



Sustainability Report
2018

endesa



Sustainability Report 2018



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and
CEO

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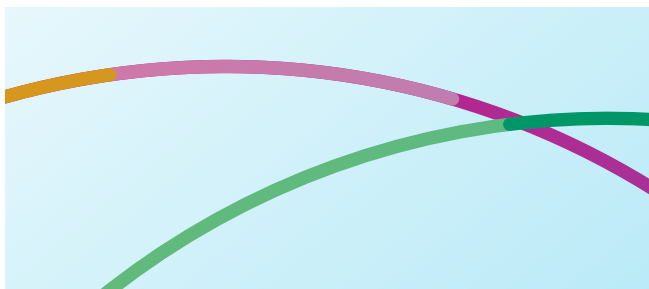
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Letter from the Chairman

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I have great pleasure in presenting the eighteenth Annual Sustainability Report shared by ENDESA with society as part of its commitment to transparency in the matter of sustainable development, which is the guiding principle of its corporate behaviour.

This firm and well-established commitment was recognised in 2018 by the City University of New York, which awarded ENDESA with the prize for the best sustainability report from among 629 reports prepared by the world's major companies. This award recognises the company's strong commitment to transparency and the highest sustainable development standards at international level.

In line with this increased commitment and performance with transparency and



and with the ethical conduct that shapes our activity, we have created a new tax reporting section on the ENDESA website where the current information on the company's behaviour in tax matters is reflected.

Furthermore, in 2018 ENDESA Foundation became the first corporate foundation of the IBEX 35 to be accredited in transparency by Lealtad Instituciones.

ENDESA unreservedly and with full conviction assumes the international benchmark guiding principles concerning sustainability promoted by the United Nations, as it is expected of a key agent in building a new sustainable global energy model.

It therefore maintains a firm commitment to the Ten Principles of the Global Compact, the Guiding Principles on Business and Human Rights, and to the Seventeen United Nations Sustainable Development Goals.

To this end, ENDESA has played an active role in the Spanish Global Compact Network, forming part of its Executive Committee, particularly concerning to the promotion of the United Nations Sustainable Development Goals and the Guiding Principles on Business and Human Rights.

With a view to honouring the commitments set forth in ENDESA's Human Rights Policy approved by the Board of Directors in 2013, and following the recommendations of the aforementioned Guiding Principles on Business and Human Rights, ENDESA developed a due diligence process in 2017 with a multi-year Action Plan, 90% of which was completed in 2018. The company envisages that the rest of the measures in the Plan will be implemented during the course of 2019.

In 2016, ENDESA also publicly pledged to contribute to the achieve of the Sus-

tainable Development Goals, placing special emphasis on five of them, and focuses its business to respond to these major challenges in the fields in which it operates.

In this report, we set out how our strategy responds to those challenges, which are so relevant for society and our stakeholders. To this end, we present the progress made in 2018 in meeting the 100-plus objectives established in our 2018-2020 Sustainability Plan, and we renew our commitment in this area, publishing the objectives set forth in our new 2019-2021 Sustainability Plan.

There are several major reasons for being satisfied about our sustainable business approach in 2018:

- > The significant progress made towards decarbonisation with a major reduction in CO₂ emissions.
- > The wholesale improvement in all the company's environmental indicators.





- > The increase in capacity and production from renewable sources and zero CO₂ emissions.
- > Further investments and roll-out of digitalisation processes paving the way to a new sustainable energy model.
- > The headway made in integrating the shared value creation focus at an operational level.
- > The high number of beneficiaries of our social projects.
- > The ability to ensure our employees a stable environment and access to a wide range of social benefits, especially in the matter of conciliation.
- > The extensive integration of human rights, social and environmental aspects into our supply chain.

However, undoubtedly, two of the achievements that have brought us most satisfaction in 2018 were the zero fatal accident rate among our own and contracted personnel, and that the accident frequency index has been re-

duced by almost 30%. These are major milestones in fulfilling one of our most significant and top objectives: the health and safety of everyone who works in or for our company.

I did not want to finish this foreword without also mentioning that these notable results would not have been possible without a corporate governance and ethical conduct approach that is constantly geared to achieving excellence.

In this regard, ENDESA has redoubled its efforts in the area of ethical conduct, approving a new version of the Board of Directors' Regulations on February 26th 2018.

These new regulations reaffirm how the company must deal with conflicts of interest within a framework of ethical conduct. It is therefore one more of the measures that ENDESA has taken in this field, which were once again favourably recognized by independent analysts in 2018, obtaining a score of 96 out

of 100 in the Code of Business Conduct category of the Corporate Sustainability Assessment of RobecoSAM: the institution responsible for deciding which companies are included in the prestigious Dow Jones Sustainability Index.

Building on these excellent results, ENDESA is facing the future with renewed vigour and full confidence in its own abilities, based above all on its top-notch personnel and a business culture founded on its firm commitment to ethical conduct, transparency and well done work.

Borja Prado Eulate
Chairman of ENDESA





Letter from the CEO

102-14

One more year, I have the pleasure of presenting the ENDESA Sustainability Report to you, confirming that the company continues to meet its commitment to transparency in matter of sustainable development, in its triple dimension: economic, environmental and social.

ENDESA is firmly convinced that all of its activities should be carried out within the framework of sustainable development. Identification of the priorities and expectations of our stakeholders allows us to guide our work toward a sustainable business model and to better guarantee adequate return for our shareholders, in the short and long term, as well as a positive impact on the communities in which we are present. This focus, based on the principle of shared value creation, minimizes



risks and allows optimization of business opportunities.

Regarding the basis for this conviction, ENDESA's 2018-2020 Sustainability Plan springs from the analysis of materiality of the themes that are relevant for our stakeholders and thus defined four priorities for a sustainable business model aligned with the company's 2018-2020 Strategic Plan: growth through low-carbon technologies and services, optimization of assets and innovation, involvement and inclusion of local communities and involvement and inclusion of our people.

These four lines are based on five strategic pillars cutting across all company activity: good governance and ethical conduct, occupational health and safety, environmental sustainability, responsible supply chain and orientation toward creation of economic and financial value; and likewise with basis in two

drivers that also cut across all company activities: digitalization and customer orientation.

The objective of this 2018 Sustainability Report is to present the main advances that have been achieved in each of these four lines and to show our renewed commitment to integration of sustainability into the strategy and operation of our business; a commitment that is clearly reflected in the company's 2019-2021 Sustainability Plan.

Indeed, the details offered in this Report prove that ENDESA is successfully progressing along these lines. For example:

> Regarding decarbonisation, among other milestones, the company has increased the percentage of energy generated with zero emissions, increased its installed capacity of renewable energies and has reduced absolute emissions of CO₂ by 39.5%

since 2005 and specific emissions by 22.6%, in all cases improving the objectives initially established.

> With regard to operating efficiency and the new sustainable energy model, the company has maintained the high investment rate in network digitalisation, which is an essential basis for the development of the new energy model, achieving the launch of remote management of up to 98.2% of remote meter with capacity under 15kW. ENDESA thus consolidates its position as a national leader in the development of this technological solution, which contributes to motivating energy efficiency and electrical system sustainability.

Likewise, in this new energy model in which the customer is called upon to play a vital role, it is especially relevant to state that for the ninth consecutive year, the company has





confirmed its leadership position with regard to the level of mass customer satisfaction in electrical service, achieving a score of 7.18 out of 10, which is an increase of 2% with respect to 2017.

It is also of vital importance for the future of companies in the sector to be capable of providing goods and services with added value that contribute to the electrification of society. In this respect, once again, ENDESA has shown its leadership in the matter of E-mobility with the announcement of its Charging Infrastructure Plan, through which it has allocated 65 million euros for installation of over 8,500 public access electrical charging points during the 2019-2023 period.

- > With regard to involvement of the local communities, it should be pointed out that ENDESA's social projects have reached a million and a half beneficiaries in 2018, raising the commitment acquired respecting the United Nations Sustainable Development Goals (SDGs) 4, 7 and 8 (Quality Education, Affordable and Clean Energy, and Decent Work and Economic Growth).

Further, the shared value creation model continues to be extended in the company on a hugely successful operating scale, guaranteeing that its operations are positive impact generators in the local communities.

- > Regarding people, ENDESA has continued working in 2018 on different fronts to improve its diversity ratios which, despite historic conditions that influence some of the company's main activities, the percentage of women in the workforce is over 23% and over 32% of women out of total new hires. Also, ENDESA continues to offer its employees a full range of conciliation measures that already total 68 and have allowed over 2,740 workers to benefit from any of them.

Likewise, there have been advances in other relevant aspects, such as corporate governance, supply chain or environmental sustainability. On this latter point, greater availability of hydraulic power in the year 2018 stands out, which has involved lower thermal generation production and the improvements derived from the company's environmental investments have entailed an advance in practically all of its environmental indicators (NOx, SO₂, particulates, etc.).

It has also continued to achieve very relevant results in pioneering initiatives such as the drive for E-mobility of the employees, achieving the figure of 659 electric vehicles purchased by them in 2018 for their private use, thus avoiding 1,318 tons of CO₂ emissions annually.

Last but not least, in fact, it is precisely the opposite, I would like to mention a fact that refers to one of the sustain-

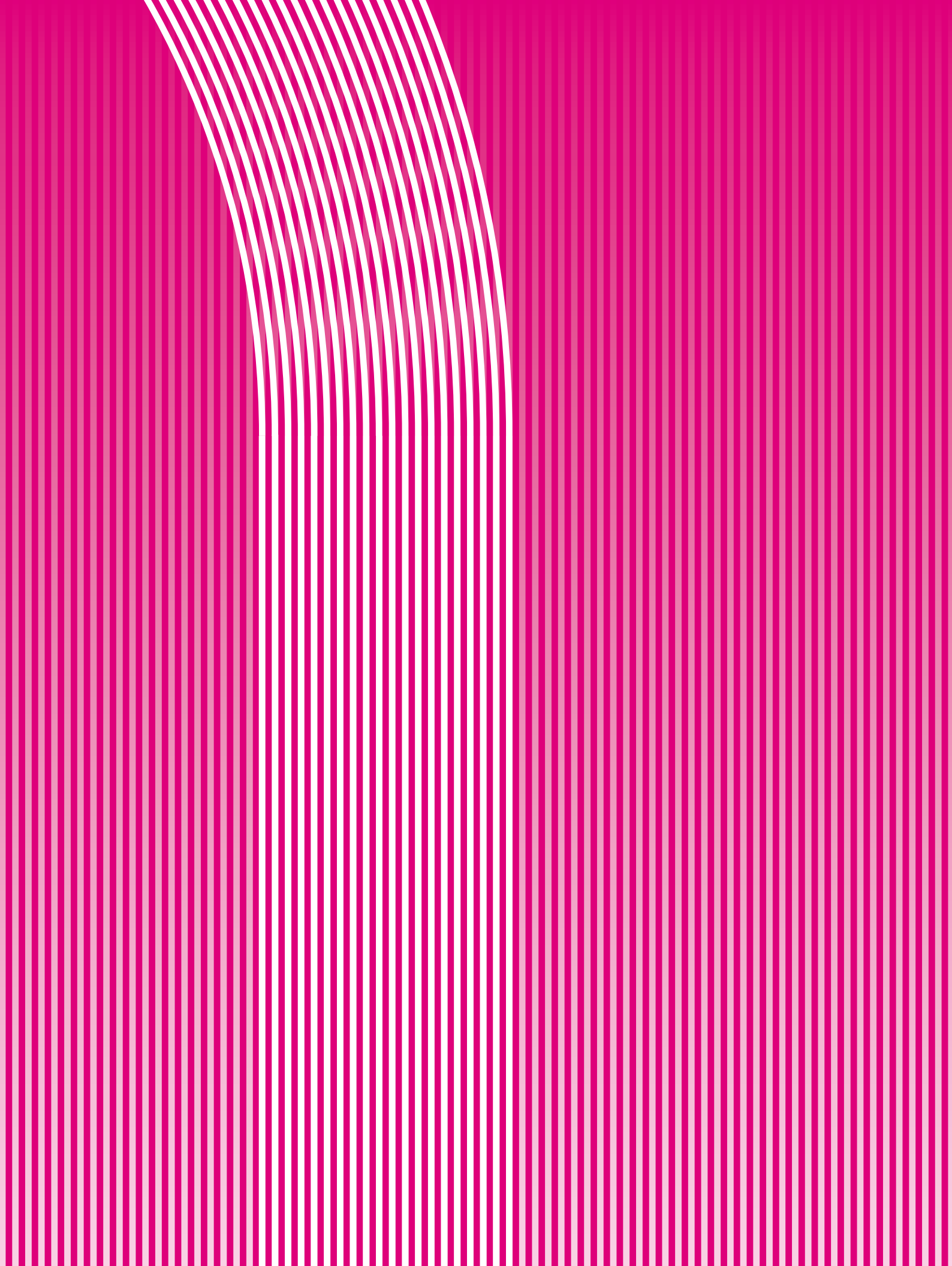
ability aspects that is most relevant for ENDESA: the safety and health of the people who work at or for the company. In 2018, there was not a single fatal accident, among either ENDESA's personnel, or contract company personnel. Further, the combined accident frequency index, that is, that which takes into account workers from both workforces, was reduced by 4% compared to 2017.

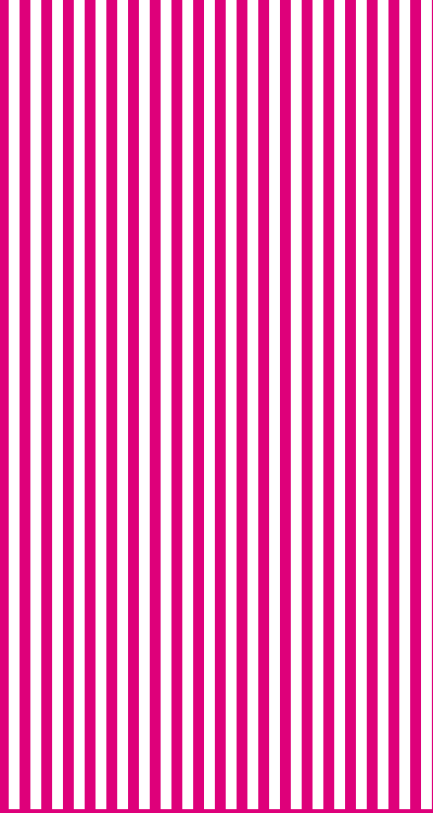
Advances in the very diverse facets that I have just discussed provide a solid basis to continue deepening our commitment to sustainability. As is clearly expressed in the 2019-2021 Strategic Plan and the 2019-2021 Sustainability Plan, ENDESA's decision to contribute to the development of a new energy model based on a high rate of electrification from renewable sources, such as a more efficient and sustainable energy vector that guarantees a fair and inclusive transition, is firm and unquestionable.

The future is full of opportunities and we are prepared to continue leading the way with all of our stakeholders.

José D. Bogas Gálvez
CEO of ENDESA







01

Getting to
know ENDESA



1. Who we are

1.1. ENDESA in figures

102-7 EU1 EU2 EU3

	2016	2017	2018
GROSS INCOME FROM OPERATIONS (EBITDA) (millions of euros) ¹	3,432	3,542	3,627
PROFIT AFTER MINOR TAXES (millions of euros)	1,411	1,463	1,417
SHARE CAPITAL (millions of euros)	1,271	1,271	1,271
NON-CURRENT FINANCIAL DEBT (millions of euros)	4,223	4,414	4,975
WORKFORCEFINAL (Employees)			
Spain and Portugal	9,694	9,706	9,763
Gross installed capacity (MW)			
Spain and Portugal	23,691	23,678	23,766
Hydroelectric	4,765	4,752	4,753
Conventional thermal	8,130	8,130	8,077
Thermal nuclear	3,443	3,443	3,443
Combined Cycles	5,678	5,678	5,678
Renewables and Cogeneration	1,675	1,676	1,815
Electricity Generation (GWh)			
Spain and Portugal²	69,831	78,648	74,193
Hydroelectric	7,173	5,004	8,339
Conventional thermal	28,100	31,906	28,997
Thermal nuclear	25,921	26,448	24,067
Combined Cycles	7,425	11,849	8,957
Renewables and Cogeneration	1,212(5)	3,441	3,833
Sales of electricity to end users (GWh)			
Spain and Portugal	93,490	96,513	89,639
Regulated market	13,815	12,919	12,356
Deregulated market ³	79,675	83,594	77,283
Number of electricity customers⁶ (thousands)			
Spain and Portugal	11,016	10,848	10,754
Regulated market ⁴	5,593	5,255	5,029
Deregulated market ³	5,423	5,593	5,725
Sales of GAS (GWh)			
Total⁷	78,129	79,834	86,729
Deregulated Market	48,270	46,578	47,810
Regulated market	1,464	1,372	1,430
International Market	19,474	24,523	25,270
Wholesale	8,921	7,361	12,219

	2016	2017	2018
Number of Gas customers⁸ (thousands)			
Total	1,538	1,560	1,604
Regulated market	262	246	233
Deregulated market	1,276	1,314	1,371
Power distributed² (GWh)			
Spain and Portugal	115,602	117,961	117,029
Tax information			
Public subsidies received (€ millions)	334	315	287

¹ Gross Income from Operations (EBITDA) = Income – Procurements and Services + Work Carried Out by the Group for its Assets – Personnel Expenses – Other Fixed Operating Expenses.

² Data measured at power plant bus bars.

³ For the sake of consistency with the economic data on this business provided in this report, it includes the sales made by ENDESA Energy to customers in European countries outside the Iberian market.

⁴ Tariff customers. Toll customers not included.

⁵ Data since the date of taking control of ENEL Green Power España, S.L.U. by ENDESA Generación, S.A.U., 27 July 2016.

⁶ Supply points.

⁷ Excluding own generation consumption.

⁸ supply points.

1.2. Main activities

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ENDESA, S.A. was incorporated on 18 November 1944, and its registered office is at calle Ribera del Loira 60, Madrid.

ENDESA, S.A. and its subsidiaries (ENDESA or the “Company”) operate in the electricity and gas business, mainly in the markets of Spain and Portugal. To a lesser extent, ENDESA also markets electricity and gas in other European markets as well as other value-added products and services (PSVA) related to its main business. The organisation is focused on the activities of generation, distribution and marketing, each of these including electricity and, where applicable, gas activities.

1.3. Main markets

102-4 102-6

ENDESA, S.A.’s activity is structured by business lines to provide flexibility in the markets where it operates and to respond to the needs of its customers in the areas and businesses where it maintains a presence. ENDESA operates principally through the following Companies to organise its various business lines:

> **ENDESA Generación, S.A.U.**, which develops electricity production operations in mainland operations and the Non-Mainland Territories, consisting of the island territories of the Balearic and Canary Islands and the autonomous cities of Ceuta and Melilla, and combines its holdings in Gas y Electricidad Generación, S.A.U. (100%), Unión Eléctrica de Canarias Generación, S.A.U. (100%), and ENEL Green Power España, S.L.U. (EGPE) (100%), among others.

> **ENDESA Red, S.A.U.**, established to bring electricity to consumption points, and is made up of ENDESA Distribución Eléctrica, S.L.U. (100%), and ENDESA Ingeniería, S.L.U. (100%), among others.

> **ENDESA Energía, S.A.U.**, whose primary activity consists of supplying energy to customers that decide to exercise their right to select a supplier and receive service on the deregulated market. It holds equity interests in ENDESA Energía XXI, S.L.U. (100%), a company that acts as ENDESA’s reference marketer, and ENDESA Operaciones y Servicios Comerciales, S.L.U. (100%), which provides commercial services related to the supply of electrical power. ENDESA Energía, S.A.U. performs marketing activities in the deregulated markets in Germany, France, the Netherlands and Portugal.

> **ENDESA X, S.A.U.** (100%) which performs operations and marketing of new services adapted to the development of the energy market.





Its activities encompass four courses of action: e-Home, e-Industries, e-City and e-Mobility, seeking out opportunities in the area of E-mobility, management of demand, distributed generation, energy storage and expansion of services provided to household, industrial and institutional customers.

ENDESA is involved in the generation, distribution and sale of electricity, primarily in Spain and Portugal, and to a lesser extent marketing electricity and gas to other European markets through its platform in Spain and Portugal, particularly in Germany, France and the Netherlands.

ENDESA does not sell prohibited products or services, a subject of discussion among stakeholders or that constitute a topic of public debate.

The markets and the activities carried out by ENDESA are described below:



1.3.1. Spanish market

- > **Generation:** ENDESA generates electricity in the mainland system and in Non-Mainland territories, which include the Balearic and Canary Islands and the autonomous cities of Ceuta and Melilla.
 - Conventional generation is a deregulated activity, although there can be generation with renewable energies with specific remuneration.
 - Conventional generation in the Non-Mainland Territories is treated differently, responding to the specificities derived from their territorial location, and here its retribution is regulated. Generation with renewable energy in the Non-Mainland Territories yields incentives to investment due to a reduction in generation costs.

- > **Marketing of electricity, gas and value-added products and services (VAPS):** Marketing activity consists of the sale of energy in the market, and the sale of value-added products and services (VAPS) for customers. Sales activities are deregulated.
- > **Electricity distribution:** The purpose of the electricity distribution activity is to distribute electricity to the consumption points. Distribution activities are regulated.



1.3.2. Market in Portugal

- > **Generation:** Electricity generation in Portugal is carried out in a competitive environment.
- > **Marketing of electricity and gas:** This activity is deregulated in Portugal.



1.4. Organisational structure

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ENDESA, S.A.'s activity is structured by Business Lines, allowing the Company to act with flexibility in the markets in which it operates, and the ability to respond to the needs of its customers in the territories and businesses in which it operates.

ENDESA operates principally through the following Companies to organise its various business lines:



1.4.1. Power generation: ENDESA Generación

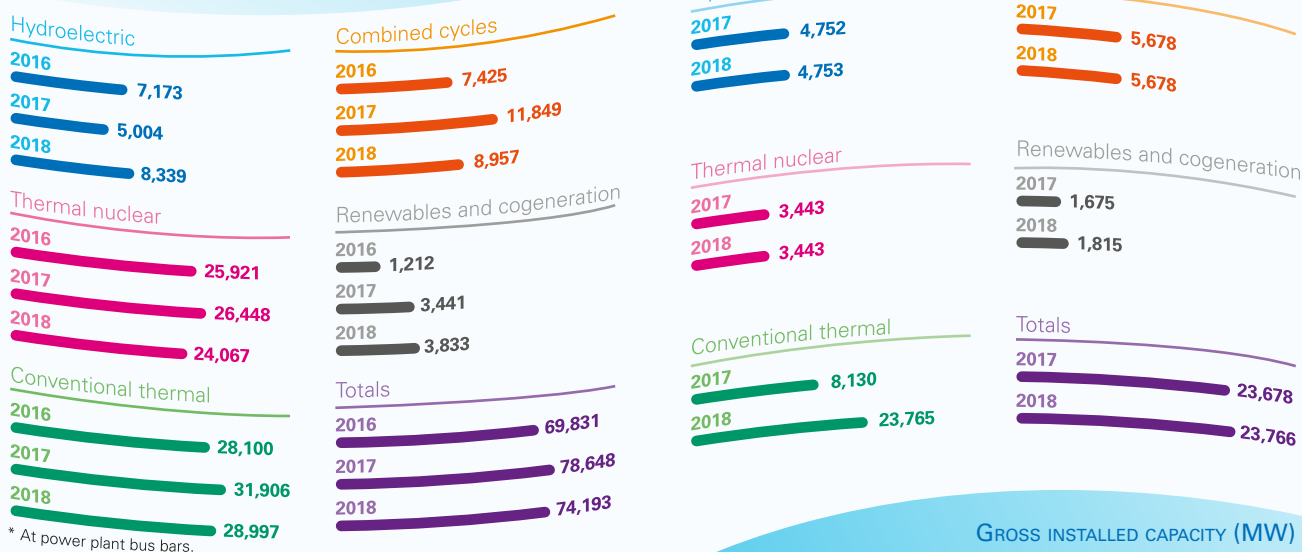
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ENDESA Generación, S.A.U. comprises holdings in Gas y Electricidad Generación, S.A.U. (100%), Unión Eléctrica de Canarias Generación, S.A.U. (100%), ENEL Green Power España, S.L.U. (EGPE) (100%) and a 50% stake in Nuclear, S.A., which owns the Nuclear Plant at Santa María de Garoña (Burgos).

At 31 December 2018, ENDESA's total net installed capacity in Spain was 20,904 MW under its ordinary system, of which 16,370 MW corresponded to the Mainland Electricity System and the remaining 4,534 MW to Non-Mainland Territories (TNP) of the Balearic and Canary Islands and the cities of Ceuta and Melilla. At that date, the net installed power in renewables was 1,815 MW. ENDESA's generation facilities in Spain reached a net total production of 74,193 GWh in the 2018 financial year.



ENDESA'S PRODUCTION OF ELECTRICAL POWER* GWh



1.4.2. Renewable energies: Enel Green Power España

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On 27 July 2016, ENDESA Generación S.A.U., a company wholly owned by ENDESA S.A.(ENDESA), purchased

from ENEL Green Power International B.V. 60% of the share capital of ENEL Green Power España, S.L. (EGPE), a company in which ENDESA previously owned 40% of the share capital. ENEL Green Power España, S.L.U. (EGPE) is a company involved directly or indirectly through companies to the production of electric power using renewable energy sources in Spain, and it currently has approximately [98] wind

power, hydroelectric and solar plants, with total installed capacity of 1,815 MW at 31 December 2018 and an output of 3,833 GWh in 2018.

1. The following transactions for the purchase of companies, all of which are being acquired to the development of wind and photovoltaic capacity awarded to ENEL Green Power España, S.L.U. (EGPE) in the capacity auctions held in fiscal year 2017:

Company incorporations 2018

Acquisition date	Technology	Ownership Percentage at 31 December 2018		Ownership Percentage at 31 December 2017		
		Controlling	Financial	Controlling	Financial	
Valdecaballero Solar, S.L.U.	9 January 2018	Photovoltaic	100.00	100.00	—	—
Navalvillar Solar, S.L.U.	9 January 2018	Photovoltaic	100.00	100.00	—	—
Castiblanco Solar, S.L.U.	9 January 2018	Photovoltaic	100.00	100.00	—	—
Parque Eólico Muniesa, S.L.U.	12 January 2018	Wind	100.00	100.00	—	—
Parque Eólico Farlán, S.L.U.	12 January 2018	Wind	100.00	100.00	—	—
Aranort Desarrollos, S.L.U.	19 January 2018	Wind	100.00	100.00	—	—
Bosa del Ebro, S.L.	21 February 2018	Wind	51.00	51.00	—	—
Tauste Energía Distribuida, S.L.	23 March 2018	Wind	51.00	51.00	—	—
Eólica del Cierzo, S.L.U.	23 March 2018	Wind	100.00	100.00	—	—
San Francisco de Borja, S.A.	23 March 2018	Wind	66.67	66.67	—	—
Energía Eólica Alto del Llano, S.L.U.	11 May 2018	Wind	100.00	100.00	—	—
Sistemas Energéticos Campoliva, S.A.U.	17 July 2018	Wind	100.00	100.00	—	—
Sistemas Energéticos Sierra del Carazo, S.L.U.	18 December 2018	Wind	100.00	100.00	—	—
Sistemas Energéticos Alcohujate, S.L.U.	18 December 2018	Wind	100.00	100.00	—	—





2. The acquisition by ENEL Green Power España, S.L.U. (EGPE) of 100% of the share capital of the companies Parques Eólicos Gestinver, S.L.U. and Parques Eólicos Gestinver Gestión, S.L.U. was concluded on 3 April 2018. Parques Eólicos Gestinver, S.L.U. has 132 MW of installed wind power, distributed across five wind farms located in the Autonomous Communities of Galicia and Catalonia. With this acquisition, ENDESA has strengthened its presence in the peninsular generation market, expanding its portfolio of renewable generation assets in its production mix.
3. On 22 May 2018, ENEL Green Power España, S.L.U. (EGPE) acquired 60.0% of the share capital of Eólica del Principado, S.A.U., a company engaged in the generation of electricity through renewable wind technology, and in which EGPE previously had a 40% share. Through this transaction, ENDESA took over control of Eólica del Principado, S.A.U., in the face of the significant influence that it had up to that date. 

1.4.3. Power distribution: ENDESA Red

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Among others, this company incorporates ENDESA Distribución Eléctrica, S.L.U. (100%), which undertakes the regulated activities of electrical distribution, and ENDESA Ingeniería, S.L.U. (100%).


At 31 December 2018, ENDESA distributes electricity in 27 Spanish provinces in ten autonomous communities (Andalusia, Aragon, Balearic Islands, Canary Islands, Castile and Leon, Catalonia, the Valencian Community, Extremadura, Galicia and Navarre) and the Autonomous City of Ceuta, servicing a total area of 195,487 km² and a population of nearly 21 million inhabitants.

The number of customers with contracts to access ENDESA's distribution grids surpassed 12 million at that date, and the total power distributed via ENDESA's grids, measured at the pow-

er plant bus bars, reached 117,029 GWh during the 2018 financial year.

102-10

On 31 May 2017, ENDESA Red, S.A.U. acquired 52.54% of the share capital of Eléctrica de Jafre, S.A., a company whose business consists of electricity transmission and distribution, as well as the leasing and reading of water and electricity meters. A 47.46% stake had previously been held in this company. As a result of this transaction, ENDESA took control of the company, thus strengthening its distribution business.

On 25 July 2018, ENDESA Red, S.A.U. acquired 94.6% of the share capital of Empresa de Alumbrado Eléctrico de Ceuta, S.A., including 100% of Empresa de Alumbrado Eléctrico de Ceuta Comercialización de Referencia, S.A.U. and 100% of Empresa de Alumbrado Eléctrico de Ceuta Distribución, S.A.U., with over 30,000 customers and it is the principal electricity distributor and supplier in Ceuta. 

1.4.4. Marketing of energy: ENDESA Energía, S.A.U. and ENDESA X, S.A.U.

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ENDESA Energía, S.A.U. was set up to carry out marketing activities, responding to the demands arising in relation to the deregulation process in the Spanish electrical sector. Its primary activity consists of supplying energy to customers that decide to exercise their right to select a supplier and receive service on the deregulated market.

ENDESA Energía, S.A.U. also holds stakes in the companies ENDESA Energía XXI, S.L.U. (100%), a company operating as a supplier of reference, and in ENDESA Operaciones y Servicios Comerciales, S.L.U. (100%), which provides commercial services related to the supply of electrical power. ENDESA Energía, S.A.U. performs marketing activities in the deregulated markets in

Germany, France, the Netherlands and Portugal.

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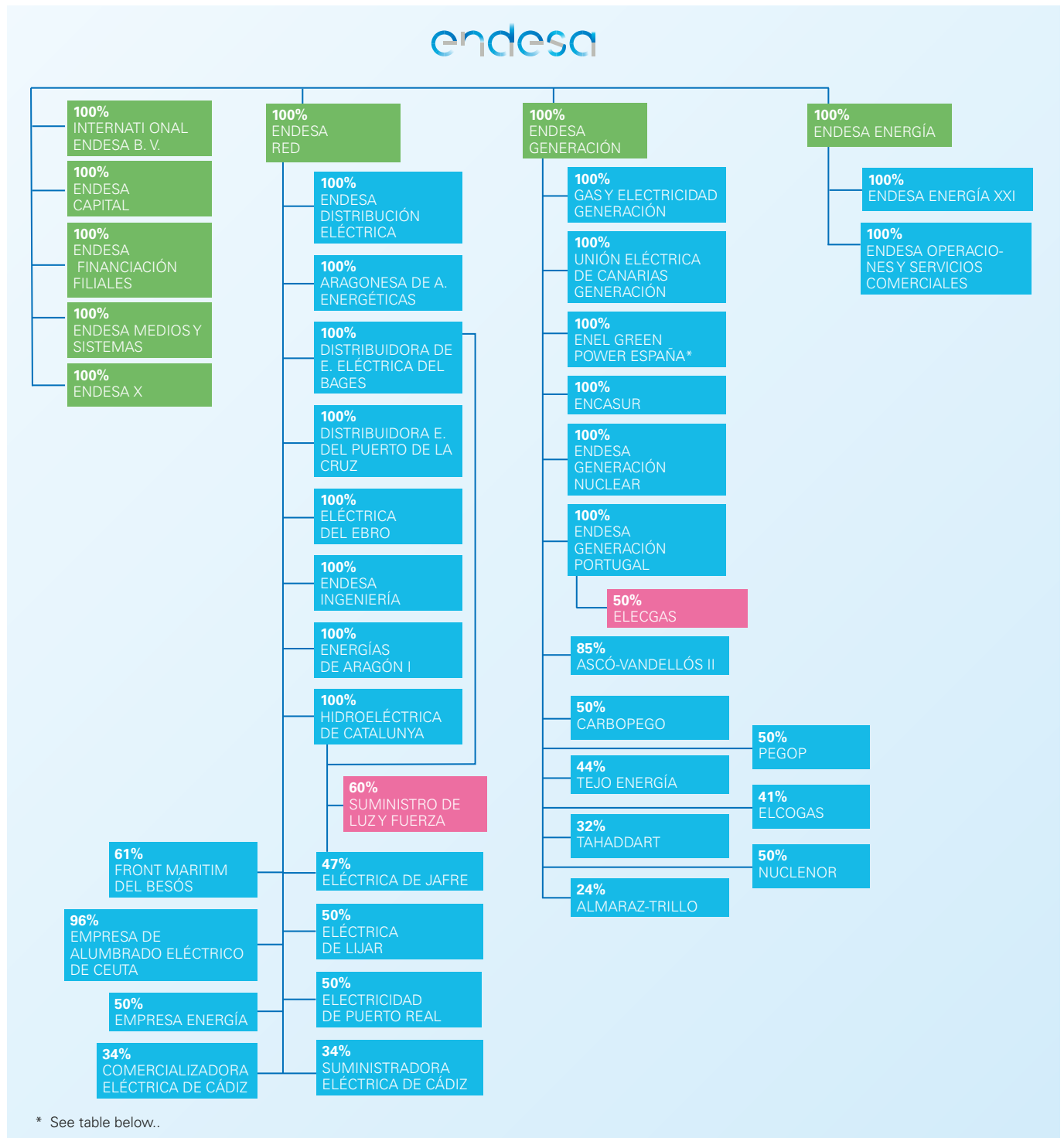
ENDESA X, S.A.U. Was created on 26 June 2018 to carry out activities of development and marketing of new services adapted to the progression of the energy market. Its activities encompass four courses of action: e-Home, e-Indus-

tries, e-City and e-Mobility, seeking out opportunities in the area of e-mobility, management of demand, distributed generation, energy storage and expansion of services provided to household, industrial and institutional customers.

In 2018, ENDESA provided 89,639 GWh to 10.8 million supply points in the electricity market. ENDESA supplied a total volume of gas of 86,729 GWh in 2018, and at 31 December 2018, its customer portfolio in the conventional natural gas

market was made up of 1.6 million supply points.

A corporate map of ENDESA is provided below, showing graphically its main investees at 31 December 2018:





100%
ENEL GREEN
POWER ESPAÑA

100% AGUILÓN 20	100% ENERGÍAS DE ARAGÓN II	60% EÓLICOS DE TIRAJANA	30% PARC EOLIC LOS ALIGARS	100% PRODUCTOR REGIONAL DE ENERGÍA RENOVABLE	60% SOCIEDAD EÓLICA LOS LANCES
100% ALMUSSAFES SERVICIOS ENERGÉTICOS	67% ENERGÍAS DE GRAUS	33% ERECOSALZ	100% PARQUE EÓLICO A CAPELADA	100% PRODUCTOR REGIONAL DE ENERGÍAS RENOVABLES II	36% SOTAVENTO GALICIA
100% ARANORT DESARROLLOS	77% ENERGÍAS ESPECIALES DE CAREÓN	70% EXPLOTACIONES EÓLICAS DE ESCUCHA	50% PARQUE EÓLICO BELMONTE	30% PRODUCTORAS DE ENERGÍAS	51% TAUSTE ENERGÍA DISTRIBUIDA
100% BAYLIO SOLAR	80% ENERGÍAS ESPECIALES DE PEÑA ARMADA	74% EXPLOTACIONES EÓLICAS EL PUERTO	80% PARQUE EÓLICO CARRETERA DE ARINAGA	100% PROMOCIONES ENERGÉTICAS DEL BIERZO	45% TERMOTEC ENERGÍA (en liquidación)
40% BOIRO ENERGÍA	100% ENERGÍAS ESPECIALES DEL ALTO ULLA	51% EXPLOTACIONES EÓLICAS SANTO DOMINGO DE LUNA	75% PARQUE EÓLICO DE BARBANZA	33% PROYECTOS UNIVERSITARIOS DE ENERGÍAS RENOVABLES	33% TOLEDO PV
51% BOSA DEL EBRO	50% ENERGÍAS ESPECIALES DEL BIERZO	51% EXPLOTACIONES EÓLICAS SASO PLANO	82% PARQUE EÓLICO DE SAN ANDRÉS	50% SALTO DE SAN RAFAEL	40% UFEFYS (en liquidación)
100% CASTIBLANCO SOLAR	100% EÓLICA DEL CIERZO	90% EXPLOTACIONES EÓLICAS SIERRA COSTERA	66% PARQUE EÓLICO DE SANTA LUCÍA	67% SAN FRANCISCO DE BORJA	100% VALDECABALLERO SOLAR
33% CENTRAL HIDRÁULICA GÚJAR-SIERRA	51% EÓLICA DEL NOROESTE	90% EXPLOTACIONES EÓLICAS SIERRA LA VIRGEN	100% PARQUE EÓLICO FARLÁN	45% SANTO ROSTRO COGENERACIÓN (en liquidación)	40% YEDESA COGENERACIÓN (en liquidación)
20% COGENERACIÓN EL SALTO (en liquidación)	100% EÓLICA DEL PRINCIPADO	100% FURATENA SOLAR 1	90% PARQUE EÓLICO FINCA DE MOGÁN	100% SEGUIDORES SOLARES PLANTA 2	
38% COMPAÑÍA EÓLICA TIERRAS ALTAS	51% EÓLICA VALLE DEL EBRO	30% HIDROELÉCTRICA DE OUROL	76% PARQUE EÓLICO MONTES DE LAS NAVAS	28% SISTEMA ELÉCTRICO DE CONEXIÓN VALCAIRE	
25% COMPAÑÍA EÓLICA DE ZARAGOZA	80% EÓLICAS DE AGAETE	51% HISPANO GENERACIÓN DE ENERGÍA SOLAR	100% PARQUE EÓLICO MUINIESA	100% SISTEMAS ENERGÉTICOS ALCOHUJATE	
100% DEHESA DE LOS GUADALUPES SOLAR	55% EÓLICAS DE FUENCALIENTE	37% MINICENTRALES DEL CANAL IMPERIAL-GALLUR	52% PARQUE EÓLICO PUNTA DE TENO	100% SISTEMAS ENERGÉTICOS CAMPOLIVA	
40% DEPURACIÓN DESTILACIÓN RECICLAJE	40% EÓLICAS DE FUERTEVENTURA	100% NAVALVILLAR SOLAR	58% PARQUE EÓLICO SIERRA DEL MADERO	96% SISTEMAS ENERGÉTICOS MAÑÓN ORTIGUEIRA	
65% ENEL GREEN POWER GRANADILLA	50% EÓLICAS DE LA PATAGONIA	33% OXAGESA (en liquidación)	100% PARQUES EÓLICOS GESTINVER	100% SISTEMAS ENERGÉTICOS SIERRA DEL CARAZO	
100% ENERGÍA EÓLICA ALTO DEL LLANO	40% EÓLICAS DE LANZAROTE	90% PARAVENTO	100% PARQUES EÓLICOS GESTINVER GESTIÓN	65% SOCIEDAD EÓLICA DE ANDALUCÍA	
55% ENERGÍAS ALTERNATIVAS DEL SUR	50% EÓLICAS DE TENERIFE	30% PARC EOLIC LA TOSSA-LA MOLA D'EN PASCUAL	56% PLANTA EÓLICA EUROPEA	50% SOCIEDAD EÓLICA EL PUNTAL	

1.4.4.1. Energy business in Portugal

102-5 102-45

ENDESA's presence in the Portuguese electricity system focuses mainly on electricity generation and sales activities in the deregulated market.

The assets shared by ENDESA in 2018 have an installed power at ordinary system of 1,483 MW distributed via its share in Tejo Energy (628 MW) and Elecgas (855 MW).

ENDESA has a 43.75% stake in Tejo Energy, a company owning the coal power plant, and 50% in Elecgas, a company owning the gas power plant, both located in Pego. In turn, ENDESA owns 100% of the power produced by Elecgas due to the Tolling contract in force between the two parties.

The Pego coal and gas power plants generated 3,066 GWh and 2,044 GWh respectively (3,385 GWh corresponding to ENDESA's share), representing 10.0% of Portugal's total electricity consumption.

Maintenance of the coal power plant and combined cycle at Pego is under the charge of Pegop, in which ENDESA holds a 50% stake. It also holds a 50% stake in Carbopego, the company that purchases the coal for the plant.

Meanwhile, during 2018 ENDESA received 13.2 million euros in dividends from all the companies shared.

The deregulation process continued to progress in Portugal during 2018 in the Large Customer (Medium Voltage) and Company (Special Low Voltage) segments. The power supplied in the deregulated market reached over 90% of Portugal's total consumption.

ENDESA continues to be the one of the largest operators in the Portuguese deregulated electricity market, with a share of 14.4%. At year-end, ENDESA supplied 6.9 TWh to more than 272,000 supply points.

Besides this strong position in the marketing of electricity, in the Portuguese gas market ENDESA supplied 4.6 TWh to end consumers, 3.5% less than in 2017, due to demand adjustment. In addition, ENDESA continued with its commitment to the marketing of Value-Added Products and Services.

During 2018, ENDESA served over 272,000 supply points in Portugal, distributed as follows: more than 5,500 medium voltage points, more than 4,000 special low voltage points and more than 262,000 normal low voltage points. The electricity supplied in 2018 reached a total value of almost 6.9 TWh. With regard to gas, almost 4.6 TWh were supplied, and more than 70,000 supply points were active at the close of the year.



1.4.4.2. Business in other countries

102-5 102-45

ENDESA is present in Morocco through a 32% stake in Energie Electrique de Tahaddart, a company that owns a 392 MW combined cycle power plant located to the north of the town of Asilah, near the river Tahaddart. In 2018, the plant's production totalled 2,234 GWh (715 GWh corresponding to ENDESA's 32% stake).

In **France**, ENDESA supplied over 19.2 TWh of gas during 2018, 5.4% more than in the previous year. At the close of the year, it had over 4,400 active gas supply points.

In **Germany**, ENDESA supplied over 2.0 TWh of electricity and over 50 GWh of gas, with a total of more than 700 active supply points.

In **the Netherlands**, the Company supplied over 0.7 TWh of electricity and over 1,300 GWh of gas, with more than 200 active supply points for electricity and more than 100 for gas at the close of the year.

And lastly, in Andorra ENDESA supplied over 0.2 TWh in 2018, which is approximately a 40% of the consumption of the entire country.





2. Commitment to a sustainable energy model

2.1. The Open Power strategic positioning

G4-DMA General management Approach

ENDESA has always been at the forefront in developments in the energy sector, providing safe, affordable and sustainable power to millions of people all over the world.

