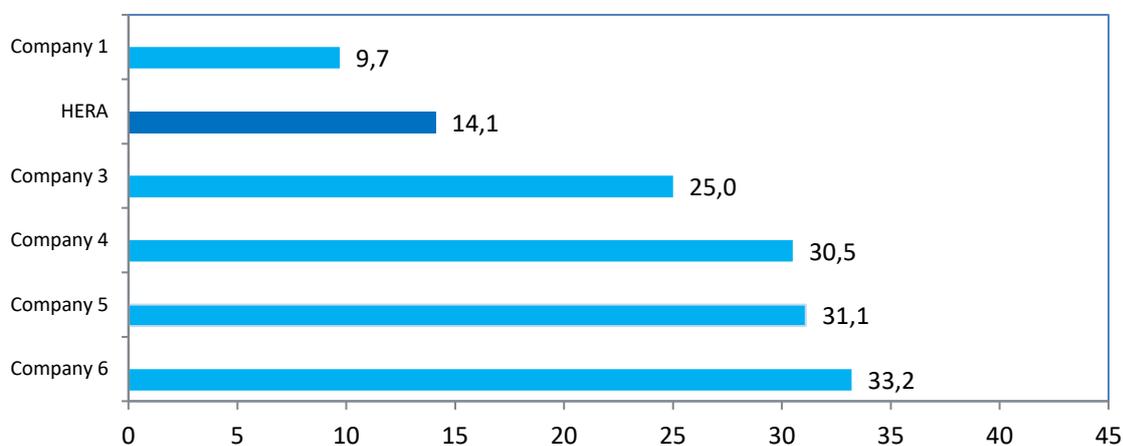
convened periodically when occupational health and safety information is shared (e.g. issues such as, lost time injury trend, safety improvement projects).

During the first phase of the **health emergency**, the Hera Group set up a **committee for the prevention and control of the spreading of the virus**, in accordance with the shared Government-Social Partners protocol of 24 April 2020. The composition of this committee included the participation of workers' representatives and normally met every fortnight. The company protocol for prevention and protection against the spread of Covid-19 was ratified by the corporate committee in May 2020 and updated twice during the second half of 2020.

Occupational safety in the main Italian utility companies

In a comparative analysis between the main Italian utilities, Utilitatis considered the frequency index of lost time injuries lasting more than three days: Hera ranked second among the six multi-utilities taken into consideration.

Occupational safety, frequency index (2019)



Source: Utilitatis, 2020 Sustainability Benchmarking (2019 data)

Lost time injury frequency indices (by blue-collar workers)

	2018	2019	2020
Total	29.2	28.6	35.2
Of which grid services	26.4	18.0	27.5
Of which waste management services	43.3	47.5	45.4

Data refer to Hera Spa, AcegasApsAmga and Marche Multiservizi. Lost time injuries lasting more than 3 days were considered.

Lost time injury indices are higher for workers, since they are more at risk of lost time injuries occurring given the nature of the activities they perform. With regard to blue-collar workers, waste management services show a higher frequency index compared to other services (47.5), since featuring a higher operation rate.

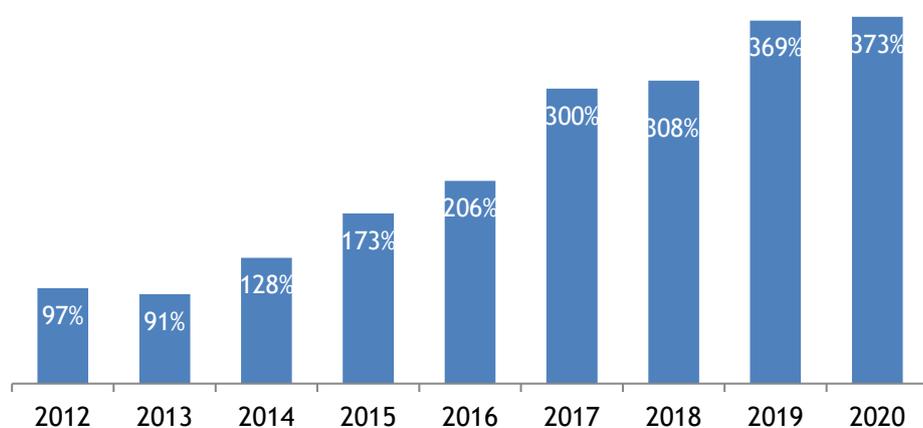
Lost time injury indices of some subsidiaries (2020)

	AcegasApsAmga Group	Herambiente Group	Marche Multiservizi	Hera Comm	Uniflotte
Frequency index	10.3	10.3	25.3	7.6	24.0
Severity index	3.0	0.3	0.6	0.2	1.8
Rate index	1.7	1.7	3.8	1.1	3.0
Workforce by index calculation	1,730	1,422	632	824	169

Regarding lost time injuries in some companies within Hera Group's perimeter, considerable improvements may be seen in the frequency index for Herambiente Group companies (from 16.2 to 10.3) and for Marche Multiservizi (from 33.0 to 25.3). AcegasApsAmga Group's severity index is affected by the fatal accident that occurred in Padua (in such cases Inail attributes a number of days of absence per lost time injury equal to 7,500 days).

A key topic for the purpose of preventing lost time injuries and improving workplace health and safety conditions is the ability to report, collect and analyse lost time injuries and near misses. Near misses are accidental events that could have potentially generated a lost time injury. Their correct analysis and examination prevents the occurrence of lost time injuries. The Hera Group places great emphasis on correctly reporting, analysing and examining near misses. The trend of near misses is monitored on a monthly basis to check compliance with the specific objectives assigned to the various departments and business units.

Change in the ratio between near misses and lost time injuries (near miss)



The figures refer to the following companies: Hera Spa, Acantho, Hera Comm Spa, Hera Comm Marche, Hera Trading, Hera Servizi Energie, Herambiente Group, AcegasApsAmga Spa, Acegas Servizi Energetici Group, Aresgas Group, Hera Luce, Inrete Distribuzione, HERAtech, Marche Multiservizi and Marche Multiservizi Falconara, and Uniflotte.

In 2020, the ratio between near misses reported and lost time injuries that occurred for Hera Group's scope of reporting was 373%. The indicator shows a constant rise. Of note in the Group's overall result are the results achieved by Hera Spa (240%), AcegasApsAmga (558%) and by the companies of the Herambiente Group (1,067%). The level of lost time injuries reported in Marche Multiservizi reached 25%.

The main types of near misses analysed by the prevention and protection service regarded road accidents, falling or slipping to the ground, collisions and crushing.

[403-5]

A structured process within the Hera Group ensures that all workers receive adequate health and safety training. Safety training particularly focuses on:

- **general concepts** of risk, damage, prevention;
- **rights and duties** of various corporate individuals and supervisory bodies;
- **specific risks** related to the various tasks and to possible damages;
- resulting **prevention and protection measures**.

The training activity is specifically provided to new hires, after job changes or following technical and organisational changes. Training is also periodically repeated if there are any changes in the existing risks.

Training content and duration for workers, safety officers and managers are based on the timescales and methods set out in the State-Regions agreement of 21 December 2011. Training is planned and delivered with the cooperation of the company's Personnel Department and the prevention and protection service, and also with the help of experienced external professionals.

The workers who receive periodic and repeated training are:

- workers in charge of **fire prevention and fighting**, first aid and emergency management;
- **workers' safety representatives**.

The health and safety of people is a key part of the Group's values, and a top priority for everyone. Over the past years we have achieved important results also in terms of reducing lost time injuries, but we strive to achieve even more.

The analysis of the lost time injuries clearly shows that 80% are caused by behavioural factors. After having worked extensively on technique and organisation, today the human factor is a key aspect in the prevention of lost time injuries, and it is exactly on this belief that the The Culture of Safety project is founded in the Hera Group.

The project began in 2016 with the creation of an innovative training module for safety officers (intermediate-level managers) in the operations area. During this development process - where the focus was on the individual and not exclusively on the content - participants were provided with elements to deal with behaviour, based on real working experience. This allowed participants to acquire greater knowledge of how to deal with different situations and to understand the importance of being an example to others.

In order to increasingly spread the message of the Culture of Safety, the Group designed a new training course, **The Culture of Safety**, an innovative, multimedia project that involves **over 2,500 workers** in the three-year period 2019-2021. This training method is conceived to stimulate the active participation of individuals and to create emotional involvement and interaction among participants also through the use of videos (one made internally in the Group). The aim is to develop **risk awareness** and a real **leadership in health and safety**.

Thanks to these new training tools, our goal is to promote cultural change in the company and to question deep-rooted beliefs and habits in order to attain a new way of experiencing health and safety.

Another important step in building a true culture of safety within the Group is the **supervisory project by safety managers and officers**, set to start in 2021. The aim of the project is to develop awareness of this role in safety managers, especially as regards supervising behaviour of individuals whom the manager is responsible for. The activities will consist of three main lines of action:

- **training event** on legislative-related matters during March - April 2021 (delegation of duties, supervisory duties, disciplinary instruments);

- **monitoring phase** to get an overall picture of the current state of obligations associated with the manager's duties of care (support from the prevention and protection service to a selected group of company BU managers in order to collect useful elements for improvement);
- **sharing** of monitoring results and of proposals for improvement with Employers, dissemination of development actions to all interested workforce also through coaching sessions with the prevention and protection service.

Development of the **Man Down** APP, a project launched in 2020 with the aim of developing an IT tool (an APP that can be installed on employees' mobile phones) to alert the remote control centre in Forlì, in the event that employees working alone find themselves in an emergency situation and/or they feel ill and fall to the ground.

After a first testing phase in AcegaApsAmga to test the APP functions and calibrate the phone instrumentation (Gyroscope) parameters, testing is now underway for the staff of Heratech laboratories and will be extended to Hera Spa's Water Business Unit in 2021.

Industrial relations

Since February 2020, the health emergency has also had an important impact on the planning of industrial relations activities, leading to a significant production of trade union **discussions** and **agreements**.

The first company protocol regulating measures to combat and contain the spreading of the **Covid-19 virus** in the workplace was signed at Group level on 7 April 2020. In addition to incorporating the provisions of the protocol signed on 14 March 2020 between the Government and the Social Partners, the trade union agreement established three Local Area Committees (Emilia-Romagna, Marche and Veneto-Friuli-Venezia Giulia) to ensure application and verification of the protocol rules. The protocol also included a range of management actions, useful for combating the spread of the virus (strengthening agile work and the 'leaving home' organisational mode, reducing non-essential activities, holiday emergency plan, etc.). Special tools were put in place to **ensure the continuity of essential services** (waste-to-energy plants, electricity and gas networks and integrated water cycle plants), even in extreme emergency situations.

A second agreement was signed on 15 May 2020, again at Group level, in order to strengthen the measures to **combat** and **contain the spread of the Covid-19 virus**, in line with the new protocol signed between the Government and the Social Partners on 24 April 2020

On 20 May 2020, agreements were signed for Hera Group staff, concerning the finalisation of the performance bonus indicators for 2019.

On the same date, the **2020 Training Plan** was presented to the Trade Unions, as included in the Group's Industrial Relations Protocol, and agreements on the 2020 Funded Training Plan were signed.

On 4 June 2020, a meeting report was signed, allowing Group employees to work in **Smart Remote Working mode (agile work)** for two days a week (previously the limit was one day a week). The report also establishes another important change, which came about during the health emergency period and regarded the extension of the perimeter of employees involved, **rising from about 1 thousand to over 4 thousand**. A second meeting report on Smart-Remote Working was signed on 28 September 2020. The text of the individual agreement was adjusted and then submitted for signature to the employees concerned.

The agreement relating to the Supplementary Collective Agreement for Group staff expired on 31 December 2019. Given the uncertain reference context, which was strictly related to the health emergency, the Company considered it appropriate to define a **bridge-agreement**, both for the **performance bonus** (year 2020) and for the **flexible welfare package** (year 2021); consequently, on 5 June 2020, the parties signed the relevant agreement.

On 11 May 2020, the Water Department of Hera Spa signed a meeting report for the outsourcing of an on-call line (mountain area) for the period June-October 2020, thus allowing **continuity of service** during peak periods.

An agreement report was signed on 29 September 2020 for the employees of Heratech Srl, Inrete Distribuzione Energia Spa and Hera Spa (in particular the Water Business Unit) for the implementation of the so-called **man down** device. The application will initially be provided to a part of Heratech's laboratory employees, and then it will be extended to a part of employees belonging to other companies. The application, provided with GPS satellite localisation functions, is able to detect any dangerous situations that operators find themselves in and intervenes by tracking the person asking for help through its geolocalisation functions. It is also able to organise timely rescue operations (for example, if the operator has fallen following an accident or because feeling unwell).

On 15 October 2020, the perimeter of users of the so-called **leaving home for the worksite** mode of operation was extended. The number of users rose from around 200 employees in the period before the health emergency, to over 700 employees (reaching around 900 during peak emergency times). This mode of operation was one of the most significant measures taken by the Group to combat and contain the spreading of the Covid-19 virus. On 31 July 2020, the National Technical Commission, specifically established by agreement dated 26 July 2018 and tasked with assessing the technical development of geolocalisation visualisation and management systems (essential for implementing the so-called "leaving home" mode of operation), also shared the use of the new application (Geocall), implemented by the Company to replace the previous application (Winit).

On 28 October 2020 and 9 November 2020, the Meeting Reports on the new **technical call centre and remote control** model, in the field of electricity, of Inrete Distribuzione Energia Spa and AcegasApsAmga Spa were signed. The agreement provides for a new model that is more **efficient** and above all more **resilient**, also in relation to the pandemic situation that is still underway.

On 10 November 2020, Hera Spa, Inrete Distribuzione Energia Spa, Heratech S.r.l, Uniflotte Srl, Herambiente Spa, Fea Srl and Hasi Srl signed a Memorandum of Agreement to regulate access to the company plants and sites of the Group in order to prevent access by unauthorised persons. The project, shared with respective trade unions by way of a specific agreement, regulates access through a number of organisational, procedural and instrumental actions, including the use of **mechatronic technology**.

In 2020, the Emilia-Romagna Region renewed the concessions for the **management of Waste Management Services**. The first area involved was Ravenna and Cesena, where the fifteen-year concession was awarded to an RTI (Temporary Grouping of Enterprises) comprising Hera Spa, Ciclat Trasporti Ambiente and Consorzio Formula Ambiente. On 16 September 2020, a memorandum of understanding applying to the RTI was signed with the regional trade union representatives, aimed at outlining and regulating the industrial relations system and defining guidelines on training, safety and procurement. Of particular note is the exception signed, in favour of the entire company structure, regarding the quota reserved by the National Collective Labour Agreement on waste management services for social cooperation, increasing it from 5 to 15%.

Within **AcegasApsAmga Spa** and its **subsidiaries**, with a view to aligning relevant conditions, an Agreement was signed on 11 September 2020 regarding the so-called **clothing voucher** for Gas and Water sector employees in the Padua area and an Agreement was signed on 5 November 2020 regarding the so-called **meal voucher** for Energy and Environment sector employees in the Trieste area.

With regard to **Acantho Spa**, in line with the agreements signed at Group level, an agreement was signed on 29 May 2020 concerning the finalisation the performance bonus indicators for 2019. On 10 June 2020, the Company Protocol regulating the measures to combat and contain the spreading of the Covid-19 virus in the workplace; on 10 June 2020, the Meeting Report allowing **Smart-Remote Working** for two

days/week; on 10 June 2020, the bridge-agreement for the performance bonus (year 2020) and for the **Flexible welfare package** (year 2021).

The process of harmonising the Group's economic and regulatory conditions at **Aliplast** continued in 2020: on 28 May 2020, an agreement was signed to harmonise the canteen service; on 13 July 2020, the Memorandum of Bridge Agreement for the 2020 performance bonus and the 2021 Welfare; and on 2 November 2020, the report for changes to working hours with the introduction of H24 shifts at the Novara plant.

On 21 December 2020, a Memorandum of Understanding was signed at **Hera Comm Marche**, in order to harmonise certain economic and regulatory conditions with the rest of the Group, starting with working hours. The agreement also regulates canteen services, business travels, geographical mobility of staff, and attendance management.

With regard to **Ascopiave Energie Spa, Ascotrade Spa, Blu Meta Spa, Etra Energia Srl, and Amgas Blu Srl** a meeting report was signed on 5 November 2020, concerning the company performance bonus for year 2020.

The Hera Group continued to cooperate with employers' associations by taking part with **Utilitalia** in the bargaining commissions and delegations for Electricity, Gas/Water and Waste Management Services National Collective Labour Agreements.

There was a significant increase in the **networking activities** between the Industrial Relations structure and third-party companies, associations, bodies and professional firms, allowing the necessary and ongoing dialogue and exchange of ideas on key issues. Similarly, there was also a significant increase in the activities carried out by Industrial Relations with other Hera Departments, in particular:

- **consulting** and **training** for contract individuals on the correct drafting and application of social clauses in contracts, to protect the staff of contracting enterprises. To this end, in cooperation with the Procurement and Contracts Department, company guidelines were drawn up to guide the activities of contract representatives in drafting tender documents and managing the staff of contracting enterprises;
- regular, **ongoing training** on labour law issues for personnel management and administration departments.