Aware of the profound change that the industry is currently undergoing, the Group is immersed in a new, more open, participatory and digital era of

energy, sharing the vision of the Enel Group, to which it belongs. This strategic positioning is summed up in the Open Power concept.

Open Power is our platform for growth, a combination of the strength of our global organisation with the opportunities of an open, connected world. It therefore constitutes our mission, our vision and our values.

The goal of Open Power is to give access to energy to more people, to open up the world of energy to new technologies, to open up energy management to people, to open up the possibility of new uses for energy and to be open to a greater number of alliances.



2025 MISSION

- Open energy to more people
- Open energy to new technologies
- Open up new ways to manage energy for the consumer
- Open up energy to new uses
- Be open to more collaborators

VISION

Open Power to confront some of the major challenges that the world is facing.

VALUES

- Responsibility**
Each of us is responsible for the success of the group at all levels. We place our energy at people service to improve your lifestyle and to make it more sustainable.
- Innovation**
We live and work with curiosity, strive to surpass the everyday and conquer our fears to expose energy to new uses, technologies and persons. Learning from our mistakes as well as from successes.
- Trust**
We act competently, honestly and transparently to gain the trust of our colleagues, customers and external collaborators, valuing individual differences. We also trust in their capacity to create value and share it.
- Proactivity**
We take charge of our work in first person. We are continuously interpreting scenarios and global challenges to anticipate changes, redefining priorities if the situation so requires.


2.2. Commitment to sustainability

In line with the Open Power strategic statement, ENDESA has placed environmental, social and economic sustainability at the centre of its business culture and is contributing to the current evolution of the energy system with a business focused on contributing to sustainable development, based on the exchange of value creation within and beyond the company. Sustainability, which must be achieved via processes of innovation, is the focal

point of the Open Power strategic positioning. Therefore, in 2015 ENDESA updated its Sustainability policy to incorporate the 'Open Power' strategic positioning and to establish the foundations for successfully overcoming the energy challenges that face modern society. The commitments of future set down in this policy are the guidelines and foundations for ENDESA's performance in the management of its business activity.

Compliance with this policy is expressly promoted by the Company's management; it concerns employees, contractors and vendors, and is presented for assessment by third parties. Likewise, the Board of Directors, via the Auditing and Compliance Committee, supervises the correct implementation of the principles of the policy throughout the company's entire value creation chain. This policy is implemented through ENDESA's different Sustainability Plans.

OUR FUTURE COMMITMENTS



Our conduct

Commitment to good governance, transparency and ethical behaviour.



Our shareholders

Commitment to value creation and profitability.




Our customers

Commitment to digital quality, commercial excellence and energy efficiency in consumption.



Our people

Commitment to personal and professional development, to diversity and conciliation, and occupational health and safety.



Our associates

Commitment to the active involvement of associates with sustainability.



Society

Commitment to the social-economic development of the communities in which we operate.



The environment

Commitment to the reduction of our environmental footprint and environmental protection.



Innovation

Commitment to technological innovation and the scope of services.



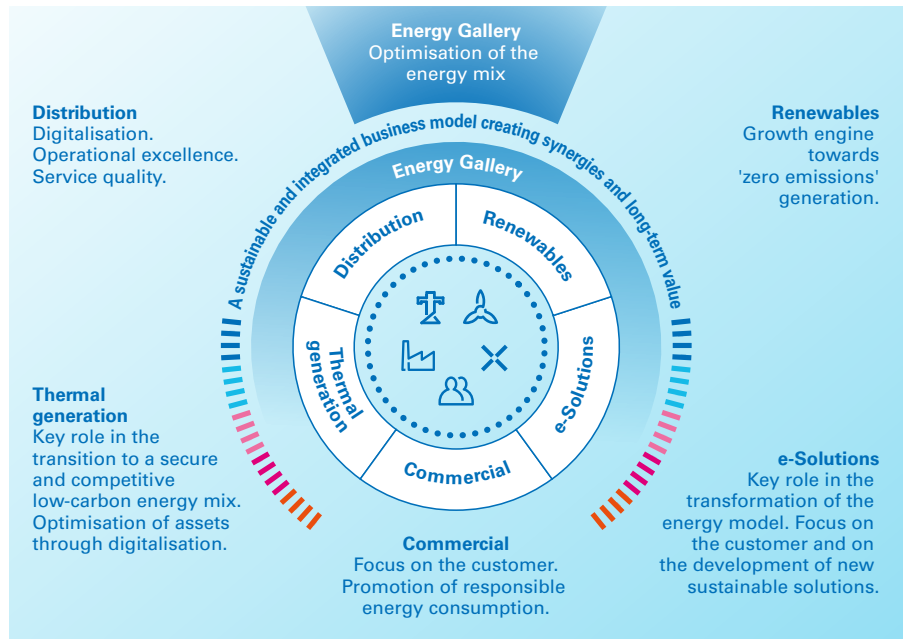
Institutions

Commitment to the development of public-private alliances for the promotion of sustainable development.



2.3. ENDESA's sustainable business model

ENDESA's strategic positioning and its commitment to sustainability, together with the main challenges that the energy sector has to face, define the Company's sustainable business model, which is integrated into the entire energy value chain and characterised by digitalisation and the promotion of a low-carbon economy.



2.4. Commitment to the United Nations Agenda

- 102-12 103-1 Management approach human rights assessment 103-2 Management approach human rights assessment
- 103-3 Management approach human rights assessment 103-1 Management approach - child labour
- 103-2 Management approach - child labour 103-3 Management approach - child labour 103-1 Management approach - forced labour
- 103-2 Management approach - forced labour 103-3 Management approach - forced labour 409-1
- 103-1 Management approach non-discrimination 103-2 Management approach non-discrimination
- 103-3 Management approach non-discrimination

ENDESA assumes the principal international reference frameworks promoted by the United Nations for sustainable management as a key player in the

construction process of a new global, sustainable, energy model. It therefore maintains a firm commitment to the Ten Principles of the Global Compact, the

Guiding Principles on Business and Human Rights, and to the Seventeen Sustainable Development Goals.



2.4.1. The ten principles of the Global Compact

ENDESA was one of the first Spanish companies to adopt the Global Compact in 2002, incorporating its principles in its Corporate Integrity, policy and sustainability standards, extending this emphasis to all areas where it maintains a presence.

Since the launching of the initiative, ENDESA has reaped benefits from its voluntary adherence to the Global Compact, considering this a valuable tool to further integrate sustainability in all of the Group's management areas, reinforcing ENDESA's firm commitment to principles of sustainability. This performance has been viewed positively by our stakeholders, as well as by sustain-

able investment funds and sustainability rating agencies. This helps encourage dialogue and collaboration between all the social agents, for which reason the Global Compact is considered to be a highly useful tool. Moreover, by belonging to the Global Compact, ENDESA is able to share experiences with other companies committed to sustainability, secure in the knowledge that it is doing so within an internationally- recognised framework backed by the United Nations.

The Global Compact requires that participating companies draw up an Annual Progress Report, detailing the work carried out for the inclusion of the ten principles into the business strategies and operations; this must be public and must remain at the disposal of the stakeholders. In this sense, ENDESA once again attained the Advanced Lev-

el of the United Nations Global Compact in 2018, this being the highest level attainable for progress reports. The Advanced Level is granted to those companies which display a high level of performance in Sustainability and which adopt and report on a set of Good Management and Governance Practices of Corporate Sustainability. Thus, ENDESA renews its commitment to this initiative in order to continue to move forward in compliance with the principles of the Global Compact.

In 2018, ENDESA maintained its commitment to the Global Compact. To this end, ENDESA has played an active role in the Spanish Global Compact Network –belongs to its Executive Committee – particularly concerning the promotion of the Sustainable Development Goals and the Guiding Principles on Business and Human Rights.



2.4.2. Guiding Principles on Business and Human Rights

[103-1 Management approach human rights assessment](#)

[103-2 Management approach human rights assessment](#)

[103-3 Management approach human rights assessment](#)

ENDESA has a permanent commitment to the respect and furtherance of Human Rights. This commitment is reflected in its corporate policies and is embodied in its adherence to the United Nations Global Compact, incorporating support and protection of Human Rights and non-complicity with their infringement in its two first principles. Historically, ENDESA has been a trendsetter in initiatives to ensure respect for Human Rights in its activities and those of its supply chain, continually developing processes to identify risks and their potential impact in matters of Human Rights.

Following the approval of the Guiding Principles on Business and Human Rights by the United Nations, ENDESA decided to formally adapt its historic commitment to the respect and furtherance of Human Rights to this new framework, integrating them into the management of the corporate activity. Consequently, in 2013 the Board of Directors of ENDESA, S.A. approved the Human Rights policy, thus following the recommendations established by the Guiding Principles. This policy includes the Company's commitment and responsibility in relation to Hu-

man Rights in general, and particularly those applicable to the business activities and corporate operations carried out by ENDESA staff, both managers and employees. It also promotes adherence to the same principles by its contractors, suppliers and commercial partners, paying particular attention to situations of conflict and high risk.

With the aim of applying the commitments included in the Human Rights policy, and following the recommendations of the guiding principles, in 2017 ENDESA carried out a Due Diligence





process to ensure the implementation and monitoring of the policy. Implementation of the activities covered un-

der the plan of action planned for 2018 and thereafter were completed to the 90% level in 2018, with the rest of

the activities planned for completion throughout 2019.



2.4.3. The Sustainable Development Goals

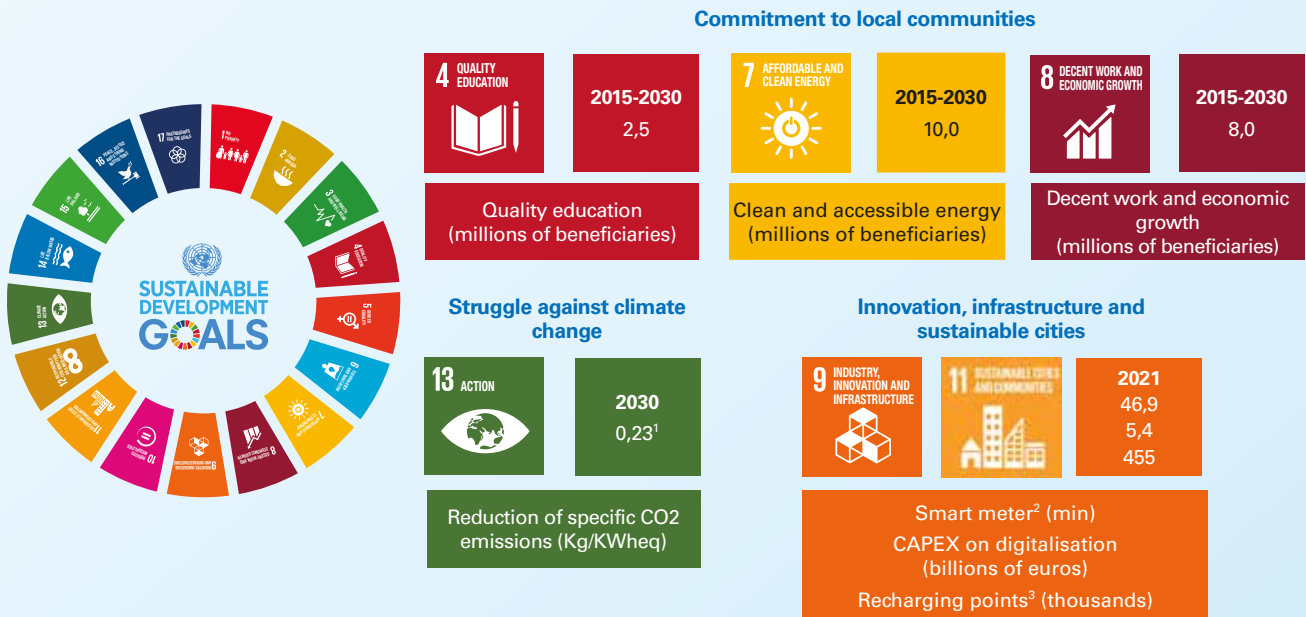
As is well known, one of the various aspects of the Sustainable Development Goals (SDG) in relation to Millennium Development Goals (MDG) is that the SDG acknowledge the key role of the corporate sector as a driver of economic, social and environmental progress in

achievement of the Goals, making its active participation essential.

ENDESA collaborated in the preparation of the United Nations Sustainable Development Agenda, is firmly committed to it and acknowledges the historic opportunity represented by the

Sustainable Development Goals and the involvement of the private sector to overcome the main challenges which is facing society, from the struggle against climate change to the eradication of poverty, and economic and social progress.

COMMITMENT OF enel IN LINE WITH THE 2030 AGENDA



¹ Specific CO2 companies will be < 0.345 kg/KWh eq in 2012.

² Includes replacement of smart meters.

³ Public and private installed recharging points.

This vision is shared within the ENEL Group, which publicly undertook to make a specific contribution with 4 of the 17 Sustainable Development Goals.

ENDESA embraces these commitments and adapts them to the context in which it operates. Thus, since the announcement in 2016 of its specific contribution to

the 2030 Agenda, the company has continued to move forward in relation to its commitment with three goals that have a direct impact on its business model:

CONTRIBUTION **endesa** TO THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS



ENDESA'S COMMITMENTS

Main achievements

13 CLIMATE ACTION 	100% decarbonisation of the energy mix in 2050 (<350gCO ₂ /kWh in 2020)	> 132 MW additional wind operations through the purchase of Gestinver > 927 MW renewables under construction > 49% the free production of CO₂ (2018 vs 2005)
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE 	~ 1,3 billion € to lead the energy future through digitalisation and ENDESA X	> 11.9 millions of electronic meters installed (low voltage) and 17,315 smart remotes > 4.2 millions digital clients
7 AFFORDABLE AND CLEAN ENERGY 	Electricity supply to all vulnerable customers	> 272 agreements signed with the Public Administration to avoid electricity supply disconnection for vulnerable customers²

ENDESA also contributes to the commitments made by the Enel Group in relation to SDG 4 and SDG 8 through its social projects and its foundation.

These five are the SDG which have the most priority by ENDESA, and thus the ones in which it emphasizes the most, but it is also firmly involved in some of the other Goals, for which it is establishing objectives and is reporting on since the SDG first appeared. To this end, ENDESA 2019-2021 Sustainability Plan sets out its roadmap for the next three years to contribute to the 2030 Agenda, aligning its sustainability strategy with this universal

	ENDESA'S commitments 2015-2020	Principal achievements 2015-2018
4 QUALITY EDUCATION 	224,818 people	120,818 beneficiaries
8 DECENT WORK AND ECONOMIC GROWTH 	639,437 people	379,437 beneficiaries

framework. For further information, see the chapter "ENDESA's Sustainability Plan".

Finally, the chapter "Our Performance" details ENDESA's compliance and con-

tribution throughout 2018 to each of the sustainable development goals, acting upon which through its business activity.










2.5. Participation in sustainability forums and associations

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ENDESA participates proactively in a number of forums and associations aimed at promoting sustainable development. Participation in these types of organisations allows ENDESA to show its commitment to sustainability, and interact with the main agents of change in order to generate shared value between

the business and its environment, and learn and share good practices, as well as strengthen relationships with stakeholders.








Details of the main sustainability forums and associations in which ENDESA participated in 2018 are provided below:

Organisation	Type of association	ENDESA's position	ENDESA participation in 2018
 Pacto Mundial Red Española	Multi-stakeholder association that acts as the focal point for the United Nations Global Compact in Spain	Member of the Executive Committee	<ul style="list-style-type: none"> > Promotion of the Ten Principles of the UN Global Compact > UN Sustainable Development Goals
 Club de Excelencia en Sostenibilidad	Association of large companies and national partner of CSR Europe	Founder Partner	<ul style="list-style-type: none"> > Energy efficiency > Sustainable mobility > Socially Responsible Investment > Responsible procurement > Responsible communication > Circular economy > Corporate governance > Human Resources > Corporate biodiversity management > Integration of Corporate Responsibility in the company
 Forética	Multi-stakeholder association and national partner of WBCSD and CSR Europe	Development partner	<ul style="list-style-type: none"> > Climate change > Integrity, good governance and transparency > Circular economy > Social impact
 TRANSPARENCY INTERNATIONAL ESPAÑA	Private not-for-profit entity, specialised in transparency	Member of the Businesses Working Group	<ul style="list-style-type: none"> > Transparency, corporate governance and compliance
 aeléc	Business association of the electricity sector	Member of the CSR Committee	<ul style="list-style-type: none"> > Management of CSR in the electricity sector

It should be noted that ENDESA also takes part in other forums and associations whose mission is to progress in the management of specific items in the field of sustainability, such as the strug-

gle against climate change or social action, which are itemised in the present Sustainability Report in the chapters in the section 'Our Performance.

ENDESA also participates in forums and associations devoted to promoting the interests of the business sector in general or the energy sector in particular. These include the following:

Organisation	Function	ENDESA's position	ENDESA participation in 2018
 CONFEDERACIÓN ESPAÑOLA DE ORGANIZACIONES EMPRESARIALES	National business association	Member of the committee on industry, international relations, health and consumer affairs, economy and finance	> Participation in the various committees
 de Comercio de España	National business association	Plenary Chamber members	> Participation in the management of the Chamber and in its various committees
	Business association of the electricity sector	Executive partners	> Participation in working papers, committees on various energy matters, forums, meetings.
 Asociación Española del Gas	Association of the gas sector	Implementing partners, participation in the Permanent Committee	> Participation in committees in different areas: marketing, communication, legal, taxation; attendance at forums and meetings; and collaboration in working groups for the development of working documents
 INSTITUTO ESPAÑOL DE LA ENERGÍA	Private not-for-profit entity of the energy sector that aims to bring about a better public understanding of the sector	Executive partner (the Chairmanship of the Club is currently held by our Chairman, Borja Prado)	> Management of Enerclub, participation in forums, seminars, development of position papers on energy
 INSTITUTO DE ESTUDIOS ECONÓMICOS	Private not-for-profit and non-political association, mainly funded through annual contributions from businesses	Participating directly and through Aelec	> Participation in the various committees
	Private foundation dedicated to fostering a more relevant role for the company in improving society	Patron of the Foundation	> Participation in various workgroups

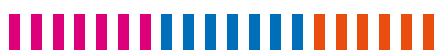


2.6. Participation in forums and initiatives for the promotion of human rights

ENDESA regards the management of human rights as a strategic issue that forms a fundamental part of its strategy with regard to sustainability and relations with stakeholders. The Company therefore participates actively in the various debates and forums held in Spain on this issue. A notable example is ENDESA's participation in the Human Rights Working Group of the Spanish Global Compact Network, which aims

to share good practices in the business sector on this issue and to design methodologies that help businesses – especially S&MEs – to integrate human rights in their business strategies. ENDESA also participated actively in the consultation process conducted by the Spanish government for developing the National Plan for Business and Human Rights approved by the Council of Ministers on 28 July 2017. This plan,

which shapes Spain's commitment to protect human rights against any impact that business activities might have on them, responds to the recommendations made within the European Union through the renewed EU Strategy for 2011-2014 on corporate social responsibility and its 2015-2019 Action Plan on human rights and democracy. In addition, ENDESA regularly participates in forums for the promotion of Hu-








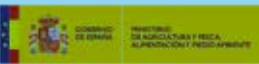





man Rights, and especially in expanding the focus on Guiding Principles of the United Nations in academic circles. As it

has consistently done over the last few years, in 2018, ENDESA participated in the International Congress for the 1st

National Plan of Action for Business and Human Rights organised by the University of Seville.



2.7. Participation in environmental forums and associations

Organisation	Type of association/initiative	ENDESA's position	ENDESA participation in 2018
	Eurelectric	Member	> Participation in environment and climate change groups
	Spanish Environment Club	Associate	> Not-for-profit association for fostering, at the national level, the awareness, dissemination and development of an environmental culture compatible with sustained progress and clean production
	Biodiversity Foundation	Signatory	> ENDESA is a signatory to the Biodiversity Compact led by the Biodiversity Foundation
	Spanish Company and Biodiversity Initiative	Participant	> ENDESA has been a member of this public-private platform since June 2013, promoted by the MITECO Biodiversity Foundation
	Spanish Association for Standardisation	Participant in committees	> Participation in committees on renewables, climate change, environmental management, energy efficiency
	Association formed to further public-private collaboration and to move forward together in the environmental challenges currently posed	Founder Partner	> Circular Economy > Climate Change
	Spanish Platform for Climate Action	Participant	> Creation of the platform, which aims to strengthen public-private collaboration against climate change and to contribute to a green, carbon-free economy
	Comunidad #PorElClima	Participant	> Network for action against climate change
	Voluntary agreements for the reduction of greenhouse gas emissions	Participant	> Audit of the activities of Endesa Distribución in Catalonia



Organisation	Type of association/initiative	ENDESA's position	ENDESA participation in 2018
	Carbon Disclosure Project	Participant	> Participation in the climate change, supply chain and water initiative
	Non-State Actor Zone for Climate Action (NAZCA)	Participant	> Launched at the United Nations Climate Change Conference in Lima in December 2014 (COP20) to capture the commitments to climate action by companies, cities, regions, sub-national governments and investors.
	COP24	Participant	> ENDESA attended the Conference of the Parties to the United Nations Framework Convention on Climate Change from 2 to 14 December 2018.
	CONAMA 2018	Strategic partner	> ENDESA participated as a Strategic Partner in the biennial meeting held in Madrid from 26 to 29 November 2018, considered the hallmark environmental event in Spain
	Innovate4Climate Finances & Market Week	Participant	> Participation in the first fair event, held in Barcelona from 22 to 26 May, which aims to contribute to building a low-carbon economy (receive the baton of the Carbon Expo)
	Spanish Technological Platform for Energy Efficiency (PTE-EE)	Participant	> Management of energy efficiency
	Platform for Electricity Networks of the Future (FUTURED)	Participant	> Management of networks





3. Governance and sustainability management system

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In order to ensure that ENDESA's commitment to sustainability remains firm in all the company's decision-making processes and in the performance of its daily activities, ENDESA has a sustainability governance and management system that involves all areas of the company.

Thus, the Board of Directors is responsible for passing the sustainability policy and plan, and assigns supervisory functions to the Auditing and Compliance Committee, among them are the following:

- > Reviewing the company's sustainability policy, ensuring that it is oriented toward the creation of value.
- > Following-up on the corporate social responsibility strategy and practices and assessing its degree of compliance.
- > Supervising and assessing the relationship processes with the various stakeholder groups.
- > Making an assessment of everything relating to non-financial risks for the Company - including operational, technological, legal, social, environmental, political and reputational risks.
- > Coordinating the reporting process of non-financial and diversity-related

information, in compliance with applicable regulations and international reference standards.

Likewise, this Committee has other functions, related to specific aspects of sustainability:

- > Providing information about proposals for modification of the Company's Code of Ethics and supervising compliance with the same.
- > Supervising compliance with the Company's rules of corporate governance and periodically assessing the suitability of the corporate governance system in order to ensure that it fulfils its mission to promote social interest and to take into account, where applicable, the legitimate interests of the other stakeholder groups.

On the other hand, the Executive Management Committee, composed by the CEO and ENDESA's General Managers, is the executive body in charge of developing and implementing ENDESA's sustainability strategy and ensuring the integration of the social, environmental and ethical aspects into the decision-making processes performed at the highest level.

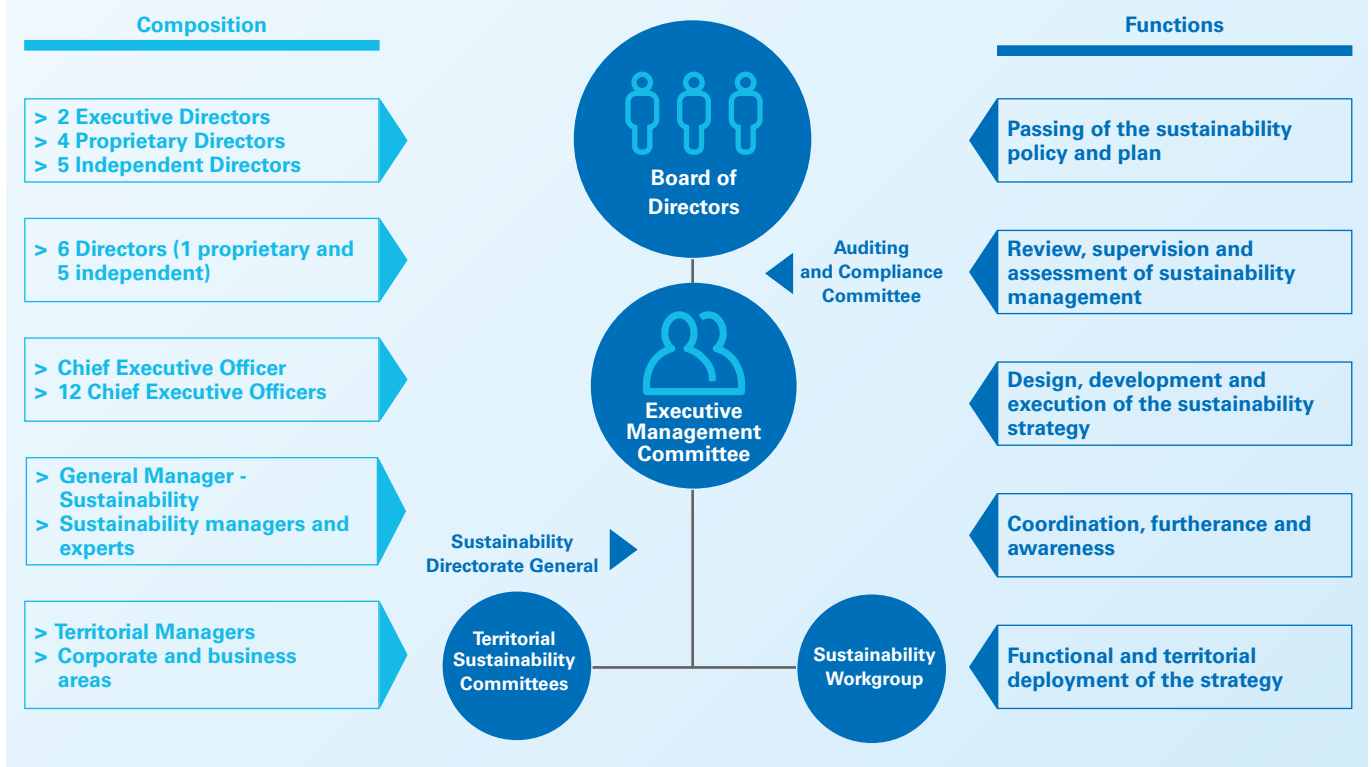
Sustainability management at ENDESA extends throughout the company; for this reason there is a work group

in charge of integrating sustainability principles into everyday business management, defining the objectives and the actions included in the sustainability plan. This workgroup is formed from the main business and support areas of ENDESA, including: Generation, Distribution, Renewables, Marketing, ENDESA X, Energy Management, Corporate Affairs, Auditing, Relationship with Investors, Human Resources, Environment, Regulatory, Means, Communications, ICT, Purchasing, Occupational Health and Safety.

Moreover, in order to incorporate local features into ENDESA's sustainability strategy, there are seven territorial sustainability committees, chaired by the most senior representative of the Company in that territory. The main functions of these committees are to strengthen and complement the courses of action established in the Sustainability Plan, providing a better setting for ENDESA's activity and adapting the objectives and commitments to the local reality.

Finally, the Sustainability Department, which answers directly to the CEO and is present on the Executive Management Committee, undertakes coordination and boosting functions for ENDESA's sustainability strategy.

GOVERNANCE AND SUSTAINABILITY MANAGEMENT MODEL



4. Risk management

4.1. Risk Management and Control Policy

The Risk Management and Control Policy, approved by the Board of Directors and applied within ENDESA and all subsidiary companies, seeks to guide and direct all strategic, organisational and operational actions taken that enable the Board of Directors to accurately establish risk tolerance levels in order to

ensure that the managers of each business line can maximise the Company's profitability, preserve or increase its assets and equity and maximize certainty of performance above set thresholds, preventing uncertain and future events from negatively impacting the attainment of profitability objectives set by the Company.

The Risk Management and Control Policy defines ENDESA's Risk Control System as an interconnected system of regulations, processes, controls and information systems, where the global risk is defined as the risk resulting

from the consolidation of all the risks to which it is exposed, taking into account the mitigating effects between the different exposures and categories of the same, enabling the consolidation of the exposure to risk of the business units and areas of the corporate Group and its assessment; also the preparation of the corresponding information for the making of risk-related decisions and the appropriate use of capital.

The Risk Management and Control Process is based on the ongoing study of the risk profile, applying the current best





practices in the energy sector or reference risk management practices, in criteria for standardising measurements and the separation of risk managers and risk controllers. It is also based on ensuring that the risk undertaken is proportional to the resources required to operate the businesses, in constant adherence to a proper balance between the risk undertaken and the targets set by the Board of Directors.

The integral risk management process consists of the identification, measurement, analysis and monitoring of the different risks, as well as their follow-up and control over time, based on the following actions:

- > Identification. Its purpose is to generate an exhaustive list of risks (complete coverage) based on events that could prevent, undermine or delay the achievement of objectives through coordinated and effective participation at all levels of the Company. Identification must include both risks that are basically within the control of the organisation as well as those caused by external events beyond its control. All causes of risk and their significant consequences affecting ENDESA's finances and/or reputation are considered in the risk identification process. Each risk identified must be identified both in terms of its nature and the risk factor causing it.
- > Measurement. The objective is to arrive at parameters that make it possible to measure financial and reputational effect using standardised methods over various time horizons of all risks that must be quantified for their later prioritisation. This assess-

ment includes both the valuation of scenarios and estimating loss potential based on the assessment of impact and probability distributions.

The goal of both of the two above phases is to arrive at a final report, a Risk Map, with a prioritised breakdown of each risk identified and assessed, depicted in descriptive files, graphs and tables. This is to be the result of the assessment process, capturing a representation of the company's condition at risk, with assessed risks prioritised.

- > Control and follow-up. The purpose of this phase is to monitor risks and the facts relevant to their management. To achieve this, indicators are identified that make it possible to supervise the progress of the risk compared to the defined risk appetite. This is a management metric that makes it possible to raise a red flag to anticipate the risk, and is reported on a regular basis.
- > Management. The purpose of risk management is to execute the actions directed toward the adaptation of the levels of risk assumed at each level of the Company, and toward the established risk tolerance and predisposition.

By means of this process, it is intended to achieve an integral view of the risk, oriented toward risk assessment and prioritisation. It includes the main financial and non-financial risks to which the Company is exposed, both endogenous (due to internal factors) and exogenous (due to external factors), to be reflected on an annual map including the main risks identified and establishing periodic revisions.

This risk map, with the risks covered being aligned with the strategy defined by the company, covering various time horizons and with its list of indicators for periodic monitoring, is presented to the governing bodies by the senior management responsible for risk management. Additionally, faced with the increased interest in management and control of the risks that the company is exposed to and given the complexity that such identification takes on from an overall perspective, the participation of employees at all levels in this process is important. To this end, a 'risks box' has been created, which employees may use to contribute to the identification of market risks and to propose measures for their mitigation, thus complementing the 'top-down' systems for the management and control of existing risks and the mailboxes and specific procedures for the sending of reports related to ethical non-compliance, legal risks and occupational risks.

In addition, the Board of Directors of ENDESA, S.A. has also passed a Fiscal Risk Management and Control Policy whose purpose is to guide and direct the group of strategic, organisational and operative actions that enable the Board of Directors to define precisely the acceptable level of fiscal risk, for the fiscal affairs managers to achieve the goals concerning fiscal risks established by the Risk Management and Control Policy. The Risk Management and Control Policy constitutes the specific, documented embodiment, in fiscal control matters, of the Tax Strategy passed by the Board of Directors of ENDESA, S.A.



4.2. Criminal Regulatory Compliance and Anti-Bribery Policy

Organic Law 5/2010, which modified Organic Law 10/1995 of 23 November of the Criminal Code, established a listing of crimes that apply to legal entities, noting the need to establish control and vigilance measures for their prevention and detection. This legal structure was reformed by Organic Law 1/2015 of 30 March, laying out the requirements enabling legal entities to substantiate their diligence in the area of criminal prevention and detection.

In compliance with the provisions of this Organic Law, ENDESA has put in place internal regulatory instruments that have satisfied the need to provide satisfactory control and management

systems applied to the area of criminal prevention and detection, particularly with regard to restrictive behaviour regarding the crime of bribery.

ENDESA's Criminal Regulatory Compliance and Anti-Bribery System (hereinafter, the "Compliance System") consists of a comprehensive body of conditions on which the Criminal Compliance and Anti-Bribery Policy is based, respecting the legal requirements under Spanish law in this regard and sufficiently satisfying the expectations placed on the Organisations that operate in accordance with the highest levels of commitment in the most advanced markets.

The principal activities engaged in by ENDESA for the effective application of the Compliance System are assessment of risks and control activities and their supervision, thus guaranteeing their design and operational value.

The Criminal Compliance and Anti-Bribery Policy was approved by the Board of Directors on 6 November 2017, and is separate from the Risk Management and Control Policy; it establishes the general principles of the Compliance System that set the groundwork for the content and application of all internal corporate standards as well as operations of the Organisation.



4.3. Main sustainability risks

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ENDESA is exposed to certain risks that it manages through the application of identification, measurement, control and management systems. In this regard, the different types of risk, financial and non-financial (among others, operational, technological, legal, social, environmental, political and reputational) to which the company faces are taken into account. These aspects are integrated into the company's risk management and control system and are supervised by the Audit and Compliance Committee of the Board of Directors.

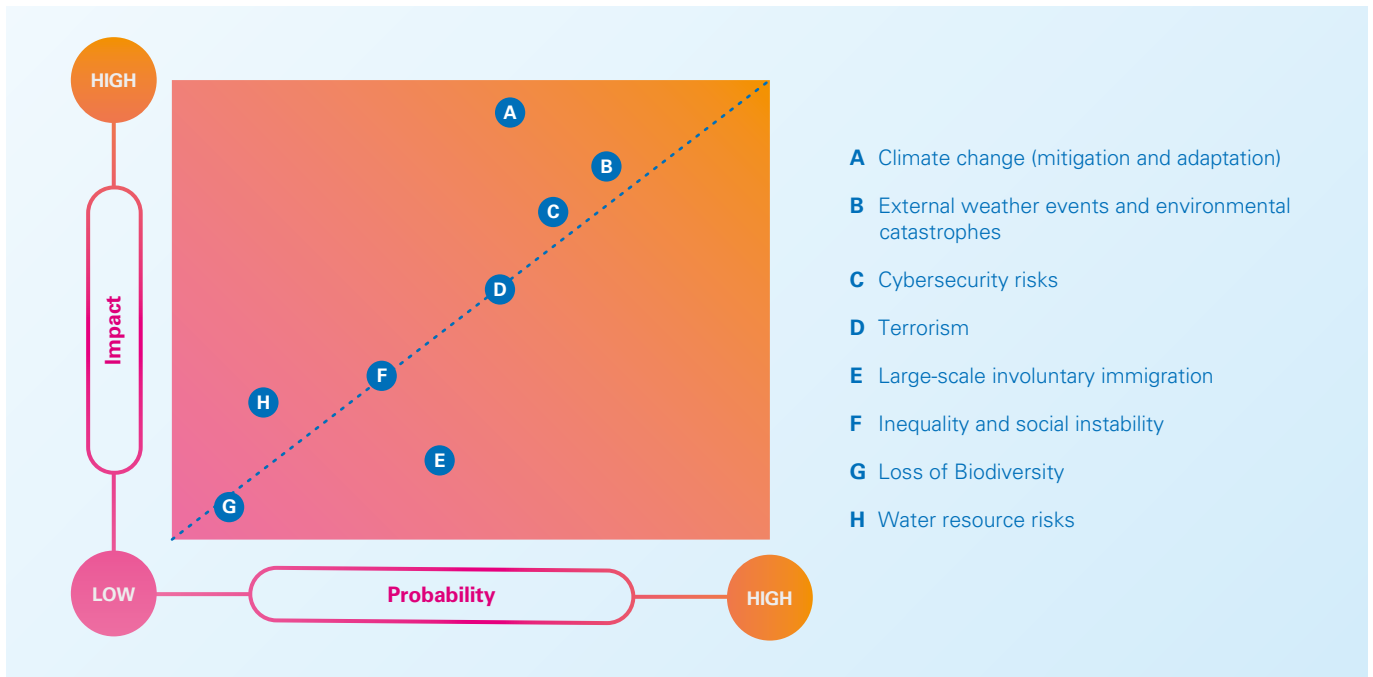
In 2018, ENDESA updated the identification of emerging sustainability risks with medium- and long-term impact related to some of the dimensions sustainability comprise, as they do systematically and on an annual basis. The goal is to be able to analyse the impact of these risks on business and to define the necessary steps for their control and prevention.

In order to achieve this, ENDESA has taken as its benchmark the identification of global risks developed by the World Economic Forum based on consultations with 750 experts from the

business, academic, civil and public sectors regarding perception of global risks with a time horizon of ten years. This map has been adjusted to the context of ENDESA's operations on the basis of the consultations carried out with stakeholders by the Company within the framework of the materiality study, thus allowing the most relevant sustainability risks to be identified.

The resulting risk map does not constitute a significant departure from the previous year, as no macrotrends have been identified.





Risk	Description	Potential impact on ENDESA	Main mitigation and management measures
Climate change (adaptation and mitigation)	The measures being taken in the fight against climate change by States and the business sector may prove insufficient for mitigation and adaptation.	Increased regulatory demands to accelerate the transition to an energy mix free from greenhouse gas emissions (increased additional costs for production using fossil fuels).	<p>ENDESA has established a roadmap towards the decarbonisation of its energy mix by 2050 that sets intermediate objectives for the reduction of CO2 emissions for the years 2020, 2030 and 2040. This roadmap is based on a clear commitment to renewable energies, the maintenance of nuclear energy and the optimisation of thermal generation assets during the transition.</p> <p>A project for adaptation that encompasses both evaluation of internal vulnerability and assessment of future benefits and opportunities has been developed. The conclusions of the project reveal that the risks to which the business lines would be subjected are classified between low and very low, and it is also expected that they will materialise slowly and in the future.</p>
Extreme weather events and environmental catastrophes	<p>Climate change is generating associated phenomena such as the increase in the occurrence and intensity of adverse weather events (floods, storms, etc.).</p> <p>Furthermore, a greater occurrence of environmental disasters caused by nature itself (tsunamis, earthquakes, etc.) or by man (industrial discharges, atmospheric and/or radioactive pollution, etc.) have a considerable effect on the business activity.</p>	<p>Incidents in distribution networks and power plants due to the occurrence of adverse weather events.</p> <p>Environmental sanctions arising from the potential triggering of environmental catastrophes in the operation of power plants or the distribution network (fire, radioactive emissions).</p>	<p>ENDESA has ISO 14001 certified environmental management systems for all of its generation and distribution assets, designed to promote excellence in environmental management and to go beyond the requirements of environmental legislation.</p> <p>In addition, the Company actively and continuously participates both in national and international initiatives and the development of studies and projects for in-depth evaluation of the effect of climate change on infrastructures that facilitate the creation of adaptation measures to minimise risks.</p> <p>Furthermore, it prepares its facilities against the possible consequences of extreme weather events and environmental catastrophes. In this regard, implementation of emergency plans for hydroelectric dams was completed in 2018, along with other measures.</p> <p>ENDESA has environmental liability and civil liability insurance to cover any potential breaches of environmental regulations and any claims arising from damages to third parties.</p>



Risk	Description	Potential impact on ENDESA	Main mitigation and management measures
Cybersecurity risks	The digital transformation entails greater exposure to potential cyber attacks that could endanger the security of computer systems and databases containing sensitive information.	Economic losses and reputational impacts entailed in the event of ENDESA's information systems being affected by a cyber attack. In addition, the Company's critical infrastructures could also be exposed to this type of attack, which might cause a serious impact on the essential services that they provide (e.g. nuclear power plants).	ENDESA has a cybersecurity strategy that is in line with international standards and government initiatives. As part of this strategy, ENDESA performs a process of assessment of the principal risks and identification of vulnerabilities, as well as an exhaustive digital surveillance process whereby it analyses the information and implements corrective action to mitigate risks. It also implements training and awareness initiatives with its employees in the use of digital technologies at both the professional and personal level to mitigate risks.
Terrorism	The geopolitical situation in certain countries and extremist religious movements are giving rise to an increase in terrorist attacks in developed countries.	Increased risk for the security of critical infrastructures that could potentially be targets for terrorist attacks, such as nuclear power plants.	ENDESA has a critical infrastructures security management system coordinated with Forces and Bodies of State Security.
Large-scale involuntary immigration	The situation of conflict and poverty in developing countries (especially in Africa and the Middle East) is causing an increase in the flow of involuntary immigration into the countries of Europe.	Greater incidence of non-payment and loss of revenue due to the inability of growing sections of the population to pay their energy bills.	ENDESA enters into agreements with the Public Administration to avoid electricity supply disconnection for vulnerable customers and thus reduce the risks of non-payment. It also develops programmes to facilitate access to energy by disadvantaged groups (energy volunteering programmes, prepaid systems)
Inequality and social instability	<p>Worldwide, we are seeing an increase in inequality which, in the case of Spain and Portugal, is being exacerbated by high levels of unemployment.</p> <p>In addition, social instability caused by lack of leadership and the weakness of representative democracy, together with a greater ability for people to organise themselves and make greater demands on governments and businesses, is contributing to a strengthening of civil society.</p>	<p>Greater incidence of non-payment and loss of revenue due to the inability of growing sections of the population to pay their energy bills.</p> <p>Social instability and the strengthening of civil society are leading to the Company's activities being more challenged, which makes it necessary to increase the extent of its communication and develop more participative models for relations with society.</p>	<p>ENDESA is developing various measures to facilitate access to energy for vulnerable communities.</p> <p>The Company is also implementing a methodology for shared value creation in its local operating environment to ensure a positive impact on local communities, contributing to responding to the challenges that these communities face such as unemployment and the resulting inequality and social instability.</p>
Loss of biodiversity	Increased demographic pressure and human activity characterised by a high level of consumption of natural resources are causing a loss of biodiversity in ecosystems.	Increased environmental requirements for the development of new electricity generation and distribution projects.	As part of its Biodiversity Preservation Plan, ENDESA is developing projects to protect, preserve and enhance Biodiversity, fostering increase in scientific awareness, searching for synergies that assist in its conservation and developing tools to help understand the interaction between biodiversity and its operating activities.
Water resources risks	The demographic explosion and the consumption patterns of today's society are resulting in increased pressure on natural resources, particularly water.	Restrictions on the use or availability of water for electricity generation.	ENDESA incorporates measures in its environmental management systems to promote efficiency in the consumption of water resources.





5. Respect for human rights

5.1. Management focus: ENDESA's human rights policy

103-1 Management approach - human rights assessment

103-2 Management approach - human rights assessment

103-3 Management approach - human rights assessment

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ENDESA has a permanent commitment to the respect and furtherance of Human Rights. This commitment is reflected in its corporate policies and is embodied in its adherence to the United Nations Global Compact, incorporating support and protection of Human Rights and non-complicity with their infringement of its two first principles. Historically, ENDESA has been a trendsetter in initiatives to ensure respect for Human Rights in its activities and those of its supply chain, continually developing processes to identify risks and their potential impact in matters of Human Rights.