Open-ended contract workers that are members of unions (breakdown by trade union)

Qty	2018	2019	2020
CGIL	2,265	2,122	2,134
CISL	700	742	672
UIL	600	555	573
CISAL Federenergia	28	27	25
FADEL	206	169	159
RDB	0	0	0
ADL	14	8	8
UGL	18	13	8
USB	3	16	12
FESICA CONFESAL	2	1	1
FEDERMANAGER	10	11	12
CIU MIDDLE MANAGERS	0	0	0
SNALV	6	4	4
CONFIAL	1	1	1
Basic confederation	1	1	2
Basic trade union	11	10	9
Total	3,865	3,680	3,620
Percentage of workforce as at 31/12	45%	41%	40%

Figures refer to 31 December 2020 and to Hera Spa, Hera Comm, Acantho, Asa, Hera Comm Marche, HERAtech, Inrete Distribuzione Energia, Fea, Herambiente, Aliplast Group, Hera Servizi Energia, Hera Trading, HASI, Herambiente, Uniflotte, AcegasApsAmga, AcegasApsAmga Servizi Energetici, Hera Luce and Marche Multiservizi.

40% of the Group's open-ended contract workers are members of a union: the percentage value is around 1 point less than in 2019.

Open-ended contract workers that are members of unions (breakdown by position)

%	2018	2019	2020
Middle managers	20%	17%	17%
White-collar workers	41%	38%	37%
Blue-collar workers	56%	52%	51%
Total	45%	41%	40%

Figures refer to 31 December and to Hera Spa, Hera Comm, Acantho, Asa, Hera Comm Marche, HERAtech, Inrete Distribuzione Energia, Fea, Herambiente, Aliplast Group, Hera Servizi Energia, Hera Trading, HASI, Uniflotte, AcegasApsAmga, AcegasApsAmga Servizi Energetici, Hera Luce and Marche Multiservizi.

In relation to the worker's role, the rate of union membership for white-collar and blue-collar workers decreased (in both cases by about 1 percentage point compared to the previous year), while the rate for middle managers was stable.

Hours of strike

Hours	2018	2019	2020
Total time on strike (hours)	8,324	1,225	61
Time on strike (per capita)	1.0	0.1	0.0

The figures refer to the following companies: Hera Spa, Acantho, AcegasApsAmga, Fea, Herambiente, Herambiente Servizi Industriali, HERAtech, Hestambiente, Hera Comm, Hera Luce, Hera Trading, Inrete Distribuzione Energia, Marche Multiservizi, AcegasApsAmga Servizi Energetici and Uniflotte. The hours worked are calculated net of overtime hours for recovery.

In 2020, one strike for a total of two hours was announced by the trade union organisation USB Lavoro Privato for the waste management services sector on the subject of job safety during the health emergency.

Litigation with the workforce [419-1]

Qty	2018	2019	2020
Litigation pending at the close of the year	30	23	16

As at 31 December 2020, 16 **cases of litigation** against workers were pending. This is the lowest figure over the past three years.

The **disciplinary measures** taken against Group employees amounted to 222 in 2020, in compliance with applicable national labour agreements: they involved **oral or written reprimands** (51 cases), **withholdings on salary** and **temporary suspensions from work** (160 cases, 78 of which were disciplinary measures with fines not involving a penalty of more than four hours' work remuneration) and 11 **terminations** two of which with notice and nine without notice.

Case study

Smart working project

With regard to the smart working project, after the launching of the first pilot in 2017 with 370 workers, the project was then gradually extended until reaching over 1,500 people in 2019.

The experience we have gained since 2017, allowed us in 2020, to handle the emergency situation with **resilience**, further strengthening the tools made available to make sure that people could feel close to one another. Since mid-2020, around **4 thousand employees** have been permanently involved in the project, bringing the percentage of workers committed to the project at the end of 2020 to 77% of total permanent employees, excluding blue-collar workers.

The number of smart working days were increased in June 2020: from one day/week of remote working to two days. At the same time, associates were asked to plan their remote working days for the following week, by entering the request in the system by Thursday of the previous week; this allowed managers to have an overall view and better manage the team's activities. Since the health emergency is continuing, these two days may be further extended in cases provided for by law (e.g. fragility, quarantine for children under 16 or closing of schools, need for distancing within the company).

Smart working, according to the Hera model, means working on four different aspects: **culture, time and performance, space** and **technologies**, representing from the outset a process for completely reshaping new ways of working.

During the period of the health emergency, in addition to the traditional training platform, a specific section was created in the dedicated sharepoint, with training pills and useful information to better support even new hires who were working remotely.

Key focus was also given to listening to **remote workers**: during lockdown, specific surveys were carried out to find out how workers perceived their forced experience with remote working and to better target initiatives to help them.

The various listening sessions carried out during the year confirmed complete satisfaction both in terms of improved productivity (for the workers involved and for their managers) and in terms of greater satisfaction, both by the workers who were already in the project and those who joined during the emergency period.

We will continue to invest in communication towards all employees and in specific training on **specific skills** to make smart working more effective. The aim will be to continue **measuring both collective and individual benefits, enhancing new opportunities and creating conditions** to jointly increase **productivity and well-being**.

As part of this process, company management is required to further develop resource management skills in a context where performance (and therefore achievement of goals) grows in importance compared to the time and physical place of work. Hera Group's leadership model plays a leading and decisive role in ensuring effective application.

The smart working project, as a whole and with reference to remote working, contributes to achieving target **8.2** of the **UN 2030 Agenda**.

Incentives also depend on sustainability

Aspects that refer to sustainability are present in the bonus system for middle managers. The bonus system is connected to the balanced scorecard and ever since 2006 has provided for a part of the incentive to be connected also to the achievement of sustainability targets.

In 2020, 35% of the variable remuneration of Group managers and middle managers was linked to sustainability target projects (improvement of quality, environmental impact, image, personnel involvement, professional development and involvement of stakeholders), with target projects aimed at creating shared value accounting for 23%.

Balanced scorecard 2020: breakdown of variable remuneration in sustainability and CSV areas

Area	% variable remuneration	No. of target projects	No. of managers/middle managers involved
Smart use of energy	4%	18	114
Efficient use of resources	11%	44	228
Innovation and contribution to development	8%	28	205
Total CSV areas	23%	90	362
Other sustainability areas	12%	47	275
Total CSV and sustainability	35%	137	482

As may be seen in the table, the managers and middle managers involved in CSV and sustainability target projects in 2020 amounted to 482, that is, 69% of the total. Restricting the analysis to CSV areas only, there were 362 managers and middle managers involved in target projects aimed at creating shared value. This confirms the Group's widespread CSV approach in its strategy and short-term bonus system (balanced scorecard) which in 2020 involved 697 workers, including managers and middle managers.

Sustainability was also included in the deferred incentive plan for management retention redefined by the Board of Directors in the meeting of 19 December 2018, on the proposal of the Remuneration Committee. The Plan is reserved to a small number of managers selected by taking into account the weight of the organisational position, the evaluation of the performances achieved in the development process and the "market risk". The development introduced for the three-year period 2019-2021 includes CSV EBITDA among the three indicators used to quantify the bonus to be paid in 2022. The target to be achieved is set out in the 2018-22 Business Plan for 2021.

Implementation of physical security in the Group's offices

The Hera Group has taken its physical assets into due consideration ever since its establishment. The growing awareness by Group management on this topic, owing to the increase in malicious actions against its assets, as well as the growing attention by national and international institutions, not to mention possible reputation damage, has led the company to decide to implement and enforce a **risk assessment model**. The model is designed to ensure the correct identification, measurement, management and monitoring of the risks threatening the Group's assets, including all necessary measures to prevent and mitigate the threats and impacts caused by fire, regardless of the causes (intentional, negligent or accidental). The decision to adopt a risk assessment model was also prompted by an increasingly structured and complex regulatory framework, as well as the increased activities of technical and regulatory standardisation bodies, requiring considerably greater attention and professional expertise on the matter.

Risk management is aimed at preserving the effectiveness and profitability of the Group's businesses along the entire value chain, particularly for occupational safety and with regard to the environmental impacts and risks linked to the continuity and security of services and related information.

Based on the above and of the risk monitoring results, an overall technical-management project was drawn up, including an investment plan, which was shared with the internal departments and approved by the Corporate Risk Committee. The project:

- guarantees a uniform minimum standard of protection for the entire Group through the application of homogeneous countermeasures;
- applies advanced technological solutions in compliance with regulations, standards and good practices;
- centrally manages contracts (infrastructure, maintenance and services) ensuring proper standardisation and optimisation of intervention costs;
- makes use of synergies, skills and resources within the Hera Group.

The aim of the project is to reduce the risks threatening the Group's assets. To achieve this a central management function ensures a uniform minimum standard of protection for the entire Group through the application of homogeneous, technologically advanced countermeasures in compliance with regulations and standards. It also coordinates the performance of contracts (for systems, infrastructure, maintenance and services) in order to standardise and optimise procurement costs.

In addition, the project makes full use of the synergies, skills and resources within the Hera Group such as:

- centralisation of the alarm reception point in the remote control room in Forlì with viewing of all alarms/alerts regarding the assets, allowing for better management of the event as well as trust services;
- identification in Acantho of the network and system manager and the global contractor for system installation and maintenance and for surveillance service activation.

In terms of innovation and digital transformation, the Physical Security project has identified important synergies with the Group's digital identity project, particularly as regards the access control process. The digital identity project envisages the creation of a central software platform regulating access to all Group sites through the development of virtual access credentials with high intrinsic security (which can be installed with an APP on smartphones) and the implementation of innovative mechatronic systems (cylinders and locks with an onboard electronic component for opening without the need for mechanical keys) to ensure high access security levels at the entrances to industrial sites and plants.

Circularity, resilience and sustainability also in Hera Group offices

As part of Hera's efficiency and quality projects, work continued in 2020 to ensure the transition towards a circular economy and sustainability within its offices. The project to increase **separate waste collection** in

the Group's main offices, with the introduction of new and more efficient collection bins (in terms of number and volume), is headed in this direction. At the Berti Pichat site alone, this innovation led to a thirteen percentage point increase in the volume of separate waste collected (62% compared to 49%), and to a sharp improvement in the quality of waste disposed of. The goal for 2021 is to complete the installation of all new bins at the other sites involved in the project and in the offices of Hera Spa, reaching the installation of over 240 new bins by the end of the year.

The projects launched in previous years concerning the **use of recycled paper in office printers** and the positioning of **mains water dispensers** in offices and canteens are currently being monitored and managed. In compliance with the guidelines to address the coronavirus health emergency, but also to reduce the production of plastic, new **contactless dispensers** were installed in canteens in 2020 to make tap water available.

In terms of **resilience**, the seismic upgrading of the Group's main buildings continued in 2020 following the analysis carried out in 2018. This activity led to the total monitoring of **76 buildings, 47 of which used for office purposes and 29 for operational purposes** (workshops, plants and technical rooms), and allowed all the buildings to be classified in specific earthquake risk classes. The interventions planned for the buildings will allow the earthquake prevention certification class to clearly improve.

Speaking again of resilience, in order to deal with the health emergency, the Group's offices (in cooperation with the Milan Polytechnic) upgraded their **air conditioning systems**, improving air **quality and filtration** in the offices thanks to improvements made to the air treatment units. The most significant intervention in this area was made to the air-conditioning system of the **remote control room in Forlì-Cesena**. The work considerably increased the level of air filtration and ventilation in the room, allowing the aerosol produced by the operating staff to be removed more quickly in the upper area of the room, at a distance from the operators. This considerably reduced the risk of propagation between adjacent workstations, which were in any case suitably spaced. Even the **crisis room and buffer room** intervention project planned for 2022 responds to the need to have a resilient and secure structure, provided with high standards of logical and physical security, which will allow the company's control room to be fully operational in extreme emergency situations and to implement safety measures at all Group sites.

With regard to **sustainability and efficient resource management**, together with HeraLuce, the **energy requalification project using LED lighting in the outdoor areas** of the Hera Group's main offices was completed in 2020. The project led to overall savings of over 130 TOE per year (equivalent to two years' electricity consumption for 130 typical households). In 2020, a multi-year project was also launched regarding the **informed use of water resources**, particularly for the recovery of rainwater for toilets and, in cooperation with Uniflotte, the company that manages the Group's corporate fleet, for the reduction of water used for washing vehicles. Savings of about 3,800 cubic metres per year are expected for 2021 compared to 2020, with a 2030 water consumption reduction target of about 22 thousand cubic metres compared to 2017.

Thanks to HeraSolidale, Euro 83,000 were raised for seven Organisations

HeraSolidale seeks to promote solidarity and **support social and environmental projects** by involving Hera Group's **workforce**, its **customers** and the **company**.

The fourth edition of the project started in 2020 and will last until December 2022. The fourth edition of the project involved Group employees who voted for % out of the 15 organisations chosen by the company, according to the following criteria: **reputation and transparency of activities, contribution to one or more goals of the 2030 UN Agenda**, and **intervention areas of relevance to Hera services** (accessory criterion).

A new feature of the fourth edition of HeraSolidale is the identification of **two Non-Profit Organisations dealing with environmental sustainability**, in line with the commercial offering of the Group and of Hera Comm - a key partner for the success of HeraSolidale, in addition to the **five Non-Profit Organisations** and

Organisations voted by workers, for a total of **seven Organisations**. Unlike the other editions, the fourth edition of HeraSolidale will last three years.

The **seven Organisations** included in the fourth edition of HeraSolidale and the **projects achieved** are detailed below:

- **ADMO Non-Profit Organisation: “A donor for everyone”** aims to purchase swabs to register new potential donors with the Italian Bone Marrow Donor Registry through quick and easy saliva tests; the goal is to allow every patient have access to a bone marrow transplant.
- **ANT Italia Non-Profit Organisation: “Children in ANT”** offers free assistance to young cancer patients, so that children can receive special medical and nursing care directly at home, and provides psychological support to the whole family.
- **Don Bosco Mission Community - CMB: “An educational-schooling centre in Ghana”** supports an early literacy school for children, an afternoon youth centre, a summer camp and the training of CMB members. Support ranges from the purchase of school materials to meals, including the costs of utilities and the contribution to staff salaries.
- **Marevivo Non-Profit Organisation: “Let's save our seas from plastic”** is a project that uses modern technology to clean up the Italian seas by collecting plastic waste from the waters of harbours and nautical clubs. It aims to reduce sea pollution by promoting a model of circular economy and consumption.
- **Theodora Non-Profit Organisation: “Dr. Sogni's special hospital visits”** offers play and recreation activities to children and teenagers hospitalised at the Policlinico Sant'Orsola-Malpighi and the Bellaria Hospital in Bologna, helping them maintain their daily routine and turning their hospital room into a more welcoming and familiar place.
- **Treedom Foundation Non-Profit Organisation: “Let's green Madagascar!”** is a project for the creation of an integrated agro-forestry system ensuring the protection of biodiversity and giving local communities the opportunity to benefit from harvests through the planting of trees.
- **UNHCR: “Education of the children of Chad”** ensures access to primary education for refugee children in Chad by focusing on school capacity, teacher training, supply of teaching materials, transport and the right to education for girls.

Just as happened for the third edition of the project, in addition to Group **employees** who can take part either by donating a monthly amount withheld directly from their payslip, or through Hextra - the integrated company welfare system -, the project also involved external stakeholders. **New Hera customers** can donate 1 Euro to one of the seven organisations when they sign a contract with Hera.

But there is more: as every year, even the **company** wishes to play its part: Hera Comm and Hera Comm Marche will donate 1 euro for every new customer during the three years of the project.

In just 5 project months, starting from July 2020, approximately Euro 83 thousand have been collected: roughly Euro 23 thousand donated by employees through payslip withdrawals and Hextra and about Euro 60 thousand donated by customers, Hera Comm and Hera Comm Marche.

In the midst of the health emergency, the Hera Group also decided to give practical support to the local areas in which it operates **by donating Euro 550 thousand to the healthcare services of Emilia-Romagna, Veneto, Friuli-Venezia Giulia and Marche**.

This initiative was also extended to workers, who were able to take part thanks to **an extraordinary edition of HeraSolidale** specifically launched to promote this fundraising project. The Group's workforce donated **Euro 65 thousand, reaching a total donation of over Euro 600 thousand**.

Thanks to the partnership with the Organisations involved, the HeraSolidale project contributes to the achievement of **target 17.17 of the UN 2030 Agenda**.

Suppliers

Objectives and results

What we said we would do	What we have done	SDGs	Progress*	Geographic scope**		
<ul style="list-style-type: none"> Monitoring of the corporate social responsibility of the suppliers vis-à-vis their workers: collect an additional 40 assessment questionnaires and perform 20 audits care of the suppliers (headquarters and worksites) in 2020. 	<ul style="list-style-type: none"> Monitoring of the corporate social responsibility of the suppliers vis-à-vis their workers: over 50 assessment questionnaires collected and 20 audits at suppliers (headquarters and worksites) performed in 2020 (see page 380) 	8		ER	T	M
<ul style="list-style-type: none"> Continue to assign a relevant score to the environmental and social sustainability aspects in tenders held with the most economically advantageous bid method. 	<ul style="list-style-type: none"> 41/100 average score reserved for sustainability aspects in tenders held in 2020 with the most economically advantageous bid method. (see page 369) 	8, 12		ER	T	M
<ul style="list-style-type: none"> 75% the value of supplies of services and work in 2020 with monitoring of lost time injuries in the workplace. 	<ul style="list-style-type: none"> 79% the value of supplies of services and values with monitoring of lost time injury rates in 2020. (see page 378) 	8		ER	T	M
<ul style="list-style-type: none"> Continue with the development of the quality, safety, environmental and social responsibility management systems in the choice of suppliers. 	<ul style="list-style-type: none"> The optimisation of certified management systems continued in 2020: 87.6% of the value of the supplies from suppliers with Iso 9001; 65.7% Iso 14001 / Emas; 56.8% Iso 45001; 39.4% Sa 8000. (see page 365) 	8, 12		ER	T	M

*  Result achieved or in line with plans.  Result with moderate deviation from planning.