Following the adoption of the Guiding Principles on Business and Human Rights by the United Nations, ENDESA decided to formally adapt its historic commitment regarding respect and furtherance of Human Rights to this new framework, integrating them into the management of the corporate activity. Consequently, in 2013 the Board of Directors of ENDESA, S.A. approved the Human Rights policy, thus following the recommendations established by the Guiding Principles. This policy includes the Company's commitment and responsibility in relation to Hu-

man Rights in general, and particularly those applicable to the business activities and corporate operations carried out by ENDESA staff, both managers and employees. It also promotes adherence to the same principles by its contractors, suppliers and commercial partners, paying particular attention to situations of conflict and high risk. The policy identifies eight principles divided into two main areas, namely labour practices and communities and societies:

PRINCIPLES OF THE HUMAN RIGHTS POLICY

Labour practices



- > Rejection of forced or compulsory labour and child labour
- > Respect for diversity and non-discrimination
- > Freedom of association and collective bargaining
- > Occupational health and safety
- > Fair and favourable working conditions

Communities and society



- > Respect for the rights of communities
- > Integrity: Zero tolerance for corruption
- > Privacy and communications

The policy can be found at www.endesa.com



5.2. The due diligence process

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In order to apply the commitments contained in the Human Rights Policy, and following the recommendations of the Guiding Principles, ENDESA is committed to establishing appropriate Due Diligence processes to ensure that the policy is implemented and monitored, assessing the possible impacts and risks existing in the field of Human Rights and establishing measures for their mitigation.

To this end, in 2017 ENDESA conducted a Due Diligence process to assess the level of compliance with its policy and

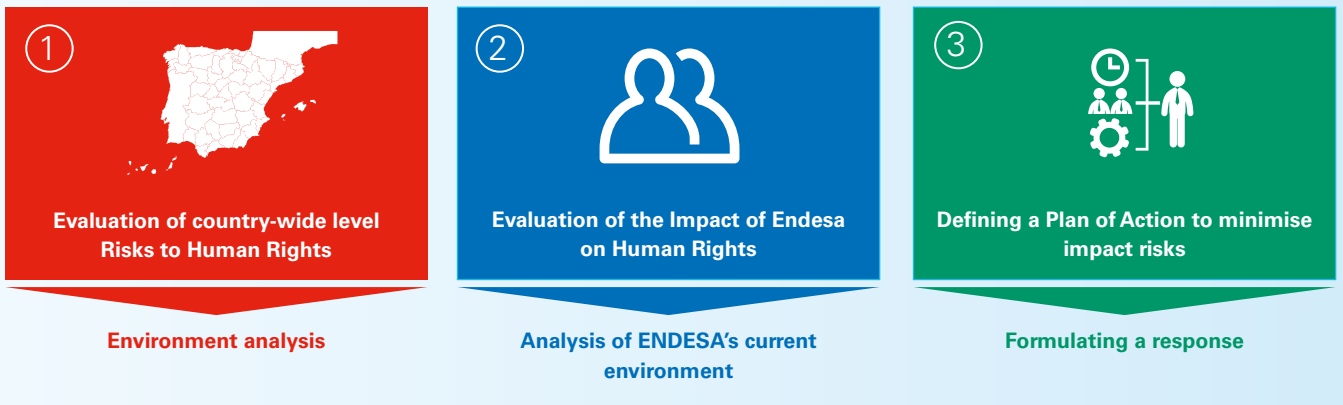
the Guiding Principles. This process encompassed all of its business activities in Spain, including generation, distribution and marketing activities, as well as supply chain management, assets purchasing processes and corporate functions.

The process was conducted on the basis of an initial identification of the level of country risk, a subsequent assessment of the real and potential impacts of ENDESA's activities on human rights, and finally the design of an action plan.

Given the relevance of this topic for ENDESA, the entire process was presented to the Auditing and Compliance Committee (ACC) on 29 January 2018 to report on the principal results of Due Diligence and the plan of action developed for the purposes of follow up on an annual basis. Also, the actions taken in 2018 to comply with the plan of action were also reported on at the 28 January 2019 session of the Audit and Compliance Committee.



EXTERNAL COMMUNICATION OF THE PROCESS AND RESULTS





5.2.1. Identification of country risk level

In order to understand the context in which ENDESA operates with regard to human rights, and to identify the issues that, due to regulatory and social conditions, may involve a higher level of initial risk, ENDESA conducted a consultation with more than 50 experts from different fields, such as: the United Nations, civil society, academic institutions, the general public, customers and the supply chain.

This consultation enabled the Company to classify each of the principles included in the human rights policy according to the level of non-compliance risk existing in Spain – marked mainly by the level of development of the legislation in force and the social context of the country – where the Company operates.



5.2.2. Assessment of the impacts of ENDESA's business activities

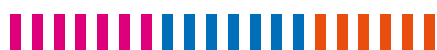
The objective of the second phase of the process was to conduct an analysis of ENDESA's value creation chain in order to identify the Company's actual and potential impacts on each of the aspects included in the human rights policy and the applicable Guiding Principles. To this end, action was taken on two levels:

- > Conducting in-depth interviews with top management and the CEO in order to analyse the '*state of the art*' of the integration of respect for human rights in the daily management of the business, and thus being able to identify potential risks and opportunities.
- > Internal assessment of the Company's policies, procedures, systems

and practices in each of the business and management areas, based on an analysis of more than 130 indicators that measure performance in the different human rights aspects linked to business management.

This analysis made it possible to ascertain that ENDESA had in place a set of very robust mechanisms and management systems at the time that Due Diligence was conducted, allowing it to ensure respect for human rights and adequately manage the existing risks. In this regard, there follows a summary of the main findings and the existing management mechanisms identified in 2017:

Aspects	Level of management and maturity at ENDESA	Mechanisms for risk management	
Ámbito: Prácticas laborales			
Freedom of association and collective bargaining	Robust	Over 90% of the workforce covered under collective bargaining agreements concluded with various labour unions and aligned with the covenants in force of the International Labour Organization (ILO) ratified by Spain. The functioning of these organisations and the right to trade union action is expressly set out in the collective bargaining agreements.	
Rejection of forced or compulsory labour and child labour	Robust	The management systems and Human Resources procedures ensure that there are no minors in the workforce. The youngest employee at the time that due diligence was performed was 22 years old. At 31/12/2018, the youngest employee was 22 years old. Employees' employment conditions are clearly detailed in their respective contracts, and the collective bargaining agreements regulate the working of overtime, with a commitment to remuneration for such work and minimisation of the number of hours worked.	
Respect for diversity and non-discrimination	Robust	ENDESA has a policy and an action plan for diversity and inclusion that establish objectives and lines of action in four areas (gender, age, nationality and disability) with the aim of disseminating a culture that recognises diversity as an element of value generation. In addition, the collective bargaining agreement regulates the existing equality plan within the business.	
Occupational Health and Safety	Robust	ENDESA's work centres have occupational health and safety management systems certified by the international standard OHSAS 18001, which establish suitable measures to manage the risks inherent in ENDESA's industrial activity and reduce accident rates. In addition, the prevention of labour risks is integrated into activities, processes, practices and facilities across all of the management bodies of the business.	
Fair and favourable working conditions	Robust	Working conditions are regulated through collective bargaining agreements agreed with trade union organisations. Furthermore, the various human resources management mechanisms and procedures are designed to favour working conditions that exceed the requirements established by the legislation in force.	
Area: Communities and society			
Respect for the rights of communities	Responsible relationships with communities	Robust	ENDESA is currently implementing a methodology for the creation of shared value in the management of its local operations. This integrates the expectations of local communities in the management of the assets and seeks solutions that create value for society, thus helping to obtain the 'social licence' to operate. This methodology is implemented throughout the useful life of the asset.
	Management of security	Robust	ENDESA uses private security forces in accordance with the provisions of the legislation in force. Security services are provided by external personnel properly accredited and authorised by the Ministry of the Interior. Part of their training includes aspects relating to legislation on private security, basic personal rights and human rights. They are also subject to periodic review and assessment by the State security forces and bodies.
	Environment	Robust	ENDESA has environmental management systems certified by ISO 14001 for 100% of its electricity generation and distribution activity. Through these systems, the Company establishes environmental monitoring plans and continuous improvement measures that go well beyond the requirements imposed by the legislation in force.
Integrity and ethical conduct	Robust	ENDESA has a Code of Ethics, a Zero Tolerance for Corruption Plan and other rules in line with the most advanced compliance models. In addition, among other aspects, ENDESA has established specific action protocols to guide the actions of its collaborators in relation to the acceptance and offering of gifts and favours, as well as in dealings with public officials and authorities. ENDESA also has a Criminal Risks Prevention Model that ensures compliance with the regulations applicable to the Group in relation to the criminal liability of legal entities. This model was certified in accordance with the UNE 19601:2017 standard. Furthermore, since 2017 the Company has a legal compliance and anti-bribery policy, as well as an anti-bribery management system certified by UNE-EN ISO 37001:2017.	





During the Due Diligence process, an analysis was also performed on the extension of the commitment to human

rights throughout the value creation chain, including the supply chain and responsible relationships with custom-

ers. The main mechanisms for the management of both aspects are detailed below:

Aspect	Mechanisms for management
Supply chain	
Management of suppliers and contractors	<p>The General Conditions of Contract include obligations for suppliers and contractors in relation to respect for human rights during the provision of the service contracted by ENDESA.</p> <p>In addition, since 2017 the supplier qualification process includes human rights assessment criteria for the families of suppliers with higher risks. If necessary, provision is made for conducting of audits and on-site visits, as well as the establishment of improvement plans by suppliers and, if applicable, for loss of qualification and possible suspension of the contract.</p>
Fuel procurement	<p>The electricity sector has to obtain fossil fuel supplies that originate, in many cases, from countries where there are less stable legal frameworks and a higher risk of violation of human rights. For this reason, ENDESA systematically performs an analysis of counterparts before contracting these services. This analysis makes it possible to identify any relevant controversies that could entail legal and reputational risks for the Company, and incorporates elements relating to human rights.</p> <p>Moreover, in recent years there has been a high degree of pressure exerted by civil society and investors in relation to coal mining, and this pressure has been passed on to electricity companies (especially European ones) that use this fuel for operating their thermal power plants. ENDESA, as a member of the ENEL Group, is part of the Bettercoal initiative. Organised by a group of European electricity companies, this initiative called worldwide seeks to promote the continuous improvement of corporate responsibility in the coal supply chain, including human rights as one of its main elements. Thus, mining companies must adopt the Bettercoal code and implement a body of good practices, as well as undergoing processes for assessment and continuous improvement.</p>
Responsible relationships with customers	
Privacy and communications	<p>ENDESA has a system certified by AENOR for the handling of commercial advisers and Customer Service agents, based on a specific code of ethics designed to ensure that the commercial activity complies with the legislation in force, respects privacy, protects minors and respects those who do not wish to receive commercial information. With regard to the protection of personal data, ENDESA has appropriate monitoring and review systems and mechanisms to ensure compliance with the Organic Law on Data Protection.</p> <p>With regard to marketing communications, there is an internal control system that seeks to minimise risks and avoid any messages that might violate human dignity or human rights.</p>
Access to energy for vulnerable customers	<p>ENDESA recognises the essential role played by access to energy in ensuring the observance of human rights, since it is directly linked to the well-being of people and their quality of life.</p> <p>In this regard, States have the primary responsibility for ensuring access to sustainable, safe and affordable access to basic energy services. However, the electricity sector can contribute to this goal and thus promote social and economic development that is inclusive and sustainable.</p> <p>In this context, ENDESA is aware of the serious problem posed by the inability to meet energy bills in many Spanish households, and the Company has therefore been a pioneer in the signing of agreements with the Public Administration to guarantee supplies to vulnerable customers.</p> <p>In addition, the Company is implementing various initiatives to promote energy efficiency and savings on electricity bills for groups of this type.</p>



5.3. Opportunities for improvement and action plan

During the process of assessing the compliance of the human rights policy and its alignment with the Guiding Principles, a number of opportunities for improvement were identified to strengthen the Company's commitment to respect for human rights in the performance of its industrial and commercial activities. These opportunities for improvement are classified into four areas: strength-

ening and disseminating ENDESA's commitment to human rights; promoting among employees the integration of human rights into business activity; strengthening relationships with local communities; and extending the commitment and control to the value chain. In order to respond to these four areas of action, an action plan was defined

containing 27 actions that were planned for implementation in 2018 and subsequent years, and the monitoring of which is the responsibility of the Board of Directors of ENDESA, S.A., via the Auditing and Compliance Committee. Some of the most significant actions are detailed below:

Area for improvement	Main actions	Status as at 31/12/2018
Strengthen and disseminate ENDESA's commitment to human rights, both to employees and to external stakeholders	<ul style="list-style-type: none"> > Inclusion of the human rights policy together with internal policies. > Development of an organisational procedure for the management of processes of Due Diligence. > Dissemination of ENDESA's commitment to human rights and the measures that are being implemented. 	<ul style="list-style-type: none"> > All operating instructions since 2015 reviewed and included in those approved in 2018. > Procedure developed and pending approval in the beginning of 2019. > Declaration of the Human Rights policy and intense communication campaign between September and December via the Internet.
Promoting the inclusion of human rights in ENDESA's business activity among employees.	<ul style="list-style-type: none"> > Training ENDESA's workforce on human rights. > Promoting programmes for diversity, inclusion and promotion of improvement in diversity ratios. > Improving safety rates (frequency, severity and fatal accidents) 	<ul style="list-style-type: none"> > Launch of an on-line course for 100% of the workforce. Development of two additional on-site courses planned for 2019. > Improvement objectives included in the 2018-2020 Endesa Sustainability Plan. > Improvement objectives included in the 2018-2020 Endesa Sustainability Plan.
Strengthening relations with local communities	<ul style="list-style-type: none"> > Continuing implementation of mechanisms and actions for management of relations with communities in electricity generating and distribution activities. 	<ul style="list-style-type: none"> > Implementation of the Shared Value Creation methodology in thermal and renewable facilities in O&M and adaptation of the methodology for generation and distribution to focus more strongly on Human Rights.
Extending the commitment and control to the entire value chain.	<ul style="list-style-type: none"> > Roll-out of the human rights auditing methodology to suppliers > Continuation of the extension of the human rights assessment criteria to asset purchasing processes. 	<ul style="list-style-type: none"> > Pending completion in the second quarter 2019. > Extended to asset purchasing operations (Ceuta Distributor).

The following related actions were also implemented as part of the Due Diligence plan of action:

- > More extensive information collected in the sustainability report
- > Inclusion of the local community relations function at the facility level.
- > Fostering of measures to avoid creating discriminatory attitudes during the selection process (inclusive language in publications, at least one woman in the finalist candidates, exhaustive reporting on the percentage of women in all phases of the selection process, etc.)
- > Management awareness of the company's commitment to minimise overtime.
- > Inclusion of Human Rights criteria in the supplier evaluation process (vendor rating).
- > Inclusion of Human Rights aspects in the sustainability questionnaire filled out by contractors.
- > Notification and dissemination of the ethics channel to suppliers and contractors.
- > New procedure for evaluation of counterparties, focusing on Human Rights of coal providers.
- > Deployment of the hydroelectric dam emergency plan for 100% of assets.
- > Incorporate a focus on Human Rights in the focus groups held with NGOs for preparation of analysis of materiality.
- > Creation of a specific channel, (sostenibilidad_csv@enel.com) to deal with questions, complaints or explanations on projects in progress that will be included in the panel sites of each of the building works of renewable plants.



5.4. Reporting and complaint mechanisms

Under ENDESA's human rights policy, when any person linked to ENDESA – whether an employee or an external party – believes a situation exists that is contrary to the provisions of its policy, it

can report this to the Company's Auditing Department.

In the handling of these reports, the Auditing Department will act to protect the informants from any form of

reprisal, i.e. any act that could give rise to even the mere suspicion that the person in question might suffer any form of discrimination or penalty. In addition, the confidentiality of the





informants' identity is guaranteed, unless the applicable legislation establishes otherwise.

Furthermore, for issues relating to labour matters, ENDESA has the necessary mechanisms to establish an ongoing dialogue with the different trade union organisations so that they can convey any grievances or complaints to the Company. Similarly, through the strategic positioning of Open Power, ENDESA seeks to establish an increasingly constant and close dialogue with the organisations of civil society, through which it can receive grievances or suggestions on issues relating to human rights. In this regard, a notable feature is the existence of a sus-

tainability mailbox through which any stakeholder can make contact with the Company.

In all cases where, based on a report of this type, it is determined that there has been a breach of the principles reflected in this Policy, the corresponding procedure provided for in the Code of Ethics will be applied. ENDESA is also committed to developing appropriate remediation mechanisms, without prejudice to the right of recourse to any other judicial and non-judicial mechanisms that may exist.



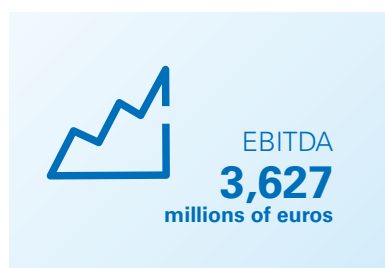
5.5. Cases of discrimination and corrective actions undertaken

There were three human rights-related complaints in 2018 (mobbing, or corporate climate, and human resource management). They were all referred to a specialist, following the established protocol. A non-compliance has been confirmed in one of them, and investigations are ongoing for the other two, which have not been concluded to date.



6. ENDESA's economic performance

6.1. Principal economic indicators



6.1.1. Consolidated profits

ENDESA obtained a net profit of 1,417 million euros during 2018, representing a 3.1% drop from the 1,463 million euros obtained in 2017.

Ordinary net profits for 2018 increased to 1,511 million euros, an increase of 4.1% compared to the previous year (1,452 million euros).

The distribution of net profit and ordinary net profit for 2018 for all ENDESA business and its variation from the previous year is displayed below:

	millions of euros							
	Net gain/(loss)				Ordinary Net Profit (2)			
	2018	2017	% Var.	% Contribution to Total	2018	2017	% Var.	% Contribution to total
Generation and marketing	396	263	50.6	27.9	490	263	86.3	32.4
Distribution	1,046	1,048	(0.2)	73.8	1,046	1,037	0.9	69.2
Structure and Other (1)	(25)	152	(116.4)	(1.7)	(25)	152	(116.4)	(1.6)
Total	1,417	1,463	(3.1)	100.0	1,511	1,452	4.1	100.0

¹ Structure, services and adjustments.

¹ Ordinary Net Result = Profit for the Year for the Parent Company - Net Result from Sales of Non-Financial Assets (greater than 10 million euros) - Net Losses from Impairment of Non-Financial Assets (greater than 10 million euros).

6.1.2. Income, EBITDA and operating profit

In 2018, income totalled euros 20,195 million, up by euros 138 million (+0.7%) compared with 2017. Of this amount, 19,555 million euros correspond to sales (+0%) and 640 million euros to revenues from other operations (+27.7 %).

ENDESA reported gross operating profit (EBITDA) of 3,627 million euros in 2018 (+2.4%). To analyse its evolution during the 2018 financial year, the following factors must be taken into consideration:

- > The reduction in cost of energy purchases (-3.0%) and fuel consumption (-1.1%) due primarily to lower thermal (-13.3%) and nuclear (-9.0%) production for the year, despite the increase in cumulative arithmetic price in the wholesale electricity market (57.3 €/MWh; +9.7%).
- > The lower expense recorded in fiscal year 2017 for the subsidised rate of 222 million euros in accordance with Order ETU/929/2017 of 28 September and Order ETU/1288/2017 of

22 December, for which the various judgments in this respect were executed.

Operating profit (EBIT) for 2018 decreased 5.5% from the previous year, resulting in 1,919 million euros, primarily due to the allocation of losses for damage in Groups 1, 2, 3 and 4 of Alcudia Thermal Plant (Balearic Islands) amounting to 157 million euros.

	Profits 2018					
	Income		EBITDA		EBIT	
	Mill. euros	% var. 2017	Mill. euros	% var. 2015	Mill. euros	% var. 2015
Spain and Portugal	20,195	+0.7	3,627	+2.4	1,919	-5.5





6.1.3. Investments

In the financial year 2018, gross investment by ENDESA totalled 1,470 million euros (1,175 million euros in 2017), of which 1,203 million euros are related

to tangible investments, 231 million euros to investments in intangible assets, and 36 million euros to financial investments, as detailed below:

	Millions of euros		
	Investments		
	2018 ¹	2017 ¹	% Var.
Generation and Marketing	585	358	63.4
Distribution	609	610	(0.2)
Other	9	10	(10.0)
TOTAL TANGIBLE²	1,203	978	23.0
Generation and Marketing	140	48	191.7
Distribution	61	47	29.8
Other	30	38	(21.1)
TOTAL INTANGIBLE³	231	133	73.7
FINANCIAL	36	64	(43.8)
TOTAL GROSS INVESTMENTS	1,470	1,175	25.1
TOTAL NET INVESTMENTS⁴	1,310	982	33.4

¹ Does not include business combinations transacted during the financial year (see paragraph 2.5., Perimeter of Consolidation of the Consolidated Management Report).

² See Note 6.1 of the Consolidated Financial Statements for the financial year ending 31 December 2018.

³ See Note 8.1 of the Consolidated Financial Statements for the financial year ending 31 December 2018.

⁴ Net investments = Gross investments - Grants related to assets and transferred facilities.

Gross investments in generation for 2018 consist for the most part of investments for the construction of wind and photovoltaic power awarded in tenders held in 2017, amounting to 192 million euros.

Investments were also made in plants already in operation as of 31 December 2017, including investments of 3 million euros in the Litoral Coal-Fired Plant and 43 million euros in the As Pontes Coal-Fired Plant for adaptation to the Industrial Emissions Directive (IED).

Gross investments in distribution are related to network extensions and investments aimed at optimising functioning of the network to boost efficiency and quality of service. These also included investment for the widespread installa-

tion of remote management smart meters and their operating systems.



6.2. Generation of wealth in 2018

201-1 201-4

ENDESA's activity as a producer and supplier of electrical power contributes to the economic and social development of the countries where it operates.

	Generation of Wealth (Millions of euros)	
	2017	2018
Direct Economic Value Generated	20,049	20,233
Economic Value Distributed	18,793	18,911
Dividends	1,463	1,511
Operating costs and other operating expenses	15,690	15,779
Personnel expenses	917	947
Taxes and duties*	557	504
Investment in social development	11.3	11.3
Finance expenses	166	170
Economic value retained	1,256	1,322

* Includes corporate tax paid in the year on continuing activities, duties and other taxes.

The balance of capital grants at 31 December 2018 amounted to 287 million euros. This figure mainly includes subsidies received under the scope of collaboration agreements for the execution of

plans for the improvement of the quality of electrical supply in the distribution grid, signed with the Ministry for Ecological Transition (formerly the Ministry of Energy, Tourism and Digital Agenda)

and the Public Agencies of the Autonomous Communities, among others, for the construction of electrical distribution installations.



6.3. Fiscal transparency

6.3.1. Tax policy

ENDESA complies with tax regulations as a part of the principles inspiring the corporate responsibility of the Company, applying responsible tax policies and promoting a cooperative and transparent relationship with the Tax Authorities.

In this vein, ENDESA's Board of Directors, at their meeting on 20 December 2010, agreed on ENDESA's joining the Code of Good Tax Practices. In compliance with the dispositions therein, the person responsible for ENDESA's tax affairs periodically informs the Board, via the Auditing Committee, of the tax policies followed by the Company and of the fiscal consequences of the most significant operations. On 25 January

2016, ENDESA's Board of Directors ratified the adherence of ENDESA, S.A. and its controlled Spanish subsidiaries to the Code, subsequent to the recent inclusion in the same of an Appendix with new conduct obligations for both the Company and the Authorities. In compliance with the voluntary system of enhanced transparency provided for in the aforesaid Appendix of 6 June 2017, ENDESA submitted the Enhanced Transparency Report to the State Tax Administration Agency both in 2018 and in 2017, referring to the 2017 and 2016 fiscal years respectively.

In addition, and in compliance with the provisions of Law 31/2014 of 3 Decem-

ber amending the Corporate Enterprises Act, on 15 June 2015 ENDESA's Board approved both ENDESA's Tax Strategy and its risk management and control Policy, tax risks included, subsequently updated on 19 June 2017. Both documents are available on the company's website, in the 'Corporate Governance' section.

Likewise, on 30 January 2017, ENDESA's Board passed ENDESA's Tax Risk Control and Management Policy, whose aim is to establish a fiscal control framework within the Company. This document is also available on the Company's website.



6.3.2. Fiscal contribution

In line with ENDESA's commitment regarding fiscal management, since 2014 the payment of the most significant taxes in the countries where it operates, principally Spain and Portugal, has been voluntarily published, illustrating our commitment to transparency in the payment of taxes.

ENDESA's activity not only generates a significant direct contribution to the Authorities by means of the payment of taxes, but also a considerable contribution via the collection from third parties of taxes generated as a consequence of the company's activities. For this reason, it is considered proper that

both amounts are shown, although separately.

In 2018, ENDESA's total tax contribution amounted to 4,087 million euros, of which 1,650 million euros corresponded to amounts paid by the Group and 2,436 million to amounts collected as a consequence of ENDESA's business activity.





ENDESA's total contribution 2018 *

Millions of Euros	Amounts paid	Amounts collected
I. TAXES PAID IN THE FISCAL GROUP:		
Taxes on Profits	329	—
Corporate Income Tax ¹	329	—
Subtotal, taxes paid in the Fiscal Group	329	0
II. TAXES PAID TO THE TREASURY:		
Taxes on Profits	39	68
Corporate Income Tax	12	—
Tax on Commercial and Professional Activities	26	—
Other deductions	1	68
Taxes on Property	72	0
Real Estate tax (municipal)	60	—
Other ²	11	—
Employment-associated Taxes	122	207
Payments made to Social Security ³	122	24
Work income deductions	—	183
Taxes on Products and Services	253	1,293
VAT paid ⁴	2	1,293
Tax on use of public domain	194	—
Other charges in the public domain and other ⁵	56	—
Environmental Taxes	847	543
Electricity Production Value Tax	269	—
Nuclear fuel tax	122	—
Hydraulic Dues	25	—
Nuclear Service Taxes	166	—
Environmental Taxes (regional)	66	—
Tax on Electricity	—	489
Tax on Hydrocarbons	26	54
Coal Tax	173	0
Subtotal taxes paid in Spain⁶	1,332	2,112
Taxes paid outside Spain⁷	(10)	324
Subtotal taxes paid in all countries	1,322	2,436
TOTAL TAX CONTRIBUTION	1,650	2,436
III. OTHER REGULATORY PAYMENTS⁸:		
Rates Subsidy	84	
Energy Efficiency	29	
Other	5	
Subtotal other regulatory payments	119	0
TOTAL PAYMENTS TO PUBLIC AUTHORITIES	1,769	2,436

¹ As the requirements foreseen in Chapter VI of Title VII of Law 27/2014 of 27 November concerning Corporate taxes have been fulfilled, since the 2010 financial year ENDESA and certain subsidiaries resident in Spain belong to the Fiscal Consolidation Group of which the leading Company is Enel S.p.a. and the Company representing said Group in Spain is Enel Iberia. It is this Company that, as the body representing the Fiscal group, maintains the final relationship with the Treasury with regard to this Tax.

² The amount corresponding to 'Other' in the 'Taxes on Property' category refers mainly to the Tax on the Increase in Value of Urban Land, the Tax on Buildings, Installations and Works, and fees for permits and construction licences.

³ The Social Security payments made by ENDESA are included as, in line with the philosophy implemented by the OECD in the analysis of a country's tax burden, these are a contribution of an obligatory nature which generally constitutes a significant part of a country's income and which, by virtue of its nature as a tax rather than a contribution, is considered clearly a tax in our country.

⁴ With regard to the V.A.T. paid, the information relates to the V.A.T. actually paid (the difference between the output V.A.T. and the deductible input V.A.T.).

⁵ The item 'Other charges in the public domain' includes amounts mainly related to the granting and regulation of dams, public rates and others.

⁶ Where applicable, each tax item includes amounts paid by way of outlay resulting from inspection proceedings and voluntary regularisations, as well as returns received during the year. Default interest or surcharges are not included, as they are considered not to be part of the tax contribution.

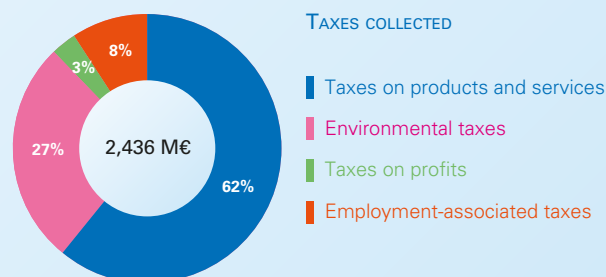
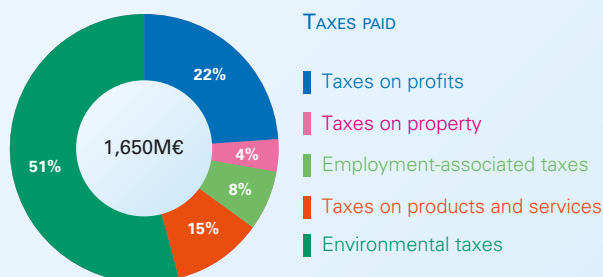
⁷ For the purpose of calculating the total of taxes paid outside Spain, ENDESA's presence in Portugal, the Netherlands, Morocco, Germany and France is included.

⁸ Likewise, 'Other Regulatory Payments' are reported separately; these are paid to the Authorities by ENDESA as a statutory requirement, a consequence of the regulation of the sector in which it operates, although these are not strictly taxes and therefore cannot be included in the Total Tax Contribution; specifically:

- Energy efficiency: gas and electricity marketing companies are bound by the energy efficiency obligation system to make an annual financial contribution to the national energy efficiency fund. This obligation was instituted by Royal Decree 8/2014 of 4 July.
- Rates subsidy: an obligation of companies owning electricity generation facilities to contribute to the financing of the Rates Subsidy, instituted by Royal Decree-Law 6/2009 of 30 April.

* Paragraphs related to corporate income tax include taxes actually paid during the year (affected by instalment payments and tax rebates from previous years). The tax liability for the year at year close was considered in previous years. For purposes of comparison with 2017 data, the information on tax liability would be i. 353M€ for ENDESA and its subsidiaries that are part of the Fiscal Group, and ii 13M€ for the other subsidiaries that pay taxes individually. Each tax item includes amounts paid by way of outlay resulting from inspection proceedings and voluntary regularisations. Default interest or surcharges are not included, as they are considered not to be part of the tax contribution.

Breakdown of total tax contributions



Breakdown of total tax payments by geographical area

As is to be expected, Spain is the jurisdiction where ENDESA has paid most taxes; these represent over 92 percent of the total of taxes paid and collected during the 2018 financial year.



Total amount of payments made to Public Authorities Breakdown by countries where ENDESA operates

Country	Millions of Euros			
	Spain	Portugal	Other ¹	Total
Taxes paid	1,660	0	-10	1,650
Taxes collected	2,112	123	201	2,436
Total Tax Contribution	3,772	123	191	4,087
TTC Percentage of total	92%	3%	5%	100%
Other regulatory payments	Spain	Portugal	Other¹	Total
Rates Subsidy	73	11	5	90
Energy efficiency	29	0	0	29
Total other payments made to Public Authorities	102	11	5	119
Total payments made to Public Authorities	3,874	134	197	4,205

Total amount of accounting profit broken down by countries where ENDESA operates

Country	Millions of Euros			
	Spain	Portugal	Other ¹	Total
Total income	18,323	1,079	793	20,195
Accounting profit before tax ²	1,798	19	1	1,818
Tax on Profits ³	338	0	-12	326

¹ The section 'Other' refers to ENDESA's presence in the Netherlands, Morocco, Germany and France.

² The standard for determining accounting profit is on a consolidated basis.

³ The information corresponding to Tax on Profits corresponds to the Income Tax paid, with consideration of possible payments due to Inspection Reports. In that event, indicate that ENDESA and its 100% owned subsidiaries resident in Spain are part of the Tax Consolidation Group whose parent company is Enel S.p.a., the latter being the company representing the Tax Group in Spain, Enel Iberia, S.L. Consequently, the information reported is the amount paid by ENDESA and its subsidiaries included in the Tax Group to Enel Iberia, S.L., which reports and settles the tax of the Tax Group with the Tax Administration in accordance with tax regulations. Furthermore, the amount paid to the Tax Administration is considered for the other subsidiaries of the consolidated business group that are not part of the tax consolidation group.



6.3.3. Use of tax havens

ENDESA's policy is not to make investments in or via territories considered to be tax havens for the purpose of reducing the tax burden. They are made only if there are significant economic reasons, other than that mentioned above, to justify this. Furthermore, ENDESA has never employed entities established in tax havens with the intention of concealing the true owner of income, activities, assets or rights.

It is true that ENDESA performs occasional, non-relevant activity in other countries, which, although not considered tax havens by the Spanish State Tax Administration Agency, are considered by certain external observers to be territories that, in their opinion, have a tax regime more favourable than that of Spain.

The truth is that their inclusion in the Sustainability Report is not justified, due either to the significance of the activities performed by the Company in these geographical areas or to the legal classification granted to these countries by the Spanish Tax Authorities. However, aware of the importance that society should observe that ENDESA always acts with absolute transparency, it considers it expedient to report the activities performed by its subsidiaries in territories that, although not tax havens, may occasionally be considered to have low tax requirements, as is the case with the Netherlands. It must be borne in mind that the economic and judicial characteristics of the Netherlands enable direct access to the most efficient financial markets and the adoption of more agile judicial systems capable of providing greater flexibility to companies established there, resulting in a lower incidence of compliance costs

and greater speed of access to sources of finance.

In any event, it is important to mention that the Netherlands, although it is included in the Tax Justice Network list (November 2009), has had a signed agreement with Spain to prevent Double Taxation, with an Information Exchange clause, since October 1972, and maintains a Corporate Income Tax rate very similar to that in Spain.

ENDESA's only financial interest in the country is a 100% stake in International ENDESA, B.V. (IEBV), a Dutch company established in 1993 to raise funds for the ENDESA Group via the Euro Medium Term Note (EMTN) and Euro Commercial Paper Programme (ECP) debt issuance. IEBV's last debt issue was in 2003, being currently left only the activity of issuing ECP. The company is considering possible transfer of this activity to Spain, to be continued from ENDESA, S.A., an entity resident in Spain.



6.4. Creation of value for shareholders

6.4.1. ENDESA's share performance

102-7

2018 was a negative year for most securities markets, affected by incipient signs of economic slowdown and changes in monetary policy by the Fed and the ECB that were interpreted as a possible cycle change and by factors like trade tensions, questions about conclusion of Brexit or political instability in countries like Spain and Italy.

The Spanish market was not an exception. Its premier indicator, IBEX-35, sus-

tained high volatility and ended the year with a decrease of 14.97%, recording its worst annual result since 2010 when it dropped more than 17%.

Performance was largely similar in the other European markets. The German exchange was dogged with even worse performance, with the DAX index dropping 18.3%, hit by poor development of exporting companies faced with the threat of the USA's trade war against China and Europe. The London FTSE

lost 12.48% in the United Kingdom, and the French CAC closed the year down by 10.95%.

In Italy, the FTSE MIB closed down 16.15% due to political tensions between the Italian government and the European Union due to its spending plans, which triggered risk premium for the country.

The US indices also experienced declines, albeit fewer, and only a single digit. The S&P 500 lost 6.2% and the

DJIA 5.63%, while the NASDAQ 100 index finished best, losing only 1%.

The Spanish IBEX-35 began 2018 on the optimistic note with which it finished the previous year, and reached its highest level at the end of January with 10,609.5 points, managing to accumulate a revaluation close to 6%. The decline in the index was practically continuous from that point, with the exception of a brief uptick in May and June fuelled by the government change.

The Spanish market exhibited considerable volatility and a negative trend in the second half of the year. The IBEX-35 index reached its lowest point of the year on 27 December at 8,363.9 points, 17% below the start of the year, closing a few sessions later near that level at 8,539.9 points, a drop of 15% as already mentioned.

Only eight stocks on the IBEX-35 managed to close in positive territory. The biggest gains were in companies in the electric sector, stocks with defensive profiles that provide safe havens in difficult markets. ENDESA remained in second place in this ranking, with cumu-

lative revaluation of 12.74% for the year. Conversely, the lowest positions were held largely by bank stocks, affected by the low interest rate environment that penalized their normal business margins.

The good performance by Spanish electric companies also helped the EUROSTOXX UTILITIES index finish as the second best European industry index in 2018, despite the fact that its performance was practically flat at the end of the year, revalued slightly at 0.3%. ENDESA was the fourth highest company quoted in the indicator.

Despite the track record of the IBEX-35, ENDESA stock moved from low to high in 2018, reaching its annual lowest at 16.6 euros per share at the close of the 9 February session and its highest of 21.27 euros per share in the 24 December session.

The main factor driving this growth was the sustained improvement in fundamental business parameters throughout the year, especially the improvement in hydroelectric production, renewable en-

ergy and more favourable conditions in the gas market.

The improvement in its operating environment was combined with the government change in the second half of the year, which the market reacted favourably to. In the last quarter, ENDESA stock sustained a setback in October due to a sudden increase in perception of regulatory risk due to the political situation, but the presentation of the 2019-2021 Strategic Plan in November managed to reverse the pricing trend and it closed the year at 20.13 euros per share, very close to the highest levels of the year.

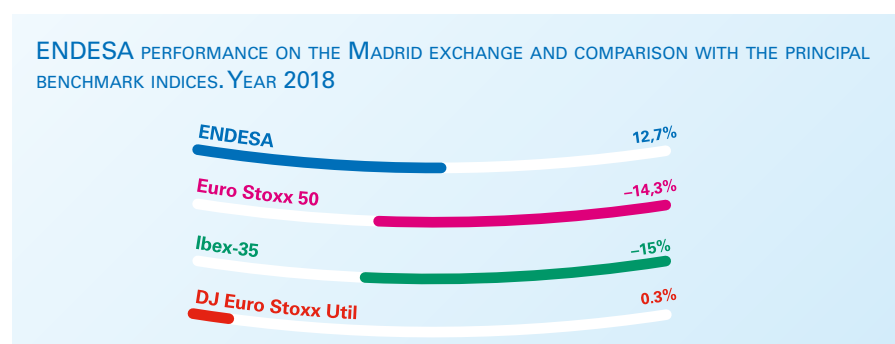
The 1.382 euros per share that the company shared as ordinary dividends charged to the 2017 profits, which provided an additional profit from dividends of 7.74%, were added to the 12.74% positive cumulative market profitability for the ENDESA shares in 2018. All in all, total profitability for shareholders calculated as the total of stock market profitability and profit from dividends came to 20.48% in 2018.



Main statistical data of ENDESA shares in 2018

	Maximum	Minimum	Average	Close	% Annual revaluation	% Total Profitability	Volume of shares traded
ENDESA (€/share)	21.270	16.600	18.938	20.130	12.7	20.5	547,343,953

Source: Madrid Stock Exchange.



102-7

ENDESA closing market capitalisation for the year was 21,313 million euros, the 9th highest capitalisation on the Ibex-35.





6.4.2. Dividend

103-1 Management approach - economic performance

103-2 Management approach - economic performance

103-3 Management approach - economic performance

In line with the Dividends Policy approved by ENDESA's Board of Directors on 21 November 2017 for the 2017-2020 period, ENDESA's General Shareholders' Meeting held on 23 April 2018 approved the distribution of a total ordinary dividend charged against the closing profits for 2017, at a gross amount of 1.382 euros per share, a figure equalling 1,463 million euros. This dividend was paid to the shareholders in two cash payments made on 02 January 2018 for 0.7 euros gross per share (741 million euros in total) and on 02 July 2018 for 0.682 euros per share (722 million euros).

For the coming years, the Dividend Policy for the 2018-2021 period approved by the Company's Board of Directors in

its session of 20 November 2018 establishes that the Board of Directors will ensure that the ordinary dividend per share agreed to be paid out for financial years 2018-2020 is equal to 100% of the ordinary net earnings of the Parent Company in the consolidated financial statements of the Group that it heads. Specifically, it will ensure that the ordinary dividend will be at least 1.33 euros gross per share for 2018.

For the financial year 2021, the Board of Directors will ensure that the ordinary dividend per share agreed to pay out for that year is equal to 80% of the ordinary net earnings attributed to the Parent Company in the consolidated financial statements of the Group.

It is the intention of the Board of Directors that payment of the ordinary dividend shall be made exclusively in cash, by payment in two instalments (January and July) on the specific date that is to be determined in each case and which shall be appropriately communicated.

As for the ordinary dividends charged against the profits for 2018, the ENDESA, S.A. Board of Directors has resolved to distribute a dividend to its shareholders in the gross amount of 0.70 euros per share.

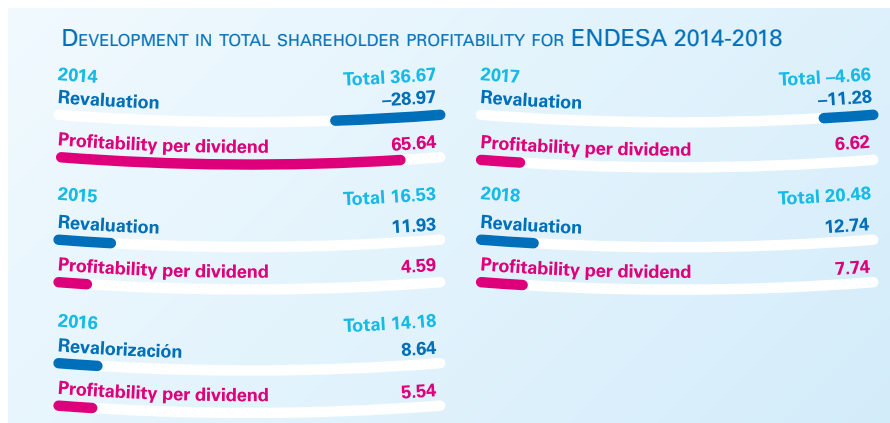
Payment of this dividend, involving an outlay of 741 million euros, was made on 2 January 2019.



6.4.3. Profitability

Total profitability for ENDESA shareholders was 20.48% in financial year 2018, since the profitability of 7.74% allocated based on dividends paid in the year was added to the 12.74% revaluation of the stock.

During the last five years, the average total profitability for ENDESA's shareholders has been 16.6%.



The total profitability of ENDESA's shares was +20.48% in 2018

6.4.4. IBEX35

Since its return to the IBEX-35 in November 2014, ENDESA is weighted in the index with a coefficient of 40% of its capital, given that its floating capital

(*free float*) is 29.9%, within the 20-30% tranche.

With consideration of this weighting, ENDESA shares ended 2018 in 16th

place on the IBEX-35 based on capitalisation level adjusted for free float.



6.4.5. Transparency and close relations with shareholders and investors

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ENDESA maintains a constant relationship with its shareholders, private and institutional investors and leading stock market analysts, providing them with a steady stream of detailed information through the Investor Relations Department and the Shareholders' Office in Madrid.

In this regard, on 11 November 2015, the ENDESA Board of Directors, in accordance with the Code of Good Governance of Listed Companies, approved the 'Policy of communication and contact with shareholders, institutional investors and vote advisors'. The main

objective of this Policy is that the Company maintains transparent, complete and truthful information, providing permanent attention to relations with its shareholders and institutional investors. The general principles governing this policy are transparency, immediacy, continued information, equality of treatment, affinity to company interests and compliance with regulations.