** Geographic scope of improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

What we will do	SDGs	Geographic scope*		
<ul style="list-style-type: none"> Monitoring of the corporate social responsibility of the suppliers vis-à-vis their workers: in 2021 perform at least 30 audits at the suppliers (headquarters and worksites). 	8	ER	T	M
<ul style="list-style-type: none"> Continue to assign a relevant score to the environmental and social sustainability aspects in tenders held with the most economically advantageous bid method. 	8, 12	ER	T	M
<ul style="list-style-type: none"> Continue with the development of the quality, safety, environmental and social responsibility management systems in the choice of suppliers. 	8, 12	ER	T	M
<ul style="list-style-type: none"> 75% the value of supplies of services and work in 2021 with monitoring of lost time injuries in the workplace. 	8	ER	T	M

* Geographic scope of the improvement objectives ER: Emilia-Romagna T: Triveneto M: Marche.

Suppliers

[102-9]

At the end of 2020, the **companies supplying goods, services, professional activities and works** to the Hera Group included in the pool numbered **5,602**. The presence of a single list of qualified suppliers for the entire Group represents **an opportunity in terms of growth** for the suppliers themselves, since they are thereby given the opportunity to expand their business relationships on all the commodity groups for which they have requested and obtained the qualification.

The data provided in this section, unless otherwise indicated, refers to the companies Hera Spa, AcegasApsAmga, AcegasApsAmga Servizi Energetici, Hera Luce, Herambiente, Fea, Herambiente Servizi Industriali, Hestambiente, Hera Comm, Inrete Distribuzione Energia, Heratech, Marche Multiservizi and Uniflotte; the data does not include intercompany purchases.

71% of the total suppliers on the list are qualified for the supply of services, while more than 65% (3,643 suppliers) had at least one contract active in 2020.

Pool of suppliers

Number	2018	2019	2020
Goods	2,431	2,552	2,585
Services	3,662	3,871	3,962
Works	890	922	995
Total	5,110	5,401	5,602
<i>of which suppliers who received at least one order during the year</i>	3,250	3,644	3,643

The table provides a breakdown of suppliers by product class. Some suppliers may belong to more than one class and, consequently, the sum of the individual items may not tally with the total number of suppliers. The 2018 figures do not include Marche Multiservizi.

The main **activities outsourced** by the Hera Group within the sphere of waste management services concern the mechanised waste collection services, the door-to-door waste collection service, street sweeping and washing (manual and mechanised), the cleaning of street waste bins and the management of the separate waste collection centres. With regard to the grid services, the company mainly resorts to outside suppliers for the activities concerning highly specialised maintenance, plant engineering activities and meter services (readings, closures, initialisations, etc.). Furthermore, facility management (Global Service), commercial and contact individuals call centre activities are outsourced.

In terms of economic value, in 2020 the Hera Group commissioned purchases for **more than Euro 1.1 billion**, of which over Euro 23 million for purchases from other European nations and Euro 7.8 million from other non-European countries (Great Britain, Switzerland, the United States, Canada and Israel).

The **impacts generated by the supply chain** of the Hera Group mainly concern the observance of the health and safety in the workplace standards, the social sustainability aspects and the environmental impacts of the outsourced activities.

Raw material supplies

In 2020, **natural gas** sold by the Group sales companies was purchased for around 27% from Eni Gas & Power, around 10% from Axpo Italia, around 3% from Edison Energia, around 3% from Enel Trade, around 1% from Engie Italia and 55% via Hera Trading (which, in turn, purchased spot gas on the main European hubs and at the virtual exchange point).

With regard to the **electricity market**, 21% of sales to end customers on the free and protected market were covered by bilateral purchases from other operators, and 79% sourced on the electricity exchange. The methods for trading electricity, both via sourcing on the electricity exchange and, in particular through bilateral agreements, do not allow for the tracing of the physical sources of energy. With regard to the **energy mix** used for electricity generation sold by the Hera Comm Group in 2020, please refer to section "Energy transition and renewables" in the chapter "Pursuing carbon neutrality".

Qualification, selection and assessment of suppliers

The **supplier qualification and assessment system** makes it possible to check the technical, economic, and organisational quality requirements, as well as the compliance with environmental and safety regulations and corporate social responsibility requisites, and the acceptance of the Group Code of Ethics.

The vendor management system

Since 2012 the **vendor management system** has represented the model for the self-registration and qualification of suppliers and addresses all the companies interested in spontaneously proposing themselves in the Hera Group suppliers list, for any product category. The "**e-Procurement**" vendor management portal allows the suppliers to use a **transparent, equal and tracked** tool to qualify themselves and participate in tenders announced by the Hera Group.

Within the qualification area of the supplier portal, the companies can access the procurement product categories, making it possible to use the following services:

- independently update the profiles of interest, putting oneself forward for any new commodity groups within the accredited supplier system;
- independently update one's details, as well as the schedule of the supplier qualification documents;
- check one's qualification and periodic assessment status;
- gain the possibility of being called to present bids;
- gain the possibility of receiving information relating to the awarding of a contract;
- being updated on the Group's initiatives of economic interest.

Inclusion in the Hera supplier qualification system is handled on-line by means of the **e-procurement platform**, which also represents a useful communication instrument between the Group and the suppliers. This platform has an annual fee that reflects the number of product sub-categories of product groups in which the supplier is interested, varying between Euro 50 to 250, in order to reimburse the minimum operating costs to share the expenses among all the subscribers with reference to transparency and access to the documents relating to participation in the tender procedures. This instrument has also been extended to the public tenders since 2011.

During 2020, the Hera Group traded 98% of the total volumes on the e-procurement platform. When using this platform, suppliers are supported by a dedicated help desk service. In 2020, 12,743 requests for information were received, all of which were resolved within the time-frame established by company procedures.

Another important aspect of the vendor management system is the **monitoring of the companies** who jointly take part in the performance of the contracts for the Hera Group in the role of subcontractors and the like, consortium executors or principals in temporary joint ventures. By means of the reporting generated by the monitoring activities, it is possible to improve the governance of the purchases, as well as extend the mechanisms for valuation and control envisaged by the Group procedures to all the companies involved in the execution of the tender, overseeing the entire chain of the economic parties involved in the service for various reasons.

In September 2018, within the sphere of the process innovation projects, the new **supplier qualification portal** was inaugurated, with the purpose of simplifying the qualification process, the up-dating of the data and the usability of the information, guiding the uploading of the data to be input in the system. The new portal, permitting direct access for the supplier to each of the individual questions of the qualification document, considerably reduces both the data input timescales for initial qualification and the timescales for updating the data in the event of subsequent changes. The response of the supplier pool was positive: at the end of December 2020, **95% of the supplier pool** re-qualified themselves via the new portal. During 2020, Marche Multiservizi completed the process of adopting the Group's supplier qualification, selection and assessment platform and 99% of traditional suppliers qualified on the new portal.

Since 2017, an automatic and traceable system has been active for the **alternation of the invitations** to the suppliers to participate in private tenders which, basing itself on a series of parameters including the number of invitations received, their distribution over time and the vendor rating score, further guarantees the supplier selection process and the rotation of the same, with the **utmost transparency** and on a consistent basis with the Hera Group guidelines. In the same way, this system permits greater communication between the suppliers and the company and absolute exactitude in the document management. For the purpose of increasing the rate of participation of the suppliers in the tenders, the rotation system was integrated, during 2019, with the new supplier qualification portal so as to assimilate within the rotation also the desire of the suppliers to operate solely in specific geographic areas, as specified by said suppliers in the qualification document. By means of this integration, the intention is to increase the efficiency of the tenders, with the automatic rotation system not selecting suppliers by means of invitation in a specific geographic area if they do not desire to work in those areas.

The supplier qualification procedure

[308-1] [414-1]

Supplier **qualification** and **assessment** is regulated by the checking of the technical, economic, and organisational quality requirements, compliance with environmental and safety regulations and corporate social responsibility requisites, as well as **acceptance of the Group Code of Ethics**. Furthermore, the supply contracts drawn up by the Group companies include termination clauses linked to the failure of suppliers to comply with the principles of the Code of Ethics. Therefore, **all the qualified suppliers are subject to this assessment system**.

The Hera Group's supplier qualification process has been formalised within a specific procedure, by means of the establishment of a **single list of reliable economic operators**, handled by the Procurement and Tenders Department of Hera Spa. The suppliers to be invited for the performance of the negotiated procedures are selected from this list, as and when necessary. Therefore, the suppliers are selected for all the Group companies on the basis of qualification requirements divided up into:

- standard requirements: identical for any product category;
- specific requirements: linked to a specific product category.

Among the various **criteria** identified by the Group for the qualification and selection of new suppliers, of particular importance are those of an **environmental and social** nature, for example:

- declaration that the following have been reviewed and accepted: Code of Ethics; **Corruption prevention model**; **General Quality-Safety-Environment-Energy and Social responsibility Regulations** for contractors and/or autonomous workers operating within the sphere of the Hera Group; **Quality and sustainability policy**; **Personal data protection policy**;
- fulfilment of the **workplace safety obligations** envisaged by Italian law;
- observance of the current legislation referring to the **right of the disabled to work**;
- presence of **employees facing social hardship** within the company workforce with respect to the total;

- enrolment in the **regional register of social cooperatives**;
- declaration of full knowledge of the principles and the **rules on Corporate social responsibility**, and of commitment to comply with the principles and requirements included in the same and with the participation in monitoring and audit activities envisaged by the Hera Group, as well as the assessment of any corrective measures required;
- possession of the following **system certifications**: Iso 9001; Iso 14001 (or, alternatively, of Emas registration); Iso 45001; Sa 8000; Iso 50001;
- possession of the certificate of enrolment in the **national register of environmental operators**, pertinent to the precise activities of the product group;
- possession of enrolment with current validity care of the competent Prefecture for the sectors of interest identified by the Italian Prime Minister's Decree dated 18 April 2013 and subsequently extended by Italian Law no. 40 of 5 June 2020 (conversion law with amendments of Italian Law Decree 23/2020, known as Liquidity), in the **list of suppliers not subject to mafia infiltration attempts** (so-called **white list**); otherwise presentation of a formal commitment to request the same.

For the purpose of ensuring the business operations and **only in exceptional cases, the Group foresees the possibility of making exceptions**:

- **casual** suppliers: in the event of needs motivated by reasons of experimentation, it is possible to issue just one purchase document vis-à-vis a supplier certified using a simplified procedure. These “casual” suppliers, in order to be able to receive additional purchase orders, will have to obtain complete qualification in observance of the Hera Group rules;
- **exclusive** suppliers: in the event of indispensable needs, it is possible to issue purchase documents vis-à-vis a supplier qualified with a simplified procedure, on an exclusive basis;
- procedure for **purchases using order vouchers**: purchase of goods on a case by case basis for a modest economic value, issuing order vouchers on suppliers with which there are specific agreements or even lacking specific agreements;
- procedure for **other purchases** which, having considered their nature (for example: legal, notarial, courier, translation costs) **do not require the prior qualification** of the suppliers. Otherwise the purchase must be appropriately registered in accordance with the rules established by the Group.

Suppliers by type of certification

The portion of purchases from suppliers with Iso 14001 or Emas certification has risen (+3.8 percentage points), bringing the values in line with 2018 figures, while the portion of purchases from suppliers with Iso 9001 and Sa 8000 certification are slightly up compared to the 2019 figure (by 0.8 and 1.2 percentage points respectively). The portion of suppliers with Iso 45001 certification remained stable.

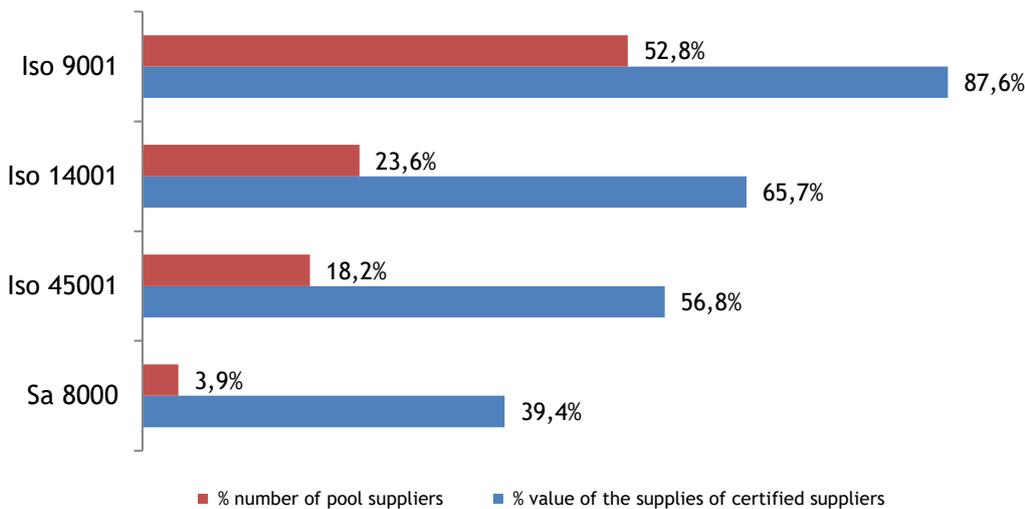
These results are the consequence of both **direct action** taken by the Group companies, which systematically include indication of the **possession of certification** in the calls for tenders or in the supplier qualification stage as a requirement for participation and/or incentive for the tender, and of the greater sensitivity acquired by the companies in considering the certification as a component of greater competitiveness.

Procurement from certified suppliers - value breakdown by type of certification (% of total supplies)

%	2018	2019	2020
Quality certification (Iso 9001)	87.4%	86.8%	87.6%
Environmental certification (Iso 14001-Emas)	65.7%	61.9%	65.7%
Occupational safety (Iso 45001)	56.8%	56.8%	56.8%
Social certification (Sa 8000)	33.2%	38.2%	39.4%
Total supplies (millions of Euro)	911.8	1,010.1	1,136.2

The percentage in value terms of the tenders awarded to certified suppliers is always greater than the percentage of qualified suppliers in possession of certification. This view also highlights the effects of the systematic request for possession of certification in the supplier qualification and selection stage.

Portion of supplies with respect to the number of pool suppliers (2020)



Supplier assessment and checking

[403-7]

The periodic assessment makes it possible for suppliers with active contracts to receive an **up-date of their scoring** for each individual qualifying product in the vendor rating system, with an increase in the event of total absence of anomalies, or a decrease in relation to the seriousness of the anomalies detected. The updated assessment can always be consulted and assessed autonomously by the supplier in their specific reserved area of the supplier portal. The scores have been divided up into **three categories** which contribute towards channelling the rotation, selection and invitation - by the individual buyers - of the qualified suppliers by specific product class affected by the private tenders carried out by the Hera Group. The score assigned to each supplier via the rating system influences the list of the firms invited to participate in tenders. Problematic suppliers are excluded from the under-threshold invitations unless they fall within the qualified brackets, via suitable corrective action and/or accurate improvement plans.

Area type	Scoring interval	Level of reliability
Green area	Between 75 and 100 points	from averagely reliable to very reliable
Yellow area	Between 60 and 74 points	from sufficiently reliable to averagely reliable
Red area	Under 60 points	critical

The **supplier assessment management and monitoring model** continues to ensure, via the maintenance of the reporting, the quarterly frequency for the concession of the **bonuses**. By contrast, the methods for the calculation of the decreases takes place by means of the closure of the analysis of the **anomalies** (non-compliance) and the definition of specific corrective actions. By means of the formalities introduced it is therefore possible to assign in a standardised manner the decrease in the score over the specific supplier firms (including subcontractors and the like) responsible for the non-compliant behaviour, who can be inferred from the field monitoring documentation (check list) compiled by the contractual contact individual or their appointee. This allows the company contact individual/Director of works to check the contractual performances of suppliers in the fundamental areas of quality, safety, the environment, the energy savings and corporate social responsibility. In the event of **serious or very serious non-compliance of the supplier**, there is also the possibility of **temporary suspension** from new invitations to private tenders for a period which ranges from three to six months. In 2020, suspension was activated for **six suppliers** due to very serious non-compliance. In one case the suspension lasted for three months, for the other five cases, the suspension amounted to six or more months since the number of very serious non-compliance was multiplied.

The **control of suppliers** takes place by means of the checks carried out by the Company Contact Individuals (in turn subject to **internal audits** on the observance of the procedures) and via inspection visits care of the premises of the companies carried out by a certified third party so as to check the observance of the safety and corporate social responsibility requirements or even through joint internal audits performed by Units specifically set up for the purpose. Monitoring by the Company Contact Individuals takes place for the **deliveries of goods** on their receipt, while for the **services and works** it takes place during the progressive execution of the service, for each related quarter. More specifically, the check is carried out by filling in and signing the applicable monitoring check lists, also filled in and signed with respect to the checks carried out on all the parties involved, including sub-contractors and sub-suppliers (if any). The **number of controls** for the services and work is defined on the basis of the contractual amount, the duration of the contract and the impact on the quality, security, environment and corporate social responsibility of the services being monitored.

In 2020, **30 check lists were reviewed and standardised**, updating those documents in line with the Iso 45001, Iso 50001 e Iso 37001 certifications in order to ensure increasing consistency and fairness in the assessments. Once streamlined, agreed on and standardised, the check lists were made available on the company information portal to the Contract Managers, together with the specific instructions for use and the standardisation table of the various anomalies (specific non-compliances). Among these, the general product monitoring check list was also reviewed to introduce specific control elements relating to the Iso 50001 certification.

The policies and activities described make it possible to ensure **increasingly greater coherence and equity** in the assessments made at Group level.

The classification of "**non-compliances**" as a consequence of the finding, always preceded by the prompt sending of the check list to the supplier to obtain any applicable counter-findings, also allows the prompt and correct periodic assessment of qualified companies. The categories identified substantially recapture the main certifications in the Hera Group: Iso 9001, Iso 14001, Iso 45001 and Iso 50001 in addition to the guarantees on the Corporate Social Responsibility.

Non-compliances found by type

	2018	2019	2020
Observation	113	94	74
Fairly unserious non-compliance	115	74	58
Serious non-compliance	338	299	236
Very serious non-compliance	211	228	204
Total	777	695	572

The 2018 figures do not include Marche Multiservizi.

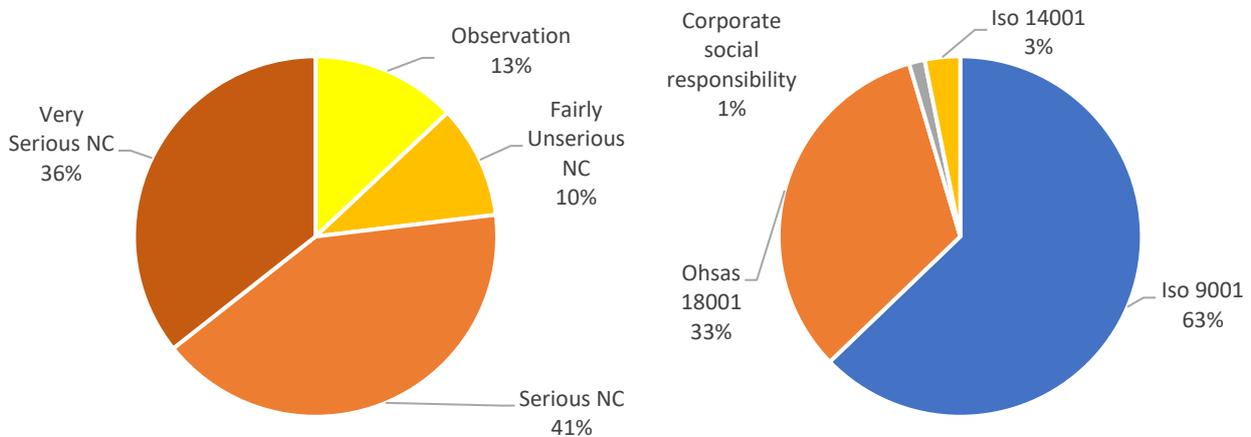
Non-compliances found by certification

	2018	2019	2020
Iso 9001	519	479	359
Iso 45001	214	191	187
Corporate social responsibility	16	6	8
Iso 14001	28	19	18
Total	777	695	572

The 2018 figures do not include Marche Multiservizi.

At Group level, **572 non-compliances** were found in 2020, down by 18% compared to the previous year, due in part to the healthcare emergency period that affected certain work and activities. Of the total, 453 non-compliances (**79%**) were closed as at 31 December 2020. 77% of the non-compliances were found to be serious or very serious, with the figure up on the previous year (71% in 2019).

Non-compliances found (2020)



In 2020, the joint **internal audits** of the Quality, Safety and Environment Department of Hera Spa, Quality, Safety and Environment of Herambiente Spa and the Procurement and Tenders Department of Hera Spa were maintained, for checking, on a rotation basis, the procedures adopted care of several contract contact individuals: there were **16** of these audits and, on the basis of the problematic elements detected, a new training plan was developed for the company contact individuals. The plan illustrated, to 550 parties, the innovations introduced in the accurate monitoring of suppliers (including subcontractors and the like) as well as in the field of data loading in the company information system, with the introduction of automation and standardisation of the final communication phase, of anomaly management, to suppliers. On-the-job training sessions were also carried out, aimed at the correct and consistent compilation of the checklists on site.

In 2020, furthermore, **inspections** on Corporate social responsibility continued in the facilities of suppliers: in some cases, partially non-compliant conduct was noted which was promptly highlighted, with consequent launch of **corrective actions** and prompt verification of the same. There was a total of four inspections, less than originally planned due to the healthcare emergency during the year.

Additionally, collections of the requirements for a project aimed at creating an **Interactive Group Portal** were started in 2020, with the contracting firms to use as an organised, fundamental repository to collect the necessary and obligatory documents in order to manage the contracts, the subcontracts and for the digital transformation of the supplier monitoring check lists.

Also in 2020, the automated **system for checking the Inps/Inail contribution payment regularity** with the applicable One-stop Social Security Point was fully operational, in order to facilitate the monitoring and management of suppliers, along with that for **Cassa Edile** for all suppliers active and present in the Hera Group's list, including parties grouped together in temporary joint ventures (representative and principals), consortiums and specific contractors, subcontractors and the like relating to the individual service purchase document (order and/or contract).

The selection of suppliers: tenders awarded adopting the most economically advantageous bid method

The Hera Group **Guidelines on Procurement**, since 2008, favour the most economically advantageous bid method as the approach for assessing bids, using sustainability criteria consistent with the principles of the Code of Ethics and in compliance with prevailing laws on public contracts.

In the specific areas identified by the Guidelines, and in detail “**respect for the environment**”, “**social commitment**”, “**quality of services**” and “**economic value**”, sustainability criteria have been defined on the basis of the experience acquired in managing calls for tenders awarded adopting the most economically advantageous bid method and of the regulations on the matter and in line with Group objectives. A **minimum number of sustainability criteria** to be considered for choosing suppliers were established for each business area, based on the amount and importance of the tender (if it is a tender with a significant impact on the environment, occupational safety, the quality of services provided to customers, the term or amount of the contract). The Procurement and Tenders Department is responsible for **selecting the sustainability criteria** in agreement with the company contact individuals concerned. They chose the criteria to be used for the type of tender, the importance of the sustainability criterion in relation to said tender, and assessments in respect of previous tenders assigned and their results. The Procurement and Tenders Department can also use the technical support of the Shared Value and Sustainability Department and the Quality, Safety and Environment Department for the choice of the criteria.

Among the main criteria adopted, mention is made of: the management of atmospheric emissions and sound; prevention, reuse and recyclability of waste; energy efficiency; reduction of the hazardous nature of substances used; reduction of water consumption; supplier’s adoption of their own Code of Ethics; hiring of persons with disabilities and persons facing hardship; lost time injury prevention and safety training (the social commitment criterion); quality of materials, equipment and instruments; professional qualifications and skills and technical services and performance. In 2019, said criteria were joined by others related to the **circular economy** as highlighted further on in this section and in the case study dedicated to the dissemination of circular economy principles in the supply chain.

Within the **Iso 50001** certification process for Hera Spa, the company procedures provided that the business units that so required, if it is found that the outsourced activity or asset has a significant impact on the energy consumption of the Group, proceed with the assessment of the energy efficiency requirements on the basis of an Energy Management document useful for the assessment of the energy impact.

The **main innovations in the Tender Code** (published with Italian Legislative Decree 50/2016 and implementing the EU directives issued on the matter and establishing the new law to apply to tenders and

public contracts, as subsequently amended by Italian Legislative Decree 56/2017, by the so-called “Sblocca cantieri” Decree (Decree on unblocking construction sites - Italian Legislative Decree 32/2019) subsequently converted into Italian Law 55/2019) include the **provision of the awarding method according to the economically most advantageous bid approach as mandatory and exclusive in certain cases** (Art. 95) such as for example services with a high intensity of manpower (such as cleaning services or scholastic services), or engineering, architecture services or those of another technical or intellectual nature for amounts greater than Euro 40 thousand.

The Hera Group Procurement guidelines in fact **anticipated these virtuous practices in the selection of suppliers by around ten years.**

Public tenders for contracts adopting the most economically advantageous bid method

	2018	2019	2020
No. of public invitations for tenders published	55	68	72
No. of public invitations for tenders published with economically advantageous bid method	47	44	44
Value of the public invitations for tenders published (millions of Euro)	183.5	612.4	688.4
Value of the public invitations for tenders published with economically advantageous bid method	171.5	516.0	590.8
% of tenders with economically advantageous bid method out of total (value of the calls)	93.5%	84.3%	85.8%
Average score assigned to aspects relating to sustainability of public tenders awarded during the year	32.1	34.8	41.7

In the three-year period considered, the incidence of the economically most advantageous bid criterion was on average over 86% of the total value of the public tender invitations issued by the Group.

In particular, during 2020, a total of 72 public invitations for tenders were announced, for a total starting price of Euro 688.4 million: of these Euro 591 million, or 85.8% of the total value of the invitations issued, envisaged the awarding criterion **according to the most economically advantageous bid method.**

The value of the invitations for tenders increased by about 11% compared to 2019, while the percentage of the value of the public invitations to tender with the most economically advantageous bid method was slightly up on the previous year: 85.8% in 2020 compared to 84.3% in 2019. However, this percentage is lower than 2018 in accordance with the regulatory procedures which came into force in 2019.

The **average score assigned to the sustainability aspects** came to **41.7** (+20% compared to 2019).

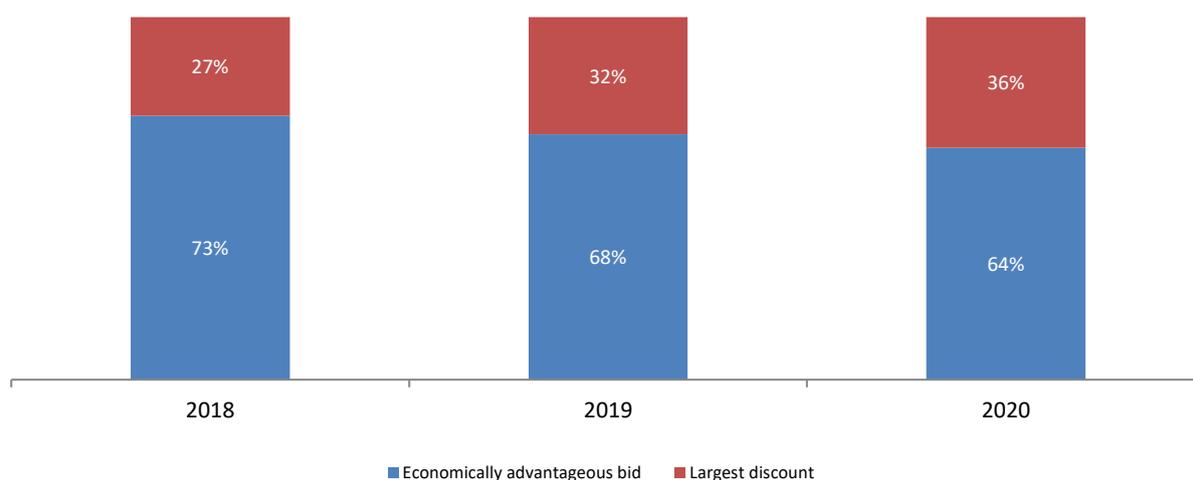
In 2020, 28 public tender invitations were issued with awarding to the lowest price for around Euro 97 million, equal to 14% of the total value of the public tender invitations issued in the year. Furthermore, three qualification system public tenders were held, which were not included in the total: the legislation in fact requires that the tender amount and the award method be defined as and when in the subsequent negotiation procedures.

Total awards adopting the most economically advantageous bid method

	2018	2019	2020
Value of the total awards to which the most economically advantageous bid award method is applicable (millions of Euro)	788.4	844.9	1,043.0
% of the value of the awards adopting the most economically advantageous bid method	72.8%	67.7%	63.9%
% of the value of the awards adopting the most economically advantageous bid method with sustainability criteria	95.4%	91.4%	96.3%
% of the value of the awards adopting the most economically advantageous bid method relating to the circularity criteria	-	5.7%	12.5%
Average score assigned to the sustainability aspects in the awards adopting the most economically advantageous bid method	31.8	34.4	40.6
of which: Average score assigned to the circularity aspects in the awards adopting the most economically advantageous bid method	-	1.8	8.5

Extending the analysis to all the awards and not just to the public tenders, at Group level in 2020 **64% of the awards envisaged the most economically advantageous bid award method**. Again at Group level, **96.3%** of the value of the awards with the most economically advantageous bid method was assigned in 2020 using the sustainability criteria (91.4% in 2019). Criteria relating to the circularity aspects were provided for in over 90% of the new tenders using the most economically advantageous bid method, and it is estimated that the value of the awards with circularity aspects stands at 12.5% (about Euro 83 million) of the value of the tenders assigned in 2020 (in 2019, the figure stood at 5.7%, about Euro 32 million).

Total awards with economically advantageous bid method

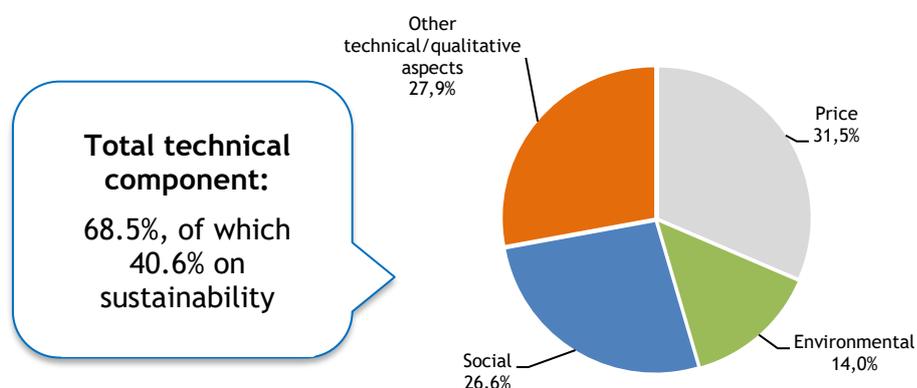


With regard to orders and contracts awarded during 2020 via the most economically advantageous bid award method, the average score assigned to the technical component was 68.5 points out of 100 (approximately +3% compared to 2019): of which **40.6 points relating to sustainability criteria (14.0**

pertaining to environmental aspects and 26.6 to social aspects) revealing a change of +6.2 points on average assigned to sustainability criteria with respect to 2019. With regard to social sustainability, the average score was stable compared to 2019 (+0.3 points), with a significant increase in environmental sustainability (+6 points). This increase was substantially due to the further enhancement of the procurement policies in terms of circularity and environmental criteria. Of the 68.5 average points reserved to the technical component, 8.5 have elements of circularity (+6.3 points compared to 2019).

Excluding AcegasApsAmga and Marche Multiservizi the average score assigned to the sustainability criteria came to 40.0 points (+4.4 points with respect to 2019), of which 8.8 have circularity criteria. In AcegasApsAmga, these values amounted to 44.1 points (+19.1 compared to 2019), of which 6.7 relating to circularity criteria, while in Marche Multiservizi, the value amounts to 25.3 (+9.7 compared to 2019) of which 2.3 for the circularity criteria. Please refer to the case study in this chapter for more information on the awards that meet the circular economy principles.

Total awards adopting the most economically advantageous bid method: scores assigned to the various components (weighted average on the amounts) (2020)



The Group sets itself the objective of continuing to assign a **relevant score to the environmental and social sustainability** aspects in the tenders held with the most economically advantageous bid method.