The Auditing and Compliance Committee is the body responsible for supervising the communications strategy and shareholder and investor relations, including small and medium sharehold-

ers. In compliance with this policy, the Auditing and Compliance Committee supervised its Strategy for Communication and Relations with Shareholders, Investors and Other Stakeholders in its meeting of 17 December 2018 for the year 2018.

The conclusions of the Committee indicate that the channels for dissemination of ENDESA information are operating properly and it is being performed in accordance with the general principles of ENDESA policy and in compliance with best corporate governance practices.



6.4.6. Investor Relations Department

102-43

Among the activities performed by the Investor Relations Department in 2018, we should emphasize making public presentations to analysts and investors on the Company's quarterly profits and its strategic plan.

In this regard, on 21 November 2018, ENDESA presented the market with an update of its strategic plan for the 2019-2021 period.

ENDESA conducted two Non-Deal Road Shows during 2018. The first was held in Europe and the United States in March, after presentation of the profits for 2017.

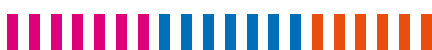
The second, also held in Europe and the United States, was held in November after presenting the updated 2019-2021 Strategic plan, with the aim of informing the Company's main investors about the update of the plan in depth. In these two Roadshows, ENDESA visited a total of 17 cities, meeting with 149 investors. ENDESA also participated in 5 Reverse Roadshows, meeting with 61 investors in Madrid.

Furthermore, ENDESA's Investor Relations Department attended a total of 7 international conferences on the sector,

where it was able to meet with 91 investors.

It should also be noted that as part of its daily activity, the Investor Relations Department responded to a total of 1,158 queries from analysts, investors and rating agencies by telephone, e-mail or in face-to-face meetings.

Finally, on 23 April 2018, at its headquarters in Madrid, ENDESA held its Ordinary General Shareholders' Meeting, at which all the items on the agenda were approved, with a quorum of 81.731% of the share capital being present.





6.4.7. ENDESA's Shareholder's Office

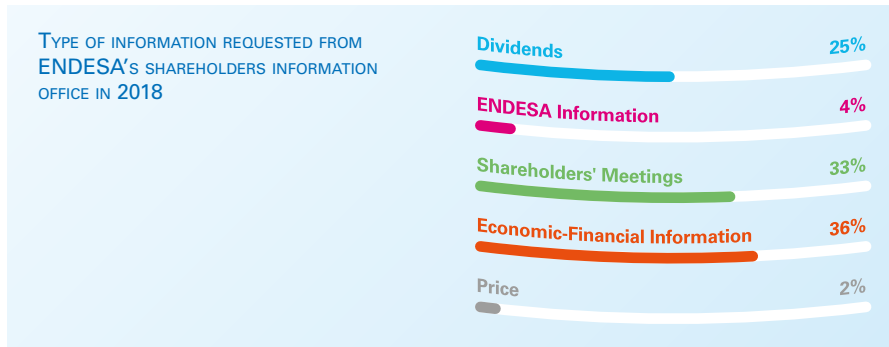
102-43

One of the most significant channels that the company places at the disposal of its private shareholders is the 'Information for Shareholders and Investors' included on its corporate website (www.endesa.com)

During 2018, ENDESA's Shareholders' Office responded to 1,761 telephone calls and received 88 visits, and 1,042 documentation deliveries were performed.



2,891 requests from shareholders were handled by the Shareholder's Office



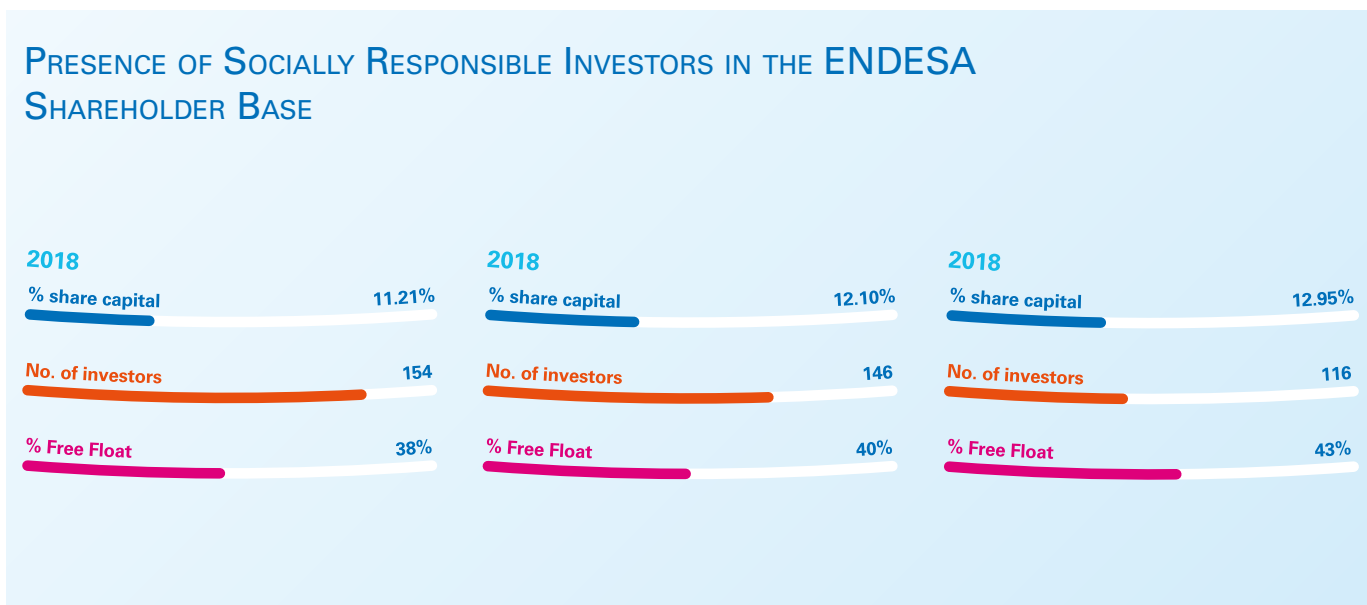
6.5. Attraction of Socially Responsible Investment

ENDESA strives to be a company of reference for investors who take social, environmental and ethical considerations into account in their investment policies, generating a long-term relationship with them.

For the fourth year running, in 2018 ENDESA performed a shareholder

identification study, focusing particularly on those foreign institutional investors who follow a responsible investment policy and who are active in non-financial matters. This study revealed that this type of investor represents at least 11.21% of ENDESA's capital stock and 38% of its floating

capital. In compliance with Spanish legislation concerning the identification of shareholders, the analysis was performed on an investment advisor level, being unable to go more deeply into the investment fund level.



6.5.1. Sustainability indices and rankings





ENDESA is aware that a prominent presence in the main socially responsible investment indices attracts this type of investors, and therefore the Company plays a noteworthy part to this end. Presence in these indices also enables recognition of ENDESA's genuine, firm commitment to the integration of social, environmental, ethical aspects and good governance into business management and decision-making processes, reaching a high level of performance. Even

more importantly, it enables ENDESA to involve itself more deeply in that genuine, firm commitment by precisely identifying areas for improvement regarding the integration of sustainability into the management of the Company - in other words, it is a tool for continuous improvement in its sustainability management.

In 2018, ENDESA appeared once again on all the indices in which it was included in the previous year, even improving its performance on some of them, such as the Dow Jones Sustainability Index, where it rose one place in the electric

utilities sector, reaching 5th place, or the Euronext Vigeo, where it improved by 5 points over the prior year, remaining in the top 3 for the sector. Its presence should also be noted on the prestigious FTSE4Good indices, in which it was included for the first time in 2017, leading the conventional electric sub-sector and involving recognition of the company's commitment to progress toward developing a more sustainable and responsible energy model.

There follows a summary of the six major sustainability indices in which ENDESA is present:

Family	Main indices	Selection Criteria	Assessment Criteria	Score	Periodicity	Year of inclusion
	DJSI World	10% companies in the electric utilities sector with best performance	Environmental, social and economic performance, following 26 criteria and 600+ indicators	85/100 Financial: 85 Environmental: 85 Social: 85 5 th place in sector	Annual	Since 2001
	FTSE4Good Developed Index FTSE4Good Developed Europe Index	Companies with a score over 3.1/5	Environmental, social and governance performance, following 14 criteria	4.8/5 Environmental: 4.3 Social: 5 Governance: 5	Semi-annual	Since 2017
	Euronext VIGEO World 120 Euronext VIGEO Europe 120 Euronext VIGEO Eurozone 120	120 companies with best performance	Environmental, social and governance performance, following 25 criteria and +300 indicators	67/100 Environmental: 69 Social: 72 Governance: 58 3 rd place in sector	Semi-annual	Since 2012 (Europe and Eurozone) and 2014 (World)
	STOXX Global ESG Leaders STOXX Global ESG Social Leaders STOXX Global ESG Governance Leaders	Companies with scores over 50/100 in the three dimensions and over 75/100 in at least one dimension	Environmental, social and economic performance, following 48 criteria	A+ Governance: 91 Social: 99.7 Environmental: 55 Leader in Social P.	Annual	Since 2016
	CDP Climate CDP Water	All companies providing information on their strategy and performance related to climate change and water	Strategy and transparency in matters concerning the fight against climate change and water	A- (climate) B (water)	Annual	Since 2006 (climate) and 2010 (water)
	ECPI World ESG Equity ECPI Euro ESG Equity ECPI Global Carbon Liquid ECPI Clean Energy ECPI Global Renewable Energy Liquid	Companies with best performance on sustainability (better than E-). Furthermore, their presence on area-related indices highlights their leadership in energy transition	Environmental, social and economic performance. Analysis of commitment to energy transition	Included	Quarterly (thematics semi-annually)	Since 2017





7. Report profile

102-50 102-51 102-52 102-54 102-56

The 2018 Sustainability Report is the eighteenth published by the Company since the publication of Sustainability Reports commenced in 2001; it has continued on a yearly basis since then. This report was prepared in compliance with the Essential Option of the GRI Standards. The Index of GRI content may be found in Appendix III. With this 2018 Sustainability Report, ENDESA hopes to provide a transparent, global view of the Company's per-

formance in the field of Sustainability, in accordance with its Sustainability Policy and its 2018-2020 Sustainability Plan, which has already been updated to the 2019-2021 Plan.

The Sustainability Report is published alongside other annual Company reports, such as Legal Documentation and the Corporate Governance Report, as well as the content of the Sustainability section of ENDESA's website (www.endesa.com).

The Board of Directors, the Company's supreme governing body, and the top management are involved in the request for external verification, assigned to the firm Ernst & Young, an organisation of proven competence and external to the Company, which applies professional criteria and follows empirically-based systematic verification processes. The independently-reviewed public report is included in Appendix II.



ENDESA Sustainability Report awarded by City University of New York

ENDESA was awarded first place in the study carried out by the Weissman Center for International Business of the City University of New York on quality of sustainability reports from different industries and countries, which analysed 629 reports by major companies around the world.

This recognition is further proof of the company's firm commitment to transparency and to the highest standards of sustainable development worldwide.

The Weissman Center developed a methodology for analysis based on comparison and evaluation of sustainability reports (CSR-S Monitor), analysing a combination of common indicators for all of them. Based on this methodology,



the overall score is based on the sum of scores in 11 reporting areas, including the environment, labour relations, human rights, anti-corruption, supply chain management or integrity

8. Coverage of the report

ENDESA maintains a constantly-updated corporate register featuring the entirety of its interests, of whatever nature, direct or indirect, and also of any entity over which it is enabled to exercise control.

The scope of the information presented in this report embraces both ENDESA, S.A. and its shared companies in the Iberian Peninsula (Spain and Portugal). For more information, see section 1.4 Organisational structure of this chapter. As a general rule, the environmental data covers 100 percent of the facilities where ENDESA has a majority share and therefore responsibility for their operation (control). Moreover, data is included that relates to facilities where a majority share is not held, and in these

cases the percentage stake is reported, as is the case with the nuclear facilities and thermal plant in Pego (Portugal).

With regard to employee data, the companies managed by ENDESA and those shared in Spain and Portugal are included. Also included are the employees of the shared companies in France, the Netherlands and Germany.

With regard to safety, data on the employees of companies where ENDESA has a majority share, and therefore responsibility for their operation (control) are included.

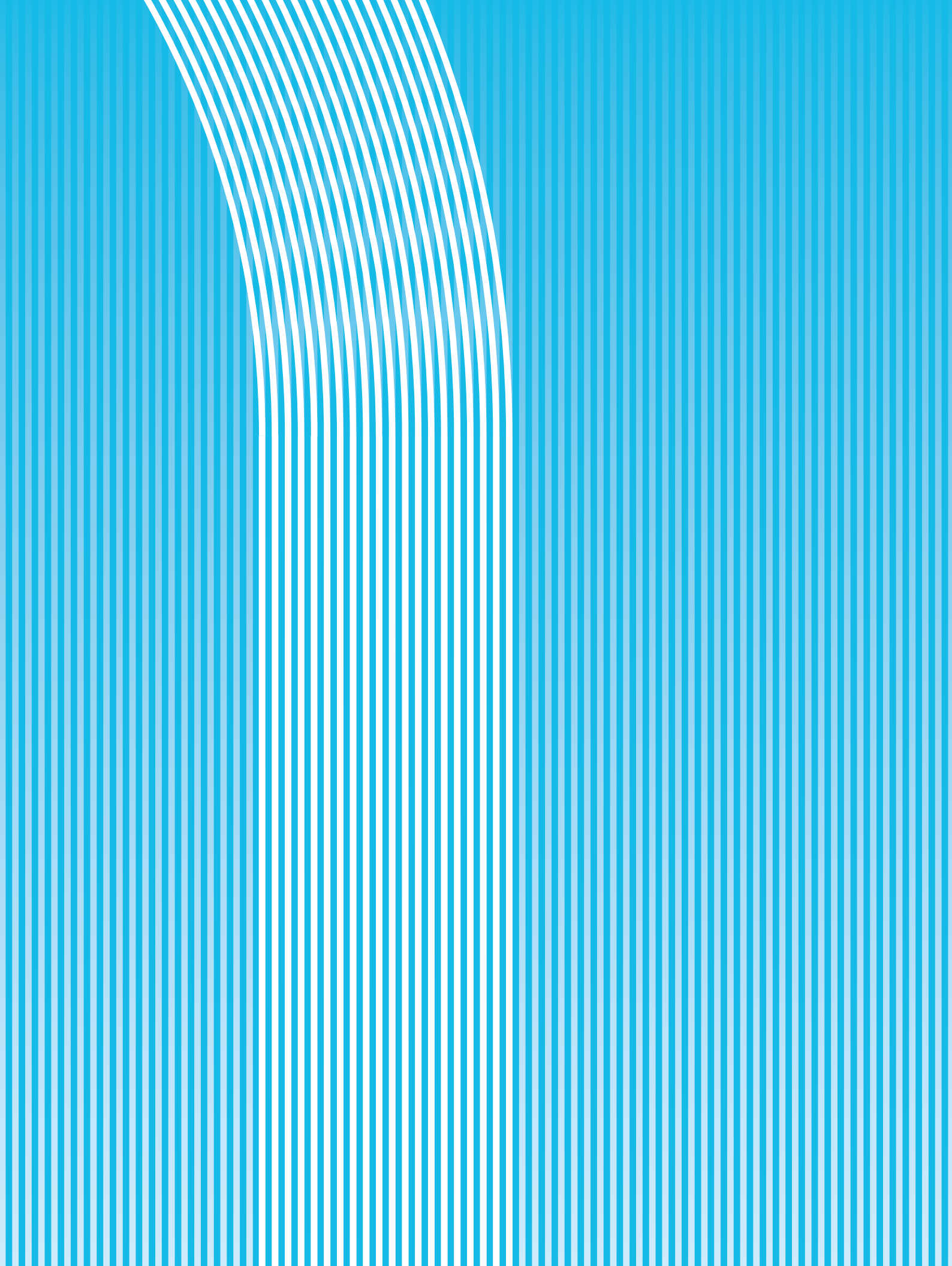
Information concerning social programmes corresponds to the activities performed by ENDESA, its foundations and its subsidiaries in Spain and Portugal.

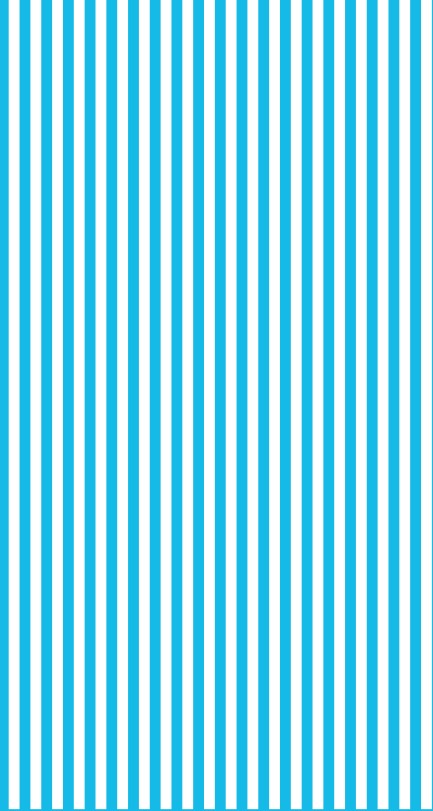
With regard to the material aspects identified, it should be noted that all of these are significant, both within and outside the organisation, for all the entities forming ENDESA.

Throughout this report, the specific cases where the scope of the information presented differs from the criteria described herein are marked.

This document has been drawn up in accordance with the guidelines of the Global Reporting Initiative (GRI) standards for the preparation of sustainability reports. The Report is also complemented with the sector supplement specific to the electricity sector (GRI Electric Utilities Sector Supplement) and the principles established by the AA1000 APS standard (2008).







02

Defining
priorities



1. Identification process for priority issues

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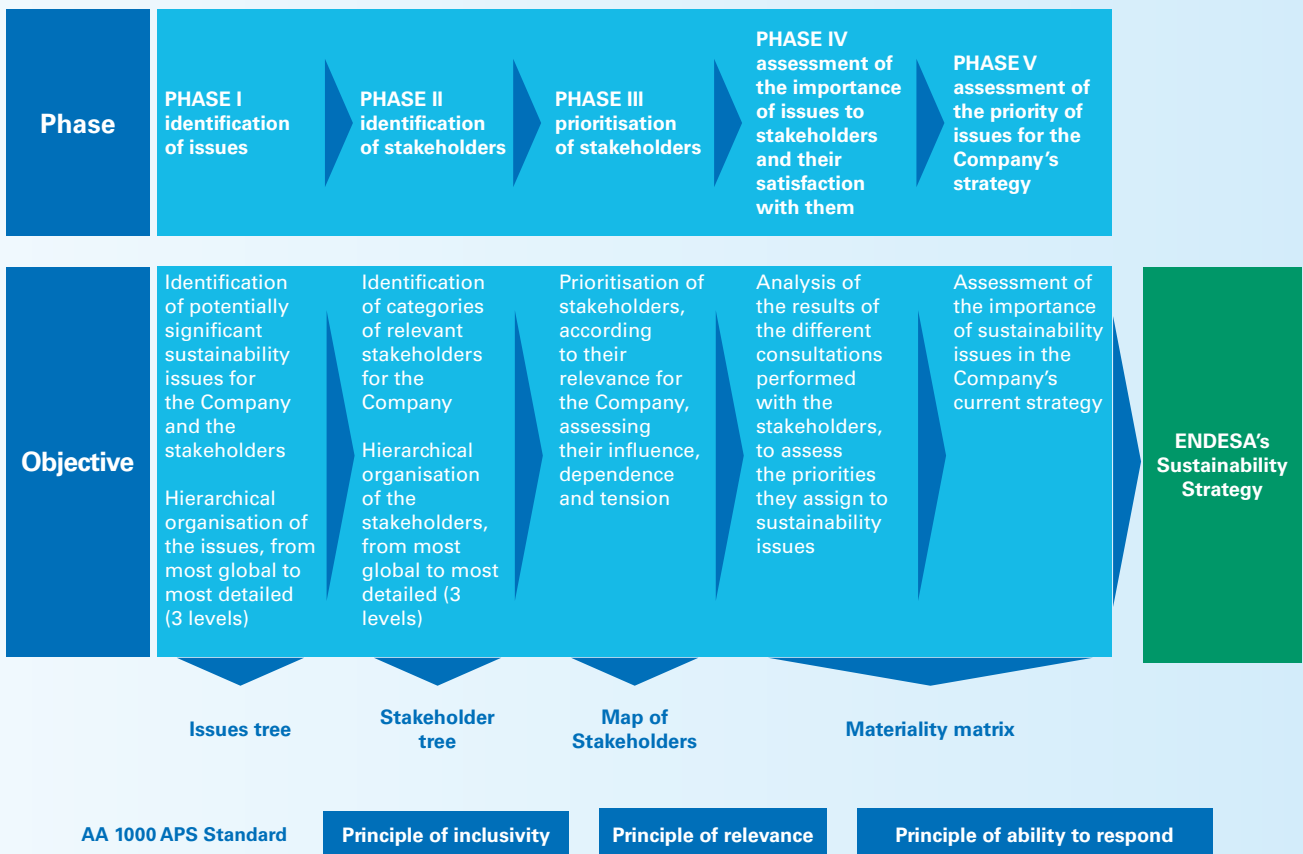
In order to factor in stakeholder expectations in a structured manner, and aligned with the company purpose, each year ENDESA identifies priorities to assess and select the economic, ethical, environmental and

social issues which are relevant for stakeholders and for the company's strategy.

This process conforms with international AA 1000 standards developed to offer guidance on how to organise strategic management of stakehold-

er engagement. The goal of this is to identify, prioritise and respond to sustainability challenges and enhance performance in the long term through fulfilment of a series of principles: inclusivity, relevance, responsiveness and impact.

IDENTIFICATION PROCESS FOR PRIORITY ISSUES



2. Participation of stakeholders

ENDESA builds its sustainability strategy around its stakeholders and their expectations, which guide its industrial plan so that it meets their needs, reduces risks and exploits those business opportunities that open up when fulfilling these requirements. Therefore, the company endeavours to foster ongoing dialogue with its stakeholders. ENDESA's commitment to maintaining a constant dialogue with the stakeholders is a fundamental element of the Enel Group's *Open Power* statement, by

means of which the company will be even more open to the participation and cooperation of its stakeholders in order to successfully face future challenges. All in all, ENDESA considers that management and dialogue with stakeholders contributes to:

- > Improving risk and opportunity management.
- > Early identification of relevant trends and issues.
- > Enhancing credibility and confidence, enabling the creation of synergy.

- > Favouring decision-making processes.
 - > Revealing opportunities for improvement and other business opportunities.
- Supervision of the stakeholder management process is included among the responsibilities assigned to the Auditing and Compliance Committee of ENDESA's Board of Directors.



2.1. Identification of the stakeholders

102-40 102-42

ENDESA regularly reviews, identifies and classifies the company's stakeholders on a national and local level. All ENDESA's units – staff and business lines – carry out an annual, global and regional review of the stakeholder list to ensure all major stakeholders are considered. The classification and cataloguing of these parties is also reviewed. Each stakeholder group is

segmented in order to identify each of the sub-groups forming it and be able to better identify channels for dialogue and consultation so as to assess their perception of the company's management. The stakeholders identified by this process are shown below:





Level I	Level II	Level III
Financial institutions and shareholders	Investors and shareholders	Institutional investors
		Private investors
	Lenders	Holders of institutional bonds
		Holders of domestic bonds
		Banks
Rating agencies and financial analysts	Public financial institutions	
	Other financial institutions	
Public Administration	Political parties	Rating agencies and financial analysts
		National political parties
	Government Institutions	Regional and local political parties
		Local Government
		Regional Government
	Authorities and supervisory bodies	National Government
		Community government institutions
		Local and regional authorities and supervisory bodies
		National authorities and regulators
	Law enforcement agencies	International authorities and regulators
		Local law enforcement agencies
		National law enforcement agencies
Business community	Companies and competitors	International law enforcement agencies
		Local companies
		National companies
	Trade unions	Multi-national companies
		Public enterprises
		Local trade unions
	Business associations	National trade unions
		International trade unions
		Local business confederations
		National business confederations
Civil society and citizens	Citizens and public opinion	Chambers of Commerce
		Other business associations
		Minorities
	Opinion leaders	Local citizens
		National citizens
		International public opinion
	Environmental non-governmental organisations	Local opinion leaders
		National opinion leaders
		International opinion leaders
	Foundations and Associations for social purposes	Local non-governmental organisations
		National non-governmental organisations
		International non-governmental organisations
	Religious institutions	Local associations
		National associations
		International associations
Research centres and academic institutions	Local religious institutions	
	National religious institutions	
	International religious institutions	
Organisations for promoting CSR	Primary and secondary education centres	
	National research centres	
	International research centres	
	National and international organisations	
	Sector organisations	

Level I	Level II	Level III
Suppliers and contractors	Potential suppliers and contractors	Potential suppliers and contractors
	Contractors	Local contractors
		National contractors
		International contractors
	Suppliers of goods and services	Local suppliers
		National suppliers
		International suppliers
	Fuel suppliers	Local suppliers
		National suppliers
International suppliers		
Our people	Employees	Top management
		Middle management and leads
		Experts and technicians
		Administrative staff
		Interns and temporary staff
	Union organisations	Union delegates
		Company Committees
Customers	Potential customers	General public
		Companies
	Electricity market and end-users	General public
		Companies
	Gas market and end-users	General public
		Companies
Media	Social networks and virtual communities	Consumer associations
		Local social networks
		Regional social networks
		National social networks
		International social networks
	Traditional media	Local media
		Regional media
		National media
International media		





2.2. ENDESA's stakeholder communication channels

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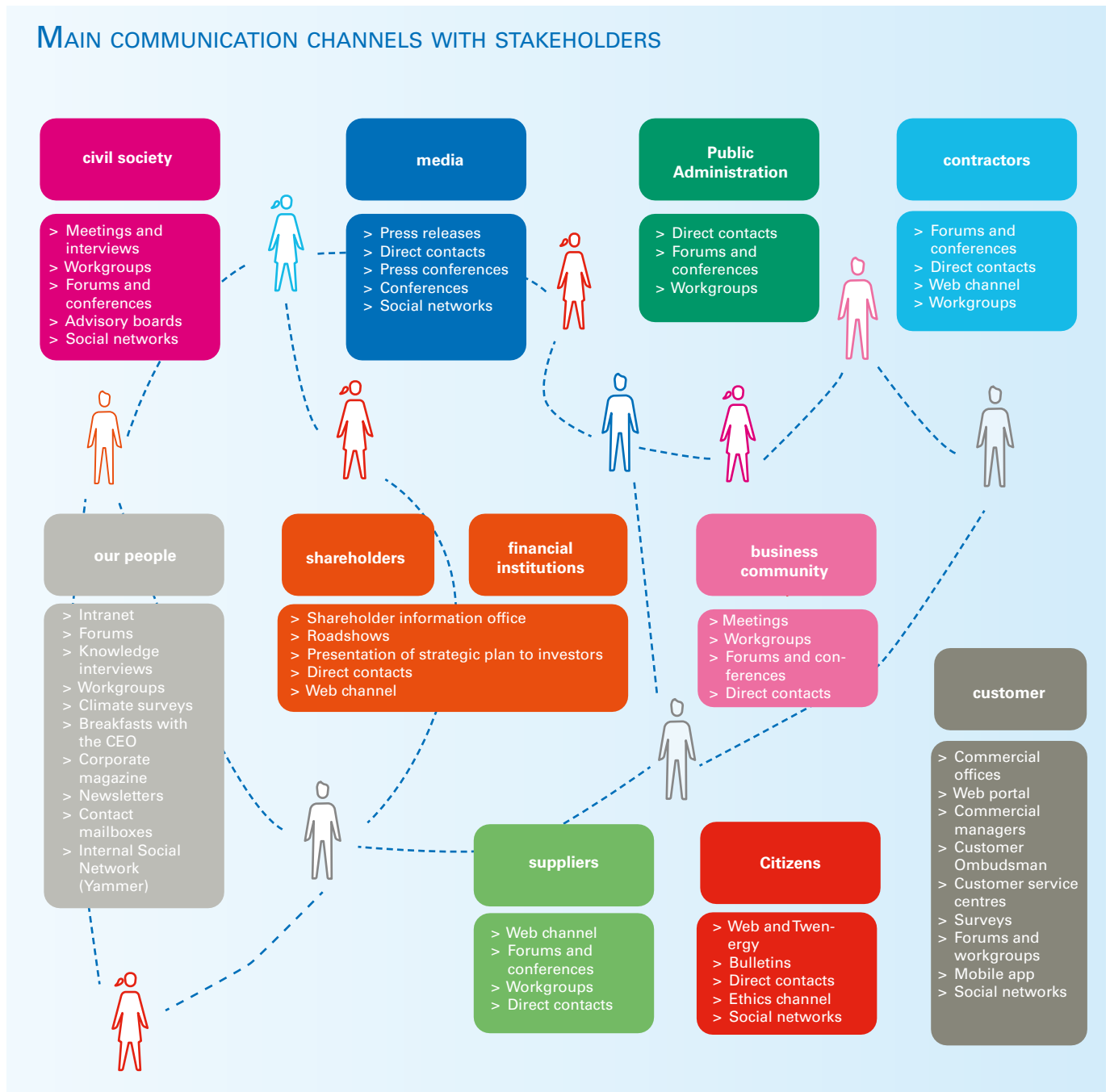
ENDESA's operational excellence is based on a continuous interaction with its stakeholders, with whom it maintains a constant relationship in the course of its activities. By means of communication channels and procedures forming

its management systems, the company acquires solid knowledge of its stakeholders' requirements and expectations, and the evolution of these.

During 2018, ENDESA entered into an ongoing dialogue with its stakeholders

via various communication channels. See section 3.1 *Materiality study in this chapter* for further information.

MAIN COMMUNICATION CHANNELS WITH STAKEHOLDERS




2.2.1. ENDESA and social networks

ENDESA has continued to increase its presence on social networks, enriching its digital channels with content aimed at all of the *stakeholders* present and responding, in turn, to user queries (Community Management). Thanks to the company's different accounts on the various social platforms (Twitter, Facebook, LinkedIn, Instagram, WhatsApp or YouTube), all kinds of business-related issues have been covered, including marketing or distribution, as well as aspects such as CSR and sustainability.

In 2018 ENDESA strengthened its specific digital public relations programme in order to disseminate the company's most significant projects in terms of innovation and sustainability. Through hashtag #endesachallenges, the organization of 15 of its own events as well as participation by a total of 92 experts in smart cities and e-mobility, the programme has had potential coverage on networks with almost 68 million users.

The company's blog has continued to grow in terms of articles related to innovation and sustainability, in addition to participation by external partners, to generate discussion and make ENDESA a reference account for users interested in these issues. The blog received 127 thousand visitors in 2018.

In parallel, the activation of sponsorships is also taking place through social networks, whether through institutional channels or their own basketball accounts: Endesa Basket Lover. 

The main challenge for 2018 is to strengthen the digital public relations action programmes, with the aim of shoring up relations with stakeholders through social networks. 

2.2.2. Endesa.com website


The corporate website (www.endesa.com) has continued to grow during 2018 through new content focused on the company's strategic objectives and current affairs that have been disseminated through corporate social channels. It has also been the space to follow the agenda of events promoted by ENDESA that are open to public participation.

As part of its commitment to information transparency, a new tax reporting section has been created on the website providing the latest information on ENDESA's tax matters.

One of the most important projects in 2018 was the launch of the second Vuelta a España in an electric vehicle. Through a coordinated dissemination strategy across all corporate digital channels (website, blog and social networks), this initiative has potentially reached more than 14 million users.

In the area of web accessibility, a comprehensive tool has been developed to facilitate access to content for people with visual impairment. Work is also ongoing on technical and content improvements to ensure the entire website meets the highest standards of accessibility.

The company's digital strategy has included revamping Endesa Distribución's website, launched in October 2018 with

a new look aligned with the corporate global style guide, which will continue to be developed to include new interactive services. 

2.3. Prioritisation of stakeholders

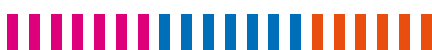
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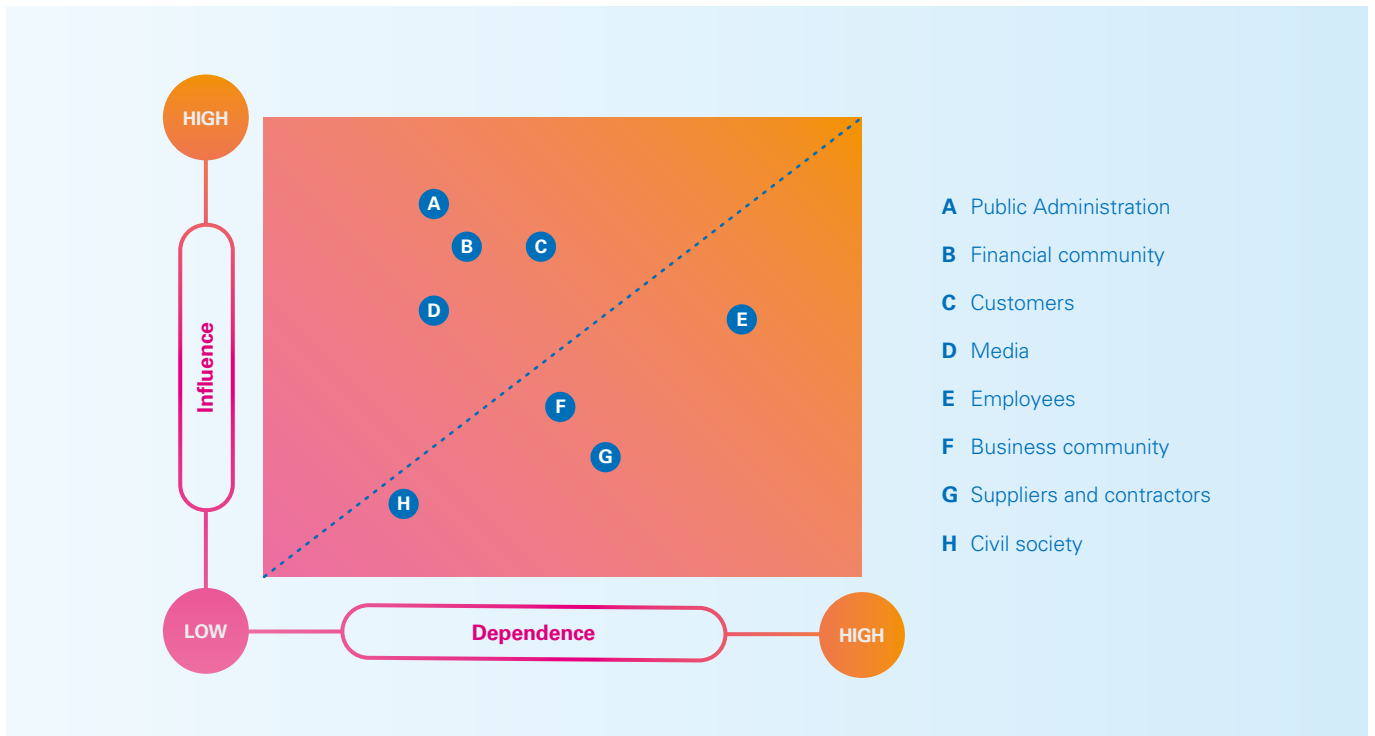
As is the case every year, with the active participation of different business and corporate units at ENDESA, in 2018 the stakeholders were prioritised according to their relevance to the company. To this end, the stakeholders were prioritised according to two key variables:

- > **Dependence:** Groups or individuals directly or indirectly dependent on the organisation's activities, products or services and their associated functions.
- > **Influence:** Groups and individuals who may have an influence on the organisation, or strategic stakeholder groups for the decision-making process.

The combination of the two factors mentioned and consideration of the level of special and immediate attention needed by each group determines the importance of the stakeholder group, guiding and prioritising its involvement in the identification of material issues.

This methodology is also applied in all the territories where the company operates, thus increasing its level of detail, and therefore, its applicability in the design of effective responses.





This analysis revealed in 2018 that public institutions, investors and customers are the stakeholders with the greatest capacity to influence the company, while its employees have the greatest degree of dependence.

3. Material aspects

3.1. Materiality study

102-46 102-47

In 2018, ENDESA performed a materiality study that has served as the basis for defining the priorities set out in its 2019-2021 Sustainability Plan. Throughout 2018, ENDESA conducted ad hoc

analysis (focus group involving social agents) and updated the information on trends and investors and other reports (such as the corporate reputation report and customer satisfaction survey).

It has also supplemented this analysis with the results of the work performed in 2017, which comprises over 4,000 sources and involved representatives from 18 different stakeholder groups.

The following analysis and other work was performed:

- > Analysis of trends in the field of energy and sustainability with possible current or future effects on the Company's activities.
- > Analysis of investors, proxy advisers and investment analysts of sustainability issues.
- > Review of the relevance assigned and the degree of maturity of the issues in

management performed by the major companies in the electricity sector.

- > Media and social network analysis.
- > Telephone consultations with various external stakeholder groups.
- > In-depth interviews with external stakeholders and a focus group with experts from the sector on sustainability.
- > On-line consultation with employees and a focus group with key employ-

ees in the management of the Company's sustainability issues.

- > In-depth interviews with ENDESA's top management.
- > Focus group involving over 80 local and national social organisations.
- > Analysis of existing reports that incorporate issues related to the Company's sustainability: corporate reputation report, employee climate survey and customer satisfaction survey.



3.2. Materiality study results

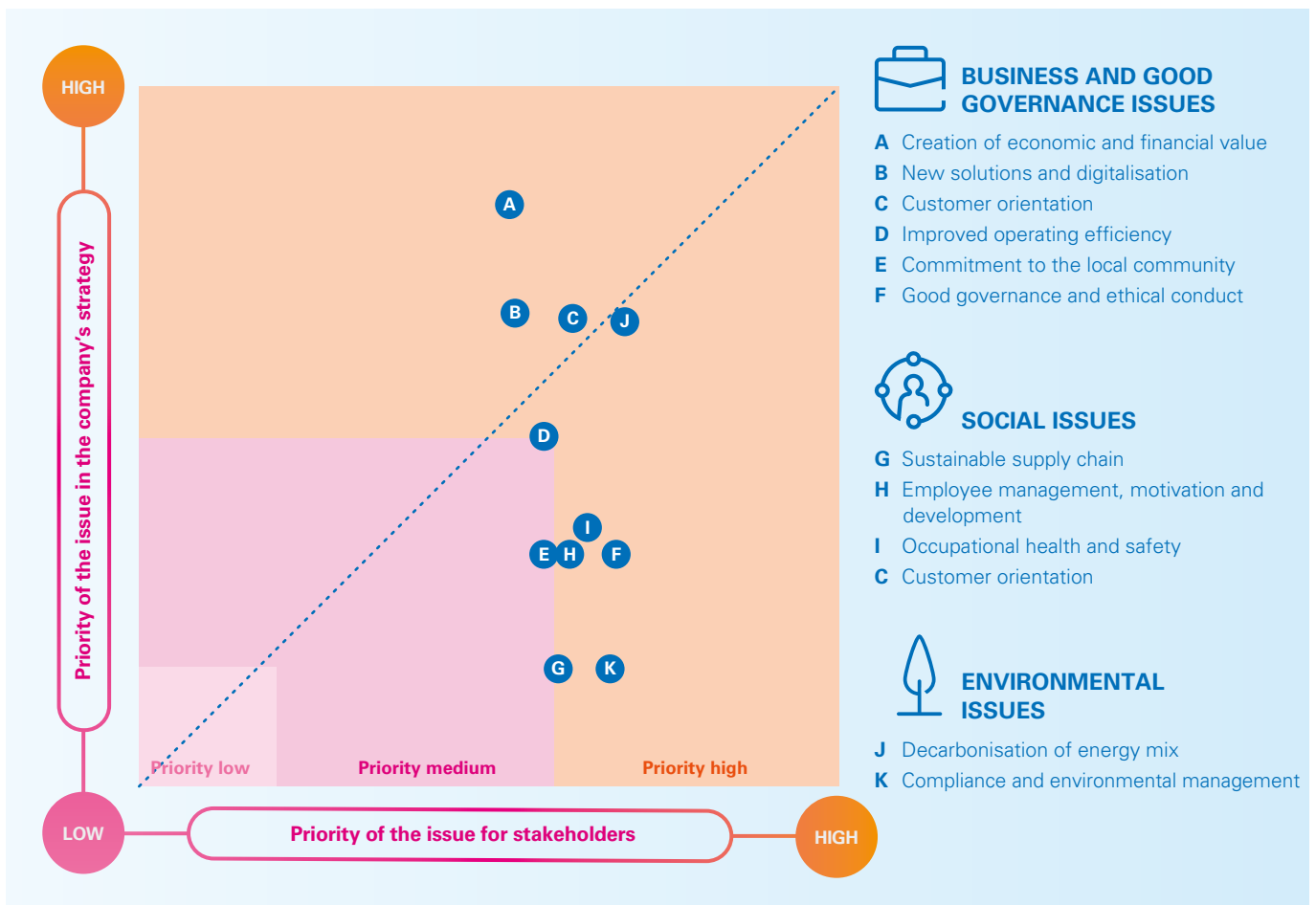
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3.2.1. Priorities for the company and for stakeholders

The combination of the variables analysed in the materiality study performed, that is, the relevance of the different

sustainability issues - previously identified - in the business strategy and the level of priority given to these issues by

the stakeholders are expressed in the following matrix:





As the earlier matrix shows, the following are among the most relevant issues for the company's sustainability:

Creation of economic and financial value:

The creation of economic value is essential to ensure the continued existence over time of the company, and therefore, its sustainability. To this end, the financial performance of the Company has been identified as the most important issue, according to the internal and external surveys executed. It has likewise been stated that ENDESA should commit itself to the search for a sustainable economic growth, seeking the integration of financial and non-financial risks into business management and exploiting the business opportunities derived from economic, environmental and social development in the areas where the company operates.

Decarbonisation of energy mix Climate change currently represents the main challenge that companies in the energy sector should be facing in the coming years. This has led to the development of public policies and regulations aimed at promoting decarbonisation in the electricity generation process, which in Spain is responsible for 18% of greenhouse gas (GHG) emissions. Furthermore, the more advanced institutional investors pay special attention to the viewpoints, approaches and results of the company regarding climate change. For this reason, ENDESA, aware of its role in this regard and of its ability to contribute to achieving a low-carbon economy, has included as one of its priorities a gradual reduction of greenhouse gas (GHG) emissions associated with electricity production through placing greater emphasis on renewable ener-

gies and optimising the management of traditional technologies. And all of this without losing sight of the public commitment to achieve the decarbonisation of the energy mix in 2050, which will be achieved following the roadmap established in the 2019-2021 Strategic Plan.

Good governance and ethical corporate conduct:

Over the last few years, ethical conduct practices of listed companies have become the object of increased scrutiny by markets and regulators. ENDESA's financial performance is determined, among other factors, by strict compliance with ethical standards and principles, both internally and in its external relationships. In this way, ethical conduct enables ENDESA to generate confidence among its shareholders and investors, and it has become a brand differentiation factor, which builds customer loyalty, factors which are reflected in the economic results and that contribute to the consolidating the position of leadership and reference displayed by ENDESA in the market. ENDESA has implemented a set of standards, plans and control mechanisms by which it obliges all its employees to behave with integrity in their dealings with the stakeholders –shareholders, employees, suppliers, customers and authorities- with whom they are linked.

Customer orientation: Currently, a highly significant transformation is taking place worldwide in the energy sector. This transformation is caused, among other reasons, by the appearance of a new, more active customer profile, which requires a greater decision-making capacity in the management of his energy consumption. Thus, it is crucial that a customer-cen-

tric business strategy be devised. Likewise, excellence in commercial service must be the main value in customer relations, always seeking maximum efficiency and the introduction of constant improvements. ENDESA has a plan for excellence in commercial service aimed at offering its customers the best possible service and considers customer orientation to be one of the key drivers of its 2019-2021 Sustainability Plan.

Development of new solutions and digitisation:

Technological advances, especially in the area of telecommunications and digitisation, are accelerating the transformation of customers and their expectations. This new context allows the appearance of new business opportunities based on developing energy solutions that promote sustainability and allow diversifying the offer of products and services that ENDESA provides its customers. ENDESA, as the leading company in the Spanish energy sector, must take up an active stance in this new context. For this reason, it commits to innovation and the development of new products and services as engines for adapting to the needs of the environment, both customer and regulatory, and enhancing the use of efficient technologies to favour energy saving. To this end, via its 2019-2021 Sustainability Plan, ENDESA has included specific measures to further the development of this activity and its growth.

All top-priority issues are directly linked to business and good governance aspects. However, among the environmental issues analysed, compliance **and environmental management** are positioned as the most rele-

vant. Caring for the environment and minimising environmental impacts has become one of the main determining factors of public opinion with regard to the sector's Companies. Likewise, regulations have increased considerably, which has led to an increase in the level of standards required of companies in their endeavour to minimise their environmental footprint. In that regard, ENDESA, which has always been committed to excellence in environmental management, is continuing to include environmental aspects - such as improving air quality, efficient use of energy and the promotion of responsible consumption of water resources - among its priorities. Similarly, the social issue that is reaching a higher level of importance for the company and the stakeholders is oc-

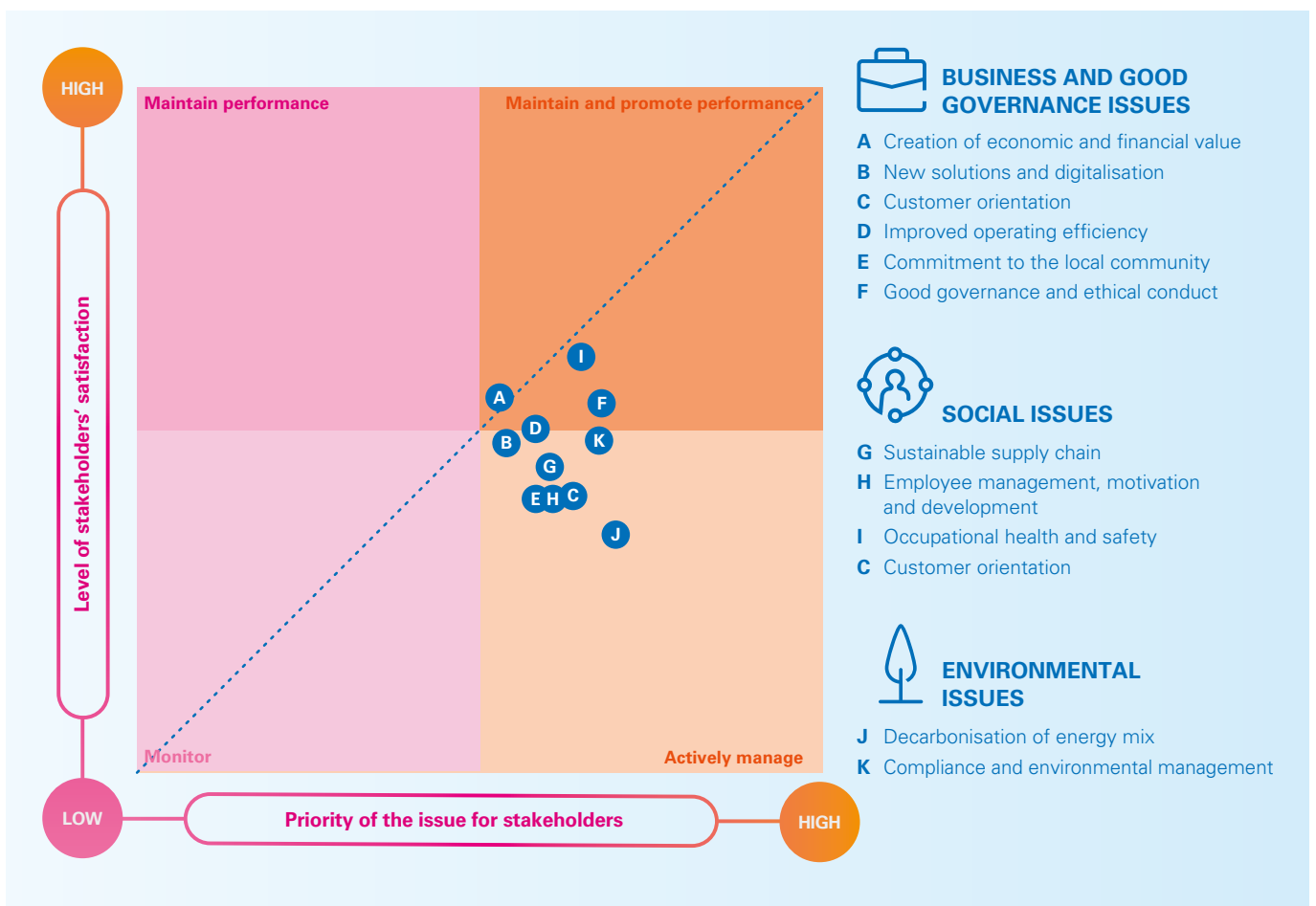
cupational health and safety. Optimal management of occupational health and safety has a direct impact on the economic performance of companies since it allows increasing productivity and reducing the associated labour costs. It also contributes considerably towards promoting loyalty and commitment among employees towards ENDESA and the work they carry out. Consequently, this aspect represents a fundamental pillar of sustainability at ENDESA and contributes to the Company's operational excellence.



3.2.2. Stakeholders' satisfaction

Throughout 2018, we continued to evaluate stakeholder satisfaction with regard to the various sustainability issues. The results of this work are presented in the chart below:

According to the stakeholders consulted, the aspects that the company should manage most actively are decarbonisation of the energy mix and customer orientation. Accordingly, both aspects are included in the strategic priorities recognised in ENDESA's new 2019-2021 Sustainability Plan, with the aim of thus meeting the expectations of the stakeholders.





3.2.3. Priority issues and satisfaction for each stakeholder group









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The level of priority given by each stakeholder group to each of the sustainability issues analysed during the

consultation process performed within the framework of the materiality study is detailed below. These results

are very similar to those of the previous year because there have been no megatrends or phenomena with a major impact affecting stakeholders' perception of priorities and satisfaction in this short space of time and because features of the analysis were common across both years:

RANKING DE PRIORIDAD QUE CADA GRUPO DE INTERÉS OTORGA A LOS ASUNTOS DE SOSTENIBILIDAD








	Creation of economic and financial value	Decarbonisation of energy mix	Good Governance and ethical corporate conduct	Customer orientation	New solutions and digitalisation of services	Occupational health and safety	Management, development and motivation of employees	Commitment to local community	Improved operating efficiency	Compliance and environmental management	Sustainable supply chain
 Business community	High	Medium	High	High	Medium	Medium	High	High	Low	Low	Low
 Civil society	High	Medium	Medium	High	Low	High	High	Medium	Low	High	Low
 Customers	Low	High	High	Medium	Low	Medium	High	Low	Low	Medium	High
 Financial community	Medium	Medium	High	Low	Medium	Low	Low	Low	Medium	High	High
 Media	Medium	Low	High	High	Low	High	High	Medium	Medium	Low	Low
 Our people	High	High	Medium	High	Low	Medium	Medium	Low	Low	High	Low
 Suppliers	Low	Low	High	High	Low	Medium	High	Low	High	Medium	Medium
 Institutions	Low	High	Medium	Medium	Low	High	High	High	Low	Medium	Low

■ High Importance (between 1st and 3rd place)
 ■ Medium importance (4th to 7th)
 ■ Low importance (8th to 11th)

The above matrix has determined that there are very notable differences among the various stakeholder groups in identifying the most important sustainability issues. In any event, the majority of stakeholders have attributed

higher levels of importance to those issues that relate most to themselves. Likewise, the level of satisfaction with ENDESA that each stakeholder group displays regarding each of the sustainability issues assessed is detailed below:

ENDESA'S PERFORMANCE LEVEL ASSIGNED BY EACH STAKEHOLDER GROUP TO SUSTAINABILITY ISSUES

	Creation of economic and financial value	Decarbonisation of energy mix	Good Governance and ethical corporate conduct	Customer orientation	New solutions and digitalisation of services	Occupational health and safety	Management, development and motivation of employees	Commitment to local community	Improved operating efficiency	Compliance and environmental management	Sustainable supply chain
 Business community	High	Medium	High	Medium	Medium	High	Medium	Medium	Medium	High	Medium
 Civil society	High	Medium	Medium	Medium	Medium	High	Medium	Medium	Medium	Medium	Medium
 Customers	High	Medium	Medium	Medium	Medium	High	High	Medium	Medium	Medium	Medium
 Financial community	High	Medium	Medium	Medium	High	High	Medium	Medium	Medium	Medium	Medium
 Our people	High	Medium	Medium	Medium	Medium	High	Medium	Medium	Medium	Medium	Medium
 Suppliers	High	Medium	High	High	Medium	High	Medium	High	Medium	High	High
 Public institutions	High	Medium	High	Medium	Medium	Medium	Medium	Medium	Medium	Medium	Medium

■ High Importance (between 1st and 3rd place)
 ■ Medium importance (4th to 7th)
 ■ Low importance (8th to 11th)





In general, there are no significant discrepancies among the stakeholders consulted and the majority of them ascribe average performance on most of the issues, with the exception of those related to the creation of economic value and occupational health and safety, where performance is high. In any case, ENDESA is incorporating these results into its planning process and is setting up targets and actions aimed at further improving its performance on the various sustainability issues analysed in order to successfully respond to the expectations of its stakeholders.

The NGO stakeholder group was spotlighted in 2018, with a focus group being convened at a central and regional level, the main finding of which were:

- > High interest: considerable involvement of NGOs (82 organisations), with the largest component being social (87%) rather than environmental NGOs.

- > Positive assessment of the initiative.
- > The NGOs tend to provide constructive criticism, demonstrating a high level of engagement with the company (they would recommend the company and/or strive with the company).
- > Notable similarity of priorities and assessment of the company's performance among NGOs given their heterogeneity of profiles.
- > In general the highest overarching priority for NGOs is the company's involvement with local communities, followed by compliance, environmental management and customer focus. The latter along with decarbonisation of the energy mix are seen by NGOs as the areas where ENDESA has the greatest room for improvement. The matters of least concern are economic value creation of economic value and operating efficiency, while those related with personnel management were most highly valued.

- > The most important matter concerning local community engagement globally and across regions and which was discussed during an extensive part of the meetings was access to energy, followed by the economic and social development of communities and support for local communities through training and volunteering. In the last two years it is where the NGOs perceive a better performance of ENDESA. Assessing the impact of operations is the least relevant issue, and they feel that there is greater room for improvement in the area of mitigating the impacts of operations on communities and respect for communities' rights.
- > The human rights issues connected with ENDESA's activity concern ensuring energy access for all and developing clean energies to protect the environment.

THE OPINIONS OF TERTIARY-SECTOR ORGANISATIONS ON ENDESA'S RELATIONSHIP WITH THE LOCAL COMMUNITIES IN WHICH IT OPERATES HAVE BEEN ANALYSED IN DEPTH



- > **82 local and national** organisations: 12 in Zaragoza, 8 in Palma de Mallorca, 19 in Zaragoza, 10 in Seville, 13 in Tenerife, 18 in Madrid and 2 in A Coruña.
- > **87% companies** and **13% environmental** → findings most representative of the former.

PRIORITY ISSUES FOR NGOs

GENERAL

- > Local community engagement
- > Customer orientation
- > Compliance and environmental management

COMMUNITIES

- > Access to electricity
- > Economic and social development of communities
- > Support for local communities – training and volunteering



LEVEL OF SATISFACTION OF NGOs

GENERAL

- > Occupational health and safety
- > Employee management, motivation and development
- > Customer orientation
- > Decarbonisation of energy mix

COMMUNITIES

- > Local community support
- > Economic and social development of communities
- > Migration of impacts on communities
- > Respect for the rights of communities

These findings along with other analyses of this and other stakeholder groups have been used to determine the overarching priorities in the matrices above.



3.2.4. Scope of operation for promotion of a sustainable business model

In order to identify the issues ENDESA needs to focus on over the next few years to ensure shared value creation and generate better benefits for the company and its shareholders in the long term, the company collates the results of the previous analysis with those of the business model, sector and stakeholder expectations. The outcome has led to the following areas of action being identified:

> *The sector's response to climate change:* international commitments

and technological development are promoting a decisive impetus toward renewable energies and a gradual reduction of the weight of fossil-source generation in the energy mix.

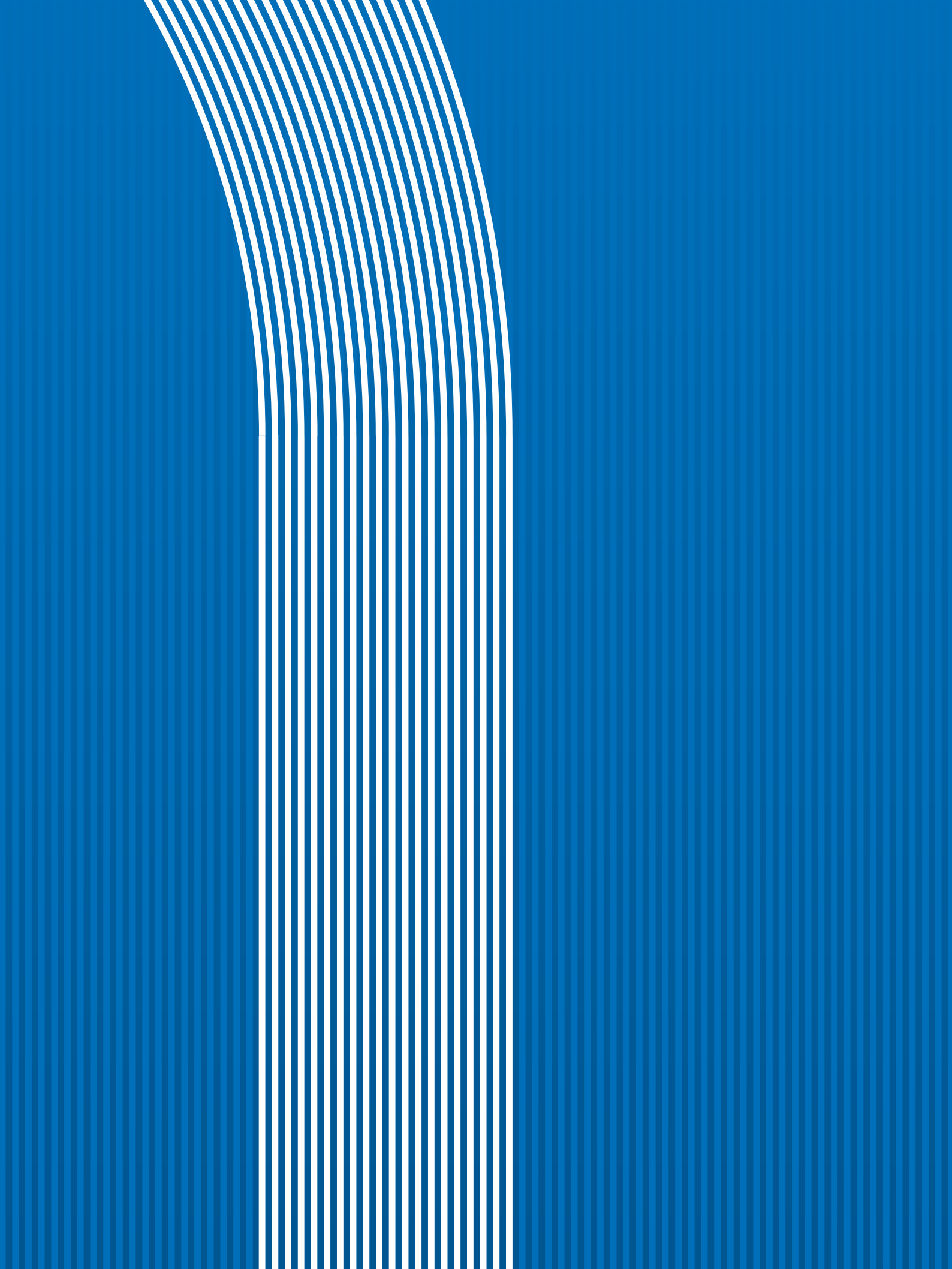
> *Value creation models for the new energy scenario:* increased competition, technological development and new consumer demands are expected to lead energy companies to transform their business model toward a model more focused on distribution, promoting digitalisation and marketing, developing and diversifying the supply of services especially in the area of renewables, energy efficiency, mobility and digital services.

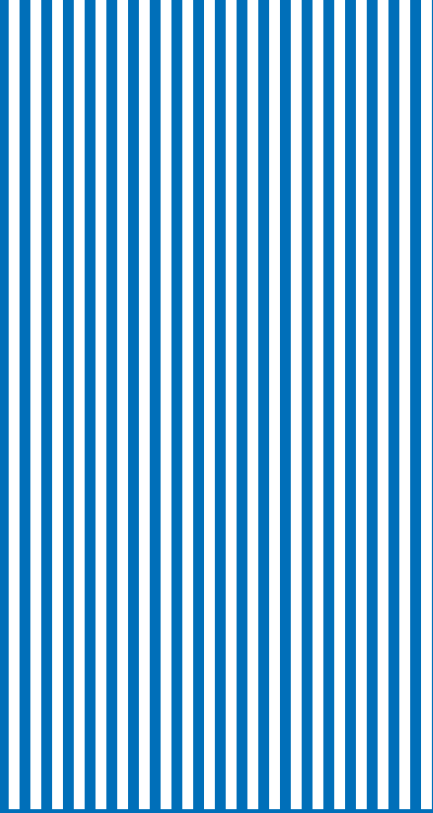
> *Strengthening social legitimacy:* the energy sector has high public exposure, which was promoted as society has become more aware of it. Therefore, it is essential to push ahead with improving social perception in order to continue competing in the new energy scenario and rolling out the shared value creation model across all stages of the life cycle of the company's operations.

> *Responsible business management:* increases the importance of environmental, social and governance issues in determining a responsible company. Among them, aspects related with human rights, the development of human capital, occupational health and safety, environmental management, cybersecurity and the extension of sustainability to the supply chain stand out.

Ultimately, according to the stakeholders consulted, the company's value creation must be based on a set of requirements necessary for operation (such as corporate governance, environmental management, health and safety, human rights, the supply chain or community relations) and incorporate a set of elements aimed at generating future value for the business (such as customer orientation, new business solutions, digitalisation and operating efficiency). All of this must be done on the basis of promoting a 2050 emission-free energy model and through a continued commitment to the development of highly qualified human capital to lead the energy transition.







03

ENDESA's

Sustainability Plan

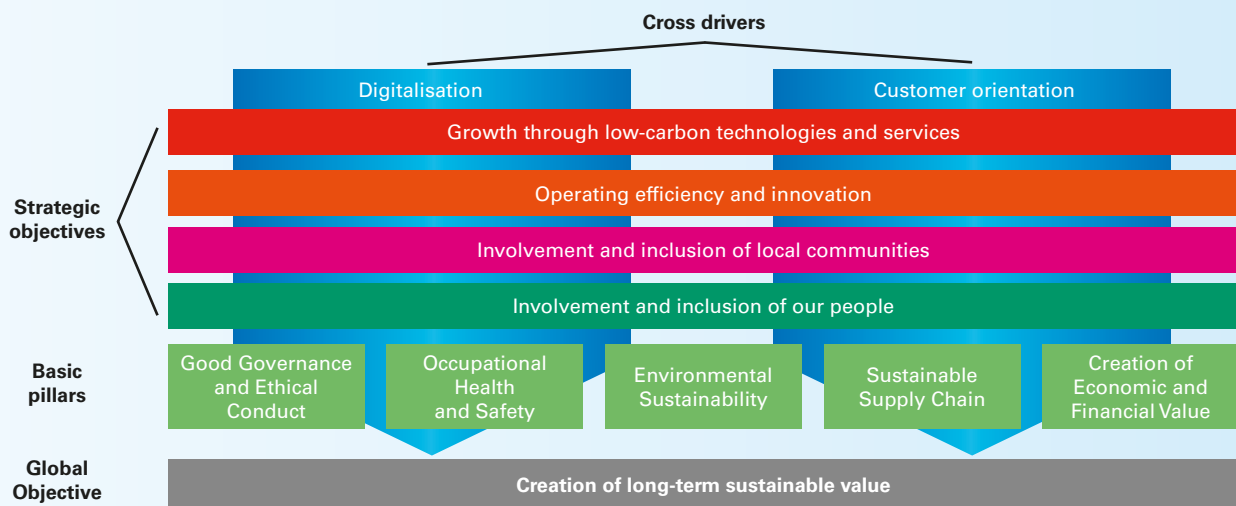


1. Compliance with ENDESA's 2018-2020 Sustainability Plan

ENDESA's 2018-2020 Sustainability Plan (ESP), oriented toward creation of long-term sustainable value, established four strategic priorities: growth through low-carbon technologies and services, operating efficiency and innovation, involvement and inclusion of local communities, and involvement and inclusion of our people.

Thus, it established two core drivers for all business activity: digitalisation and customer orientation. In order to guarantee a high level of excellence in responsible business management, five strategic pillars were identified: good governance and ethical conduct, occupational health and safety, environmental sustainability, sustainable supply chain and creation of economic and financial value.

ENDESA's 2018-2020 SUSTAINABILITY PLAN












ENDESA has responded to each of the strategic priorities and pillars defined in the 2018-2020 Sustainability Plan, through over 100 quantitative management goals achieving a global compliance that is higher than 94%.



Field	Course of action	Goal 18	Result 18	Accomplishment
Growth through low-carbon technologies and services	Reduction of absolute CO ₂ emissions (Mton)	35	31	91%
	Reduction of specific CO ₂ emissions (g/kWh)	436	418	
	CO ₂ -free production (%)	48%	49%	
	Development of Renewable Energies (GW)	6.4	6.6	
	Environment Improvements in Thermal Power Plants	115	46.4	
	Installation of storage capacity	20	20	
Operating efficiency and innovation	Efficiency of renewable energy plants	94.6%	94.6%	84%
	Efficiency of hydraulic power plants	98.2%	98.7%	
	ISO 9001 certified thermal generation facilities	100%	100%	
	ISO 9001 certified renewable generation facilities	100%	100%	
	Electricity losses in distribution (%)	7.70%	7.49%	
	Interruption time (own + programmed SAIDI) (min.)	575	76.3	
	Energy Recovery (GWh)	733	1,203	
	Electrification of the fleet (no. of electric vehicles)	299	100	
	Optimization of internal combustion fleet (no. of internal combustion vehicles in the fleet)	1,338	1,502	
	No. of hybrid vehicles	335	529	
	Reduction of CO ₂ emissions in the fleet (tons)	4,062	4,468	
	E-mobility programme employees (no. of employees with e-vehicles)	750	659	
	Launch of innovation challenges on the energy challenges platform	1	1	
	New <i>start-ups</i> selected each year	2	11	
	Internal innovation events each year	2	5	
Involvement and inclusion of local communities	Promotion of access to energy (no. of beneficiaries)	240,000	403,390	100%
	Support for education (no. of beneficiaries)	32,000	52,526	
	Socio-economic development (no. of beneficiaries)	42,000	185,248	
	Environmental awareness and promotion of biodiversity (no. of beneficiaries)	78,000	149,958	
	Extension of shared value creation model in local operations	Use of renewable CSV	OK	
Involvement and Inclusion of Our People	Participation in the employee satisfaction survey (% of employees)	83%	71%	85%
	Participation in performance appraisal processes (% of employees)	99%	37%	
	Participation in performance feedback interviews (% of employees)	95%	37%	
	Gender diversity: Overall female hires	35%	32.1%	
	Gender diversity: Women in executive positions	17.5%	17.5%	
	Boosting employee training (hours/employee/year).	36	38	
	Boosting on-line employee training (hours/employee/year).	10	7	
	Employees benefited by improvements in work areas in offices	1,800	507	
	Services in ENDESA offices that favour conciliation	60	68	
	Promotion of smartworking (no. of employees)	1,200	1,843	





Field	Course of Action	Goal 18	Result 18	Accomplishment	
Digitalisation of assets, customers and people	Investment in digitalisation (assets, people and customers) (M€)	367.5	341.8	97%	  
	Low Voltage: Installation of Smart Meters (cumulative) (millions of smart meters, cumulative)	11.9	11.8		
	Medium voltage: Installation of remote controls (no.)	17,315	18,044		
	High Voltage: Remote Control upgrading (no. of remotes upgraded)	235	160		
	Customer digitalisation (millions of digital contracts)	4	4.2		
	Digitalisation of invoicing (millions of contracts with digital invoicing)	2.8	2.8		
	Sales via digital channels (vs other types of channel).	9.5%	14%		
	Promotion of e-care management (%)	72%	81.8		
	Promotion of twenergy on-line channel (millions of visits)	5.2	6.0		
	Development of digital capabilities among employees	100%	100%		
	Web applications protected with cybersecurity.	75%	89%		
	Response to cybernetic emergencies CERT Accreditation	Yes	Yes		
	Awareness activities on cybersecurity for employees and their families	15	15		
Customer orientation	Increased investment in development of energy solutions (€ millions)	37	39	94%	  
	Profit obtained from sales of energy solutions (€ billions)	0.1	0.1		
	Overall customer satisfaction with the company	7.2	7.4		
	Installation of public access electric vehicle recharging stations (no.)	57	82		
	NGV service stations open to the public associated with fuel changes	14	12		
Good governance and ethical conduct	Presence of women on ENDESA's Board of Directors	18%	18%	100%	
	Plan of action to comply with the CNMV guide on Auditing Commissions	50%	100%		
	Annual verification of Criminal Risk Prevention Model controls	100%	100%		
	Ethical conduct training for employees in the last 3 years (% of employees)	95%	100%		
	Verifiable claims analysed within 90 days	100%	100%		
	Score obtained in DJSI ethical conduct criteria	>95	96		
Occupational health and safety	Fatal accidents	0	0	100%	
	Combined accident frequency index	1.04	0.72		
	Safety inspections in own and contractors' facilities	68,971	84,020		
	Facilities assessed by the ECOS (Extra Checking On Site) programme.	12	34		
Sustainable supply chain	Execution of medical check-ups on employees	5,030	6,728	100%	
	Purchases made from rated suppliers (% of volume of purchases)	70%	80%		
	% of the ratings performed on suppliers where human rights aspects are verified	80%	80%		
	% of the ratings performed on suppliers where environmental aspects are verified	80%	80%		
	% of the ratings performed on suppliers where occupational health and safety aspects are verified	80%	80%		
	Assessment of suppliers' performance (% of purchase volume)	60%	60%		
	Contractors assessed regarding social, ethical and environmental aspects	15%	17%		



Field	Course of Action	Goal 18	Result 18	Accomplishment
Environmental Sustainability	Reduction of environmental footprint (vs prior year).	-10.7%	-22.1%	91%
	Specific SO ₂ emissions (g/kWh)	0.76	0.64	
	Specific NO _x emissions (g/kWh)	1.09	0.95	
	Specific particulate emissions (mg/kWh)	28	21	
	Specific mercury emissions (µg/kWh)	4	3	
	Specific Water Consumption in Generation (M ³ /MWh)	0.88	0.80	
	Hazardous and non-hazardous waste in generation (ton)	45,202	57,496	
	Reuse of combustion products from coal-fired power plants (% of ash, slag and gypsum)	16%	27%	
	Execution of biodiversity preservation projects	>20	25	
	Evaluation of impact on biodiversity (*)	n/a	n/a	
	Certification of Energy, Environmental and Indoor Air Quality Management in Offices	54%	55%	
	Reduction of energy consumption in buildings (vs 2017)	-0.5%	+2%	
	Reduction of water consumption in buildings (vs 2017).	-0.5%	-10%	
	Reduction of paper waste generation in offices (vs 2017)	-10%	-1%	
	Reduction of space in offices as a whole (m ² reduced)	18,625	6,240	
	Investment for the integration of space into the surroundings (€ millions)	22.0	11.5	
	Social and environmental actions on company assets	>10	11	
	Reduction of CO ₂ emissions in buildings (tons emitted)	10,355	13,143	





2. ENDESA's New 2019-2021 Sustainability Plan

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One of ENDESA's biggest priorities is to integrate sustainability into business management and into decision-making processes. Therefore, it is necessary to have maximum alignment between business and sustainability strategy, so that both are oriented toward achieving the same goal, thus generating economic value for the Company in the short and long term.

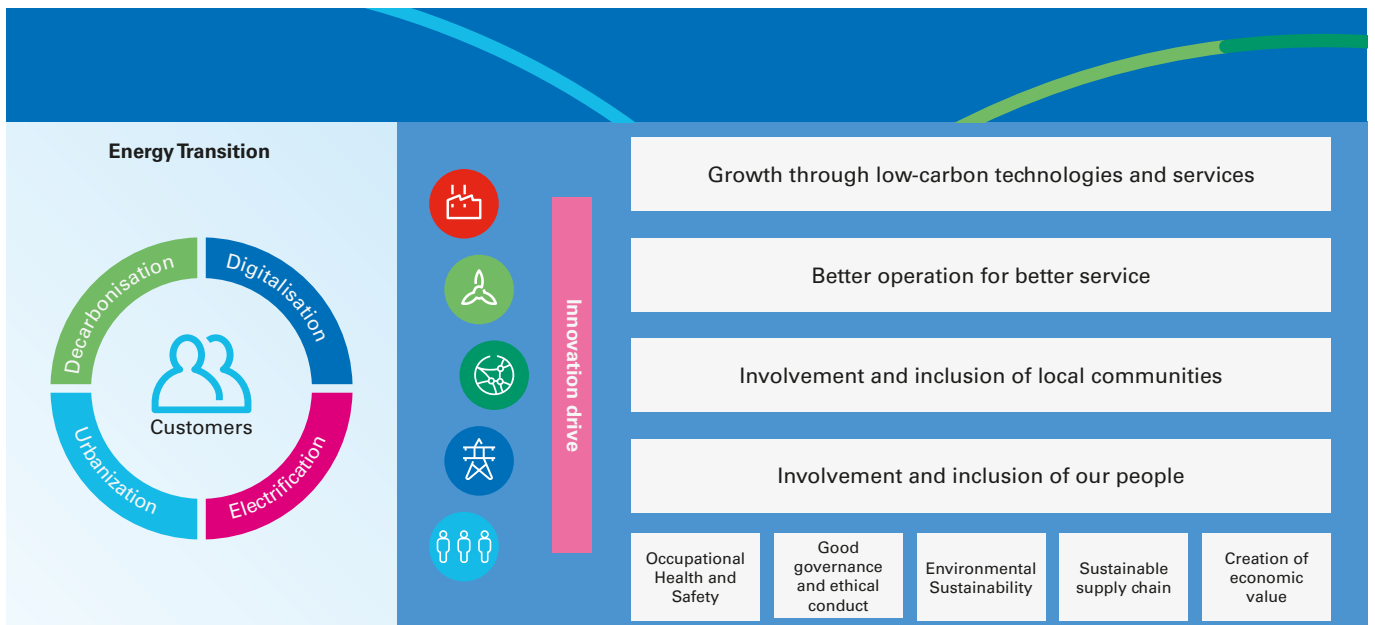
On 21 November 2018, ENDESA presented its update to its Strategic Plan for the 2019-2021 period, subsequent to

the update of the Enel Group's Strategic Plan for the same period disclosed on 20 November, during its "Capital Market Day".

In order to achieve the maximum alignment between the sustainability and business strategies, ENDESA carried out an analysis process, consultation and strategic reflection for the design of its new 2019-2021 Sustainability Plan, using as a basis the achievements and opportunities for improvement identified in the previous plan. This process has enabled identification of ac-

tion priorities for the next three years. Details of this analysis as well as the principal conclusions are in the chapter "Defining priorities".

The new 2019-2021 Endesa Sustainability Plan, like the previous one, also defines ENDESA's contribution to the United Nations Sustainable Development Goals. This framework represents the basis of the sustainability plan and acts as a benchmark to establish a sustainability strategy that enables generating long-term value both for the company and for the



environment in which it operates. The new 2019-2021 Sustainability Plan seeks to promote sustainable value over the long term, setting the follow-

ing strategic priorities and defining over 100 quantitative management objectives:

Strategic priorities:

> **Growth through low-carbon technologies and services:** The new

Sustainability Plan maintains the road map to make ENDESA a CO2 emission-free company by the year 2050, a commitment acquired by the ENEL Group. To this end, emission reduction goals have been set, as well as an increase in investment in the development of renewable energy.

> **Better Operation for Better Service:** The Sustainability Plan includes courses of action directed at promoting efficiency and quality in the management of generation and distribution assets as well as relating to the promotion of sustainable mobility of the employees in their transfers for occupational and personal reasons. Likewise, through focus on open innovation, the Sustainability Plan includes lines of action oriented toward promoting the attraction of external talent and exploring new cooperation pathways for the development of new business solutions to further sustainability. Digitalisation is fundamental to achieve a sustainable energy model. To this end, action will be taken on three main fronts: the digitalisation of the company's assets (generation facilities and electricity distribution grid), the development of a digital culture within the company and the digitalisation of our customers and of the way ENDESA relates with them. Special attention will also be paid to cybersecurity to minimise risks associated with digital transformation. ENDESA is aware that customers' new demands require the development of new business solutions that go beyond the supply of electricity and gas. To

achieve this, the Sustainability Plan includes investment and growth objectives in the development of new solutions that promote a more sustainable energy model. Furthermore, it pays special attention to maintaining a high level of excellence in its relationship with customers and in the quality of the service provided.

> **Involvement and inclusion of local communities:** From a viewpoint of creating shared value, ENDESA promotes the integration of sustainability throughout the company's value chain, and seeks to combine its interests with the priorities and requirements of stakeholders at a local level. The Sustainability Plan therefore, includes objectives oriented toward promoting access to energy, social-economic development and education as mainstays of its commitment to local communities.

> **Involvement and inclusion of our people:** For ENDESA, its people constitute the Company's main asset. For this reason, the new Sustainability Plan includes objectives that will allow to continue promoting the level of satisfaction of its employees, diversity and inclusion, development of talent and balance between professional and personal life.

Basic foundations for responsible management:

> **Occupational Health and Safety:** ENDESA understands safety as the result of "zero accidents" and health as full personal well-being. To achieve this, the Sustainability Plan establishes the necessary objectives to focus on reducing the accident rate among

employees and contractors, as well as promoting satisfactory safety monitoring through the performance of inspections and health through conducting regular physical examinations.

> **Good Governance and Ethical Conduct:** The Sustainability Plan includes the necessary objectives to maintain a high level of excellence in compliance with its commitments and ethical responsibilities, implementation of good corporate governance practices and the furtherance of transparency in its relationships and communications with all its stakeholders.

> **Environmental Sustainability:** In order to reduce its environmental footprint as much as possible, the new Sustainability Plan includes reduction goals for main environmental indicators, as well as promoting the preservation of biodiversity via the search for excellence in environmental management.



> **Sustainable Supply Chain:** The new Sustainability Plan establishes courses of action directed toward increasing monitoring and supervision systems for the supply chain in accordance with environmental, safety and human rights criteria.





> **Creation of Economic Value:** ENDESA should be committed to the search for sustainable economic growth, taking advantage of the business opportunities derived from economic, environmental and social growth of the environments in which the company operates.

The main objectives defined in the new Sustainability Plan for the 2019-2021 period are detailed below:







Field	Course of Action	Closing 2018	2019	2021
Growth through low-carbon technologies and services 	Reduction of absolute CO ₂ emissions (Mton)	31.0	27.95	24.75
	Reduction of specific CO ₂ emissions (g/kWh)	418	382	332
	CO ₂ -free production (%)	49%	52%	56%
	Development of Renewable Energies (GW)	6.6	1.9 GW new in 2019-2021	
	Environmental improvements of thermal power plants (€ millions)	46.4	124 € millions in 2019-2021	
	Installation of storage capacity(MW)	20	85 MW up to 2021	
	Production from renewable sources	13.8	13.6	11.2
	Better operation for better service 	Efficiency of wind power plants	94.6%	94.8%
Efficiency of hydraulic power plants		98.7%	98.8%	98.8%
ISO 9001-certified thermal generation facilities		100%	100%	100%
ISO 9001-certified renewable generation facilities		100%	100%	100%
Electricity losses in distribution (%)		7.49%	7.50%	7.02%
Interruption time (own + programmed SAIDI) (min)		76.3	55.5	51.5
Energy Recovery (GWh)		1,203	3,947 GWh in 2019-2021	
Installation of public access NGV service stations		12	18	22
Provision of Efficient and Sustainable Products through the Online Store		1,076	>1,600 products in 2021	
Improved global customer satisfaction		7.4	7.4	7.4
Promotion of collaboration with <i>start-ups</i> (no. of projects)		11	15 projects in 2019-2021	
Promotion of digitalisation of assets, customers and people (€ millions)		320.8	1,283 in 2019-2021	
Promotion of electronic invoicing (millions contracts)		2.8	3.5	3.8
Promotion of <i>e-care</i> management		81.8%	83.5%	85.0%
Investment in the development of <i>e-solutions</i> (€ millions)		39.0	63.7	95.2
Sale of <i>e-solutions</i> (profits obtained € billions)		0.1	0.1	0.2
Promotion of the on-line Twenergy channel (Millions of visits)		5.9	5.7	6.6
Public access recharging stations for electric vehicles		164	3,300 public points in 2021	
Low Voltage: Installation of Smart Meters (cumulative) (millions of Smart meters cumulative)		11.8	12.3	12.5
Medium voltage: Installation of Remote controls (thousands of remote controls, cumulative)		18.0	21.5	24.4
High Voltage: Remote Control upgrading (no. of remotes upgraded)		160	257	364
Promotion of cybersecurity in web applications exposed to the Internet		89%	100%	100%
Response to cybernetic emergencies (obtaining national CERT certification)	Yes	Certification and affiliation in international bodies		
Promotion of awareness on cybersecurity for employees and their families	15	45 activities in 2019-2021		

Field	Course of Action	Closing 2018	2019	2021
Involvement and inclusion of local communities 	Promotion of access to energy (no. of beneficiaries)	403,390	1,820,000 in 2015-2020	
	Support for education (no. of beneficiaries)	52,526	224,000 in 2015-2020	
	Socio-economic development (no. of beneficiaries)	185,248	639,300 in 2015-2020	
	Environmental awareness and promotion of biodiversity (no. of beneficiaries)	149,950	609,000 in 2018-2022	
	Extension of shared value creation model in local operations	OK	Deployment in Gx, Rx and Dx	
Involvement and inclusion of our people 	Participation in the employee satisfaction survey (% of employees)	71%	84%	84%
	Participation in performance assessment processes (% of employees)	37%	99%	99%
	Participation in performance feedback interviews	37%	93%	93%
	Scope of climate surveys (% of employees)	100%	100%	100%
	Participation in the climate survey (% of employees)	71%	84%	84%
	Overall female hires	32.1%	35%	37%
	Women in executive positions (manager)	175%	18.0%	19.0%
	Number of employees participating in digital transformation training programmes	1,291	1,358 in 2019-2021	
	Boosting employee training (hours/employee/year)	379	38	38.2
	Boosting on-line employee training (hours/employee/year).	6.6	15	17
	Improvement activities in work areas in offices	507	2,542 in 2019-2021	
	Services in ENDESA offices that favour conciliation	68	76	80
	Promotion of smart working (o. of employees)	1,843	1,300	1,500
	Travel safety	n/a	100% of trips in 2019-2021	
	Disability: Selection of a focal point	n/a	Selection of a focal point	
Good governance and ethical conduct 	Presence of women on ENDESA's Board of Directors	18%	30% in 2020	
	Maintaining the criminal compliance (UNE 19601) and anti-bribery (UNE-ISO 37001) certification	Yes	Yes	Yes
	Annual Verification of Criminal Risk Prevention Model controls	Yes	Yes	Yes
	Ethical conduct training for employees in the last 3 years (% of employees)	100%	97.55%	100%
	Verifiable claims analysed within 90 days	100%	100%	100%
	Score obtained in DJSI ethical conduct criteria index	96/100	>95	>95
	Promotion of good governance practices	Yes	Annual supervision of the Criminal Risks Prevention Model	
	Diversity policy and policy monitoring	n/a	Extension to the Supervision Committees	
	Evaluation of the Board of Directors with the support of an independent consultant	Yes	1 Three-Year Evaluation	
	Supervision of the Human Rights Due Diligence action plan	Yes	Annual CAC Monitoring	
Occupational Health and Safety 	Fatal accidents	0	0	0
	Combined accident frequency index	0.72	0.80	0.76
	Safety inspections in own and contractors' facilities	84,020	210,000 in 2019-2021	
	Facilities assessed by the ECOS (Extra Checking On Site) programme	34	120 in 2019-2021	
	Execution of medical check-ups on employees	6,728	~19,100 in 2021	