With regard to the importance and significance assigned to sustainability criteria when assessing the bids, the following tenders awarded in 2020 are indicated:

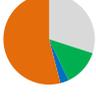
Type	Description	Area	Amount (millions of Euro)	Duration (years)	Technical component	Sustainability score
Restricted procedure public tender	Maintenance service at the Herambiente waste treatment plants	ER	65.6	4	70 	Environmental (6, of which 6 on circularity): <u>Iso 50001</u> and <u>Iso 14001</u> Social (49): injury prevention trend, Prevention and Protection Service Managers' visits at plants, health and safety training, lost time injury trend, visits to plants, Iso 45001 and Sa 8000 Other technical aspects (15)

Type	Description	Area	Amount (millions of Euro)	Duration (years)	Technical component	Sustainability score
Open procedure public tender	Work on networks and plants for the water, sewerage, gas and district heating services	ER	60.2	4	70 	Environmental (16, of which 14 on circularity): emissions by vehicles used, <u>use of electrical vehicles, separate waste collection at worksites, use of secondary raw materials at worksites, commitment to reuse excavated soil, Iso 14001</u> Social (35): fire-fighting and first aid training, possession of requirements for environments of suspected pollution and surrounding areas, staff trained in asbestos, legality rating, lost time injury trend, Iso 45001 and Sa 8000 Other technical aspects (19)
Restricted procedure public tender	Sweeping and waste collection service in tourist areas and historical centres, monitoring and maintenance of waste collection centres in the local area in the Province of Rimini	ER	32.0	2	70 	Environmental (12, of which 4 on circularity): age and environmental impact of vehicles, <u>number of electric vehicles, Iso 14001</u> Social (32): hiring employees facing social hardship, legality rating, Iso 45001 and Sa 8000 Other technical aspects (26)
Private tender	Work to bring the waste incineration line up to standard at the waste collection centre in Baiona (Ra)	ER	23.5	2	70 	Environmental (32, of which 32 on circularity): <u>CO and HCl concentration in the flue gases, % TOC in the slag, electric power absorption in the engine, chemical reagent and active carbon consumption, mercury abatement efficiency in the flue gases</u> Other technical aspects (38)
Open procedure tender	Work to connect users to water, gas and sewerage plants	ER	23.2	4	70 	Environmental (9, of which 2 on circularity): emissions from vehicles used, <u>Iso 14001</u> Social (45): fire-fighting and first aid training, possession of requirements for environments of suspected pollution and surrounding areas, legality rating, lost time injury trend, Iso 45001 and Sa 8000 Other technical aspects (16)
Open procedure tender	Internal canteen and management of bar service in the local areas of Emilia-Romagna and Tuscany	ER	21.6	5	70 	Environmental (19, of which 16 on circularity): <u>Iso 14064, Iso 14001, use of organic products, safeguarding fish species, recycling used oils</u> Social (18): confirmation of foods used, health and safety training, meals for coeliacs and diabetics, exotic fruit from fair-trade trading, Iso 45001 Other technical aspects (33)

Type	Description	Area	Amount (millions of Euro)	Duration (years)	Technical component	Sustainability score
Restricted procedure	Waste management services in the municipalities of Padua, Saonara and Noventa Padovana	T	17.5	4	70 	Environmental (13, of which 7 on circularity): average age of vehicles, <u>environmental impact of vehicles and use of fuels with reduced environmental impact</u> , environmental awareness-raising projects, <u>Iso 50001</u> Social (30): Hiring and training of employees facing social hardship, lost time injury trend, Ohsas 18001 and Sa 8000 Other technical aspects (27)
Restricted procedure	Work to build, complete and expand the treatment plant in Cà Nordio in Padua	T	16.3	2	70 	Environmental (14, of which 9 on circularity): <u>optimisation of efficiency and quality of depuration</u> , energy efficiency and reduction of use costs, <u>energy, product and material recycling solutions</u> Social (10): reduction of acoustic and olfactory impact, reduction of interference, improvements on the Security and Coordination Plan, lost time injury trend Other technical aspects (46)
Restricted procedure	Waste management services in the municipalities of Padua, Saonara and Noventa Padovana	T	15.3	4	70 	Environmental (23, of which 1 on circularity): average age of vehicles, environmental impact of vehicles, environmental awareness-raising projects, provision of separate waste collection bins, environmental issue training, <u>Iso 50001</u> Social (9): fire-fighting and first aid training, lost time injury trend, Ohsas 18001 and Sa 8000 Other technical aspects (38)
Restricted procedure public tender	Waste collection and transport service and services connected to the sweeping service in the Municipality of Ferrara	ER	12.8	2	70 	Environmental (22): age and environmental impact of vehicles Social (9): legality rating, Iso 45001 and Sa 8000 Other technical aspects (39)
Open procedure public tender	Massive replacement and enrolment of water meters service	ER - T	11.3	4	70 	Environmental (14, of which 8 on circularity): cataloguing vehicles, <u>possession of vehicles with reduced environmental impact</u> , <u>Iso 14001</u> Social (12): lost time injury trend, Iso 45001 e Sa 8000 Other technical aspects (44)

Type	Description	Area	Amount (millions of Euro)	Duration (years)	Technical component	Sustainability score
Open procedure public tender	Work to build or change the connection overhead sections of water and gas systems	ER	9.6	4	70 	Environmental (13, of which 8 on circularity): emissions from vehicles used, <u>use of electric vehicles Iso 14001</u> Social (41): fire-fighting, first aid training and qualification of the person in charge, lost time injury trend, Iso 45001 and Sa 8000 Other technical aspects (16)
Open procedure public tender	Work to renovate buildings in Bologna	ER	8.5	3	70 	Environmental (12, of which 12 on circularity): <u>installation of solar screens and ventilated roof, increase in heat recovery efficiency, use of recycled materials</u> Social (18): installation of quality control and air circulation system, humidifier and anti-dust/anti-noise barriers Other technical aspects (40)
Restricted procedure	Environmental services in the area of the Municipality of Trieste - Altipiano area	T	7.4	5	70 	Environmental (18, of which 12 on circularity): average age of vehicles, <u>environmental impact of vehicles and use of fuels with reduced environmental impact</u> Social (32): Hiring employees facing social hardship, lost time injury trend, Ohsas 18001 and Sa 8000 Other technical aspects (20)
Open procedure public tender	Tyre replacement, repair and maintenance service	ER	6.5	4	70 	Environmental (43, of which 18 on circularity): minimum guaranteed mileage, <u>reuse/recovery/recycling chain certification, eco-drive training, EU production, Iso 14001</u> Social (22): tyre approval, Iso 45001 Other technical aspects (5)
Open procedure public tender	Water, gas, lpg, district heating and electricity meter reading service	ER - T	6.5	4	70 	Environmental (19, of which 19 on circularity): <u>use of electric vehicles Iso 14001</u> Social (31): road sign training and qualification of the person in charge, number of female staff with meter reading tasks, lost time injury trend, Iso 45001 and Sa 8000 Other technical aspects (20)

Type	Description	Area	Amount (millions of Euro)	Duration (years)	Technical component	Sustainability score
Negotiated procedure	Cleaning and maintenance services for wastewater treatment plants and other plant/offices of AcegasApsAmga Spa and Hestambiente Srl and for the concrete pump and disinfection service and on call extraordinary interventions to be carried out as an emergency service in the local area managed by the companies belonging to the Hera Group	ER - T	6.2	3	70 	Environmental (11, of which 2 on circularity): <u>environmental impact from use of vehicles, Iso 14001</u> Social (35): fire-fighting, road sign, first aid training and qualification of person in charge, employees with requirements on the issue of environments of suspected pollution and surrounding areas, lost time injury trend, legality rating, Ohsas 18001 and Sa 8000 Other technical aspects (24)
Negotiated procedure	Realisation of connections, extensions/improvements and/or small movements of networks and plants for water, gas and sewage services in the local areas managed by AcegasApsAmga Spa	T	3.9	3	70 	Environmental (6, of which 2 on circularity): enrolment in the national register of environmental operators, <u>Iso 14001</u> Social (16): first aid training, employees with requirements on the issue of environments of suspected pollution and surrounding areas, Ohsas 18001 and Sa 8000 Other technical aspects (48)
Negotiated procedure	Additional activity service on natural gas, water and electricity meters with respect to the services provided by AcegasApsAmga Spa	T	3.6	4	70 	Environmental (11, of which 11 on circularity): <u>impact from use of vehicles and use of low environmental impact fuels, Iso 14001</u> Social (23): fire-fighting and first aid training, lost time injury trend, legality rating, Ohsas 18001 and Sa 8000 Other technical aspects (36)
Negotiated procedure	Massive replacement and enrolment/affiliation service on the gas meters related to the services provided by AcegasApsAmga Spa	T	3.5	2	70 	Environmental (11, of which 2 on circularity): <u>impact from use of vehicles, Iso 14001</u> Social (23): fire-fighting and first aid training, lost time injury trend, legality rating, Ohsas 18001 and Sa 8000 Other technical aspects (36)
Restricted procedure tender	Waste treatment and optimising service at the selection and recovery plant in Ferrara	ER	3.3	4	70 	Environmental (5, of which 3 on circularity): <u>Iso 14001</u> Social (44): lost time injury trend, legality rating, number of audits on safety, cleaning of clothing and vehicles, Iso 45001 and Sa 8000 Other technical aspects (21)

Type	Description	Area	Amount (millions of Euro)	Duration (years)	Technical component	Sustainability score
Open procedure public tender	Maintenance of the volume conversion devices of the gas meters	ER	2.2	2	70 	Environmental (28, of which 28 on circularity): emissions from vehicles used, <u>use of electric vehicles, extension of guarantee, Iso 14001</u> Social (17): lost time injury trend, Iso 45001 e Sa 8000 Other technical aspects (25)
Private tender	Renovation work on buildings in the Municipality of Castenaso	ER	1.9	1	70 	Environmental (12, of which 12 on circularity): <u>installation of solar screens, supply of heat recovery unit, integration of air conditioning unit regulation system</u> Social (25): improvements to acoustic comfort, installation of anti-dust/anti-noise barriers Other technical aspects (33)
Restricted procedure public tender	Supply and installation of four underground drop-off points in the Municipality of Rimini	ER	1.4	1	70 	Environmental (13, of which 13 on circularity): <u>remote equipment monitoring, Iso 14001</u> Social (3): Iso 45001 Other technical aspects (54)

The pie charts in the table show the points assigned to the price in grey, those assigned to environmental sustainability in green, those to social sustainability in blue and those to other technical aspects forming part of the technical components in orange. The circularity score and the criteria used have been highlighted in the "Sustainability score" column.

In the **private tenders** the Hera Group invited an average of 21 suppliers for each set of negotiations, confirming the approach of the Group based on an open and transparent competition between the suppliers on a consistent basis with the guidelines of current legislation.

Contract management

The Guidelines on Procurement, in accordance with the Group's Code of Ethics and the organisational model pursuant to Italian Legislative Decree no. 231/2001 and the related "**procurement**" **protocol** determine the underlying principles of the Hera Group's procurement activities in the event of acquisition of goods, services and work necessary for the performance of activities carried out under free market conditions and subject to public works contracts (Code of Public Contracts Italian Legislative Decree no. 50/2016, as amended).

It should be noted that in 2019 Hera Spa obtained Iso 37001:2016 certification, which involves the adoption of a management system aimed at **preventing and dealing with possible cases of corruption** and **furthering an ethical corporate culture**. This certification has led to a number of amendments to the contract general terms adopted in the tender procedures, aimed at making this management system operational from a procurement standpoint. In particular, during its meeting on 25 September 2019, the Board of Directors of Hera Spa adopted the Corruption prevention model integrated into the Organisation and Management Model pursuant to Italian Legislative Decree no. 231/2001, whose foundation lies in the principles and values expressed in the Code of Ethics and the Quality and Sustainability Policy adopted by the Hera Group.

The use of subcontracts

With regard to subcontracting and the like, the **procedure** introduced was further consolidated in 2020 and saw the full compliance of AcegasApsAmga as well, but not Marche Multiservizi.

The **authorisation to subcontract** makes the works directors and the company contact individuals responsible for document checking activities, and Vendor rating and assurance of Hera Spa responsible of the process validation, the checking of the social security contribution regularity, the control of the list of qualified suppliers and their rating, the search of the Anac electronic records and, if necessary, the request for anti-Mafia information from the Prefecture with direct access to the National bank of anti-Mafia data, as well as the request of the Criminal Records Office. All the documentation regarding the request, checking and authorisation has been fully **standardised at Group level** and reviewed with updates on the reference legislation, by the Group Regulations and Tender unit. All the documentation is made available in the reserved document area of the supplier portal, to the companies and via the Company Information Portal, to all the employees.

The fulfilments necessary for **monitoring the activities of the sub-contractor companies at the worksite have been further completed** (supplier monitoring check list), together with the obligations for permitting easy, correct and accurate monthly administrative reporting, inclusive of the accurate checking of the payments to employees used in the execution of the sub-contracting.

The Group **standard specifications**, on a consistent basis with the reference legislation, envisage that the contractor pays the subcontractors and the like and that the former provides the works director, on request, with suitable proof of payment with regard to the various Progress Reports (SALs) and/or Performance Certification Forms (MAPs) issued. In the absence of proof, the works director/company contractual contact individual informs the competent administration unit of the suspension of the payment of the quotas not indicated in the subsequent SALs/MAPs until payments are up-to-date. This is an alternative method to the direct payment method of the subcontractors and can be activated directly at the beginning of the contractual relationship for the micro/small enterprises as provided for by law, or during the work activities for the other cases.

In 2020 almost **Euro 46 million** was subcontracted out, **equal to 5.3%** of the amount of work and services outsourced by the Group, while the amounts disclosed for the subcontracting handled came to slightly more than Euro 15 million (1.8%).

Times of payment as per contract

The **contractual average payment times** of the supplies decreased progressively standing at the end of 2020 at 59 days (65 days in 2019 and 79 days in 2018), in accordance with the contractual standard which defines average payment times of 60 days for the Hera Group.

The monitoring of work accidents at suppliers

So as to have a complete picture of the lost time injury impact relating to the activities carried out directly and indirectly, as from 2009 Hera has set itself the objective of monitoring the lost time injury indices for the main suppliers of work and services. Their specifications and tender contracts envisage the forwarding of the "Annual summary of the lost time injuries occurring care of the contracting companies during the performance of activities on behalf of Hera" form, via which each supplier is required to **communicate its lost time injury indices** annually or at the end of the contractual period. As from 2015, this phase for the collation and analysis of the data was computerised using the Sap Srm platform.

Monitoring of supplier lost time injuries

	2018	2019	2020
Value of supplies of services and work (millions of Euro)	745.2	826.9	922.8
Value ordered from suppliers under monitoring (millions of Euro)	652.2	726.0	819.8
Value ordered from suppliers under monitoring (%)	88%	88%	89%
Value ordered from suppliers who have forwarded the monitoring (millions of Euro)	491.5	560.9	650.1
Value ordered from suppliers who have forwarded the monitoring on the value ordered from suppliers involved in the monitoring (%)	75%	77%	79%

A selection of suppliers was made with product groups relating to activities with little significance from the standpoint of safety; the related amounts were excluded from that consumed and therefore from the calculation base for the objective fixed at 75%. In any case, the contractual obligation for the forwarding of the lost time injury data does not lapse for these suppliers.

In 2020, **1,666 suppliers responded to the survey** (1,352 in 2019) for a total of Euro 650 million in contract value (Euro 561 million in 2019), equal to 79% of the value of the supplies of services and works involved in the lost time injury monitoring (the objective had been set at 75%). Overall, **288 lost time injuries were monitored**; the calculation of the data identified an average frequency index of 22.3 and a severity index of 0.52, both down with respect to the previous year (the 2019 values were 27.9 and 0.66 respectively).

An analysis of the data relating to the **most significant products from a lost time injury standpoint** shows the following indices: for the works category ("general works") the frequency index is 14.97 and the severity index is 0.56 (in 2019 the indices were 14.7 and 0.52 respectively), while for the waste management services category, the frequency index is 34.79 and the severity index is 0.84 (in 2019 the indices were FI 42.95 and SI 0.95).

Supplier relations

In 2020, Hera took part in a number of **meetings with the main trade associations** such as a meeting with the national Association of Construction Firms (Ance). A report on the impact of the Hera Group on local businesses was presented and the functioning of the e-procurement platform was illustrated during these meetings. Additionally, during the healthcare emergency period, **close dialogue was maintained with the main suppliers** for the most critical supplies in order to constantly monitor the situation and ensure the essential services as best as possible.

In conclusion, as usual, at the end of the year the customary **meetings were held with representatives of social cooperatives** working in the areas served by the Hera Group, to discuss the results achieved in 2020. On the basis of the analysis of the data collected, the work group active in the meetings confirmed the validity of the procedures defined for monitoring. The encounters also pertained to the ways to promote employment projects, illustrated in the section "Economic development and social inclusion".

Litigation with suppliers

[307-1] [419-1]

The number of disputes fell: at the end of 2020, there were 24 disputes pending with the suppliers, compared with 28 at the end of 2019. There were 16 disputes started in 2020, mainly concerning tender aspects.

Case study

The supplier monitoring plan with a focus on social responsibility

During 2020, **more than 50 more questionnaires for Corporate Social Responsibility assessment** were further received from suppliers deemed as critical in terms of activities and contractual amounts. The documents were examined and steps were taken to request clarification and additions for incomplete or missing parts. Furthermore, a total of 218 disclosure measures on the legislation were reported on, by the companies, vis-à-vis their workers.

In addition, in 2020, **four audits were carried out with a focus on social responsibility**, all at the suppliers' premises: in several cases, specific audits were necessary to check that the agreed improvement process had actually started and that corrective actions had been taken. **16 additional audits** were carried out directly at the Hera Group worksites, jointly with the Quality, Safety & Environment Department of Hera and Herambiente. The audits at the premises of suppliers were carried out by **certified external personnel with references**, selected by means of private negotiation, so as to ensure a transparent and independent process adopted by the Group.

These monitoring activities supplement the periodic checks of the company contract contact individuals, also with regard to the correct handling of subcontracting and the like, where present.

The circular economy in the supply chain

In 2019, the Hera Group started up a project aimed at managing the transition of the Group purchase models to reflect the principles of the circular economy.

In the first stage of the project, based on application of the Resolve model proposed by the **Ellen MacArthur Foundation** which defines 6 areas of action for the transition towards the circular economy, all the types of goods and services purchased by the Group were analysed and for each of them the current level of maturity of the "circularity" in the selection of suppliers was defined (measured on the basis of negotiating power, maturity of demand, the market and regulatory and sector constraints) along with the future potential (measured on the actual economic weight of the sphere of action on the total cost of the supply), also taking into account the complexity of implementing any action to be taken. The analysis of the spending from a circular economy standpoint, also carried out with the involvement of the operational structures, showed up 43 types of purchase product for which "circular" purchases already exist or can potentially be activated, indicated that existing projects should be mapped and certain pilot projects for 2020 be defined; the management of the worksites and the purchase of meters, tyres and plastic products to collect waste (bags and small format containers). At the same time, a reporting model was developed to promptly monitor the impact of the projects started up: in accordance with what has already been done to monitor the use of sustainability criteria in awards, the technical criteria relating to the principles of the circular economy were mapped.

In the second stage of the project, started in 2020, the first objective was to define common guidelines for the whole Group on the "circular purchases" and to expand the reporting of the circularity also to tenders awarded with the lowest price bid method.