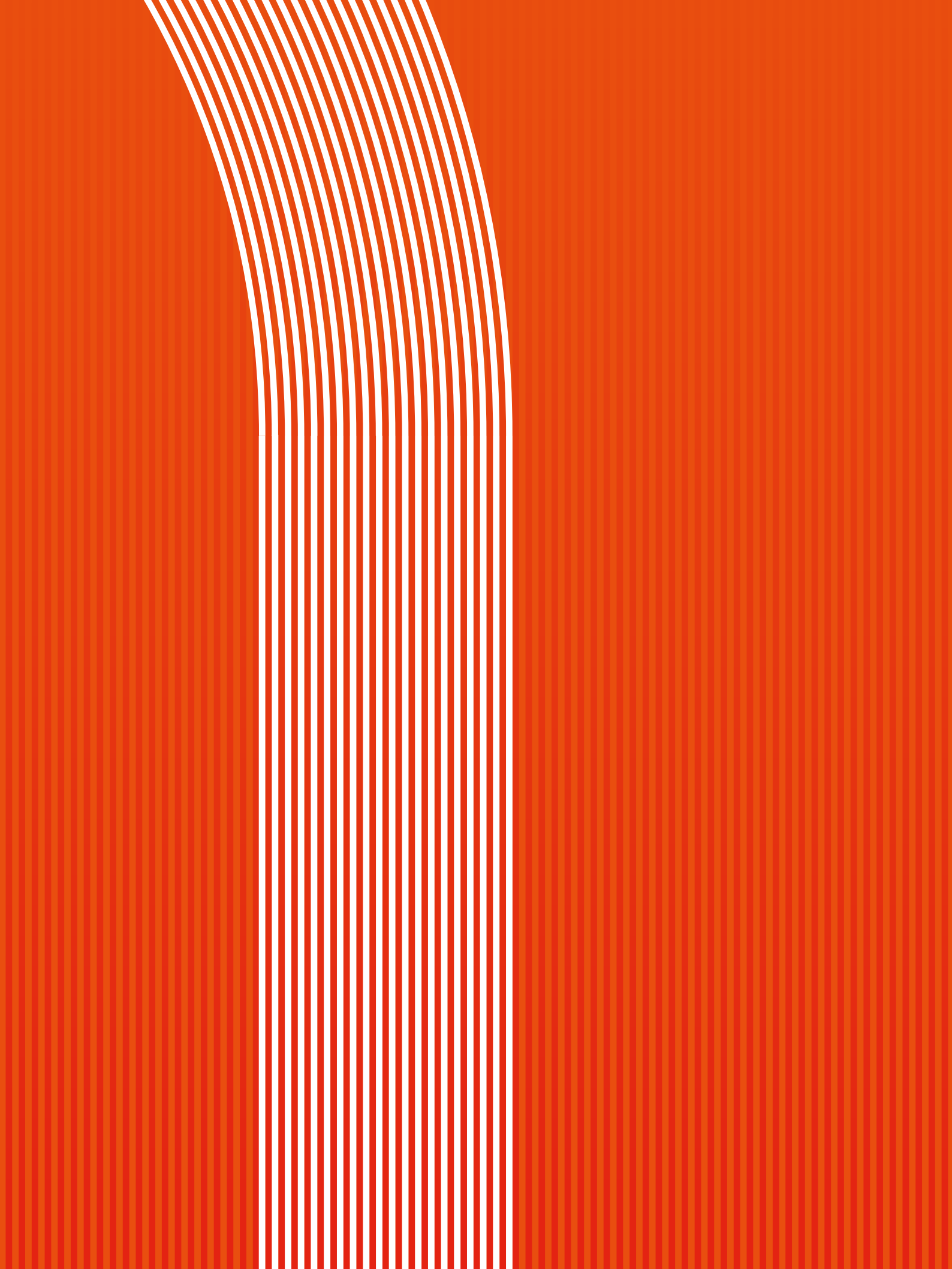


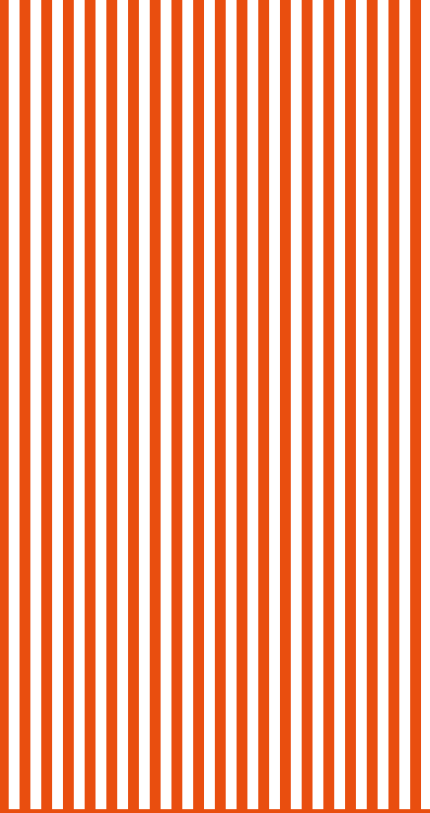


Field	Course of Action	Closing 2018	2019	2021	
Environmental Sustainability 	ISO 14001 certified environmental management systems (% generation and distributions facilities)	100%	100%	100%	
	Reduction of environmental footprint (vs prior year).	22%	-32% in 2021 vs 2018		
	Specific SO ₂ emissions (g/kWh)	0.64	0.61	0.31	
	Specific NO _x emissions (g/kWh)	0.95	0.93	0.83	
	Specific particulate emissions (mg/kWh)	21	20	16	
	Specific mercury emissions (µg/kWh)	3	2	2	
	Specific water consumption in generation (M ³ /MWh)	0.80	0.50	0.44	
	Hazardous and non-hazardous waste in generation (ton)	57,496	42,693	36,192	
	Reuse of combustion products from coal-fired power plants (% of ash, slag and gypsum)	27%	21%	35%	
	Execution of biodiversity preservation projects	25	>20	>20	
	Certification of energy, environmental and indoor air quality management in offices	55%	55%	56%	
	Reduction of energy consumption in buildings	△2%	0.5%	0.5%	
	Reduction of water consumption in buildings	▽10.0%	10%	20%	
	Reduction of paper waste generation in offices	▽1%	10%	20%	
	Reduction of space in offices as a whole (m ² reduced)	6,240	+24,500 m ² reduced		
	Investment for integration of space into the surroundings (€ millions)	11.5	25 M € up to 2021		
	Social and environmental actions on company assets	11	>10	>10	
	Reduction of CO ₂ emissions in buildings (tons)	13,143	-17% in 2021 vs 2018		
	Reduction of single-use plastic waste in offices	n/a	Reduction of 60% in 2021		
	Optimization of the fleet (no. of electric vehicles)	4.69%	17.0%	20.2%	
	Optimisation of the fleet (no. of hybrid Vehicles)	24.8%	21.9%	29.8%	
	Optimization of internal combustion fleet (no. of internal combustion vehicles in fleet)	1,502	33% reduction by 2021		
	E-car sharing promotion (km travelled)	87,745	370,000 km travelled in 2019-2021		
	Employee e-mobility programme (no. of employees)	659	10% of employees in 2020		
	Electrification of parking sites (no. of spaces)	461	550	625	
	Taxi responsible use management (% of ecotaxi trips)	70%	72%	76%	
	ENDESA fleet reduction in CO ₂ emissions (tons of CO ₂ emitted)	4,468	4,104	3,717	
	E-car sharing (no. of employees)	n/a	75	150	
	Transportation ticket (No. of employees)	n/a	850	870	
	Second life plant projects upon cessation of activity	n/a	Launch in 2019	1 Tender	
	Sustainable supply chain 	Purchases made from rated suppliers (% of purchase volume).	80%	80%	80%
		% of the ratings performed on suppliers where human rights aspects are verified	80%	85%	100%
% of the ratings performed on suppliers where environmental aspects are verified		80%	85%	100%	
% of the ratings performed on suppliers where occupational health and safety aspects are verified		80%	85%	100%	
Assessment of suppliers' performance (% of purchase volume)		60%	65%	70%	
Contractors assessed regarding social, ethical and environmental aspects		17%	15%	15%	









04

Our performance

Endesa

endesa

ATENCIÓN
AL PÚBLICO
Lunes a viernes
08:00 - 18:00

SI NO SOMOS
TU GUÍA,
TE ESPERAMOS
FUERA

Oficina
Comercial
endesa

Good governance and ethical conduct



18

ENDESA Board of Directors positions occupied by women (%)

100

% of employees trained in ethics in the last three years

2018-2020 Endesa Sustainability Plan compliance

Strategic priority	Course of action	2018 goal	31/12/18 result	Key actions
Corporate integrity	Presence of women on ENDESA's Board of Directors	18%	18%	
	Fostering of good governance practices.	Execution of action plan to comply with the CNMV guide on auditing commissions.	100%	
	Annual verification of CRPM (Criminal Risk Prevention Manual) controls.	Crime prevention (UNE 19601) and anti-bribery (UNE-ISO 37001) compliance certification.	100%	> Inclusion of the 'Policy on Compliance with Crime and Anti-Bribery Legislation in ENDESA's body of regulations'.
	Ethical conduct training for employees (% employees).	95%	100%	
	Verifiable claims analysed within 90 days.	100%	100%	
	Score obtained in DJSI ethical conduct criteria.	> 95/100	96	





1. Good governance model

1.1. Leadership of the Board of Directors

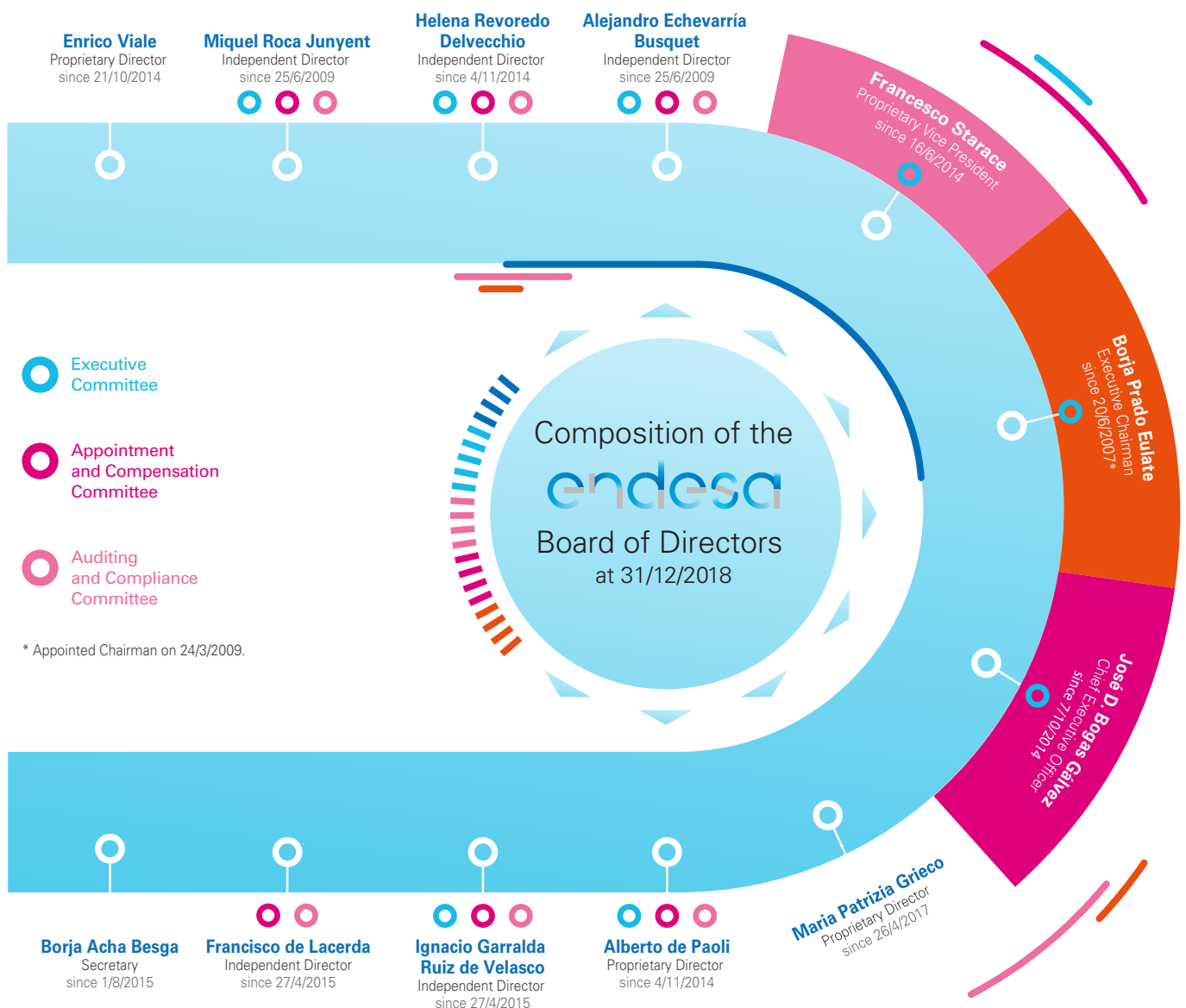
The Board of Directors, which has the full powers for the management, administration and representation of the company, as a general rule will entrust the ordinary management of the company to the delegated administrative bodies

and will concentrate its activity on general supervisory functions and the consideration of matters of particular significance to the company and its group. In accordance with the By-laws, the Board of Directors will form the Auditing

and Compliance Committee and the Appointments and Remuneration Committee, and may also create an Executive Committee.

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COMPOSITION OF THE ENDESA BOARD OF DIRECTORS AT 31/12/2018



	Qualifications and skills					Diversity			
	Finance and Risks	Engineering	Legal	Management	Strategy	Years in position	Nationality	Gender	Age
Directors									
Borja Prado Eulate	●		●	●	●	11	SPA	M	62
Francesco Starace	●	●		●	●	4	ITA	M	63
José Bogas Gálvez	●	●		●	●	4	SPA	M	63
Alberto De Paoli	●			●	●	4	ITA	M	53
Miquel Roca Junyent	●		●	●	●	9	SPA	M	78
Alejandro Echevarría Busquet	●			●	●	9	SPA	M	76
Maria Patrizia Grieco	●		●	●	●	1	ITA	F	66
Enrico Viale	●	●		●	●	4	ITA	M	61
Helena Revoredo Delvecchio	●			●	●	4	ARG	F	71
Ignacio Garralda Ruiz de Velasco	●		●	●	●	3	SPA	M	67
Francisco de Lacerda	●			●	●	3	POR	M	58

102-24

Article 9 of the Regulations for the Board of Directors, "Appointment, ratification or re-election of Directors," establishes that: 'The Board of Directors, at the proposal of the Appointments and Remuneration Committee, shall approve a specific, verifiable policy for selection of candidates for board member, to ensure that proposals for appointment as Directors are founded on prior analysis of the requirements of the Board, and

to favour diversity of knowledge, experience and gender'.

In this regard, on 10 November 2015 the Board of Directors passed a specific, verifiable policy for the selection of Directors (modified on 18 December 2017 to improve the content of the Policy from a technical point of view and bring it into line with best corporate governance practices) focused on the integration of experience and different professional and management skills (including economic, financial and legal skills, as

well as others specific to the business carried out by the Company), favouring gender and age diversity as much as possible.

Moreover, Article 9 of the Regulations states that 'Proposals for the appointment, ratification or re-election of Directors formulated by the Board shall concern persons of recognised prestige who possess the appropriate professional experience and knowledge for the exercise of their functions and who make a commitment to sufficient





dedication for the performance of their duties.

The General Meeting or, where applicable, the Board, shall be competent to appoint members of the same in accordance with the stipulations of the Capital Companies Act and the By-laws. The position of Director may be waived, cancelled or re-elected.

The proposal for the appointment, ratification or re-election of Directors submitted by the Board of Directors to the General Shareholders' Meeting, or approved by the Board of Directors in the first case, shall be formulated at the proposal of the Appointments and Remuneration Committee in the event of these being independent Directors, and with a prior report from said Committee in the case of Directors nominated for other categories.'

Furthermore, with regard to the Auditing and Compliance Committee, Article 23 of the Regulations states that 'the Board of Directors shall seek to appoint the members of the Auditing and Compliance Committee in such a manner that

they have, as a body, knowledge and experience in matters of accounting, auditing, finance, internal control and risk management, as well as adequate training in matters of corporate governance and corporate social responsibility.

The Chairperson of the Auditing and Compliance Committee shall be appointed by the Board of Directors from among the independent Directors belonging to the Committee, in due consideration of his or her knowledge and experience in accounting, auditing or risk management, with the favourable vote of the majority of the Board'.

205-2

All members of the Board of Directors have also received training on the company's anti-corruption policy.

Finally, with regard to the Appointments and Remuneration Committee, Article 24 of the Regulations states that: 'the Board of Directors shall seek to appoint the members of the Appointments and Remuneration Committee, taking account of their knowledge, skills and

experience. The Chairperson of the Appointments and Remuneration Committee shall be appointed by the Board of Directors from among the independent Directors belonging to the Committee, with the favourable vote of the majority of the Board. In the absence of the Chairman, the independent Director with the most seniority on the Committee shall take his or her place, and failing this, it shall be the oldest independent Director of who is a member of the Committee'. During 2018, the Board met on 13 occasions. The Chairman attended all of these.

ENDESA Board of Directors: key data for 2018

Total number of directors	11
Non-executive directors	9
Independent directors	5
External proprietary directors	4
Board of Directors Meetings	13
Shares owned or controlled by members of the Board of Directors or by significant individual shareholders	53,210



1.2. Remuneration of board members

The remuneration of board members will comprise the following items: a monthly fixed allocation and attendance allowances for each meeting of the company's management bodies and their committees.

> At the date of this report, the monthly fixed allocation, which has been the same since January 2013, was 15.6 thousand euros (gross). This item also includes 1 thousand euros (gross) per month for the posts of Chairperson of the Auditing and Compliance Committee and the Appointments and Remuneration Committee, as well as

2.1 thousand euros (gross) per month for the Lead Director.

> At the date of this report, attendance allowances for each meeting of the Board of Directors, Auditing and Compliance Committee and Appointments and Remuneration Committee were those approved by the Board on 21 January 2013 and amount to 1.5 thousand euros (gross).

Details of the average remuneration of board members for serving on the Board in 2018 are as follows:

Thousands of euros

	Average, total	Average, male directors	Average, female directors	Difference (%)
Fixed remuneration	194.71	197.51	187.71	
Attendance allowances	38.42	42.97	27.05	
Total	233.13	240.48	214.76	12%

ENDESA's Board of Directors comprises 11 directors. Nonetheless, the figures are calculated for the seven directors (five men and two women) who are remunerated for their work on the Board. The other four directors (all men) have waived any remuneration for their work

as directors and therefore, they have not been included to avoid distorting the averages. Although each item of remuneration is the same for men and women, there is

a 12% difference in average remuneration due to the amount of allowances received for serving on board committees and attending meetings (only one female director is on two committees).

Additionally, the female director on the committees is not the chairman thereof and so is not remunerated for this post.



1.3. Directors' responsibilities and duties

102-25

Article 28 of the Board of Directors' Regulations, approved on 26 February 2018, states as follows:

'Directors shall take the necessary steps to avoid falling into situations where their interests, whether personal or otherwise, may enter into conflict with social interest and with their duties towards the Company.

In particular, the duty to avoid situations of conflict of interest requires the Directors to refrain from:

- A) *Performing transactions with the company, unless these are ordinary transactions under standard conditions for customers and of low importance, these conditions being understood as those for which information is not necessary to express a true and fair view of the company's equity, financial position and earnings.*
- B) *Using the name of the company or mentioning their situation as directors of the same in order to exert undue influence in the performance of private operations.*
- C) *Using company assets, including the company's confidential information, for private purposes.*
- D) *Exploiting the business opportunities of the company.*
- E) *Obtaining benefits or remuneration from third parties other than the company and its group in relation to the performance of their duties, un-*

less these concern matters of mere courtesy.

- F) *Carrying out activities on their own account or on behalf of others which may entail competition, either real or potential, for the company, or which in any other way may place them in permanent conflict with the company's interests.*

The precautions mentioned in this section shall also be applicable in the event that the person profiting from the forbidden acts or activities may have a relationship with the Director.

Release from the obligations foreseen in this section, where applicable, shall require the approval of the Board of Directors or of the General Shareholders' Meeting, in accordance with the Law and other internal regulations of the Company.

The Directors shall abstain from participating in the deliberation and voting of agreements and decisions in which they or the related person may have a conflict of interests, whether direct or indirect. Agreements or decisions affecting their position as a Director, such as their appointment or revocation for positions on the Board of Directors, its Committees and the Executive Committee, or others of similar significance, shall be excluded from the above obligation'.

In this regard, the persons considered to be related to the directors, pursuant

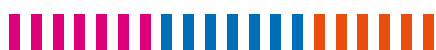
to Article 231 of the Capital Companies Act, are listed below:

- a) The director's spouse or persons with a similar personal relationship.
- b) First-degree relatives and siblings of the director or of the director's spouse.
- c) The spouses of the first-degree relatives and siblings of the director.
- d) The companies in which the director, on his/her own account or by proxy, occupies one of the positions of control mentioned in the first section of Article 42 of the Commercial Code.

With regard to legal person directors, those persons who are considered to be related are listed below:

- a) The partners who are, with regard to the legal person director, in any of the situations of control mentioned in first section of Article 42 of the Code of Commerce.
- b) The de jure or de facto administrators, the liquidators and the proxies with general powers of attorney of the legal person director.
- c) The companies belonging to the same group as the legal person director and his/her partners.
- d) The persons who, with regard to the natural person who represents the legal person director, are considered to be persons related to that natural person.

Furthermore, according to Articles 25, 26 and 27 of the Regulations of the





Board of Directors, they have the responsibility to act with due diligence, loyalty and confidentiality:

'Duty of diligence

The Directors shall perform their duties and comply with the obligations imposed by the Law, by the By-laws and by these Regulations, with the diligence of a responsible businessperson, bearing in mind the nature of the position and the duties ascribed to each of them. The Directors shall devote themselves appropriately and shall adopt the measures necessary for the correct management and control of the Company.

In the performance of their duties, the Directors have the duty to require, and the right to request from the Company the appropriate information necessary for the fulfilment of their obligations, and to duly prepare the Board meetings and those of the company departments to which they belong.

Likewise, the Directors shall attend the meetings of the company departments to which they belong, and shall participate actively in the discussions in order

to contribute effectively to the decision-making process. In the event of inability, due to a justified cause, to attend the meetings to which he/she has been summoned, he/she shall brief the Director substituting him/her, where applicable. The Company shall be empowered to take out an insurance policy covering the civil liability of the Directors and managers in the performance of their duties, with the exception of uninsurable risks in accordance with Spanish legislation.

Duty of loyalty

The Directors shall perform their duties with the loyalty of a faithful representative, acting in good faith and in the Company's best interests, understood with full independence, always seeking the best defence and protection of joint interests of the shareholders, to whom they owe their mandate and are accountable.

The Directors, by virtue of their position, have the following obligations in particular:

A) Not to exercise their powers to ends different from those for which they were granted.

B) To perform their duties under the principle of personal responsibility with freedom of criteria or judgement, and independence with regard to instructions and connections with third parties.

C) To comply with the general principles and the behaviour criteria contained in the company's Code of Ethics.

Duty of confidentiality

The Directors, even after the termination of their duties, shall maintain secrecy with regard to the information, data, reports or precedents to which they may have had access in the performance of their duties, even after termination of the same, except in the cases required or permitted by law.

When the director is a legal person, the obligation of secrecy shall fall on the representative of that director'.



1.4. Participation of shareholders

On 23 April 2018, ENDESA held its Ordinary General Shareholders' Meeting, at

which 81.73% of the share capital was represented.



2. Ethical conduct and compliance

102-16

2.1. Code of Ethics and Zero Tolerance to Corruption Plan

103-1 Management approach on anti-corruption 103-2 Management approach anti-corruption
 103-3 Management approach anti-corruption 103-1 Management approach ant-competitive behavior
 103-2 Management approach anti-competitive behavior 103-3 Management approach anti-competitive behavior
 205-2 205-3 103-1 Management approach public policy 103-2 Management approach public policy
 103-3 Management approach public policy 103-1 Management approach socioeconomic compliance
 103-2 Management approach socioeconomic compliance 103-3 Management approach socioeconomic compliance

All of the Company’s employees, executives, members of the Board of Directors and majority and minority shareholders have been informed of the company’s Anti-Corruption Policy.

415-1 205-2 205-3
 103-1 Management approach anti-competitive behavior
 103-2 Management approach anti-competitive behavior
 103-3 Management approach anti-competitive behavior

ENDESA is firmly committed to compliance with ethical standards and principles and with current legislation, both internally and in its external relationships.

To this end, the Company has a Code of Ethics and a Zero Tolerance for Corruption Plan, which represent the pillars of its culture of ethics and integrity. These documents oblige its administrators, executives and workforce to conduct their activities and their relationships with their stakeholders in an honourable manner.

The Code of Ethics is composed of:

- > 16 General Principles governing relationships with stakeholders and defining the reference values for ENDESA’s activities.

- > Behaviour criteria in relationships with each stakeholder group, specifically providing the guidelines and regulations to which ENDESA’s collaborators must adhere in order to respect the general principles and prevent the risk of unethical conduct.

- > Implementation Mechanisms describing the organisational structure around the Code of Ethics, intended to ensure adequate awareness, understanding and compliance with the Code by all employees.

In addition, as established by the Code of Ethics, ENDESA does not finance any parties, their representatives or candidates either in Spain or abroad, nor does it sponsor any conferences or gatherings whose sole purpose is political propaganda.

It does not engage in any type of direct or indirect pressure on political exponents (for example, via public concessions to ENDESA, the acceptance of suggestions for contracting, consulting contracts, etc.).

Over the last three years, 100% of the company’s employees have received training on ethical issues, and all suppliers agree to abide by the general principles of the Criminal Risks Prevention

Model, in the General Contracting Conditions.

The Zero Tolerance for Corruption Plan, in turn, represents ENDESA’s specific commitment to the fight against corruption and the complete rejection of any form in which it may appear, in compliance with the tenth principle of the Global Compact, to which ENDESA is a signatory: ‘Businesses should work against corruption in all its forms, including extortion and bribery’.

The Code of Ethics and the Zero Tolerance to Corruption Plan are available on the company’s website

<https://www.endesa.com/es/inversores/a201611-conducta-etica.html>

2.2. Corporate Integrity Protocols

In the context of the legislation on ethics and compliance, ENDESA has the following specific protocols:

- > **Protocol on the acceptance and offering of gifts and favours:** The pur-





pose is to establish clear principles of behaviour that must be followed by ENDESA's collaborators in all matters relating to the offering and receiving of gifts and favours that arise from their interaction with public officials, customers and suppliers, in order to ensure that their behaviour complies with the Company's Code of Ethics

and Zero Tolerance for Corruption Plan.

- > **Protocol on good practices in dealings with public officials and authorities:** The purpose is to establish clear principles of behaviour that guide the actions of employees, executives, administrators and third parties contracted by ENDESA in

dealings with public officials or authorities, guarantee the excellence of the services provided by ENDESA and ensure the application of the principles of transparency and propriety in relations with the public sector.

These protocols are available on the company's website: www.endesa.com.



2.3. Criminal Risks Prevention and Anti-Bribery Model

ENDESA has a Criminal Risks Prevention and Anti-Bribery Model that provides the Company with a control system for the purpose of preventing or significantly reducing the risk of commission of crimes during the course of its business activities, in compliance with the dispositions of the Penal Code concerning the criminal liability of legal entities, which were introduced into Spanish legal system in 2010.

In 2018, ENDESA's model was reviewed and it has kept the certifications obtained in 2017 for the Criminal Risks Prevention and Anti-Bribery Model which was certified for its conformity with standards UNE 19601:2017 in relation to the Criminal Compliance Management System and UNE-ISO 37001 in relation to the Anti-Bribery Management System.

The Auditing and Compliance Committee is the body responsible for the supervision of the operation of and compliance with the Model and of the functions of the Supervisory Committee responsible, among other tasks, for the monitoring and updating of the Model. The Supervisory Committee is composed of the General Manager of Auditing, the General Secretary and Secretary of the Board of Directors (who is

its chairman), the General Manager of Legal and Corporate Affairs and Compliance, the Director of Legal Business Affairs and the General Manager of Human Resources and Organisation.

During 2018, the Supervisory Committee met on five occasions, and at said meetings, the major issues concerning the CRPM were addressed, with officers from other areas of the company also attending to inform the committee of significant aspects within their scope of responsibility.

At the start of each financial year, the Supervisory Committee prepares a Programme of Activities establishing priorities regarding qualitative criteria with a risk-based focus for whose development, by virtue of the faculties conferred and the specialisation required, it relies on the Auditing, Legal Counsel and Human Resources and Organisation Departments. Furthermore, annually the Committee presents the Auditing and Compliance Committee with a report on the execution of the programme, including details of the activities performed and the conclusions reached.

Among the activities performed in 2018, the following are of note:

- > Review, updating and assessment of occurrences with risk of commission

of crimes and the adaptation and updating of their mitigating controls appearing in the matrix of the Model,

- > Verification of the efficacy and operativity of the Criminal Risks Prevention Model by means of the review of the appropriate design and operativity of the tests on certain control activities,
- > Performance of different initiatives devoted to informing and training the company's personnel regarding ENDESA's current criminal prevention compliance and ethical reference framework.
- > Review and updating of the Criminal Risks Prevention Model in order keep the certificates attesting that the Criminal Compliance Management System conforms with UNE standard 19601:2017 and the Anti-Bribery Management System with UNE-ISO standard 37001.

From the activities carried out during the financial year, it can be concluded that ENDESA's Criminal Risk Prevention Model is operative in all the significant companies of the Group and is being implemented efficiently, proving itself to be generally adequate to mitigate the risks of commission of the crimes typified in the relevant legislation.



2.4. Participation in initiatives on integrity

ENDESA's commitment to ethics and integrity in its business management not only determines its endeavour to comply with regulations, ethical principles and legislation in force, but also its active participation in initiatives to promote a greater integration of said culture into all spheres of corporate management. In this regard, and aware of the relevance and importance of participating in

civil society initiatives, in 2018 ENDESA continued to take part in the Foretica Cluster for Transparency, Good Governance and Integrity. This Cluster was established as a platform of companies coordinated in Spain by Foretica for the purpose of acting as a corporate meeting-point in leadership, awareness, exchange and dialogue in this field.

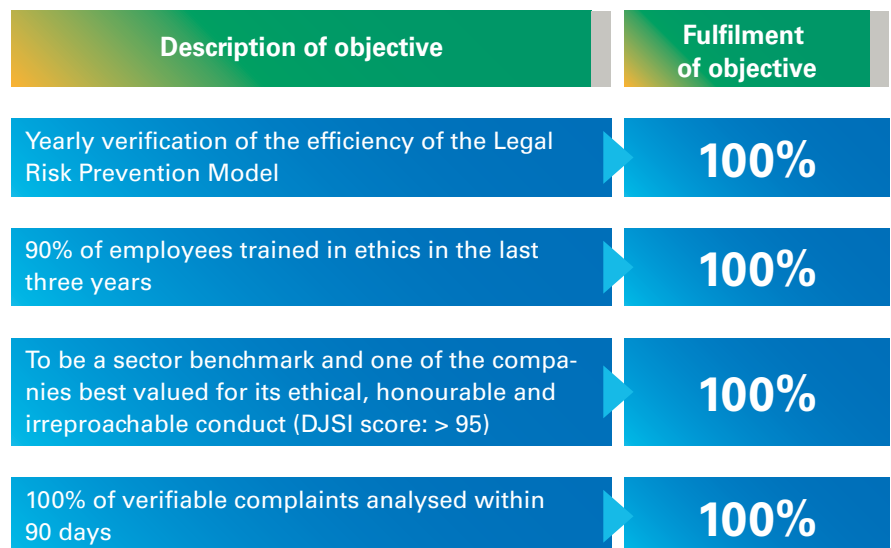
ENDESA also belongs to the 'Integrity Forum' organised by Transparencia Internacional España, in which it has taken part since 2015. This Forum consists of a platform for joint reflection alongside various companies, to move forward in matters of compliance and transparency.



2.5. Achievement of objectives

Integrity and ethical conduct form one of the basic pillars of ENDESA's sustainability strategy. Therefore, ENDESA's 2018-2020 Sustainability Plan included specific goals oriented toward maintaining a high level of excellence in this field, achieving a level of global compliance of 100%.

Moreover, in the new 2019-2021 Sustainability Plan, ENDESA has updated these goals for the 2019-2021 period. For further information, see the chapter 'Sustainability Plan'.



2.6. Ethics channel

205-3 205-1 102-17 103-1 Management approach anti- 103-2 Management approach anti-corruption
103-3 Management approach anti-

ENDESA places at the disposal of all its stakeholders an Ethics Channel, accessible via its website (www.endesa.com) and on its Intranet, so that improper, unethical or illegal conduct which in their opinion arises in the performance of the company's activities may be reported safely and anonymously.

The procedure established for using the channel guarantees confidentiality, as

it is managed by an external and independent firm, through which all reports are processed. In addition, there is an internal policy describing the reception, analysis and investigation process of claims, published on the Company's Intranet. The policy states, among other matters, that the Company will adopt disciplinary measures against any type of reprisal against those who report

claims, and also against those who report facts that they know to be false.

The messages received via the Ethics Channel correspond mainly to the improper use of resources, matters concerning conflicts of interest, personnel management and inappropriate activities by suppliers and contractors.

In addition to the Ethics Channel, claims are received via other pathways, such





as by e-mail or by letter, and are always addressed to the Auditing Directorate-General, in accordance with ENDESA's internal procedures.

The Auditing Directorate-General is responsible for ensuring the correct processing of the claims received, acting with independence of criteria and action regarding the other organisational units. It has access to all the Company documents necessary for the exercise of its

functions and follows-up the implementation of the recommendations included in the auditing reports.

Furthermore, the Auditing Directorate-General is a body attached to the Board of Directors through its Auditing and Compliance Committee, that centralises and channels significant claims and refers them to the Board.

During 2018, ENDESA received, either via the Ethics channel or via other

means, a total of 8 claims. Investigations of all these cases were concluded in the same year. No breaches of the Code of Ethics were detected in relation to the complaints received.

	Customers	Employees	Suppliers	Shareholders	Community	Anonymous	Total
Claims received in 2018, by complainant	2	1	0	0	0	5	8
Claims received during 2018, by stakeholder group affected or potentially affected	1	4	0	2	1	0	8

Status and conclusion of claims received	2015	2016	2017	2018
Closed	8	10	9	8
Non-compliance	2	2	1	0
Groundless	6	8	8	8
Open	0	0	1	0

Non-compliances by type	2015	2016	2017	2018
Conflicts of interest / Corruption	0	1	1	0
Fraud or theft to the Company / Improper use of resources	2	1	0	0
Other	0	0	0	0
Total	2	2	1	0

The business unit included in the scope of this report has been analysed in its entirety regarding organizational risks related to corruption.



2.7. Litigation

206-1 307-1 EU25

At the date of preparation of the Consolidated Financial Statements, the main litigation and arbitration proceedings involving ENDESA companies were as follows:



Litigation concerning monopolistic and anti-competitive practices

206-1

There are four lawsuits relating to monopolistic and anti-competitive practices. Fines total 12.8 million euros because the appeal against the 23.12 million-euro sanction imposed on ENDESA Distribución for alleged abuse of a dominant position has been partially

upheld by Spain's Supreme Court, which ruled that the fine must be recalculated at a lower amount; although it has not been established at the date of this report.


Details of the four lawsuits are as follows:

- > ENDESA Distribución Eléctrica, S.L.U. Resolution of the National Markets and Competition Commission (CNMC) imposing a fine of 1.18 million euros on ENDESA Distribución for an alleged abuse of a dominant position in the supply market. The resolution was challenged through a conten-

tious appeal and on 7 May 2018, Spain's High Court partially upheld the appeal, annulling the CNMC's resolution imposing the fine as it concluded that the fine had been calculated using criteria that were not in accordance with the law and contrary to the principle of proportionality. The case is therefore pending the CNMC recalculating the amount, which would involve reducing the fine.

- > ENDESA Distribución Eléctrica, S.L.U. CNMC resolution in 2012 imposing a 23.12 million-euro fine on ENDESA Distribución for an alleged abuse of a dominant position in the supply market by sending bids to parties requesting network expansion work at the same time that the distribution company sent the technical information needed to carry out such work. The resolution was first appealed before the Spanish High Court, which rejected the appeal. On 14 July 2017, the Supreme Court passed a ruling partially upholding the appeal on the aforesaid grounds of the fine not being proportional and ordered the CNMC to recalculate it. The case is awaiting a further hearing before the High Court.
- > ENDESA Energía XXI, S.L.U. In June 2017, the CNMC agreed to file a motion for sanctions against ENDESA Energía XXI, S.L.U. for alleged practices contravening article 3 of Spain's Protection of Competition Law 15/2007 (LDC) involving the use of bills sent to customers on the Small Consumer Voluntary Price/Last Resort Tariff (PVPC/TUR) to advertise services offered by the deregulated supplier or steer them to the points of service associated with the deregulated marketer. In November 2018, the CNMC issued its proposed resolution of im-

posing a fine of 5.5 million euros. A written pleading has been submitted and the matter is pending resolution.

- > ENDESA Generación, S.A.U. On 30 November 2017, the CNMC agreed to file a motion for sanctions against ENDESA Generación, S.A. for allegedly unduly altering the dispatch of groups 3 and 5 at the Besós combined cycle plant between October 2016 and January 2017 (Case SNC/DE/174/17). The CNMC considers that ENDESA Generación, S.A. assigned abnormal or disproportionate prices to electricity generated by groups 3 and 5 of the Besós combined cycle plant traded on the daily market between October 2016 and January 2017, with the purpose of excluding these groups from this market, and that the planning occurred during a period of technical restrictions. According to the CNMC, the company acted in this way, fully aware that there was a high probability of the output being allocated in this process leading to it receiving higher revenues than those on the daily market. A pleading has been submitted refuting any responsibility for the claims and arguing that the company's conduct conformed to applicable regulations. A maximum fine of 6 million euros could be imposed, which the CNMC has yet to quantify. 

Environmental litigation

307-1

The number of environmental lawsuits environmental totals 49, and the total monetary value of fines imposed

is 122,511,583.61 euros. The highest fines relate to fires, although the final amounts are being adjusted based on the claims submitted, while provisions set aside cover the valuation given, irrespective of the fact that amounts may vary at its time and when the preliminary hearings end. All references held have also been included this year as the databases have been centralised.

These 49 lawsuits break down as follows:

- > 7 cases related to renewable energies (wind).
- > 3 cases related to generation (nuclear).
- > 5 cases related to generation (water, gas and coal).
- > 34 cases related to distribution.
- > There are no cases related to renewable energies (hydroelectric).



Data protection claims

418-1

A total of 4,769 duly justified claims were filed by customers in Spain in connection with the leaking of personal data and data privacy, 20 of which referred to actions taken in 2017 and processed in 2018.

No duly supported claims regarding the leaking of personal data and data privacy were lodged by suppliers in Spain in 2018.

Sixty-eight injunctions regarding data privacy were also issued by the regulatory authorities in Spain in 2018, 10 of which concerned actions taken in 2017 and processed in 2018.






Claims and fines in the social sphere and procedure

419-1


There are three cases, excluding those for amounts of less than 30 thousand euros. Fines total 105,002 euros.

These three cases are as follows:

- > Resolution of the Secretary of State for Social Services imposing a fine of 30,001 euros on ENDESA Energía for breaching rules on access to its website. The fine was paid by ENDESA ENERGÍA at the end of October 2018.
- > Motion for sanctions no. SNC/DE/171/17 filed by the CNMC against ENDESA Energía S.A.U. for an infringement stipulated in article 66.4 of the Electricity Sector Act 24/2013, of 26 December, entailing non-compliance with customer consent and contracting requirements. The CNMC concluded that ENDESA Energía had no evidence of having received consent to contract a product or service from the spouse of the contract holder. Amount: 40,000 euros.
- > Motion for sanctions SAN/18880/2016 (SUL 7438/2016) filed by the Catalan Consumer Agency (ACC). Energy Poverty: a charge of carrying out practices that exclude or restrict the rights of consumers given that the company cuts off electricity supplies without first requesting a report from the municipal social services. Amount: 35,001 euros. 

Claims and fines concerning the impacts of products and services on health and safety


416-2

There were no incidents relating to breaches of legal regulations or voluntary codes concerning the impacts of products and services on healthy and safety resulting in a fine or sanction or caution. 

Claims and fines concerning non-compliance with product and service labelling and information rules


417-2

A total of 40 breaches of rules on product and service labelling and information gave rise to fines, which amounted to 562,528 euros.

There were no such breaches  to cautions.

Claims and fines connected with marketing

417-3

There were no incidents concerning breaches of marketing regulations or voluntary codes. 

Sanctions deriving from outages

Sanctions for outages totalled 3,237,849 euros. 





endesa

Low-Carbon Business Model



Vuelta a España
en Vehículo Eléctrico

endesa



39.5

% Reduction of Absolute CO₂ emissions (vs 2005)

22.6


% Reduction of Specific CO₂ emissions (vs 2005)

49

% Net Emission-Free Production

1,814.6

MW Renewable Installed power

Compliance with Endesa Sustainability Plan 2018-2020				
Strategic priority	Course of action	2018 goal	Result 2018	Key actions
 Decarbonisation of energy mix	Reduction of absolute CO ₂ emissions (Mt).	35	31	<ul style="list-style-type: none"> > This year, Enel Green Power España acquired 100% of the share capital of Parques Eólicos Gestinver, S.L.U., which has installed wind power of 132 MW. > ENDESA continues its participation in three carbon funds. > ENDESA voluntarily compensated for greenhouse gas emissions from several of its national and international customers.
	Reduction of specific CO ₂ emissions (g/kWh).	436	418	
	CO ₂ -free production (%)	48%	49%	
	Development of renewable energies (MW installed).	6,453	6,579	





1. Climate change, the greatest environmental challenge of the 21st century

1.1. Global commitment to combat climate change

International Agreements on Climate Change

The Paris Agreement, adopted in December 2015, entered into effect on 4 November 2016 with three key objectives within the scopes of mitigation, adaptation and financing of climate change:

- > **Mitigation:** limiting the temperature increase to 2 °C and pursuing efforts to limit it to 1.5 °C.
- > **Adaptation:** increasing adaptation capacity, strengthening resiliency

and reducing vulnerability to climate change.

- > **Climate Financing:** Developed countries will support developing countries with climate financing (transfer of funds to finance action for the fight against climate change), encouraging developing countries to also voluntarily provide resources.

To carry out these objectives, in the Marrakesh COP22, the regulatory development schedule was negotiated, which was defined (except for the market mechanisms section, de-

ferred until next year) in the COP24 held at the end of 2018 in Katowice (Poland from 3 to 14 December 2018). Therefore, from now on, all countries will have the same rules for measuring the emissions that they produce, mitigate and the aspects relating to financing and adaptation.



Climate action in the European Union

Europe responded to the climate change challenge with the European Union 2050 emissions reduction (presented by the EC on 28 November 2018), the climate and energy measures package by 2020 and the climate and energy framework by 2030, with its main priority being to significantly reduce greenhouse gas (GHG) emissions and to encourage other states and regions to do the same.

With the presentation of the aforesaid Strategy by 2050, the European Commission is starting the process to comply with the Paris Agreement, which urges the Parties to send their 2050 decarbonisation strategies by 2020. That approved notification does not constitute a legal document, nor does it include specific regulations, but it offers cues on the Commission's vision regarding: the goals to reach by 2050, their technological and economic feasibility and the principles that could guide future legislative frameworks for climate and energy policies.

The package of measures specified climate and energy goals measures assumed by the European Union for 2020 has, among others, the goal of 20% reduction of GHG emissions compared to the 1990 levels.

To give the Package continuity, new goals for reduction of emissions and renewable energies were proposed with the 2030 climate and energy framework, establishing the binding goal of reduction of emissions for the European Union by at least 40% compared with 1990 levels by 2030, thus allowing the

European Union to contribute to compliance with the Paris Agreement. In order to achieve the goal of reduction of at least 40%, the sectors included in

National Climate Response

After ratifying the Paris Agreement, Spain assumed the commitment of working within a legislative framework that would allow it to meet the commitments assumed regarding greenhouse gas emissions reduction. To comply with these commitments, preparation work began which will be the future Climate Change and Energy Transition Law intended to cut across all sectors and in which both civil society and the government are participating.