To that end, the Procurement and Tenders Department took part in a working group organised by the **Global Compact Network Italia Foundation** (national organisation of the UN Global Compact committed to promoting the Global Sustainable Development Goals - 2030 SDGs) in association with the University S. Anna di Pisa, with the aim of **defining the guidelines for circular procurement**. The Hera Group took part in the working group along with numerous companies from the energy and environmental sector. At the end of the work, guidelines were drawn up that the Hera Group incorporated by adding to the operational instruction in effect since 2013 that identifies the sustainability criteria to award tenders for works or

services and supplies. More specifically, having reaffirmed the procurement activity principles (with respect to current legislation on tenders, alignment of the entire supply chain to the goals, equality of treatment of suppliers, transparency and traceability of purchases, free competition and rotation of suppliers), four key principles relating to circularity were identified: eco-efficiency, dematerialisation, renewability and recyclability. These principles can be organised into **technical reward criteria** during the tenders awarded with the most economically advantageous bid method, or organised into specific technical specifications when planning the requirements. In 2020, reporting continued on the tenders awarded with the most economically advantageous bid method and it was also started up as a pilot project for certain tenders awarded with the lowest price bid method.

From an operational standpoint, numerous other tenders with elements relating to circularity were awarded in 2020 in addition to the tenders forming part of the pilot projects identified in 2019 (management of worksites, supply of meters, tyres and plastic products for waste collection).

With regard to the reporting of the technical reward criteria provided for in the invitation to take part in the main tenders with the tender being awarded with the most economically advantageous bid method (including those relating to the management of worksites in network areas and the supply of tyres as provided in the pilot project), please refer to the section in this chapter that refers to supplier selection.

The main tenders awarded with the lowest price bid method are set out below (including the purchase of meters and plastic products for waste collection as provided in the pilot project) with circularity elements provided for in technical specifications:

- In the restricted procedure for the supply of drinking water meters, with a starting price of the tender of about Euro 17.5 million, the turbine meters and Woltmann drum meters are made of at least 60% and 30% of recycled material of the whole weight respectively.
- In the open procedure for the supply of polyethylene bags for waste collection, with a starting price for the tender of Euro 1.2 million, the raw material of the bags had to be made by Alilplast. The circular economy project was organised as follows:
 - Hera collects the plastic packaging in the local areas on behalf of the Municipalities, distributing recycled polyethylene bags to the users;
 - The plastic collected is given by Hera to plants identified by an agreement entered into with Corepla;
 - Aliplast purchases polyethylene packaging waste with part of it being transformed into reels created for the subsequent production of polyethylene bags for waste collection, through various processing stages.
 - In order to collect different portions of municipal waste, including plastic packaging, Hera purchases recycled polyethylene bags for subsequent distribution to residential and non-residential users.
- In the procedure initiated for the supply of 120/240/360 litre polyethylene containers for waste collection, with a tender starting price of Euro 7.8 million, the technical specifications provide for compliance with prevailing laws (Uni En 840) and the minimum environmental criteria for urban furniture (Decree of the Italian Ministry of the Environment ref. 4.3.1 Italian Ministerial Decree 58 of 13 February 2014) with regard to at least 30% of the raw materials having to be made with recycled materials.
- In the procedure initiated for the supply of 1,700 litre containers with the sheet metal tanks and polyethylene covers (tender starting price of Euro 4.2 million), requiring compliance with prevailing laws (Uni En 840) and the minimum environmental criteria for urban furniture (Decree of the Italian Ministry of the Environment ref. 4.3.1 Italian Ministerial Decree 58 of 13 February 2014) with regard to at least 30% of the raw materials having to be made with recycled materials.

- In the procedure opened for the award of the road containers for waste repair and regeneration service, with a tender starting price of Euro 1.5 million, the service was designed to aim to prolong the useful life of the bins, delaying the purchase of new ones.

By applying the new model of circularity reporting, it is estimated that the value of the awards with circularity criteria in the tenders awarded with the lowest price bid method in 2020 stood at about Euro 1.8 million, equal to about 1% of the total value.

As a whole, considering both the tenders awarded with the most economically advantageous bid method and the tenders awarded to the bids with the greatest discounts, **9% of the value** of the tenders awarded in 2020 **provided for circularity criteria**.

In 2021, the third stage of the project will start, and will aim to **extend to all the Hera Group purchases the circularity reporting with the lowest price bid method**.

Focus on shared value, area by area

Bologna

The key numbers of shared value

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
<p>Energy efficiency for households and businesses 27% of customers use energy efficiency services. 161 thousand.</p> <p>Green energy 21% of customers use electricity from renewable sources and gas with CO₂ emissions offsetting</p> <p>Emissions avoided 44 thousand tonnes of CO₂ avoided thanks to 113 energy efficiency measures in the area (Hera and other companies) from 2007 to date</p>	<p>Recycling 63% separate waste collection, of which 89% was recycled* 3% of municipal waste in landfills</p> <p>Reuse Euro 256 thousand pharmaceuticals that have not yet expired and 111 tonnes of bulky waste collected and reused</p> <p>Wastewater purification 100% of urban areas with >2,000 PE became compliant 70% of urban areas with 200-2,000 PE became compliant</p>	<p>Digitalisation 69% of the gas meters are already electronic</p> <p>Employment 2,652 employees in the Bologna area and 152 hires in 2020</p> <p>Social inclusion Euro 20 million value of bills paid in instalments, 18 thousand households are involved</p>

* Excluding green waste, figures for 2019

<p>CSV Investments A new sewer pipeline in Budrio</p> <p>The Budrio sewer network was equipped with a new pipeline, partly made of recycled PVC, with significant benefits for environmental quality. In addition, the crossing of the provincial road was achieved without open excavations.</p>	<p>CSV Investments Zola Predosa water network system upgraded</p> <p>By interconnecting the networks and laying more than 3 km of new pipelines, we enhanced the water service to the areas of Zola Predosa and neighbouring municipalities, with a population of approximately 70 thousand inhabitants. Interconnection ensures continuity of service even in the event of breakdowns or failures.</p>	<p>CSV Case Study “Da Chicco a Chicco” (from bean to bean): the collection of aluminium capsules is increasing in Bologna</p> <p>In Bologna, thanks to collaboration with the Hera Group, Nespresso’s “Da Chicco a Chicco” (from bean to bean), programme for the collection and recycling of used capsules is continuing to grow results. In 2019 alone, 38,660 kg of aluminium capsules were recovered in the city, up 61% compared to the previous year.</p>
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The bases and the organisational levers

<p>Economic value distributed to the Bologna area</p> <p>Euro 370 million, of which: 165 million workers 33 million shareholders 16 million PA 156 million suppliers</p> <p>1,218 jobs created (lead-on employment of suppliers)</p>	<p>A high-quality service... at a lower price. Customer satisfaction index in the Bologna area**: 73/100</p> <p>Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -14% compared to Italian average Euro 286 in Bologna, Italian average was 332</p> <p>Annual waste collection service expense for non-residential users*** -27% compared to Italian average Euro 10.20/m² for Bologna, Euro 14.06/m² for Italy</p>
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* 3 people in 100 m². Source Cittadinanzattiva ** Does not include the Imola-Faenza area where the customer satisfaction index was 73/100

*** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data from websites of the municipalities

Ferrara

The key numbers of shared value

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
<p>Energy efficiency for households and businesses 24% of customers use energy efficiency services. 37 thousand</p> <p>Green energy 21% of customers use electricity from renewable sources and gas with CO₂ emissions offsetting</p> <p>Emissions avoided 10 thousand tonnes of CO₂ avoided thanks to 28 energy efficiency measures in the area from 2007 to date</p>	<p>Recycling 88% separate waste collection, of which 85% was recycled* 0% of municipal waste in landfills</p> <p>Reuse 27 tonnes of bulky waste collected and re-used</p> <p>Wastewater purification 100% of urban areas with >2,000 PE became compliant 66% of urban areas with 200-2,000 PE became compliant</p>	<p>Digitalisation 50% of the gas meters installed are electronic</p> <p>Employment 477 employees in the Ferrara area and 29 hires in 2020</p> <p>Social inclusion Euro 8 million value of bills paid in instalments, eight thousand households involved</p>

* Excluding green waste, figures for 2019

<p>CSV Case Study</p> <p>Air Break to improve air quality Hera Group is one of the main partners of Air Break, a project designed to improve air quality presented by the Municipality of Ferrara and that won a Euro 5 million grant under the European Urban Innovative Actions programme. One of the initiatives carried out by Hera is the creation of a predictive model which, by processing data from various sensor networks and using a digital control panel, can provide a 72-hour forecast of air pollution trends.</p>	<p>CSV Case Study</p> <p>Ferrara still in first place For the second consecutive year, the 2020 report by Legambiente and Il Sole 24 Ore on the urban ecosystem ranks Ferrara first among provincial capitals in terms of percentage of separate waste collection. In 2019, with 86.2%, the city of Este does better than Pordenone (the only other city to have exceeded 86%) and Mantua.</p>	<p>CSV Investments</p> <p>Ferrara: Hera to manage the Casaglia geothermal power plant The Hera Group has acquired the plants for the cultivation of the Casaglia geothermal field in Ferrara. Controlling the extraction phase of geothermal energy will enhance the city's district heating service. Around 43% of Ferrara's district heating was supplied by geothermal energy: a renewable and completely clean energy that makes Ferrara's district heating system one of the greenest in Europe.</p>
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The bases and the organisational levers

<p>Economic value distributed to the Ferrara area:</p> <p>Euro 97 million, of which 31 million workers 4 million shareholders 9 million PA 53 million suppliers</p> <p>417 jobs created (lead-on employment of suppliers)</p>	<p>A high-quality service... at a lower price. customer satisfaction index in the Ferrara area: 73/100</p> <p>Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -24% compared to Italian average Euro 253 in Ferrara, the Italian average was Euro 332</p> <p>Annual waste collection service expense for non-residential users*** -25% compared to Italian average Euro 10.52/m² for Ferrara****, Euro 14.06/m² for Italy</p>
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* 3 people in 100 m². Source: Cittadinanzattiva

*** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data from websites of the municipalities

**** Considered as annual disposals of mixed waste amounting to 1,200 litres per hotel, 3,120 litres per restaurant, 9,360 litres for supermarkets and food industries

Forlì-Cesena

The key numbers of shared value

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
<p>Energy efficiency for households and businesses 25% of customers use energy efficiency services. 51 thousand</p> <p>Green energy 21% of customers use electricity from renewable sources and gas with CO₂ emissions offsetting</p> <p>Emissions avoided 21 thousand tonnes of CO₂ avoided thanks to 39 energy efficiency measures in the area (Hera and other companies) from 2007 to date</p>	<p>Recycling 62% separate waste collection, of which 87% was recycled* 0% of municipal waste in landfills</p> <p>Reuse Euro 21 thousand pharmaceuticals that have not yet expired and 55 tonnes of bulky waste collected and reused</p> <p>Wastewater purification 100% of urban areas with >2,000 PE became compliant 67% of urban areas with 200-2,000 PE became compliant</p>	<p>Digitalisation 79% of the gas meters are already electronic</p> <p>Employment 603 employees in the Forlì-Cesena area and 28 hires in 2020</p> <p>Social inclusion Euro 11 million value of bills paid in instalments, 11 thousand households are involved</p>

* Excluding green waste, figures for 2019

<p>CSV Investments</p> <p>Three construction sites to refurbish Forlì's gas networks The works, which began in 2020 at three sites, are part of a multi-year plan involving the gas distribution system and will involve total investments of more than Euro 50 million to replace 120 km of pipelines. It will be implemented by Inrete Distribuzione Energia and financed in part by Unica Reti, the company of the municipalities which owns the gas networks.</p>	<p>CSV Case Study</p> <p>New sewer restorations Thanks to an investment of more than Euro 1 million, restoration work has begun on the sewer restoration in Rio Eremo in Cesena. The work involves the construction of new pipelines, new connections and a pumping plant to convey the waste water to the existing network of Ponte Abbadesse and then to the central purification plant in Cesena.</p>	<p>Hera for energy efficiency at AVI.COOP Thanks to an investment of over Euro 1 million by Hera, the plant will increase the efficiency and sustainability of its production cycles, avoiding the emission of around 1,350 tonnes of CO₂ each year. The energy savings reach 15%, thanks to the system's high overall efficiency standards.</p>
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The bases and the organisational levers

<p>Economic value distributed to the Forlì-Cesena area, of which:</p> <p>Euro 127 million 37 million workers 8 million shareholders 16 million PA 66 million suppliers</p> <p>514 jobs created (lead-on employment of suppliers)</p>	<p>A high-quality service... at a lower price. Customer satisfaction index in the Forlì-Cesena area: 73/100</p> <p>Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -24% compared to Italian average Euro 253 in Cesena, the Italian average was 332</p> <p>Waste collection service expense for non-residential users** -54% compared to Italian average Euro 6.41/m² for Cesena, Euro 14.06/m² for Italy</p>
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* 3 people in 100 m². Source: Cittadinanzattiva

** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data from websites of the municipalities

Modena

The key numbers of shared value

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
<p>Energy efficiency for households and businesses 26% of customers use energy efficiency services. 98 thousand</p> <p>Green energy 19% of customers use electricity from renewable sources and gas with CO₂ emissions offsetting</p> <p>Emissions avoided 11 thousand tonnes of CO₂ avoided thanks to 65 energy efficiency measures in the area (Hera and other companies) from 2007 to date</p>	<p>Recycling 68% separate waste collection, of which 82% was recycled* 0% of municipal waste in landfills</p> <p>Reuse Euro 69 thousand pharmaceuticals that have not yet expired and 153 tonnes of bulky waste collected and reused</p> <p>Wastewater purification 100% of urban areas with >2,000 PE became compliant, 50% of urban areas with 200-2,000 PE became compliant</p>	<p>Digitalisation 60% of the gas meters are already electronic</p> <p>Employment 906 employees in the Modena area and 60 hires in 2020</p> <p>Social inclusion Euro 14 million value of bills paid in instalments, 13 thousand households are involved</p>

* Excluding green waste, figures for 2019

<p>CSV Investments Modenese Apennines: 70 km of completely renovated electricity grids In 2020, work began on renewing the electricity grids in the Modena Apennines: over the next four years, we will replace 70 kilometres of power lines, investing over Euro ten million to make Hera Group's infrastructure more resilient, and improve service quality and continuity.</p>	<p>CSV Case Study Sassuolo is greener thanks to the Più Alberi in Città (More Trees in the City) initiative The Sassuolo edition of Più Alberi in Città (More Trees in the City) has ended successfully. During the year – and despite the difficulties linked to the health emergency – the capital of the ceramic district achieved the objectives set for it and, thanks to more than 2,000 new users accessing the drop-off points, will plant fifty trees in 2021, to enrich the tree heritage of Vistarino Park, one of the city's green areas.</p>	<p>CSV Investments Modena, "anti-drought" water network backbones completed Thanks to almost 4 km of new pipelines, built in the municipality of Prignano, the connections among the water network infrastructures of the Modenese plain and Apennines has been further improved. The new "Secchia" backbone, already in operation, now joins the other two: "Giardini" and "Panaro". The aim of the interconnections between water networks is to increase the resilience of the network and decrease the risk of drought, particularly for municipalities in the Apennines.</p>
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The bases and the organisational levers

<p>Economic value distributed to the Modena area:</p> <p>Euro 156 million, of which 58 million workers 16 million shareholders 8 million PA 74 million suppliers</p> <p>574 jobs created (lead-on employment of suppliers)</p>	<p>A high-quality service... at a lower price. customer satisfaction index in the Modena area: 72/100</p> <p>Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -12% compared to Italian average Euro 293 in Modena, the Italian average was 332 Waste collection service expense for non-residential users** -31% compared to Italian average Euro 9.72/m² for Modena, Euro 14.06/m² for Italy</p>
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* 3 people in 100 m². Source: Cittadinanzattiva

** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data from websites of the municipalities

Padua

The key numbers of shared value

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
<p>Energy efficiency for households and businesses 7% of customers use energy efficiency services. 2 thousand</p> <p>Green energy 5% of customers use electricity from renewable sources and gas with CO₂ emissions offsetting</p> <p>Emissions avoided 2 thousand tonnes of CO₂ avoided thanks to energy efficiency measures in the area (AcegasApsAmga, ASE, Hera Luce and other companies) from 2015 to date</p>	<p>Recycling 63% separate waste collection, of which 91% was recycled* 0% of municipal waste in landfills</p> <p>Reuse 6 editions of the "Ecological Saturdays" to fight dumping bulky waste and promote the culture of reuse (13 tonnes of bulky waste collected)</p> <p>Wastewater purification 100% of urban areas >2,000 PE became compliant</p>	<p>Digitalisation 48% of the gas meters are already electronic</p> <p>Employment 597 employees in the Padua area and 30 hires in 2020</p> <p>Social inclusion Euro 2.5 million value of bills paid in instalments, 1.3 thousand households are involved</p>

* Excluding green waste, figures for 2019

<p>CSV Investments</p> <p>High-tech greenhouse for the Ca' Nordio treatment plant</p> <p>The innovative plant, the result of a Euro 400 thousand investment, drastically reduces the volume of sludge leaving the purification plant, by using solar energy. The benefit is twofold: it increases the possibility of reusing the sludge as an agricultural soil improver, and reduces the cost of the service to the benefit of residents.</p>	<p>CSV Case Study</p> <p>Intelligence distributed throughout the water network</p> <p>More than a thousand sensors are now operational on the Padua water network. The data they collect help the water system self-adjust to optimise distribution, enhancing supply continuity even in extreme conditions, and makes it easier to detect leaks.</p>	<p>Online bill to support Caritas</p> <p>Hera Group also raised funds for charity in AcegasApsAmga's service areas: AcegasApsAmga donated Euro 2 to Caritas Italia for each customer that chose electronic billing for their water. The donations were used to provide meals in Veneto and Friuli-Venezia Giulia.</p>
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The bases and the organisational levers