During 2017, specifically during the period from 18 July to 10 October, the then Ministry of Agriculture and Fishing, Food and the Environment, currently the Ministry for Ecological Transition (MITECO) began the consultation process to develop the future Law with great success, receiving over 350 proposals for the aforesaid document. Thus, ENDESA played a very active role in the process as part of various forums and initiatives. Further, the Company participated in the aforesaid public consultation process,

the European Union emission trading system (ETS sectors), a reduction of 43% must be achieved with regard to 2005 levels and non-ETS sectors must

send its contributions and commitment to working toward a low-carbon, climate-resilient economy to MITECO. Later, in November 2018, MITECO published the Draft Bill for the Climate Change and Energy Transition Law. It is an ambitious document that pursues the global goal of reducing greenhouse gas emissions from the Spanish economy by at least 20% compared to 1990 by the year 2030. Likewise, it establishes the goal of compliance with the internationally assumed commitments by the year 2050, without prejudice to the autonomous agencies, that greenhouse gas emissions from the Spanish economy as a whole must be reduced by at least 90% compared with 1990, with an electric system based exclusively on renewable sources of generation.

Finally, MITECO also must approve the National Integrated Energy and Climate Plan for the 2021-2030 period, a document which will define the 'key' measures to achieve both the national goal by 2030 to reduce emissions by 20% compared to what they were in 1990 as well as for decarbonisation and electrification of the economy.

achieve a reduction of 30% with regard to 2005 levels through the binding goals of each member State.

On 22 February 2019, the Ecological Transition Ministry officially initiated a public hearing process called the Climate and Energy Package, composed of the following documents:

- > Draft Bill for the Climate Change and Energy Transition Law.
- > Draft of the 2021-2030 National Integrated Climate and Energy Plan.
- > Fair Transition Strategy.

Always up-to-date with intensive international negotiations, ENDESA aligned its corporate strategy according to the global commitments and goals currently planned in the struggle against climate change.

Likewise, ENDESA, in its commitment to integrate the environment into its strategy and decision-making processes, is currently implementing the recommendations on financing and climate change called the Task force on Climate-related Financial Disclosure (TCFD), with the goal of promoting transparency in the company and aligning itself with the four areas of activity of the TCFD: governance, strategy, risk management and metrics and targets.

1.2. Corporate governance

ENDESA is clearly and firmly committed to responsible management of climate change-related matters and therefore, all decisions are made at the highest level. ENDESA's Sustainability Strategy

has one of its main pillars in climate change, the Company's Board of Directors, which is responsible for its development and implementation. Likewise, ENDESA has established an incentives

system for its management team relating to the company's performance in climate change management.





1.3. Strategy

The effects of climate change are showing ever stronger and the response must be global and ambitious, promoting strict targets and reinforcing alliances that help combat climate change.

ENDESA's 2019-2021 Strategic Plan is based on the current energy paradigm and takes into account the transition period in which we find ourselves. Among ENDESA's strategic pillars for leading the transformation are the following:

- > Decarbonisation of the energy mix by 2050 through an ambitious emission reduction plan. The 2019-2021 Sustainability Plan approved by the Board of Directors in February 2019 has raised the ambition set forth in the 2019-2021 Strategic Plan, laying the path toward the aforesaid goal with some goals for the intervening years by 52% and approximately 69% reduction of absolute emissions of CO₂ compared to 2005, in 2020 and 2030 respectively;
- > An increase of over 30% of installed capacity of renewable energies in 2021, with an associated investment of 2 billion euros;
- > And a smooth transition toward decarbonisation, assuring security of supply and avoiding new inefficient investments in fossil fuels.

The Company is aware that the road to an efficient and sustainable energy model will be possible, thanks to a large presence of renewable energies in the generation mix and electrification of demand. On the path to electrification of demand, with special emphasis on transportation, ENDESA presented its ENDESA X business line at the end of 2018, an ambitious

infrastructure plan that includes the deployment of over 8,500 public recharging points from 2019 to 2023, with an associated investment of 65 million euros and some 100,000 private recharging points. The plan shall be developed in two phases:

- > During the years 2019 to 2020, ENDESA X will establish a network of 2,000 recharging points that will connect the main cities (with over 35,000 inhabitants) and roads covering the 15,000 kilometres of main roadways and urban areas so that 75% of the population will be guaranteed availability of public recharging infrastructure at a distance of less than 100 kilometres, wherever they may be;
- > During the years 2021 to 2023, ENDESA X will install over 6,500 public access recharging points (in shopping centres, car parks, hotel chains, service areas, public roads, etc.) to keep up with the growth of the electric vehicle market, in order to provide the best infrastructure coverage for urban areas and main strategic traffic roadways, including the islands.

Enel Green Power España (100% owned by ENDESA), the fourth largest Spanish operator in the Spanish renewables sector, undertakes the development and management of all the renewable energies of ENDESA in Spain.

On 31 December 2018, Enel Green Power España had 1,815 MW gross installed renewable power, of which 1,750 MW pertain to wind power, 51 MW to mini hydraulic, 13.5 MW to photovoltaic solar power and 0.5 MW to biogas plants,

with a joint production of 3,833 GWh during 2018. At this capacity, it will total 4,753 MW gross installed large-scale hydraulic power.




May 2017 Auction for Station Construction

On 16 May 2017, Enel Green Power España, was awarded a total of 540 MW of power for installation of new wind power production farms. This new capacity was assigned after bidding on 2,000 MW of renewable energy (expandable up to 3,000 MW) that the Spanish government launched to achieve the target of coverage for 20% of the country's energy consumption with renewable energies in 2020.

These wind power projects are located in the regions of Aragón, Andalusia, Castile and León and Galicia, autonomous communities that already have the presence of wind resources. When they go into operation, the wind power facilities will generate approximately 1,750 GWh per year and will avoid emissions of approximately 1,050,000 tons of CO₂ to the atmosphere.

During 2018, construction began on most of the wind farms to reach the authorized power of 540 MW. In particular, 18 projects from the projects portfolio were selected to be submitted at the auction. At the close of 2018, the construction contracts were signed and construction of 11 farms was begun, with a total authorized power of 370 MW. Construction of the remaining farms will begin during the early months of 2019, once all of the

necessary administrative authorizations have been obtained. 


June 2017 Auction for Station Construction

On 26 June 2017, OMIE held a second auction with the objective of achieving 3,000 MW of new capacity in renewable energies. At this time, Enel Green Power España, was awarded 339 MW of photovoltaic solar capacity in Spain. This solar capacity awarded is in addition to the 540 MW of wind power awarded during the month of May.


During 2018, construction of all of the solar plants was begun to achieve the authorized power of 339 MW. In particular, 7 projects from the projects portfolio were selected to be submitted at the bidding. At the close of 2018, construction contracts were signed and construction work begun on 7 plants with a total authorized power of 338.4 MW.

The solar plant projects are located in the regions of Murcia and Badajoz and when they go into operation, will generate approximately 640 GWh per year and avoid emissions of approximately 348,000 tons of CO₂ into the atmosphere.


Altogether, ENDESA will invest approximately 820 million euros in the construction of wind and solar power that was awarded to it in the 2017 auctions. It is estimated that this new capacity will go into operation during 2019.

Construction of this wind and solar power plant will be done with a focus on creation of shared value, ensuring a positive impact on the local communities, actively managing the relationship with the local stakeholders. 

Acquisition of Gestinver S.L. in 2018

On 2 February 2018 Enel Green Power España S.L.U acquired 100% of the share capital of the company Parques Eólicos Gestinver S.L., a company that owns five wind power plants with a combined power of 131.5 MW, distributed among five facilities in Galicia and Catalonia. The purchase agreement was closed on 3 April, once all of the previous conditions were met and since then, these assets were consolidated within the Enel Green Power España S.L.U. Group; during nine months of 2018, generation of 176 GWh was provided. 

Enlargement of the portfolio in 2018

In addition, during the year, it has been worked at Enel Green Power España to extend the wind and solar power 'pipeline' projects as well as in the scope and progress of those that are currently in the portfolio, projects that will materialize in the coming years as new capacity. Thus, continuous grow of renewable capacity is ensured in the future and the possibility of closing trade agreements for the sale of renewable energy is increased. 

ENDESA submitted the satisfactory results of the project GRACIOSA

The members of the project Renewable Generation with Storage and Smart Consumption for the Operation of Distribution Networks with Self-Consumption Systems (GRACIOSA), ENDESA, Canary Islands Technological Institute (ITC) and CEN Solutions submitted the satisfactory results obtained.

Among the main objectives achieved with the project, the following are highlighted:

Photovoltaic penetration limits on the island were detected (from 25% to 45%).

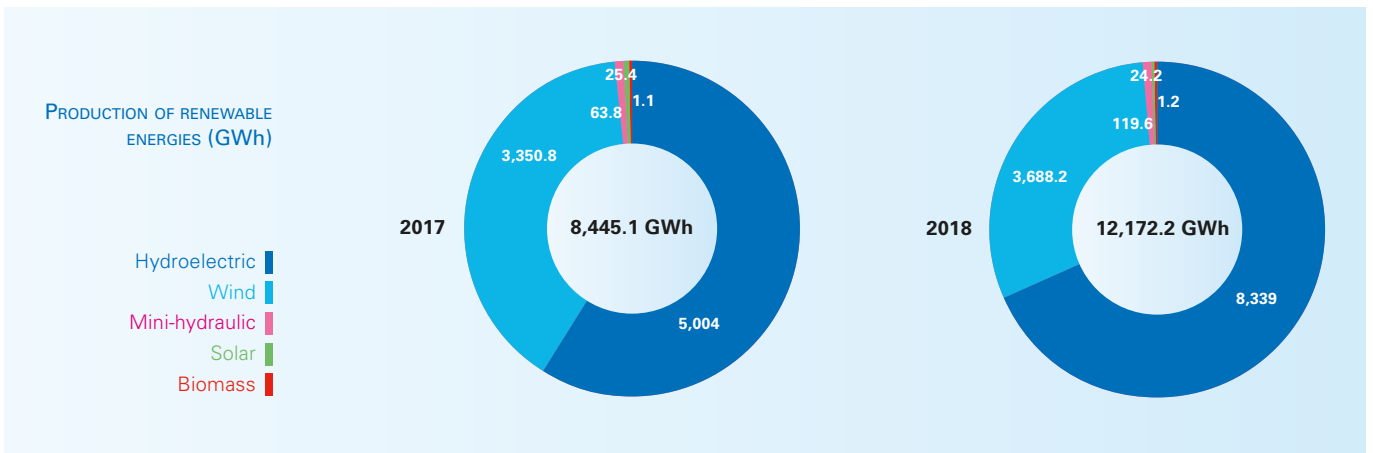
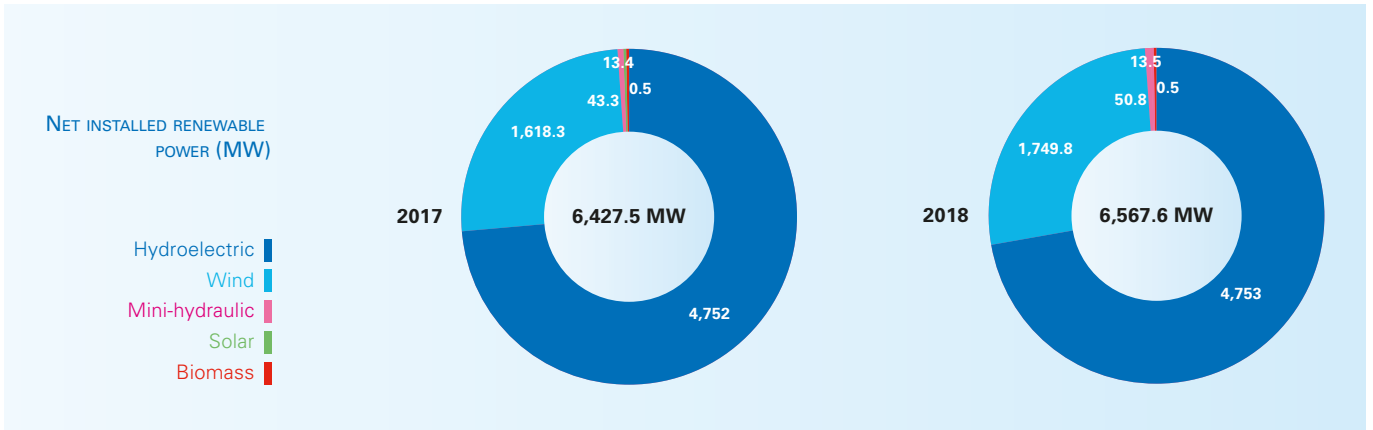
An electrical standard for microgrids with high photovoltaic levels was prepared, based on the German standard.

Recommendations for assistance to offer for installing renewable energies was prepared.

A monitoring system for the island's electrical grid was developed, with a remote system for its control from Lanzarote.

Along with the Canary Islands Technological Institute and CEN Solutions, ENDESA has been working since 2015 on this project to develop a smart microgrid on the island of Graciosa that supports large-scale integration of solar energy, moving ahead with stable self-sufficiency solutions with clean energy on the island.





1.3.1. Risks and opportunities

The risks and their corresponding opportunities derived from climate change are divided into two categories: physical and of transition.

1.3.2. Physical risks

Future climate forecasts indicate that the energy sector will be affected by climate change and its consequences will affect the entire value chain, from generation to distribution. However, the results of the Climate Change Ad-

aptation Study performed by ENDESA reveal that the risks to which the business lines will be subjected are classified between low and very low, and it is also expected that they will materialise slowly and in the future. These conditions enable the gradual implementation of different adaptation measures to avoid these risks. For this reason, at ENDESA the physical parameters associated with climate change are not expected to have significant adverse effects on the assets. Additionally, along with the idea of continual growth in knowledge and understanding of the physical risks, ENDESA participates in different research projects on the subject of adaptation to climate change (see more details in section 1.7.6) and is developing climate scenarios from which it will re-evaluate

the necessity of increasing the ambition on the matter of adaptation.

1.3.3. Transition Risks

The increasing regulations concerning objectives for energy and reduction of emissions in the European setting represent different risks and opportunities for ENDESA:

European Emissions Trading System

The European Emission Trading System (EU ETS) is the principal mechanism for

achieving the EU carbon emission reduction targets: 20 % by 2020 and 40 % by 2030. Over the last few years, this has been modified in order to optimise functionality and to manage the surplus of emission rights.

One important risk for thermal generation facilities is the reduction in the offer of emission rights, both for the EU-ETS modifications adopted during the last few years as well as for the foreseen increase in the annual reduction rate in Phase IV, as of 2020. The reduction in the bid implies the risk of increased electricity generation costs and may even cause, in a scenario of scarcity of rights, modification in the order of merit: an increase in the price of thermal generation may even entail the replacement of coal-fired facilities with natural gas-fired units.

ENDESA's carbon management strategy is based on the forecast of its own CO₂ emissions, balancing this fact with future estimates of the price of carbon and the optimization of the volume and value of the current carbon portfolio credits.



Renewable energies

Renewable energy plays a key role in the transition toward a competitive, safe, and sustainable energy system in the EU. In order to achieve a low-carbon economy in 2050, the European Union has set the following binding goals:

- > Climate and energy measures package by 2020: To achieve a 20% participation of renewable resources in the European Union's energy consumption.
- > Climate and energy framework for 2030: To increase the share of renewable energy to at least 27% of the Eu-

ropean Union's energy consumption in 2030.

In order to promote projects in the field of environmental protection and to achieve a safe, affordable and sustainable European energy market, in July 2014 the EU adopted the 2014-2020 Guidelines on state aid for the protection of the environment and energy.

In November 2016, the European Commission proposed a revision of the Renewable Energies Directive (2009/28/CE) with the goal of establishing the post-2020 framework and to guarantee fulfilment of the 2030 goal established by the 2030 Climate and Energy Framework of providing 27% of energy consumption for the EU using renewable energies. This Directive is included in Spanish legislation in the 2011-2020 Renewable Energies Plan and in the 2011-2020 Energy Efficiency and Savings Action Plan.

On the other hand, the 'Clean Energy for All Europeans' package establishes that the EU will be a world leader in renewable energies as one of its main objectives and therefore, it reviews the Framework objectives regarding climate and energy seeking to raise the quota of renewable energies above 32% by 2030. According to the latest report from the European Commission 'Perspectives on Renewable Energy in the European Union', Europe has the capacity, with the current technologies, to raise the share of renewable energies of the energy mix to 34% by 2030, doubling the rate registered in 2016, and also achieving a positive effect on the economy and in achievement of the emissions reduction goals.

In this field, in 2014 Spain passed Royal Decree 413/2014, regulating the production of electricity from renewable energies, cogeneration and waste. This

Decree establishes the legal framework for making renewable energies more competitive, and therefore, more attractive to investors.

The increase in the amount of renewable energy generated could entail a risk inasmuch as it assumes a reduction in the thermal gap. However, ENDESA considers that in fact this question represents a great opportunity for the development of new business opportunities based on renewable energies. That is why, in 2016, ENDESA acquired 100% of Enel Green Power España and forecasts an increase of over 30% of installed capacity in renewable energies in 2021, with an associated investment of 2 billion euros.



Energy efficiency

Energy efficiency represents the third pillar of the European energy and climate strategy, considering the following objectives:

- > 2020 Climate and Energy Package: 20% improvement in energy efficiency in 2020 in comparison with original plans.
 - > 2030 Climate and Energy Package: 27% improvement in energy efficiency in 2030 in comparison with what is projected.
 - > Winter Package: at the end of November 2016, the European Commission submitted a proposal for measures called 'Clean Energy for All Europeans' ('Winter Package') aimed at achieving European Climate Goals by 2030, maintaining the security of the supply and competitiveness of the energy prices.
- This package refers to energy efficiency as a priority, emphasizing that buildings have a tremendous poten-





tial for implementation of energy efficiency measures.

The legislative package submitted seeks the reduction of at least 40% of polluting emissions as compared with 1990, the increase of the renewable energies quota by above 32% by 2030 and reinforcement of the energy savings objective, raising the energy efficiency goal to 32.5% in addition to continuing to establish measures for development of the European domestic energy market and supporting energy governance that obligates countries to prepare national plans every ten years.

The objectives sought with that publication are as follows in the order established:

- Giving priority to energy efficiency.
- The European Union being a world reference in renewable energies.
- Offering a square deal to consumers for being the active and central agents in future energy markets.

The above goals were approved by the European Parliament during the month of November and they are expected to be consolidated in the beginning of 2019.

The Energy Efficiency in Buildings Directive has been the first Directive from the Winter Package to be published in the month of June (Directive (EU) 2018/844 of the European Parliament and the Board dated 30 May 2018, which modifies Directives 2010/31/EU, regarding energy efficiency in buildings and 2012/27/EU, regarding energy efficiency). This involves a new simplified framework that covers speed, quality and efficacy of building renovations, with the long-term objective of evolving toward their decarbonisation. As an update with regard to the regulatory framework

in effect, the revised Directive promotes electric mobility.

Improved in efficiency enables a saving in costs, as well as an opportunity for marketing of efficient energy solutions. The European Union has started up several initiatives to accelerate investment in energy efficiency:

- > 'Horizon 2020': EU research and innovation programme for the 2014-2020 period.
- > Project Development Assistance (PDA) grants focused on sustainable energy projects at a facility level, whose aim is to promote the raising of investments in sustainable energy projects.
- > The European Energy Efficiency Fund, which promotes the sustainable energy market and climate protection.

ENDESA, as it operates in Spain and Portugal, must guarantee compliance with these established obligations; to this end it has an energy policy whose goals are the development and implementation of energy-efficiency programmes, as well as the adoption and furtherance of innovative programmes to make its activities ever more efficient from the point of view of climate change.

For more information about energy efficiency, see section 1.3.1. *Innovation in generation from fossil fuels* from the chapter: *Innovation*.

During 2018, ENDESA achieved an approximate saving of 171 GJ of power due to the efficiency improvement programmes in our operations. These savings have led to a reduction in operational costs and therefore, an increase in the margin.

Other benefits associated with these new regulations include an increase in the demand for ENDESA's Value-Added Products and Services, whose aim is to aid customers in improving energy efficiency.

For more information about Value-Added Products and Services, see section 5. *ENDESA's Energy Solutions* from the chapter: *Customer Orientation*.



Electrification of demand

Taking into account the possibility of generation by means of renewable sources, and in all cases the greater efficiency in the final use of electrical energy with regard to fossil fuels, both to comply with the current European Union environmental objectives and, evidently, to achieve the long-term decarbonisation of the economy, electrification of the demand is essential.

More specifically, and parallel with the development of renewable energies, electrification of demand must provide a major electric mobility development and the use of electricity in household heating.



Electric Vehicle

The European Union needs to accelerate electrification of its fleet of vehicles in order to achieve the objectives established in the *White Paper on Transport*, which establishes the objective of reducing greenhouse gas emissions from the transport sector by 60% in 2050, compared with the levels of 1990 and by 20% in 2030 compared with the levels of 2008.

To decarbonise the transport sector, the EU has established the following legal frameworks to promote the use of electric vehicles:

- > The Energy Taxation Directive (2003) to restructure the way energy products are taxed, bearing in mind both

their CO₂ emissions and their energy content.

- > The Clean Fuels Strategy was launched in 2013 to guarantee creation of alternative fuels throughout the European Union, as well as the use of electricity. A minimum number of recharging points that must be installed by each member State during 2020, 82,000 and 12,000 for Spain and Portugal, respectively.
- > The Energy Union Package that stresses the need to decarbonise the transport sector, as this represents over 30% of the final energy consumption in Europe.
- > Energy Efficiency in Buildings Directive: the published Directive promotes E-mobility, establishing the minimum requirements that buildings with over ten parking spaces must meet aimed at introducing recharging points for electric vehicles. In new non-residential buildings and non-residential buildings subject to important remodelling, at least one recharging point shall be required and ductwork that allows installation of recharging points for electric vehicles, at least one per five parking spaces. On the other hand, member States must establish requirements for installation of a minimum number of recharging points in all non-residential buildings with over twenty parking spaces for 2025.
- > On 19 June 2018, the regulation (EU) 2018/842 of the European Parliament and Council was published in the Official Journal of the European Union of 30 May 2018 regarding binding annual reductions of greenhouse gas emissions by member States between 2021 and 2030, contributing to the climate action in order to comply with the commitments agreed upon in the framework of the Paris Agree-

ment, modifying Regulation (EU) No. 525/2013.

The objective of the European Union's reduction for non-ETS sectors is 30% for the 2021-2030 period and, in order to guarantee fair distribution of efforts to reduce diffuse emissions responsible for about 60% of the total emissions in the EU in 2014, the new regulation will establish binding national objectives as a way to ensure compliance with the European objective. National objectives have been set in terms of the Gross Domestic Product (GDP) per capita and vary from 0% to 40% with respect to the 2005 levels. Annual objectives are set in order to establish an emissions reduction path so that the Member States ensure a reduction of emissions at a steady rate during that period.

Spain must reduce its CO₂ emissions by 26% compared to its 2005 levels by 2030, by virtue of the agreement reached, which maintains the sharing initially proposed by the European Commission as confirmed by the institution and European sources.

On the other hand, there are initiatives under way in the EU to further the use of electric cars, such as Green eMotion and the Green Vehicles Initiative.

Bearing in mind ENDESA's commitments to promote the use of electric vehicles, this legal framework represents a clear business opportunity. The availability of capital may also increase as electric mobility is seen as a safe investment.

To obtain information about how ENDESA manages this opportunity, see section 2.2. *ENDESA's commitment to electric mobility* from the *Innovation chapter*.

Household heating

The force for technological change in household heating by electrification assumes an important improvement in terms of efficiency, contributes to a reduction in CO₂ emissions and collaterally, to an improvement in the air quality in urban areas.

The opportunities for ENDESA arise from the prediction of an increase in the demand for electricity, and also the marketing of technology such as heat pumps and other value-added products and services tendered by the Company.



Remote Management and Smart Networks

The intention of the EU is to replace at least 80% of conventional meters with smart meters by 2020, as smart measurement and the deployment of smart grids may reduce emissions in the EU by as much as 9%. This will entail the installation of about 200 million smart meters in the EU by 2020, entailing a potential outlay of 45 billion euros.

To this end, Spain has developed the corresponding regulatory framework, obliging the supplier companies to deploy smart meters for all their customers. This obligation doubtless represents an opportunity for ENDESA, as experts and pioneers in smart measurement, and it is to be expected that the demand for this service will increase in the coming years. To process this opportunity, ENDESA has defined a Smart Measurement Deployment Scheme. The purpose of ENDESA's Remote Management Project has been to implement an automatic remote monitoring and





management system for the electricity supply of domestic customers.

For more information about remote management and smart grids, see section 2.2.1. *Remote management and*

measurement control, and 2.2.2. *Development of smart grids*, from the chapter *Digitalisation*.



1.4. Risk management

ENDESA has a risk management and Control Policy approved by the Board of Directors that serves as a general activity framework. The policy regulates all stages of the process, including identification, assessment, prioritization and management as well as constant supervision and control. All risks to which ENDESA is exposed, whether financial or non-financial, are covered by the policy, including risks related to climate change.

For more information about risk management, see section 4 on *Risk Management from the chapter Getting to Know ENDESA*.

All organizational levels are involved in the risk identification and assessment process in a coordinated and directed manner by the Company's risk control system. Each business line and facility identifies and assesses the risks and opportunities that arise from its activities and also derived from its geographic

location. Specifically regarding climate change, they are assessed based on certain established risk tolerance levels, taking into consideration: exposure (climate impacts that may affect the facilities), sensitivity (potential effects and their consequences to business or facilities) and vulnerability (capacity for adaptation to overcome the impacts of climate change, considering the financial, technological and knowledge requirements).



1.5. Metrics and goals

1.5.1. Carbon footprint

103-1 Management approach Emissions

103-2 Management approach Emissions

103-2 Management approach Emissions

Climate change is the main environmental challenge that energy companies face today. ENDESA is very conscious of the urgency of meeting this challenge with determination. In this course of action, the calculation of ENDESA's Carbon Footprint is a vital element of information and transparency that helps to manage risks and opportunities that our company faces to eliminate GHG emissions globally and comprehensively.

The objective of calculating the Carbon Footprint should be to know the reality

and impact of the Company's activities in terms of Greenhouse Gas Emissions (GHG) as well as emissions associated with the entire business value chain, enabling inclusion of the 'carbon component' into decision-making. Once this information is obtained, this map allows identifying points or processes that are more emissions and energy intensive and therefore, we opt for execution of emissions reduction activities that help meet the established objectives, allowing for designing of the main

emissions-reduction strategies and opportunities, seeing the evolution over previous years and the development results of implemented sustainability policies through this indicator. This is an obvious reflection of the integration of the 'carbon component' in decision-making. The Company has calculated its Carbon Footprint, encompassing all its lines of business as well as its offices, since 2009. Further, since 2013, ENDESA registers its Carbon Footprint in the Spanish Climate Change Office

National Carbon Footprint Register in symbol of the company's transparency and commitment in the fight against climate change. Also, since 2013 and given its experience in the matter, ENDESA has undertaken a more active management of its emissions, verifying under the figure Directed Actions within the scope of UNE-EN ISO Standard 14064-31, some of the projects implemented in its facilities relating to improving energy efficiency and reduction of emissions.

ENDESA's Carbon Footprint includes the development of a calculation methodology and its own software tool, the implementation of a management system and the determination of an inventory of emissions and GHG removals in their entirety. This inventory also encompasses both the direct emissions generated by activities controlled by the Company and the indirect emissions over which it has no control, but which are the consequence of the activity performed.



During 2018, the calculation of the Carbon Footprint for the 2017 fiscal year was verified and the pertinent report was published (https://www.ENDESA.com/content/dam/enel-es/home/prensa/publicaciones/otraspublicaciones/documentos/Huella-de-carbono-2017_esp.pdf). Currently, ENDESA's 2018

Carbon Footprint is in the verification process.

After verification of the Carbon Footprint for the 2017 fiscal year, it proceeded with registration in the Carbon Footprint Registry, compensation and carbon dioxide absorption projects from the Ministry for Ecological Transition (MITECO). The purpose of this register is to contribute to the reduction of greenhouse gas emissions on a domestic level, to increase absorption by carbon sinks throughout our territory and thus to facilitate compliance with the international commitments undertaken by Spain in matters of climate change.

ENDESA has had over four consecutive years of registered footprints. That is why the organization has again requested, as it did in the previous year, activation of the 'I Reduce' part of its national seal since it points the way with the trend toward lowering emissions. By way of news, this year, it has requested and obtained activation of the 'I Compensate' part of the seal since, thanks to the 'ENDESA Forest' initiative that pursues forestry restoration of degraded or burned areas with indigenous and resilient species (See section 4.2.3. *Projects with a Socio-Environmental Component* from the chapter *Environmental Sustainability*), the equivalent of 50.54 tons of CO₂ have been compensated for, associated with the consumption of gasoil from power generating groups of ENDESA's hydraulic power plants in Spain.

It should be noted that this is the first project from the energy sector in obtaining the pertinent registration for activation of the seal in all of its phases (I Calculate, I Reduce and I Compensate) in the Carbon Footprint, Compensation and Absorption Projects Registry of the Spanish Climate

Change Office (OECC) of the Ministry for Ecological Transition.



In the consolidation of the results included in ENDESA's Carbon Footprint, a shareholding and operational approach is considered, according to ENDESA's consolidation scope which is determined by the Company's Economic and Financial Directorate-General.

In this way, 100% of the emissions from those facilities where ENDESA has a majority shareholding, and therefore responsibility for the operational control of the facility, are included. Besides, emissions from those other facilities where a majority shareholding is not owned are also included, to the extent of the percentage of the shareholding owned by ENDESA. This is the case with the nuclear facilities.





1.5.2. Direct and indirect CO₂ emissions

305-1 305-2 305-3 305-4 305-5

CO₂ emissions Scope 1, 2 and 3

	CO ₂ (t) Scope 1	CO ₂ (t) Scope 2	CO ₂ (t) Scope 3
2016	29,354,064	842,996	20,349,507
2017	34,801,749	707,019	35,237,225
2018	31,698,840	969,700	33,885,720

The results provided for the years 2016 and 2017 in this report are currently verified. Any difference from data previously published is due to the fact that at the time of publication of the previous report, the external verification process was being carried out pursuant to the UNE EN ISO standard 14064 for those numbers and the results were subject to undergo some modification. Currently, calculation of the results of ENDESA's Carbon Footprint for 2018 is in the verification process.

ENDESA calculates and verifies its emissions according to the directives recognized in the GHG Protocol with location-based focus. This international standard provides the regulations and guidelines for companies and other organisations for the preparation of their greenhouse gas emission inventories. With regard to the emissions in the different scopes for Spain and Portugal, the following are of note:

Scope 1. Direct Emissions

Direct GHG emissions are understood to be those coming from sources that are controlled by the company itself. Within this classification, emissions derived from the following are included:

- > Fuel consumption (carbon, fuel/gas-oil, natural gas, biomass) for electricity production by the power generation plants
- > Use of SF6 as a coolant in transformers for the electricity distribution facilities owned by ENDESA and in the nuclear power plants.
- > Consumption of HFCs in the cooling equipment of port terminals.
- > Methane leaks generated in reservoirs of hydraulic power plants.
- > Fuel consumption in restoration of old mining basins owned by ENDESA.
- > Climate control of buildings (use of fuels in boilers or power units) and transportation of personnel in vehicles owned by ENDESA.
- > Its own fleet of vehicles, both for maintenance of facilities (buildings, electricity distribution, hydraulic, thermal, wind and solar generation) as well as marketing.

The bulk of Scope 1 in ENDESA's case derives from the use of fuels for electricity generation. Therefore, variations in emissions depend to a great extent on factors such as annual rainfall, the increase or reduction in demand for power, and the contribution, to a greater or lesser extent, of renewable energies to the energy mix.

To that end, thermal power generation was reduced in 2018 by about 13%, which has entailed a reduction both in absolute CO₂ emissions, which was also accompanied by a reduction in specific emissions, also as a result of ENDESA's investment efforts dedicated to reducing the environmental impact of its activity. The reduction in thermal production has been distributed unequally among the different technologies: 9.6%

in production in coal-fired power plants, 21.7% in production in combined cycles and 3.5% in fuel-gas technology power plants.

Scope 2. Indirect energy emissions

Indirect GHG emissions pertaining to the technical losses produced during transport and distribution of electrical power not generated by ENDESA.

Scope 3. Other indirect emissions

Scope 3 of ENDESA's Carbon Footprint includes those emissions, which, although not generated at sources controlled by ENDESA, are a consequence of its activity. This Scope encompasses all those associated with the different stages of the life cycle of electricity not controlled by the company and which are not included in the previous Scopes, taking into account:

- > Extraction, production and transport of fuels consumed in operations.
- > Fabrication and transport of chemical products consumed in operations.
- > Transport and treatment of waste generated during operations.
- > Consumption by the end user of marketed natural gas (burned in boilers, homes, etc.)
- > Generation of marketed electricity that was not generated in its own power generation plants. It is taken

into account in terms of the country's electric mix.

- > Journeys made by personnel by air, rail or rented/leased vehicles.
- > The vehicle fleet used for the maintenance of facilities (electricity distribution, hydraulic production and wind turbine and solar generation) owned by contractors.

Variation in Scope 3 emissions depends mainly on the balance between the power generated and marketed by the Company, from marketed natural gas and the life cycle of the fuels used in thermal generation.



1.5.3. Objectives

305-5

The company updates ENDESA's Sustainability Plan annually, reacting to changes that occur in climate and energy policies and renewing its reduction objectives as a result, always with the idea of going the extra mile and meeting the challenge of putting the brakes on climate change.

During these years of intense negotiations, ENDESA is working at the highest level on the achievement of its emission reduction objectives, with the Executive Steering Committee being the body in charge of defining and promoting the policies and goals in the fight against climate change, and including them in the Company's decision-making.

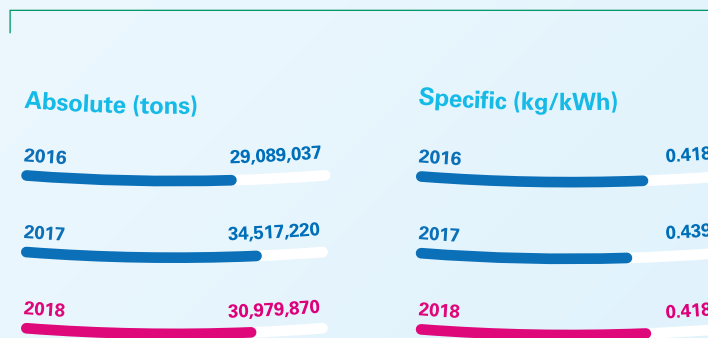


During the month of November 2018, ENDESA submitted the 2019-2021 Strategic Plan, in which it confirms its commitment to decarbonisation of the energy mix for 2050 through an ambitious emission reduction plan. In February 2019, the Company's Board of Directors approved the 2019-2021 Sustainability Plan in which it raised its ambition and laid out a path toward the aforesaid target with some goals for the intermediate years of 52% and approximately a 69% reduction of absolute CO₂ emissions compared to 2005, in 2020 and 2030, respectively.

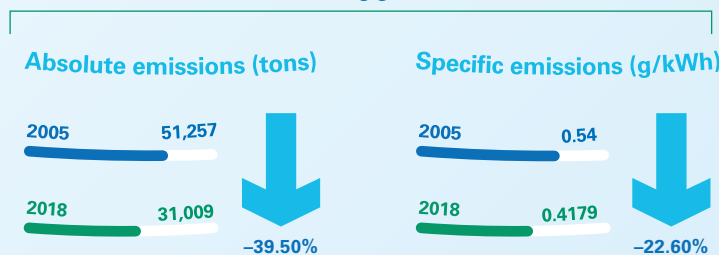
CO₂
free

DEVELOPMENT OF CO₂ EMISSIONS

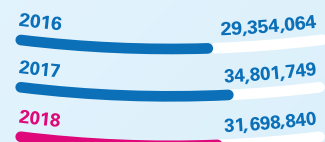
CO₂ emissions in the electricity generation process



Meeting goals



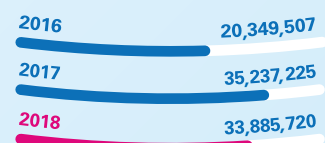
Scope 1 (tons)



Scope 2 (tons)



Scope 3 (tons)





CO₂ ROADMAP TOWARD DECARBONISATION IN 2050 free

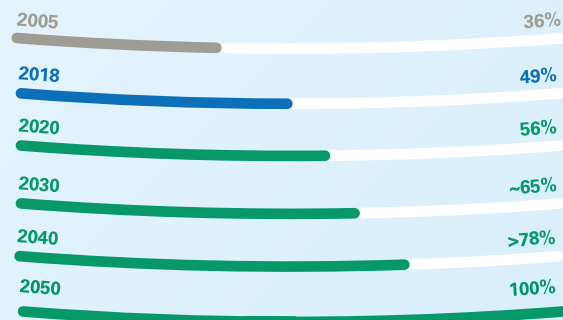
Reduction of absolute CO₂ emissions (Mton)



Reduction of specific CO₂ emissions (g/kWh)



Increase in CO₂ free production



1.6. Transparency and Recognition

1.6.1. Carbon Disclosure Project

ENDESA, by its commitment to the environment, cooperates voluntarily with CDP (previously Carbon Disclosure Project). CDP is an international non-profit organisation whose aim is to provide the largest and most comprehensive global system of environmental diffusion, enabling investors, companies, authorities and governments to mitigate

risks in the use of energy and natural resources, and to identify opportunities for a more responsible approach to the environment. The organization represents over 650 institutional investors with an investment of 87 billion dollars. ENDESA takes part in the CDP Climate Change, CDP Supply Chain and CDP Water initiatives. Information about par-

ticipation in the CDP Water is provided in section 2.4. *Water Resources* from the chapter *Environmental Sustainability*.



CDP Climate Change

Since 2006, ENDESA has taken part in the CDP Climate Change initiative, the most prestigious index in climate change matters, which provides global information on the management of the risks and opportunities identified by the largest companies worldwide.

In the latest edition, ENDESA obtained a score of 'A-', 'Leadership' level. This excellent result reflects ENDESA's firm commitment to the fight against climate change. This CDP recognition gauges, among other things, the integration of climate change into ENDESA's corporate strategy, its transparency at the time of communicating it and its relationship with the value chain on the subject of climate change. Further, the Company adopts the best practices for management of its emissions and establishes ambitious short- and long-term goals for reduction of emissions, assessing its progress and implementing effective reduction actions.

On the other hand, ENDESA identifies and manages its risks and opportunities relating to climate change, implementing a detailed risk management procedure. This appropriate management will

contribute to the achievement of the global objective adopted in the COP21 held in Paris in 2015, to limit the increase in temperature of the planet to 2°C by the year 2100, in comparison with pre-industrial levels, the regulatory schedule of which was agreed upon for achievement of the objective and signed at the recent COP24 held in Katowice.

CDP Supply Chain

Thanks to ENDESA's participation in the CDP Supply Chain program, the company can design strategies to increase the commitment of its providers using the analysis of risks and opportunities associated with climate change and management of greenhouse effect gas (GHG) emission. It is a cooperative, innovative approach that contributes to the sustainable development of the value chain.

Since 2010, ENDESA has involved its suppliers, requesting their cooperation by filling in the CDP Supply Chain questionnaire, with the intention of transferring the commitment to climate change and the reduction of emissions to them.

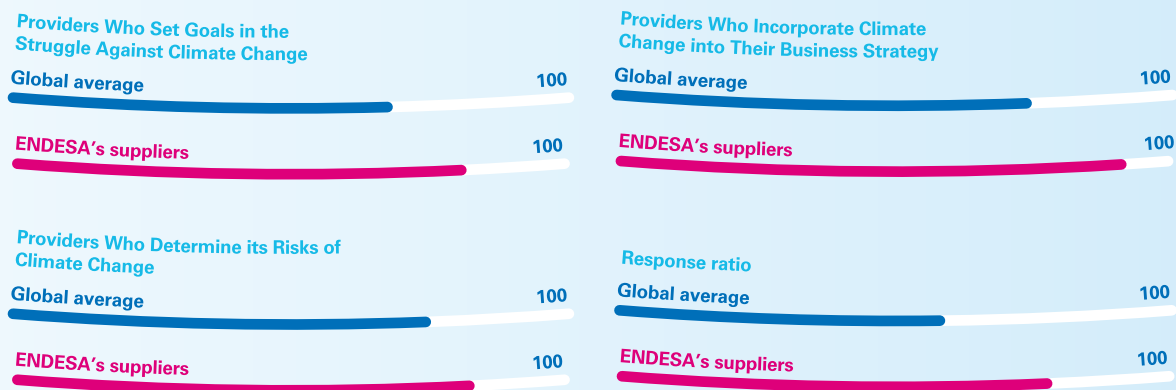
In 2018, the rate of response obtained in the CDP Supply Chain regarding Climate Change was over 91%, compared with the 68% average obtained by the companies participating in the initiative.

The implication on the part of the providers in their response to the information request made by ENDESA is far above the global average and increases every year, having grown by 10% since 2016.

In general, ENDESA uses a supply chain that is very committed to climate change. Some 92% of its providers indicate using the objectives established for the struggle against climate change, as compared to the 67% response to this same item on a global average. In turn, the CDP positively values the transparency to date in communicating the providers' emissions, development of reduction initiatives to comply with these objectives and the fact of identifying the climate change risks, which have translated into a total of 7.4 million tons of CO₂ in reduced emissions associated with these initiatives by ENDESA's suppliers according to CDP data.



COMMITMENT TO CLIMATE CHANGE ENDESA'S SUPPLY CHAIN (%)





1.6.2. Climate Projects

ENDESA has been selected for the third consecutive year by the Spanish Climate Change Office for the execution of three proposals sent in during the 2018 call for bids, focused on the scope of mobility and sustainable engineering.

The Climate Projects are projects promoted by the Ministry for Ecological Transition through the Carbon Fund for a Sustainable Economy (FES-CO₂), which has the primary objective of reducing Greenhouse Gas (GHG) emissions in the so-called 'diffuse sectors' and showing the way to transformation of the productive sector toward a low-carbon model.

Within the scope of mobility covered within the second 2018-2020 Sustain-

able Mobility Plan, E-Movement, the electrical mobility plan was selected using Car Sharing, which intends to promote a mode of transportation for employees using electric vehicles instead of taxis for their commutes to work. The project presented in the latest edition was added to those that are being executed since 2016.

Continuing within the scope of mobility, another E-Movement action has been presented and selected, the 2018 Electrical Mobility Plan for Employees that is developed in section 2.2.1. *The Mobility Plan for Employees* from the chapter *Innovation*.

Also within E-Movement is the Electrical Mobility Plan for work vehicles that

is intended to replace internal combustion vehicles used for commuting at 25 renewable energy plant construction sites, with 100% electric vehicles.

Within the scope of Sustainable Engineering, on-site sustainable engineering activity with solar energy has been presented and selected. This project consists of installation of photovoltaic panels at each of the 25 planned renewable energy plant construction sites to generate electric power, thus reducing fossil fuel consumption in the power generation groups.

With these activities recognized within the Climate Projects, a total reduction of over 800 tons of CO₂ annually is estimated.



1.7. Other Initiatives on the subject of climate change

1.7.1. The carbon market and the compensation mechanisms

Project-based flexible emission-reduction mechanisms, such as the Clean Development Mechanism (CDM), continue to represent a significant part of ENDESA's climate change strategy.