<p>Economic value distributed to the Padua area:</p> <p>Euro 86 million, of which 38 million workers 5 million shareholders 2 million PA 41 million suppliers</p> <p>322 jobs created (lead-on employment of suppliers)</p>	<p>A high-quality service... at a lower price. customer satisfaction index in the Padua area: 72/100</p> <p>Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -31% compared to Italian average Euro 228 in Padua, the Italian average was 332</p> <p>Waste collection service expense for non-residential users** -25% compared to Italian average Euro 10.57/m² for Padua, Euro 14.06/m² for Italy</p>
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* 3 people in 100 m². Source: Cittadinanzattiva

** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data from websites of the municipalities

Pesaro-Urbino

The key numbers of shared value

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
<p>Energy efficiency for households and businesses 19% of customers use energy efficiency services. 25 thousand</p> <p>Green energy 22% of customers use electricity from renewable sources and gas with CO₂ emissions offsetting</p> <p>Emissions avoided 5 thousand tonnes of CO₂ avoided thanks to 32 energy efficiency measures in the area (Marche Multiservizi) from 2007 to date</p>	<p>Recycling 71% separate waste collection, of which 84% was recycled* 31% of municipal waste in landfills</p> <p>119 thousand accesses to the 19 separate waste collection centres</p> <p>Wastewater purification 49.8% of urban areas >2,000 PE became compliant (100% by 2023)</p>	<p>Digitalisation 71% of the gas meters are electronic,</p> <p>Employment 540 workers in the Pesaro-Urbino area and 39 hires in 2020</p> <p>Social inclusion Euro 1 million value of bills paid in instalments, two thousand households involved</p>

* Excluding green waste, figures for 2019

CSV Investments	CSV Investments	CSV Case Study
<p>Expansion of the Colli al Metauro purification plant</p> <p>The project to upgrade the water purification plant in the municipality of Colli al Metauro has been approved, increasing its capacity from 5 thousand to 9 thousand population equivalents to meet the increased demand in the area. The use of new technologies will minimise the impact on the environment.</p>	<p>Biomethane from organic waste soon to be available in Pesaro</p> <p>A new composting and anaerobic biogas digestion plant will be used to recover the organic fraction from separate waste collection and from waste from the maintenance of green areas. Starting in 2023, the plant will produce 6 million m³ of biomethane per year and 28 thousand tonnes per year of high-quality compost.</p>	<p>Energy efficiency in Fermignano</p> <p>The energy re-qualification of the R&M station in Fermignano has been completed, optimising heat production and consequently reducing gas consumption and emissions into the atmosphere.</p>

The bases and the organisational levers

<p>Economic value distributed to the Pesaro-Urbino area:</p> <p>Euro 70 million, of which 33 million workers 9 million shareholders 6 million PA 22 million suppliers</p> <p>172 jobs created (lead-on employment of suppliers)</p>	<p>A high-quality service... at a lower price. customer satisfaction index in the Pesaro-Urbino area: 71/100*</p> <p>Average yearly expense for the waste service for a household** (Source: Cittadinanzattiva) -21% compared to Italian average Euro 264 in Pesaro, the Italian average was 332</p> <p>Annual waste collection service expense for non-residential users*** -46% compared to Italian average Euro 7.56/m² for Pesaro, Euro 14.06/m² for Italy</p>
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* Data for Hera Comm Marche

** 3 people in 100 m². Source: Cittadinanzattiva

*** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data from websites of the municipalities

Ravenna

The key numbers of shared value

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
<p>Energy efficiency for households and businesses 25% of customers use energy efficiency services. 61 thousand</p> <p>Green energy 22% of customers use electricity from renewable sources and gas with CO₂ emissions offsetting</p> <p>Emissions avoided 20 thousand tonnes of CO₂ avoided thanks to 39 energy efficiency measures in the area (Hera and other companies) from 2007 to date</p>	<p>Recycling 61% separate waste collection, of which 87% was recycled* 4% of municipal waste in landfills</p> <p>Reuse Euro 104 thousand pharmaceuticals that have not yet expired and 135 tonnes of bulky waste collected and reused</p> <p>Wastewater purification 100% of urban areas with >2,000 PE became compliant 82% of urban areas with 200-2,000 PE became compliant</p>	<p>Digitalisation 83% of the gas meters installed are electronic</p> <p>Employment 651 employees in the Ravenna area and 40 hires in 2020</p> <p>Social inclusion Euro 10 million value of bills paid in instalments, 10 thousand households are involved</p>

* Excluding green waste, figures for 2019

<p>CSV Investments Upgrading the networks at the Ravenna dockyard</p> <p>Work has started on the new sewer network in the Ravenna Darsena, to restore the Candiano canal. In addition to the construction of sewer pumping stations and new network sections, fibre optic cable carriers were also laid using trenchless technology. The whole project involves an investment of more than Euro 8 million, of which more than Euro 7 million are funded by the "Bando Periferie".</p>	<p>CSV Case Study "Bee Happy" relaunches home composting</p> <p>Hera has relaunched home composting by donating a box of seeds with some of the bees' favourite flowers to all residents who, by collecting the compost bin at the drop-off points in the province of Ravenna, have contributed to circular waste management. Through this initiative the company also supports "Bee Happy", the project dedicated to protecting bees and to the well-being of the ecosystem.</p>	<p>Work begins on the San Pietro in Vincoli drop-off point</p> <p>Work has begun on the construction of the new San Pietro in Vincoli drop-off point, the twenty-ninth in the province of Ravenna, and the tenth in the municipality. A total investment of around Euro 1 million to cover an area of over 6,800 square metres in the artisan business area.</p>
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The bases and the organisational levers

<p>Economic value distributed to the Ravenna area:</p> <p>Euro 162 million, of which 42 million workers 9 million shareholders 9 million PA 102 million suppliers</p> <p>791 jobs created (lead-on employment of suppliers)</p>	<p>A high-quality service... at a lower price. customer satisfaction index in the Ravenna area**: 72/100</p> <p>Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -26% compared to Italian average Euro 247 in Ravenna, the Italian average was 332</p> <p>Annual waste collection service expense for non-residential users*** -39% compared to Italian average Euro 8.57/m² for Ravenna, Euro 14.06/m² for Italy</p>
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* 3 people in 100 m². Source Cittadinanzattiva ** Does not include the Imola-Faenza area where the customer satisfaction index was 73/100

*** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data from websites of the municipalities

Rimini

The key numbers of shared value

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
<p>Energy efficiency for households and businesses</p> <p>25% of customers with energy efficiency services</p> <p>Green energy</p> <p>22% of customers use electricity from renewable sources and gas with CO₂ emissions offsetting</p> <p>Emissions avoided</p> <p>6 thousand tonnes of CO₂ avoided thanks to 22 energy efficiency measures in the area from 2007 to date</p>	<p>Recycling</p> <p>73% separate waste collection, of which 84% was recycled* 0% of municipal waste in landfills</p> <p>Reuse</p> <p>Euro 9 thousand of pharmaceuticals that have not yet expired and 20 tonnes of bulky waste collected and re-used</p> <p>Wastewater purification</p> <p>100% of urban areas with >2,000 PE became compliant 82% of urban areas with 200-2,000 PE became compliant</p>	<p>Digitalisation</p> <p>22% customers with electronic billing</p> <p>Employment</p> <p>528 employees in the Rimini area and 16 hires in 2020</p> <p>Social inclusion</p> <p>Euro 3 million value of bills paid in instalments, three thousand households involved</p>

* Excluding green waste, figures for 2019

<p>CSV Investments</p> <p>More and more Smarty bins in Rimini</p> <p>In several residential areas of Rimini, the street collection bins have been replaced with the new Hera Smarty containers, the innovative and smart bins with user identification and a waste measurement system to improve the quality of separate waste collection, and which can be accessed with the Carta Smeraldo.</p>	<p>CSV Case Study</p> <p>Occhio a cosa butti! (Watch what you throw away!) to protect the sea</p> <p>Last summer, in Rimini, we conducted an awareness campaign, sponsored by the Municipality, and designed by HeraLab to fight sea and beach pollution. Posters to online activities urged residents and tourists to behave sustainably and positively to avoid improperly disposing of household waste down the toilet and sink drains.</p>	<p>CSV Case Study</p> <p>From Israel to Santarcangelo di Romagna</p> <p>At Santarcangelo di Romagna we have conducted initial tests of a new Israeli technology which has the unique ability to repair pipes without excavation by sealing them from the inside, thus minimising inconvenience, especially when the situations are challenging or the pavement is valuable. The system injects a sealant through access points, upstream and downstream of the section to be repaired, quickly closing holes and cracks in the network.</p>
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The bases and the organisational levers

<p>Economic value distributed to the Rimini area:</p> <p>Euro 112 million, of which</p> <p>33 million workers</p> <p>6 million shareholders</p> <p>13 million PA</p> <p>60 million suppliers</p> <p>464 jobs created (lead-on employment of suppliers)</p>	<p>A high-quality service... at a lower price.</p> <p>Customer satisfaction index in the Rimini area: 70/100</p> <p>Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva)</p> <p>-14% compared to Italian average</p> <p>Euro 286 in Rimini, Italian average was 332</p> <p>Waste collection service expense for non-residential users**</p> <p>-4% compared to Italian average</p> <p>Euro 13.53/m² for Rimini, Euro 14.06/m² for Italy</p>
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* 3 people in 100 m². Source: Cittadinanzattiva

** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data from websites of the municipalities

Trieste, Udine, Gorizia

The key numbers of shared value

Pursuing carbon neutrality	Regenerating resources and closing the loop	Enabling resilience and innovating
<p>Energy efficiency for households and businesses 13% of customers use energy efficiency services. 50 thousand</p> <p>Green energy 11% of customers use electricity from renewable sources and gas with CO₂ emissions offsetting</p> <p>Emissions avoided 3 thousand tonnes of CO₂ avoided thanks to energy efficiency measures in the area (AcegasApsAmga, ASE, Hera Luce and other companies) from 2015 to date</p>	<p>Recycling 45% separate waste collection, of which 90% was recycled* 0% of municipal waste in landfills</p> <p>Reuse 4 editions of the "Ecological Saturdays" to fight dumping bulky waste and promote the culture of reuse (27.5 tonnes of bulky waste collected)</p> <p>Wastewater purification 100% of urban areas >2,000 PE became compliant 95% of urban areas with 200-2,000 PE became compliant</p>	<p>Digitalisation 58% of the gas meters installed are electronic</p> <p>Employment 1,099 workers in the area and 73 hires in 2020</p> <p>Social inclusion Euro 4 million value of bills paid in instalments, five thousand households involved</p>

* Excluding green waste, figures for 2019

CSV Investments	CSV Case Study	
<p>Modernisation of Trieste's gas network</p> <p>The resilience of Trieste's gas network increased thanks to the maxi plan to refurbish the grey cast iron pipelines: in 2020, approximately Euro 2 million will be invested to replace a further 4.5 km of network, further improving the quality of the gas service offered in the city.</p>	<p>Plant-based fluid for green energy</p> <p>The transformer serving the Gorizia power grid uses a soybean oil-based fluid as an insulating and cooling system. It does not require fossil fuels in any part of its life cycle and at its end-of-life it can become biodiesel fuel, completing the material circularity.</p>	<p>Preventing blackouts through predictive maintenance</p> <p>The new electricity grid monitoring plan uses predictive maintenance to identify the most vulnerable points. The project increases the resilience of the network: instead of acting when the fault occurs, it pre-empts it, thus avoiding the occurrence of blackouts.</p>

The bases and the organisational levers

<p>Economic value distributed to the Friuli-Venezia Giulia area:</p> <p>Euro 150 million, of which 86 million workers 11 million shareholders 9 million PA 44 million suppliers</p> <p>342 jobs created (lead-on employment of suppliers)</p>	<p>A high-quality service... at a lower price. customer satisfaction index in the Trieste area: 71/100 customer satisfaction index in the Udine area: 74/100</p> <p>Average yearly expense for the waste service for a household* (Source: Cittadinanzattiva) -4% compared to Italian average Euro 321 in Trieste, the Italian average was 332</p> <p>Waste collection service expense for non-residential users** -10% compared to Italian average Euro 12.60/m² for Trieste, Euro 14.06/m² for Italy</p>
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* 3 people in 100 m². Source: Cittadinanzattiva

** Hotel of 1,000 m², restaurant of 180 m², supermarket of 200 m², and food industry of 3,000 m². Source: Processing by Hera on data from websites of the municipalities

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Independent auditors' report
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HERA S.p.A.

**INDIPENDENT AUDITOR'S REPORT ON THE CONSOLIDATED NON-FINANCIAL DISCLOSURE
PURSUANT TO ARTICLE 3, PARAGRAPH 10, OF LEGISLATIVE DECREE 254/2016 AND ARTICLE 5
OF CONSOB REGULATION 20267 ADOPTED BY RESOLUTION OF JANUARY 18, 2018**

INDEPENDENT AUDITOR'S REPORT ON THE CONSOLIDATED NON-FINANCIAL DISCLOSURE PURSUANT TO ARTICLE 3, PARAGRAPH 10, OF LEGISLATIVE DECREE 254/2016 AND ARTICLE 5 OF THE CONSOB REGULATION 20267 ADOPTED BY RESOLUTION OF JANUARY 18, 2018

To the Board of Directors of

Hera S.p.A.

Pursuant to article 3, paragraph 10, of Legislative Decree no. 254 of 30 December 2016 (hereinafter the "Decree") and article 5 of CONSOB Regulation no. 20267/2018, we were appointed to carry out the limited assurance engagement on the consolidated non-financial disclosure of Hera S.p.A. and its subsidiaries (hereinafter the "Hera Group") as of and for the year ended 31 December 2020, in accordance with article 4 of the Decree and approved by the Board of Directors on 24 March 2021 (hereinafter the "NFD").

Responsibility of the Directors and the Board of Statutory Auditors for the NFD

The Directors are responsible for the preparation of the NFD in accordance with the requirements of Articles 3 and 4 of the Decree and the "Global Reporting Initiative Sustainability Reporting Standards" issued by GRI - Global Reporting Initiative (hereinafter "GRI Standards"), which they identified as the reporting standard.

The Directors are responsible, within the terms provided for by law, for that part of the internal control they deem necessary to ensure that the NFD is free from material misstatement, whether due to fraud or unintentional behaviours or events.

The Directors are responsible for identifying the content of the NFD, within the matters mentioned in Article 3, paragraph 1, of the Decree, considering the activities and characteristics of the Group and to the extent necessary to ensure the understanding of the Group's business, its trends, its results and related impacts.

The Directors are responsible for defining the business and organisational model of the Group and, with reference to the matters identified and reported in the NFD, for the policies adopted by the Group and for the identification and management of risks generated or faced by the Group.

The Board of Statutory Auditors is responsible for overseeing, in accordance with the law, the compliance with the Decree.

Auditor's Independence and Quality Control

We are independent in accordance with the principles of ethics and independence disclosed in the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which are based on the fundamental principles of integrity, objectivity, competence and professional diligence, confidentiality and professional behaviour. Our audit firm adopts the International Standard on Quality Control 1 (ISQC Italy 1) and, accordingly, maintains an overall quality control system, that includes processes and procedures for the compliance with ethical and professional standards and with applicable laws and regulations.

Auditor's Responsibility

We are responsible for expressing, on the basis of the work performed, a conclusion regarding the compliance of the NFD with the Decree and the GRI Standards. We conducted our engagement in accordance with the principle "International Standard on Assurance Engagements ISAE 3000 (Revised) - Assurance Engagements Other than Audits or Reviews of Historical Financial Information" (hereinafter "ISAE 3000 Revised"), issued by the International Auditing and Assurance Standards Board (IAASB) for limited assurance engagements. The standard requires that we plan and perform procedures to obtain a limited assurance that the NFD does not contain material errors. The procedures performed in a limited assurance engagement are less in scope than those performed in a reasonable assurance engagement in accordance with ISAE 3000 Revised ("reasonable assurance

engagement") and, consequently, do not provide us with a sufficient level of assurance to become aware of all significant facts and circumstances that could be identified in a reasonable assurance engagement.

The procedures performed on the NFD are based on our professional judgment and consisted of interviews, primarily with the company personnel responsible for the preparation of the NFD, in the analysis of documents, recalculations and other procedures aimed at obtaining evidence as appropriate.

In particular, we carried out the following procedures:

1. analysis of the relevant topics reported in the NFD relating to the activities and characteristics of the Group, in order to assess the reasonableness of the selection process used, in accordance with article 3 of the Decree, with the reporting standard adopted;
2. analysis and assessment of the criteria used to identify the consolidation area, to assess its compliance with the Decree;
3. comparing the economic and financial information reported in the NFD with the information reported in the Hera Group's Consolidated Financial Statements;
4. understanding of the following matters:
 - business and organisational model of the Group, with reference to the management of the topics specified by art. 3 of the Decree;
 - policies adopted by the Group with reference to the topics specified by art. 3 of the Decree, actual results, and related key performance indicators;
 - main risks generated or faced by the Group, with reference to the topics specified by art. 3 of the Decree.

With reference to such matters, we carried out some validation procedures on the information presented in the NFD and some controls, as described under point 5, letter a) below;

5. understanding of the processes underlying the preparation, collection and management of the qualitative and quantitative material information included in the NFD.

In particular, we held meetings and interviews with the management of Hera S.p.A. and with the personnel of Hera S.p.A., Hera Trading S.r.l., Inrete Distribuzione Energia S.p.A., Uniflotte S.r.l., Hera Comm S.r.l., Herambiente S.p.A., AcegasApsAmga S.p.A., Hera Luce S.r.l., Marche Multiservizi S.p.A. and we performed limited analysis and validation procedures, in order to collect information about the processes and procedures that support the collection, aggregation, processing and submission of non-financial information to the Department responsible for the preparation of the NFD.

Moreover, for significant information, considering the activities and characteristics of the Group:

- at parent company's and subsidiaries' level:
 - a) with reference to the qualitative information included in the NFD, and in particular to the business model, the policies adopted and the main risks, we carried out interviews and obtained supporting documentation to verify its consistency with the available evidence;
 - b) with reference to quantitative information, we performed analytical procedures and limited tests, in order to assess, on a sample basis, the consolidation of the information.
- for the following companies and sites, which we selected on the basis of their activities, their contribution to the performance indicators at consolidated level and their location, we held meetings remotely, during which we met local management and gathered supporting documentation regarding the compliance with procedures and calculation methods used for the key performance indicators: Hera S.p.A. Bologna and Modena offices, Granarolo dell'Emilia (BO), Imola (BO), Ravenna and Ferrara plants; Hera Trading S.r.l., Inrete Distribuzione Energia S.p.A., Uniflotte S.r.l., Hera Comm S.r.l. Bologna offices; Herambiente S.p.A. Bologna office and Granarolo dell'Emilia (BO), Ravenna and Rimini (FC) plants; AcegasApsAmga S.p.A. Trieste office and Padova plant; Marche Multiservizi S.p.A. Pesaro office and plant.

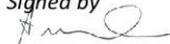
Conclusion

Based on the work performed, nothing has come to our attention that caused us to believe that the NFD of the Hera Group as of 31 December 2020 and for the year then ended has not been prepared, in all material respects, in compliance with articles 3 and 4 of the Decree and the GRI Standards.

Bologna, 6 April 2021

Audirevi S.p.A.

Signed by



Antonio Cocco
Partner

Annexes

Greenhouse gases: metrics and targets

Calculation criteria for GHG emissions

The Ministry of the Environment's coefficient (expressed in CO₂e) for natural gas consumption in stationary plants and the Defra 2020 coefficients (expressed in CO₂e) for fuel consumption for industrial purposes (diesel, LPG) and in vehicles (diesel, petrol, natural gas, LPG) were used to estimate Scope 1 emissions.

We estimated the greenhouse gas emissions from landfills by considering the methane contained in the biogas that comes out of the landfill body and the carbon dioxide resulting from the combustion of the captured biogas, and subtracting the amounts corresponding to the presence of biodegradable matter. For waste-to-energy plants, the estimate took into account the carbon dioxide resulting from the combustion of the non-biodegradable part of the waste and other fuels used in the plant. Leaks from the gas network were estimated and considered to be fully dispersed into the atmosphere.

The global warming potential (GWP) considered for methane was 28 (Source: IPCC's Fifth Assessment Report).

To estimate electricity consumption emissions (Scope 2), we used Ispra's "National Inventory Report 2020" coefficients for the location-based method and the AIB's "European Residual Mixes, Results for calendar year 2019" for the market-based method (expressed in CO₂e). The indicator does not include the Trieste trigeneration plant, the emissions of which can be estimated at 3.5% of the total.

The Defra 2020 coefficients (expressed in CO₂e) have been used to estimate Scope 3 emissions, except for emissions from the sales of electricity not from renewable sources, for which the coefficients of Ispra's "National Inventory Report 2020" have been used.

The Sales of natural gas item includes the sum of emissions due to production of the gas sold (upstream) and its use by customers (downstream). The item "sales of electricity" includes emissions from the consumption of fuels to generate electricity sold to customers (net of the share of renewable electricity). Emissions related to energy production and consumption include: (i) the production of the gas burned in the industrial cogeneration plants operated as a service by Hera Servizi Energia (upstream); (ii) the emissions produced by the Tamarete, Teverola and Sparanise joint venture plants (downstream); (iii) electricity grid losses (upstream); (iv) the extraction and transportation of fuels used to generate electricity consumed internally (upstream). Emissions from services provided include: (i) the extraction and transport of fuels consumed in the Group's vehicles; (ii) the use of vehicles by suppliers for waste collection; (iii) the use of vehicles by Herambiente for waste transportation; (iv) the recycling operations of glass, plastic, and paper sent for recovery; (iv) printing bills.

Indirect greenhouse gas emissions [305-3]

t CO ₂ e	2019	2020
Emissions from the purchase of goods and services	129	169
Emissions related to fuel and energy consumption	5,407,633	4,996,684
Emissions from the use of leased assets	85,192	75,489
Total Scope 3 emissions – upstream	5,492,953	5,072,342
Emissions from treatment of products sold	375,645	341,213
Emissions from the use of products and services sold	6,263,529	5,914,966
Emissions from investments made	363,280	284,494
Total Scope 3 emissions – downstream	7,002,454	6,540,672
Total indirect emissions – Scope 3	12,495,407	11,613,015

Emission indicators

Indicator	Unit	2019	2020	2024 target	2030 target
Direct emissions Scope 1	kt CO ₂ e	1,082.6	986.2		794
Scope 1 emissions under the Eu-Ets regime	%	15.0%	12.1%	22%*	27%*
Indirect emissions from consumption of electricity Scope 2 (market-based)	kt CO ₂ e	48.4	44.4	0	0
Emissions Scope 1 + 2	kt CO ₂ e	1,131.0	1,030.6	1,015	794
Indirect emissions Scope 3**	kt CO ₂ e	10,650.2	10,110.7	8,973	7,143
Total emissions – Scopes 1, 2, and 3**	kt CO₂e	11,781.2	11,141.3	9,988	7,937
Total emissions avoided	kt CO ₂ e	2,335.9	2,518.9		

*Forecast (not target). Indicator linked to risks.

**The Scope 3 value reported relates to the sale of natural gas (downstream) and electricity.

Intensity index of emissions

Indicator	Unit	2019	2020	2024 target	2030 target
Carbon intensity index of energy production (emissions from power plants/energy produced)	kg CO ₂ e/MWh	456	450	386	
Carbon intensity index of production value (Scope emissions 1 + 2/production value)	t CO ₂ e/Euro mln	152	137	118	
EBITDA carbon intensity index (Scope 1 + 2 emissions/EBITDA)	t CO ₂ e/Euro mln	1,042	918	780	
Carbon intensity index per resident served (Scope 1 + 2 emissions/resident)	t CO ₂ e/1000 resid.	261	244		
Carbon intensity index per customer (Scope 3 emissions/customer)	t CO ₂ e/1000 customers	-	5.2		

Quantitative measures that affect emissions

Indicator	Unit	2019	2020	2024 target	2030 target
ISO 50001 energy saving measures compared to internal consumption in 2013	toe and %	11,748 (5.1%)	13,745 (6.2%)	15,580 (7%)*	22,258 10%*
Internal consumption of electricity from renewable sources	%	82.8%	83.0%	100%	100%
Contracts at year-end with energy efficiency solutions of the total contracts (excluding safeguard, default and last resort contracts)	%	20.1%	20.2%**	42%	>45%
Electricity from renewable sources sold to free market and protected market customers (excluding safeguard)	%	29.1%	32.2%**	33%	>40%
Electricity from renewable sources sold to free market, protected market and safeguard customers	%	23.7%	27.2%**	28%	
Natural gas sold with CO ₂ offsets (% of the total sold volumes excluding volumes sold to wholesalers, default service, and last resort supply)	%	0.8%	4.4%**	17%	>20%
Electricity contracts at year-end with electricity from renewable sources [1] of the total electricity contracts (excluding safeguard contracts) (%)	%	19.8%	28.0%**		
Gas contracts at year-end with CO ₂ emissions offsetting [2] of the total gas contracts (excluding default and last resort contracts)	%	5.3%	9.6%**		
Electricity and gas contracts at year-end with “green” offers [1] [2] of the total electricity and gas contracts (excluding safeguard, default, and last resort contracts)	%	11.7%	16.6%**		
Installed renewable energy capacity	MW	155	156	166	186
Charging stations for electric transportation (public)	no.	43	104	>300	
Installed NexMeter smart meters of the total installed smart meters	qty and %	0.0 (0%)	>19.8 k (8.1%)	>300 k	

*The ISO 50001 energy saving measures for 2024 and 2030 compared to internal consumption in 2013 are characterised by both improvement targets and risk forecasts.

*The figure reported in 2020 is the Group figure; excluding the recently acquired companies (Estenergy, Amgas Blu, Ascotrade, Ascopiave Energia, Blue Meta, and Etra) to make the figure comparable with 2019: Renewable electricity sold = 31.9% (excluding protected market), 26.7% (including protected market); Natural gas sold with CO₂ emissions offsetting = 5.2%; Electricity contracts at year-end with renewable electricity = 31.5%; Gas contracts at year-end with CO₂ emissions offsetting = 13.3%; Electricity and gas contracts at year-end with “green” offers = 21.6%; Contracts at year-end with energy efficiency solutions = 27.4%.

[1] Pacchetto natura/Hera impronta zero/Business contracts.

[2] Hera impronta zero/Business contracts.

Economic and financial indicators

Indicator	Unit	2019	2020	2024 target	2030 target
EBITDA CSV Energy Drivers	Euro mln	85.5	136.6	185	
EBITDA CSV Energy Drivers – Promoting energy efficiency	Euro mln	52.2	85.0	117	

Indicator	Unit	2019	2020	2024 target	2030 target
EBITDA CSV Energy Drivers – Energy Transition and Renewables	Euro mln	33.3	51.6	68	
Share of BSC premium linked to CSV Energy Drivers	%	2%	4%		
Share of BSC premium linked to CSV Environment Drivers	%	8%	11%		
Revenue from energy production from coal or nuclear plants	Euro mln	0.0	0.0	0	0

SASB indicators

Waste management - Sustainability disclosure topics & Accounting metrics (version 2018-10)

Topic	Accounting metric		Unit of measure	Page
Greenhouse gas emissions	IF-WM-110a.1	(1) Gross global Scope 1 emissions, percentage covered under (2) emissions-limiting regulations, and (3) emissions-reporting regulations	Metric tons (t) CO ₂ e, Percentage (%)	73
	IF-WM-110a.3	Discussion of long-term and short-term strategy or plan to manage Scope 1 and lifecycle emissions, emissions reduction targets, and an analysis of performance against those targets	-	66
Fleet fuel management	IF-WM-110b.1	(1) Fleet fuel consumed, (2) percentage natural gas, (3) percentage renewable	Gigajoules (GJ), Percentage (%)	143
	IF-WM-110b.2	Percentage of alternative fuel vehicles in fleet	Percentage (%)	143
Air quality	IF-WM-120a.1	Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O), (2) SO _x , (3) volatile organic compounds (VOCs), and (4) hazardous air pollutants (HAPs)	Metric tons (t)	132
Management of leachate and hazardous waste	IF-WM-150a.1	(1) Total Toxic Release Inventory (TRI) releases, (2) percentage released to water	Metric tons (t), Percentage (%)	132
Labor practices	IF-WM-310a.1	Percentage of active workforce covered under collective bargaining agreements	Percentage (%)	340
	IF-WM-310a.2	(1) Number of work stoppages and (2) total days idle	Number, Days idle	345
Workforce health and safety	IF-WM-320a.1	(1) Total Recordable Incident Rate (TRIR), (2) fatality rate, and (3) Near Miss Frequency Rate (NMFR) for (a) direct employees and (b) contract employees	Rate	345
Recycling and resource recovery	IF-WM-420a.1	(1) Amount of waste incinerated, (2) percentage hazardous, (3) percentage used for energy recovery	Metric tons (t), Percentage (%)	101
	IF-WM-420a.2	Percentage of customers receiving (1) recycling and (2) composting services, by customer type	Percentage (%)	88
	IF-WM-420a.3	Amount of material (1) recycled, (2) composted, and (3) processed as waste-to-energy	Metric tons (t)	113
	IF-WM-420a.4	Amount of electronic waste collected, percentage recovered through recycling	Metric tons (t), Percentage (%)	88

Waste management - Activity metrics (version 2018-10)

Activity metric		Unit of measure	Page
IF-WM-000.B	Vehicle fleet size	Number	143
IF-WM-000.C	Number of: (1) landfills, (2) transfer stations, (3) recycling centers, (4) composting centers, (5) incinerators, and (6) all other facilities	Number	108

Water utilities and services - Sustainability disclosure topics & Accounting metrics (version 2018-10)

Topic	Accounting metric		Unit of measure	Page
Energy management	IF-WU-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Gigajoules (GJ), Percentage (%)	42
Distribution network efficiency	IF-WU-140a.2	Volume of non-revenue real water losses	Thousand cubic meters (m ³)	114
Water	IF-WU-240a.2	Typical monthly water bill for residential customers	Reporting currency (€)	302

Topic	Accounting metric		Unit of measure	Page
affordability and access		for 10 CCF of water delivered per month		
	IF-WU-240a.3	Number of residential customer water disconnections for non-payment, percentage reconnected within 30 days	Number, Percentage (%)	216
Drinking water quality	IF-WU-250a.1	Number of (1) acute health-based, (2) non-acute health-based, and (3) non-health-based drinking water violations	Number	120
	IF-WU-250a.2	Discussion of strategies to manage drinking water contaminants of emerging concern	-	120
End-use efficiency	IF-WU-420a.2	Customer water savings from efficiency measures, by market	Cubic meters (m ³)	118
Water supply resilience	IF-WU-440a.1	Total water sourced from regions with High or Extremely High Baseline Water Stress, percentage purchased from a third party	Thousand cubic meters (m ³), Percentage (%)	120
	IF-WU-440a.2	Volume of recycled water delivered to customers	Thousand cubic meters (m ³)	116
	IF-WU-440a.3	Discussion of strategies to manage risks associated with the quality and availability of water resources	-	120
Network resiliency and impacts of climate change	IF-WU-450a.4	Description of efforts to identify and manage risks and opportunities related to the impact of climate change on distribution and wastewater infrastructure	-	234

Water utilities and services - Activity metrics (version 2018-10)

Activity metric		Unit of measure	Page
IF-WU-000.B	Total water sourced, percentage by source type	Cubic meters (m ³), Percentage (%)	120
IF-WU-000.E	Length of (1) water mains and (2) sewer pipe	Kilometers (km)	126

Gas utilities and distributors - Sustainability disclosure topics & Accounting metrics (version 2018-10)

Topic	Accounting metric		Unit of measure	Page
Energy affordability	IF-GU-240a.2	Typical monthly gas bill for residential customers for (1) 50 MMBtu and (2) 100 MMBtu of gas delivered per year	Reporting currency (€)	299
	IF-GU-240a.3	Number of residential customer gas disconnections for non-payment, percentage reconnected within 30 days	Number, Percentage (%)	216
Integrity of gas delivery infrastructure	IF-GU-540a.3	Percentage of gas (1) transmission and (2) distribution pipelines inspected	Percentage (%) by length	314

Gas utilities and distributors - Activity metrics (version 2018-10)

Activity metric		Unit of measure	Page
IF-GU-000.C	Length of gas (1) transmission and (2) distribution pipelines	Kilometers (km)	314

Electric utilities and Power generators - Sustainability disclosure topics & Accounting metrics (version 2018-10)

Topic	Accounting metric		Unit of measure	Page
Greenhouse gas emissions and energy resource planning	IF-EU-110a.1	(1) Gross global Scope 1 emissions, percentage covered under (2) emissions-limiting regulations, and (3) emissions-reporting regulations	Metric tons (t) CO ₂ e, Percentage (%)	73
	IF-EU-110a.2	Greenhouse gas emissions associated with power deliveries	Metric tons (t) CO ₂ e	73
	IF-EU-110a.3	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	-	66
Air quality	IF-EU-120a.1	Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O), (2) SO _x , (3) particulate matter (PM ₁₀), (4) lead (Pb), and (5) mercury (Hg); percentage of each in or near areas of dense population	Metric tons (t), Percentage (%)	132
Water management	IF-EU-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Thousand cubic meters (m ³), Percentage (%)	120
Energy affordability	IF-EU-240a.2	Typical monthly electric bill for residential customers for (1) 500 kWh and (2) 1,000 kWh of electricity delivered per month	Reporting currency (€)	300
	IF-EU-240a.3	Number of residential customer electric disconnections for non-payment, percentage reconnected within 30 days	Number, Percentage (%)	216
Grid resiliency	IF-EU-550a.2	(1) System Average Interruption Duration Index (SAIDI), (2) System Average Interruption Frequency Index (SAIFI), and (3) Customer Average Interruption Duration Index (CAIDI), inclusive of major event days	Minutes, Number	312

Electric utilities and Power generators - Activity metrics (version 2018-10)

Activity metric		Unit of measure	Page
IF-EU-000.C	Length of transmission and distribution lines	Kilometers (km)	312
IF-EU-000.D	Total electricity generated, percentage by major energy source, percentage in regulated markets	Megawatt hours (MWh), Percentage (%)	58
IF-EU-000.E	Total wholesale electricity purchased	Megawatt hours (MWh)	62