The activity of following-up CDM projects, the development of the voluntary market and ENDESA's participation in different Funds managed by the World Bank is performed by the Global Front Office.

Global Front Office has enabled ENDESA and Enel to continue to be an international benchmark in the carbon market.



1.7.2. CDM Portfolio

EU5

ENDESA has 3 ERPA's (Emission Reduction Purchase Agreements) in its portfolio, each comprised of 5 CDM projects, which would entail a reduction in emissions of approximately 2 million tons by 2020.



1.7.3. Carbon Funds

EU5

ENDESA has participated in three carbon funds managed by the World Bank: Community Development Carbon Fund (CDCF), the Spanish Carbon Fund (SCF) and Carbon Partnership Facility (CPF).

Since its incorporation into these, ENDESA has not only contributed to the reduction of emissions, but has also been a party to the supplementary benefits provided for the less privileged communities. Many of the projects in which ENDESA has taken part and continues to do so have contributed to improving the quality of life of over 18.2 million people.



1.7.4. Voluntary compensation for greenhouse gas emissions

EU5

In 2018, ENDESA voluntarily compensated for the greenhouse gas emissions of several of its domestic and international customers, using for this purpose credits not only from its CDM project portfolio but also specific credits from the voluntary market (VERs, 'Voluntary Emission Reductions').

Likewise, the company continued with its policy of compensation for the greenhouse gas (GHG) emissions generated

by its own internal events and publications. During 2018, compensation for GHG emissions from the ENDESA Energía General Shareholders' Meeting and the Executives' Seminar stands out. To calculate the emissions produced during these events, the energy consumed during the event and during the entire process of desktop publishing, printing and transport of samples of accreditations, handouts and Annual Reports delivered to those in attendance was considered. Further, ENDESA has

calculated and compensated for GHG emissions from the entire production and transport process for the company's Annual Report as well as the Carbon Footprint Report. Altogether, it has compensated for the equivalent of 18 tons of CO₂.

On this occasion, credits used for the compensation for internal events come from a design for a hydroelectric power plant in India.



1.7.5. Carbon capture and storage

During 2018, ENDESA has continued to carry out various initiatives in the field of Carbon Capture and Storage (CCS):

- > Since 2011, ENDESA has operated a pilot facility for the cultivation of microalgae for the capture of CO₂, located at the Litoral thermal power plant in Almería. Its main purpose is to test new types of both photo bioreactors and microalgae, and to develop valorisation processes for the biomass obtained as a first step to demonstrate the technical-economic viability of the technology. In this regard, during this year, there was progress in the Algae for a Healthy World(A4HW) project, which is a consortium led by ENDESA and formed by seven entities and research organisations in order to move forward in the research and development of different types of microalgae for their application for nutritional purposes. Likewise, initiatives for several national and European projects were presented to move forward in the

development of different biotechnologies related to biomass production of microalgae and CO₂ capture in their processes.

- > Because of the excellent results obtained at the microalgae pilot plant, in 2017, design of a larger-scale plant de-

sign (approximately 2 ha) with much greater production capacity was begun, which would be installed at the same thermal power plant.

- > During 2018, basic engineering tasks were finalized in detail for a future microalgae plant as well as the execu-



Microalgae pilot facility at the Litoral Thermal Power Plant in Almería.





tion of the first topographical, geological and geotechnical studies of the land. Meanwhile, the tender process and purchasing of all of the equip-

ment, infrastructure, installations and services for the new microalgae plant was begun and the process of obtaining the different administrative

permits from the various competent administrations is in progress.



1.7.6. Adaptation to climate change

ENDESA was a pioneer company in the analysis of aspects relating to Adaptation to Climate Change. It began in the field in 2009 with the development of a project that included both assessment of vulnerability of all of its facilities to climate change on a global level as well as an evaluation of future benefits and opportunities. The conclusions of above project reveal that the risks to which the business lines would be subjected are classified between low and very low, and it is also expected that they will materialise slowly and in the future.

Based on the experience acquired in the above project, the company was selected as a leading energy company with regard to adaptation to climate change by the Ministry of Agriculture and Fishing, Food and Environment to participate in the ADAPTA initiative since 2013.

Year after year, ENDESA's commitment has been materializing with the development of projects that help expand knowledge about the Company's exposure to climate change and what measures to take to adapt itself as a result, thus minimizing the possible risks that impact the company's activity.

If it is certain that the aforesaid vulnerability study indicates low general exposure risk to the Company's infrastructures, it should be emphasized that, within the scope of the electrical distri-

bution, there begins to be evidence of a growing negative environmental impact, mainly in the increase of the occurrence of episodes related to extreme weather events.

Some of the projects and initiatives implemented or that are in progress on the matter of adaptation to climate change in which ENDESA participates are detailed below.

RESCCUE project ('Resilience to Cope with Climate Change in Urban Areas') for the improvement of urban resilience to climate change

This is the first large European project for innovation in urban resilience. The initiative, financed jointly by the

EU Horizon 2020 programme, seeks to improve the capability of cities to prepare for, absorb and recover from a crisis as quickly as possible. Specifically, the RESCCUE project focuses on assessing the impact of phenomena caused by climate change on the functioning of essential services in cities, such as water or power, and on providing practical, innovative models and tools to improve urban resilience in the face of current and future climate scenarios. RESCCUE has a budget of 8 million euros and is performed over 48 months on three case studies in Barcelona, Lisbon and Bristol.

ENDESA is working on the case study of Barcelona, to analyse the effect of risks associated with flooding, drought, heat waves or a possible rise in sea level on urban services such as water and power supplies, transportation, telecommunications and the treatment of waste in the city. To this end, the interdependence existing between these essential services is analysed.



ENDESA's role is focused on quantifying the impact of climate change on the capacity of reinstatement of the electrical power supply and its interaction with the water cycle. The project will thus enable analysis of the improvements which smart grids, and specifically microgrids (small-scale systems combining electricity generation, storage and distribution) may contribute to the resilience of cities.



Project 'Hydroelectric Reservoirs and Climate Change'

During this year, contribution to the strategy of adaptation to (global) climate change of ENDESA's hydroelectric facilities continued.

It entails an initiative developed by ENDESA with the cooperation of the Flumen organisation, a joint university institute created by the Polytechnic University of Catalonia (UPC) and the International Centre for Numerical Methods in Engineering (CIMNE).

Based on the study of the thermal/hydrodynamic behaviour of three of the hydroelectric facilities managed by ENDESA (Sau, Ribarroja and Matalavilla) performed by Flumen in the past, the project seeks to analyse the incidence of global change (climate change plus changes in the use of water and of territory) on the internal organisation (annual thermal cycle) of the Spanish hydroelectric facilities managed by ENDESA.

This general goal consists of three specific phases:

A. Identification of key parameters in the annual internal organisation (thermal cycle) of the hydroelectric

reservoirs, their interdependence and their possible relationship with global change.

B. Quantitative assessment of the susceptibility of the hydroelectric reservoirs to climate change.

C. Determination and development of design and operation criteria for hydroelectric reservoirs for their adaptation to global change and the mitigation of associated environmental effects.

Among the preliminary results of the study, it is indicated that the bodies of water underwent changes to their basins and could be used as indicators of global change. However, they are complex systems; in the cases studied, the hydrometeorological trends found do not completely explain the changes in the thermal behaviour of the bodies of water, in particular, the cooling of deep water. For example, it could be due to a change in the pattern of snowmelt/thawing on the peaks of the tributary basins.

In the latest phase, the thermal and hydrodynamic effects caused by the anticipated effects of global change has been studied using the design of scenarios, which include predictions that affect the Iberian Peninsula and the model response to the different management scenarios.

The project launched 2016, will be completed at the beginning of 2019.



Project 'Sustainability of Water Resources under Global Change - Hidsos IV'

Climate change and global change may entail a deterioration of the ecosystems providing water resources, affecting the sustainable use of these resources and the maintenance and improvement of the quality of the water in the associated river habitats. In particular, we may expect significant impacts on sediment dynamics, associated with the greater torrential nature of the rainfall, which might affect both the geomorphology of the river and the survival and use of hydraulic structures.

This project, implemented during the 2017-2018 period, developed by the CATALONIA WATER RESEARCH INSTITUTE (ICRA), gives continuity to and improves the works performed previously, which until now have assessed the impact on water thermal cycles in rivers, the transport of sediment and its sedimentation in the reservoirs, and the implications of these for producible power or ecosystem health, among other noteworthy aspects.

The focus of the project, by means of the use of simulations using spatially distributed and time-dynamic models, is to assess the effects of global change on the resources available and the implications for the health of ecosystems. The work, therefore, enables the identification of trends enabling the establishment of long-term strategies to reduce the effects of global change to a minimum, both for ecosystems and for hydrographic infrastructures, and the exploitation of the resources of the Noguera Pallaresa basin.





The results show the value of the field data obtained for modelling of the sedimentary dynamic based on a concentration time series, modelling of the nutrient dynamic in the Noguera Pallaresa basin and raise expectations regarding possible extrapolation of the methodology to other basins of interest to ENDESA.



Project for adaptation to climate change focused on ENDESA's electricity distribution business line

The project developed during 2017, the results of which were presented during the first quarter of 2018, has the objective of identification and assessment of climate change-associated impacts capable of affecting the electricity distribution infrastructure, their monetisation and therefore, optimisation of the decision-making process in their management.

The project has had three phases:

1. **Analysis of the effect of climate change on the integrity and operation of ENDESA's electrical distribution infrastructure.** Identification of climatic/climatological phenomena likely to negatively impact operating conditions and integrity of the electrical distribution infrastructure as well as assessment of the contribution of climate change as a source of risks.
2. **Assessment of the economic impact associated with the occurrence of climatic impacts** Assessment of the costs associated

with the occurrence of previously identified climatic impacts on the operating conditions and integrity of electrical distribution infrastructure, considering the costs of a direct nature (associated with investment in renovation, refurbishment or reconstruction) as well as of an indirect nature (associated with municipal fees, administrative charges or others).

3. **Assessment of the future vulnerability of the ENDESA electrical distribution park.** Assessment of the future vulnerability of the ENDESA distribution park (considering the results of the risks identification and monetization exercises) based on public information available on the subject of evolution of the energy model for the coming years as well as future climate variables.



Project Anywhere (2016-2019). Innovation in extreme climatic event detection

Encompassed in the European Union's H2020 initiative, the project seeks to reinforce the anticipation capacity of civil society to cope with the impact of climate change. To that end, it is working at the European level in several countries on implementation of innovative technology and early alert systems, among other things, to improve protection of society in the face of climate change. In this scope, ENDESA participates in collaboration with the Hydrometeorology Applied Research Centre (CRAHI) of the Catalonia Polytechnic University (UPC), focusing on

hydraulic generation and electrical distribution businesses.

This initiative will have a risk platform that helps identify expected impacts caused by weather and their location in time and space before they occur. Thus, a quicker and more exhaustive analysis may be done before the occurrence of the event, better coordination in emergency activities will be achieved and will help the population at risk to be prepared to respond. The platform will provide personalized alerts and support services for decision-making regarding climate events.

In addition, ENDESA carries out and has executed other activities in the field of adaptation, among these:

- > Active participation in the continuing workgroup of the National Environmental Congress (CONAMA) in adaptation to climate change.
- > Presentation of global news updates, ENDESA's experience and projects in progress in adaptation to climate change in the energy sector in the scope of the European initiative Copernicus (The Copernicus Symposium on Climate Services for the Energy Sector, February 22nd and 23rd at Espai ENDESA. Barcelona, Spain)
- > Presentation of ENDESA's experience in the field of adaptation to climate change at the international conference on climate change held in May in Bonn, Germany (44th period of Sessions of the Subsidiary Body for Implementation (SBI 44) and the Subsidiary Body for Scientific and Technological Advice (SBSTA 44)), and also the first period of sessions of the Ad Hoc Working Group on the Paris Agreement (APA 1).
- > Collaboration on the project 'Urban Resilience: Climatic effects of Economic Activity in the city of Madrid'. Organised by the Madrid City Council with the aim of developing 'Urban

Resilience' in cooperation with the Madrid Business Forum as an example of public-private cooperation in the development of urban strategies against global challenges such as cli-

mate change. The project seeks to perform a specific study based on the experience of outstanding companies from the main sectors of Madrid's economic activity, regarding the vul-

nerability of their activity in the face of climatic effects and the possibility of implementing adaptation and follow-up measures to minimise these impacts.





Digitalisation




98.2

% of meters less than 15 KW already under remote management

ENDESA Open Technological Centre

Leading technological centre accommodating the development of all ENDESA commercial IT systems for Spain, Portugal and France, along with other facilities

2018-2020 Endesa Sustainability Plan compliance

	Course of action	2018 goal	Result 2018	Key actions
 <p>Digitalisation of assets, customers and people</p>	Low Voltage: Installation of remote meters (cumulative) (total meters, in millions)	11.9	11.8	<ul style="list-style-type: none"> > Remote management project. > Digitalisation projects to enhance the distribution service. > Projects for the development of smart grids.
	Medium Voltage: Installation of remote controls (no.)	17,315	18,044	
	High Voltage: Remote Control upgrading (no. of remotes upgraded)	225	160	<ul style="list-style-type: none"> > Digitalisation projects to enhance the distribution service > Projects for the development of smart grids.
	Customer digitalisation (millions of digital customers)	4	4.2	> Project for documentation digitalisation.
	Digitalisation of invoicing (millions of contracts with digital invoicing)	2,8	2,8	> New digital invoicing functions.
	Sales via digital channels (vs other types of channel)	9,5%	14%	
	Development of employees' digital capabilities	100%	100%	> Digital competence development programmes: Are you digital?, Reverse Mentoring, e-talent Training Programme
	Web applications protected with cybersecurity.	75%	89%	> New cybersecurity risk management model.
	Cybersecurity emergency response	Accreditation of the CERT at Spanish National CERT level	Became accredited and joined international organisations	
	Awareness activities on cybersecurity for employees	15	15	





1. Focus

The digital transformation of a company is the process whose purpose is to transform it into an organisation totally tuned into the digital ecosystem, focused on the customer in an intelligent, agile manner. It is a process requiring significant change management, to successfully tackle the challenge of incorporating new digital technologies. These new technologies fundamentally enable the interconnection between people and things, and facilitate new access to both traditional and newly-created products and services.


This transformation requires a paradigm shift in the method of understanding the relationship between the Company and its customers. This new paradigm is based on the need to review the business strategy and model according to customers' needs, and starting from the 'customer experience' viewpoint, commencing the redesign of internal processes, incorporating new technologies and new ways of doing things.

ENDESA is very aware of this reality and the opportunities that it presents, and this is why digital transformation has been an essential component of

the 2018-2020 sustainability plan, investing more than 341.9 million euros in 2018. Again, digitalisation continues to occupy a prominent place in the new 2019-2021 Sustainability Plan, in which the company plans to invest over 1,000 million euros, approaching it from a triple perspective: customer, people and assets. 

The customer


Access by consumers to new technologies, their adoption and mass use have transformed the customer. This adoption entails new habits and customs for consumers in their personal and professional lives, and naturally in their relationship with companies. The great majority of them already are, or soon will be, digital, connected and social customers.

Therefore, ENDESA is working on developing the customer's digital experience, with new value proposals, new relationship channels and methods, and new business models. 

The Company's assets

> **The distribution grid** To reinforce safety of supply, to improve quality of service and to respond to future customer requirements, ENDESA is firmly committed to the development of smart networks, remote manage-

ment and automation of the grid. In this way, ENDESA is striving to prepare the grid for the integration of the decisions adopted by all the users of the system, as the energy streams will be accompanied by streams of information.

> **Electricity generation facilities:** In the same way, in order to increase the operating efficiency of the facilities and to improve their integration into the electricity system, ENDESA is increasing its efforts to undertake the digitalisation of the management of its generation facilities. 

The people

Bearing in mind that digital transformation means that the Company must adapt its value proposal to the new digital customer and must adopt new technologies in its value chain, one of the great challenges for the Company is the development of a digital culture that enables the development of the necessary skills to successfully lead the transformation. In this regard, ENDESA is working in different fields to promote change in the Company's organisational culture and way of proceeding. In this sense, the Company plans for 100% of its workforce to be able to develop their digital capacities in the next three years. In turn, the digital transformation that ENDESA is undertaking also includes improving data management processes, including but not limited to the use

Investment in digitalisation per business (millions of euros)

Distribution	282.0
Generation	10.2
Marketing	46.0
Endesa X	3.7
Total	341.9

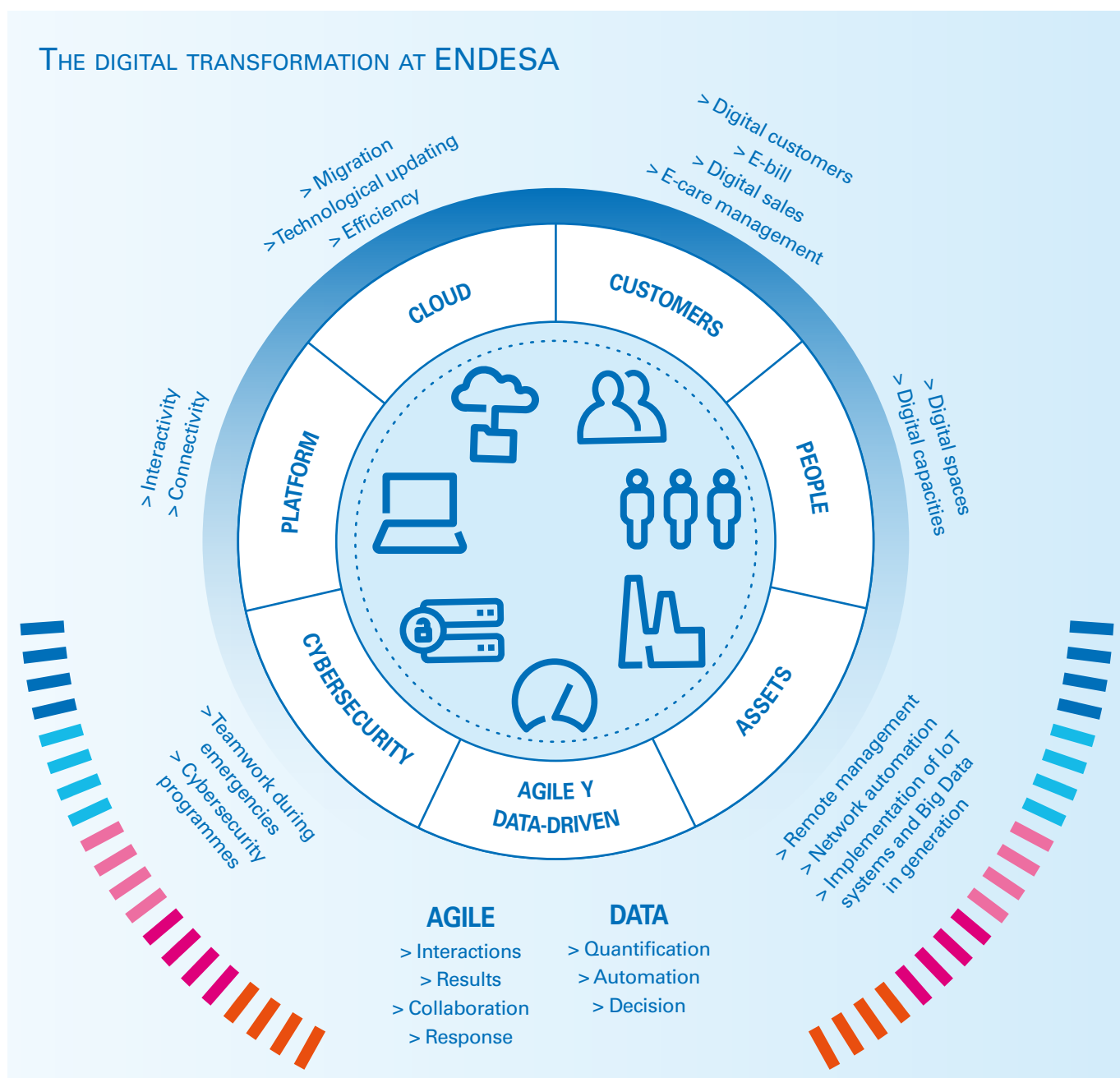
of the latest **cloud** data storage technologies and the development of digital platforms that will increase interactivity and connectivity. ENDESA is also putting special emphasis on fostering the most demanding cybersecurity promotion standards to achieve its digital transformation with the least possible risk.

In the final analysis, ENDESA aims to be a company guided by data, or 'data-driven', where Big Data is properly used to guide strategic decisions. In this regard,

management of qualitative and quantitative data will make it possible for ENDESA to make decisions that will provide a long-term sustainably competitive edge, which is what the company is working toward in locating the data assets that it already has in its business strategy centre.

Likewise, ENDESA is aware that methods for working and interacting within companies are also changing. For this reason, the company has decided to promote an agile methodology in support

of its current changes. This new way of working, engendered by Information Technology and already beginning to extend to other areas of business, promotes a focus on the objective of making deliveries to the customer as quickly as possible and reasonably often, combining methodological thoroughness with adaptation to the various needs of the customer and the context in developing a product or a service.





2. Digitalisation of ENDESA's assets

ENDESA considers the digitalisation of its entire value chain - generation, distribution, marketing and our people - to be one of the key drivers for improving efficiency. The most important areas in which investments were made during the year are as follows:

- > In Distribution, the digitalisation of processes and integration of systems, data-based networks (quality plan, reduction of losses, remote control) and smart meters.
- > In Marketing, advanced analyses, new platforms (new CRM), digitalisation of channels (electronic billing, etc.), new digital billing platform.
- > In Generation, predictive diagnostics, worker digital transformation and control system response.
- > At ENDESA X (new businesses), development of digital platforms.

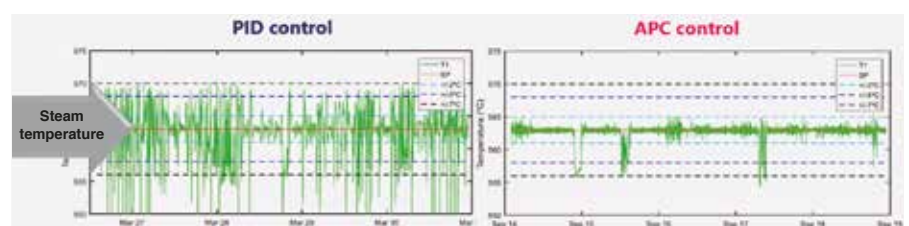


2.1. Digitalisation of Generation Facilities

In 2018 the DIGI PLANT initiative was launched in order to deploy the digital technologies validated the previous year, which afford the greatest added value to ENDESA's thermal power plants. The technologies being evaluated address both improving the operation and maintenance of the power plants and the improvement of personal health and safety and the environment. This roll-out involves up to 28 power production centres for the 2018-2021 period and is divided into the following initiatives:

- > **APC:** Implementation of advanced adaptive predictive control systems to enhance the performance of the main control loops at the power plants, thus increasing their efficiency and availability.
- > **Predictive Diagnostics:** The use of machine learning techniques and analysis of operational data for the detection and diagnosis of faults in the main equipment at the facility in order to reduce unavailability and prevent catastrophic breakdowns.

- > **Efficiency Management:** Development of software designed to improve efficiency monitoring at power plants in order to detect inefficiencies in its normal operation.
- > **Global Operational System:** Development and implementation of a single global system for managing process efficiency and performance enhancement, including a module for planning multi-year review.
- > **Digital Report:** Development and implementation of a single global system for generating reports using a visualisation tool, with access to data from the main generation applications, and equipped with a digital assistant via voice command.
- > **HSEQ- Waste Management Digitalisation:** to improve security and traceability in the waste managed by the power plant by implementing digital technology.
- > **Digital Warehouse:** Implementation of RFID technology in the materials warehouses of power plants to improve inventory control and reduce consumption of spare parts.
- > **HMI:** System for rationalising operational alarms in order to reduce the number of alarms and to prioritise them. The aim is to develop software that makes decision-making faster and more efficient for plant operators.



APC: Improvement in operation of the combined cycle boiler.



Digital Warehouse: RFID antennas for monitoring warehouse inputs and outputs.



Digital Worker Transformation: Mobile app for incident management.



> **Digital worker transformation:** Development of mobile reporting software for field operators, to quickly and easily provide key information in the field, thus reducing the time needed to carry out tasks

and enhancing the level of safety in these operations.

> **Digital management of truck arrival/departure:** Development of an access control system and automatic management of arrivals and departures

tures of materials at the plant, and related permits.

The following are of particular note among the cross-disciplinary initiatives aimed at improving infrastructures and generating new operational data for the projects mentioned above:

- > **New IT Infrastructure:** Development of IoT and Data Lake platforms for the integration of information generated on different platforms, and the development of data analysis and Business Intelligence tools.
- > **Cybersecurity:** Increasing the cybersecurity measures in IT and OT systems at power plants, focusing in particular on critical infrastructures for power generation.
- > **Sensors:** Initiatives aimed at increasing the number of newly designed wireless sensors at ENDESA's power plants. The goal here is to expand the operational data available at plants, as basic information for the operation of other digital systems.
- > **PI 2.0:** Making the plant operation log systems more robust to allow for a proper flow of data to other digital systems.



2.2. Digitalisation of the distribution grid

| 2.2.1. Remote management and measurement control

Management approach demand-side management

The purpose of ENDESA's Remote Management Project has been to implement an automatic remote monitoring and management system for the electricity supply of domestic customers.

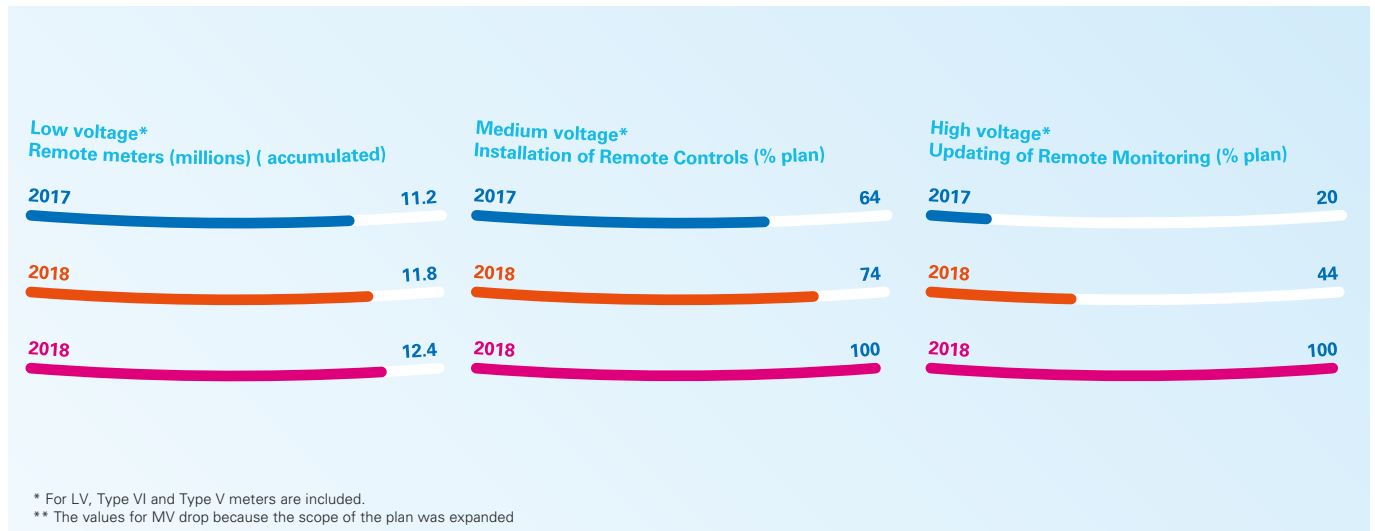
Throughout 2018, ENDESA made a total of 715,000 meter replacements, to reach a cumulative total of 11.8 million and achieve the goal established in ENDESA's Sustainability Plan. This

means that 98.2% of power supplied under active contracts with a contract power of up to 15 kW have remotely managed meters.





ENDESA has a total of 11.8 million active power contracts for less than 15 kW of contracted power and smart meters, representing 98.2% of all its meters.



ENDESA thus consolidates its position as leader in the development of this technological solution in the domestic market, helping encourage energy efficiency and the sustainability of the electrical system.

Over 1,800 hubs were installed during the year, reaching a cumulative total of more than 135,000. ENDESA has reached 99% of the hubs installed at transformation centres – transformers, enabling immediacy in the integration of equipment into the remote management system and the corresponding remote operation of such equipment.

ENDESA is complying with the legal obligations arising under the Decision of the Secretariat of Energy of 2 June 2015 (PVPC), relating to customers with contracted power of up to 15 kW that have a smart meter effectively integrated in the remote management system.

The Meters and More Association, founded by ENDESA and Enel in 2010 and established in Brussels, manages the evolution and dissemination of this protocol and now has more than 45 members, some of which are leading companies in the electrical sector, manufacturers of meters, technology companies and service providers from all over the world.

ENDESA and Enel work proactively and place the remote management solution at the disposal of other distribution companies in Spain and abroad, adapting it to the different applicable regulatory frameworks. ENDESA also participates in domestic and European innovation and energy efficiency projects via technical committees, seminars, conferences, etc., in order to aid in the European deployment of remote management and the evolution and development of SmartGrids.

Other projects in Network Commercial Operations

In 2018 ENDESA carried out the following projects to expand in the improvement of its distribution service:

> **EXABEAT:** It is a powerful system containing advanced functionalities for the mass handling of data and drives the publication of metering information. It also provides advantages in other areas such as fraud control and the supply of information for calculating losses. Implementation of the system in all territories was completed in 2018, combining the metering management systems of all the frontier points, both consumers and producers.

> **AMMS:** In 2018, the remote management system was migrated to the Cloud, prompting growth in the capacity of the installed infrastructure to ensure the evolution of the system and to enhance process performance, in addition to preventing security vulnerabilities and obsolescence. In addition, daily closing data is now collected from all the smart meters, and all the information on load curves and daily closings is sent to the new Exabeat reading management system. Deployment and remote operation of Type 4 power supplies (some 10,000 supplies) has begun, and the load curve for these supplies is being read. The first version of the WART application, which enables real-time queries of remote management equipment, is now in the production phase, and the routing algorithms for PLC communications with the meters have been improved.

> **Digitalisation of the Energy Recovery Process:**

- **EXABEAT_RdE:** This is a new module being developed in EXABEAT for recovery of energy, which handles notices and fraud and anomaly reports that are currently managed between DIANA and SCE. This makes it possible to take advantage of all the potential of EXABEAT related to the handling of metering and future information related to metering equipment provided to it.

- **APPS INSPECTION AND SEALS:** Two APPS mobile applications have been developed to support inspections and control of the new seals being installed as of 2018. The first of these provides a great deal of information to the inspector to determine the best course of action possible in the field without the need of telephone support

from the office, while the second is needed for monitoring and traceability of seals identified with a QR code.

- **Predictive models for the detection of non-technical losses:** Machine Learning and Deep Learning techniques are applied in the detection of anomalies and fraud, using proprietary predictive models developed at ENDESA. We also have a predictive machine learning model developed by the company C3.
- **Predictive model for the automatic assessment of reports:** Machine Learning and Deep Learning techniques are applied in the automatic assessment of records, using proprietary predictive models developed by ENDESA.
- **evaluation Module and Campaign planning:** This module automates the evaluation of the field performance of campaigns and schedules the work to be loaded at each execution unit, thus maximising performance. ■ ■ ■

2.2.2. Development of smart grids

ENDESA's grids are being configured according to the SmartGrid model. Their technification and the inclusion of Information and Communications Technology (ICT) enable the grids to respond effectively to users' requirements.

Smart grids enable the connection and operation of renewable and distributed generation, associated with consumption. They make possible the management of demand, flattening the load curve and maximising the use of electrical infrastructures. They make possi-

ble the deployment of electric vehicles and the development of more complete and advanced energy services, and improve the quality of electrical supply by reducing downtime caused by breakdowns and enabling the adoption of preventive, predictive maintenance strategies.

ENDESA is developing the SmartGrid concepts in the SmartCity programmes, which it leads with several projects. In Spain, the start-up of the SmartCity Malaga project has seen its ninth anniversary. SmartCity Malaga Living Lab was certified on the ENoLL network of European laboratories in 2017, becoming the place in which to manage projects that pass through all smart networks or smart grids.

Since 2010, Malaga has been a testing ground for the development of Enel's smart grids, thanks to the performance of projects characterised by the integration of a variety of technologies into the city's electricity distribution grid.

The objective of this line of work is to analyse the way in which the current energy model can evolve toward sustainability by means of the implementation of innovative technological solutions. The main goal is to provide integrated energy solutions that enable energy savings and a reduction in CO₂ emissions, in accordance with the EU targets for 2020. Thanks to these projects, all encompassed in the Enel Group's Innovation strategy, Malaga is an international referent for electricity distribution technologies.

Some outstanding projects for the development of smart grids are detailed below:

> **MONICA (Monitoring and Advanced Control of the Distribution Grid):** In 2015 ENDESA implemented project MONICA within the framework of its commitment to the improvement of the grid, for both the





operator and the customer. Its objective is the development and implementation of a Status Estimator for the medium- and low-voltage grid. This is a pioneering initiative which uses all the information from the grid and the smart meters in real time, and will include it in the DMS (Distribution Management System) for the real-time solution of operational problems, energy losses, reactive power flows, voltage level issues in lines and phases, imbalances, the early identification and analysis of incidences; also to provide options for the implementation of predictive maintenance strategies and the optimal future planning of infrastructures. The project was successfully completed, and the status estimator for low and medium voltage was validated. During the project, more than 1.5 billion measurements were processed from among 20 customers. This system will provide more in-depth knowledge of the low voltage grid, improving supply quality and reliability, to foresee events that could cause breakdowns.

To continue with the MONICA project, ENDESA launched an additional project in December 2018 called PASTORA, which will construct a layer of intelligence over the next 3 years, in order to take advantage of the potential offered by the more than 10 million measurements per day generated through the infrastructure deployed for MONICA.

> **La Graciosa:** In 2018, the La Graciosa project was completed, enabling us to assess and field test technology that could, in the future, reduce technical restrictions for the penetration of low voltage renewable energy, thanks to dynamic grid management, collaboration with customers and producers, and the

addition of storage capacity to allow distributors to counteract voltage ramping caused by low voltage solar generation.

It should be mentioned that the Graciosa project has been under way since 2015, and its main goal is to establish the strategies and systems to optimise energy flow for the maximum penetration of renewable energies in the grid. This penetration must be performed safely, and guaranteeing quality parameters in the grid.

> **SmartNet:** This project seeks to improve the efficiency and stability of the electrical network, taking advantage of the flexibility that the new role of consumers, as energy producers, now provide to the network, using collaborative models coordinated with the distribution network operator to create a more flexible energy market model.

ENDESA is leading the Spanish demonstrator that is being worked on in Barcelona with coverage repeaters that Vodafone has distributed throughout the city. The demonstrator involves the repeaters being disconnected from the network on request of the distributor and using their batteries, helping to de-congest the Barcelona city network should it be necessary and at the same time helping to stabilise the network at the level of the system operator.

Field tests were conducted in 2018 for congestion management at sub-stations through the flexibility offered by third-party assets, establishing the conditions for provision of flexibility services for the distributor.

> **RESCCUE:** ENDESA is part of the Resccue (Resilience to cope with Climate Change in Urban Areas) project, the first major European

project for innovation in urban resilience. The initiative, financed jointly by the EU Horizon 2020 programme, seeks to improve the capability of cities to prepare for, absorb and recover from a crisis as quickly as possible. Specifically, the Resccue project focuses on assessing the impact of phenomena caused by climate change on the functioning of essential services in cities, such as water or power, and on providing practical, innovative models and tools to improve urban resilience in the face of current and future climate scenarios.

ENDESA is working on the case study of Barcelona, to analyse the effect of risks associated with flooding, drought, heat waves, thunderstorms or a possible rise in sea level on urban services such as water and power supplies, transport, telecommunications and the treatment of waste in the city. To this end, the interdependence existing between these essential services is analysed.

ENDESA's role is focused on quantifying the impact of climate change on the capacity of reinstatement of the electrical power supply and its interaction with the water cycle. The project will make it possible to analyse the improvements that smart networks, and specifically micro-networks (small-scale systems combining electricity generation, storage and distribution) may contribute to the resilience of cities.

For more information about smart networks, see section 1.3.3. *Transition risks. Remote management and smart grids*, in the chapter *Low Carbon Business Model*.



2.2.3. Development of Smartcities

SmartCity Málaga

The first stage of SmartCity Malaga was concluded in March 2013. Over the years, SmartCity Malaga has seen the development and installation of different cutting-edge technologies in the field of distributed production and storage of power, recharging infrastructures for electric mobility and pioneering energy efficiency solutions in buildings, companies and homes, with the active involvement of the end-users. This experiment has proven the viability of this new energy management model in cities, achieving an energy savings of over 20%, a 20% reduction in CO2 emissions per

year, and a significant increase in power derived from renewable sources. The project was carried out in an area of the city housing 12,000 domestic customers, 300 industrial customers and 900 services customers.

After the success and the international recognition received by this pioneering smart city project, the city of Malaga has become a 'Living Lab', a real laboratory for ENDESA and the Enel Group to develop smart distribution technologies for the electrical grid (SmartGrids).

This new stage of the project guarantees its continuity and establishes SmartCity Malaga as a centre for the experimentation and development of the Enel Group's electrical power distribution technologies. The Flexiciency, PALOMA, MONICA and PASTORA projects are being developed based on these fa-

cilities and are becoming the basis for new experimentation proposals such as the group's Living Lab, evidencing the commitment of the ENEL group and ENDESA to the development of new grid technologies.

This commitment received recognition from the European Community when it approved in 2018 the implementation of the Coordinet project as part of the H2020 programme, in which ENDESA Distribución will act as coordinator of a consortium of 23 companies and European research centres. The project aims to carry out field demonstrations on grid flexibility, and ENDESA will contribute with cutting edge flexibility management of generation and consumption in the areas of Cadiz and the city of Malaga. The project will be kicked off in January 2019.





3. Customer digitalisation

Management approach demand-side management EUSS

As we have mentioned in previous years, digitalisation of Spanish society is a relentless trend that strengthened in 2018. This is what the latest survey published by the National Institute of Statistics (INE) November 2018 concluded regarding the Use of Information and Communication Technologies and Equipment in Homes. 86.4% of Spanish homes currently have access, compared to 83.4% in the survey for the previous year. The study also confirmed the prominence of mobile devices: the principal type of Internet connection is via a hand-held device (latest generation mobile telephone - at least 3G - etc.), at 83.6%.

The data confirm the vision of ENDESA about Customer development:

- > **Digital Customers, Connected and Social:** swiftly adopt new technology changes, access the Internet at any time and place, dialogue on an equal basis with companies and share their experiences on social networking sites.
- > **Empowered Customers:** are proactive and take the initiative in managing their needs via the web and apps (in self-service mode), make informed decisions related to energy (with the help of tools) and compare sales proposals in the market easily.
- > **Demanding Customers with a new standard of quality:** 'Any time, any place, any device'

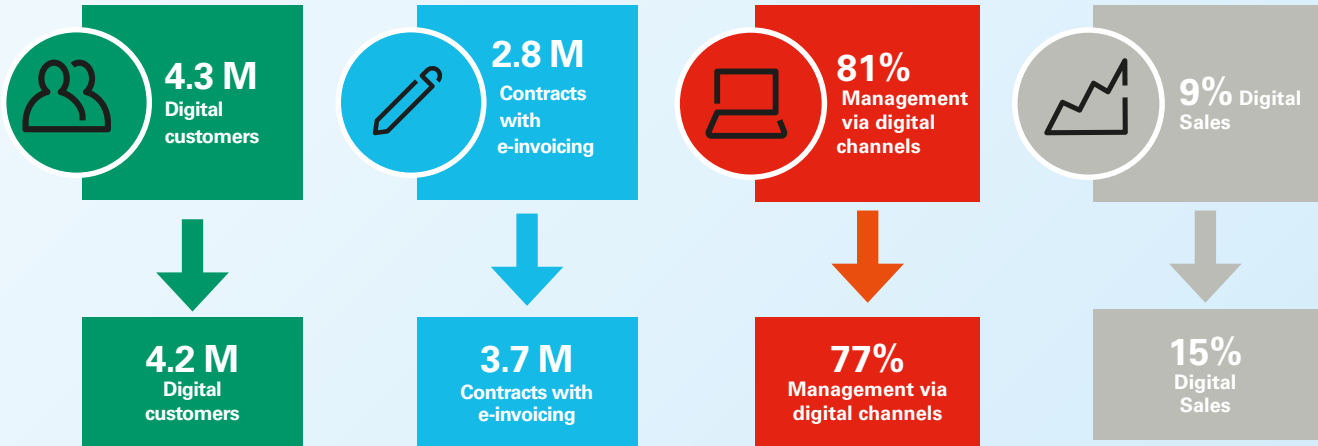
This is why one of the foundations of the ENDESA Digital Transformation Plan is focused on the Customer, incorpo-

rating the initiatives that develop the digital experience of the Customer and defining new relationship models and new value and service offerings. These initiatives are also supported by projects to digitalise internal processes and develop an internal digital culture.

Thanks to these efforts, the following advances and achievements contributing to the digitalisation process in the company can be singled out for 2018:



Achievements 2018



Objectives 2020

Digital Customer Journey

- > Completed the design of Digital Customer Journey Iberia: 110 solutions and 49 prioritised
- > Implementation plan according to Flagship planning



Cosmos Project

- > Roadmap for new Salesforce B2C platform
- > Started development of Phase I (Partner Channel for Installers and Marketing Campaigns) and Phase II (customer service, contracting, requests and claims processes and service campaigns for CCPP, CCDD and CAT)
- > Implemented MVP for Phase I



Digitalisation of sales

- > Attraction: new capacities, with special focus on enhancing the sales mix
- > Conversion and operations: Enhancements in automated processes and assisted channels.
- > Tracking and Reporting



DOCMA

- > Email communications operative (Notices of availability of digital invoices, push notifications, form abandonment, consumption warnings, loyalty campaigns,...)
- > SMS correspondence implemented and transformation of communications in .pdf
- > Articulate of COSMOS communications through DOCMA






4 Digitalisation of our people

In today's globalised world, the considerable advance in digitalisation plays a fundamental role in the changes in behaviour among customers and users. Aspects such as mobility, the appearance of new competitors and technological disruption caused by arti-

cial intelligence, Big Data and virtual reality are transforming the markets. For all these reasons, organisations and the people who work in them need to adapt to this new environment that demands greater flexibility.

ENDESA has made significant strides in re-inventing itself as a more digital and innovative company and believes that it is necessary to continue training its employees, providing them with the best digital tools to drive the cultural change that the company needs. 

4.1. Work environment

Open Power Space

Is the work environment really aligned with our strategy of going beyond physical space?

Open Power Space is a collaborate work hub designed to promote creative processes and connections between people. It also seeks to facilitate the development of innovative projects that can respond to the challenges of the new energy model, more efficiently and sustainably. But this entails much more than physical space: Open Power Space is tasked with driving the cultural and digital transformation of the company and its people. Furthermore, its open design is intended to boost cooperation, creativity and the use of new work methodologies, and to encourage connections between ENDESA's personnel and their external collaborators.

A total of twenty presentations were given in 2018 focusing on spreading awareness in line with the three pillars of the Open Power Space concept: Technol-

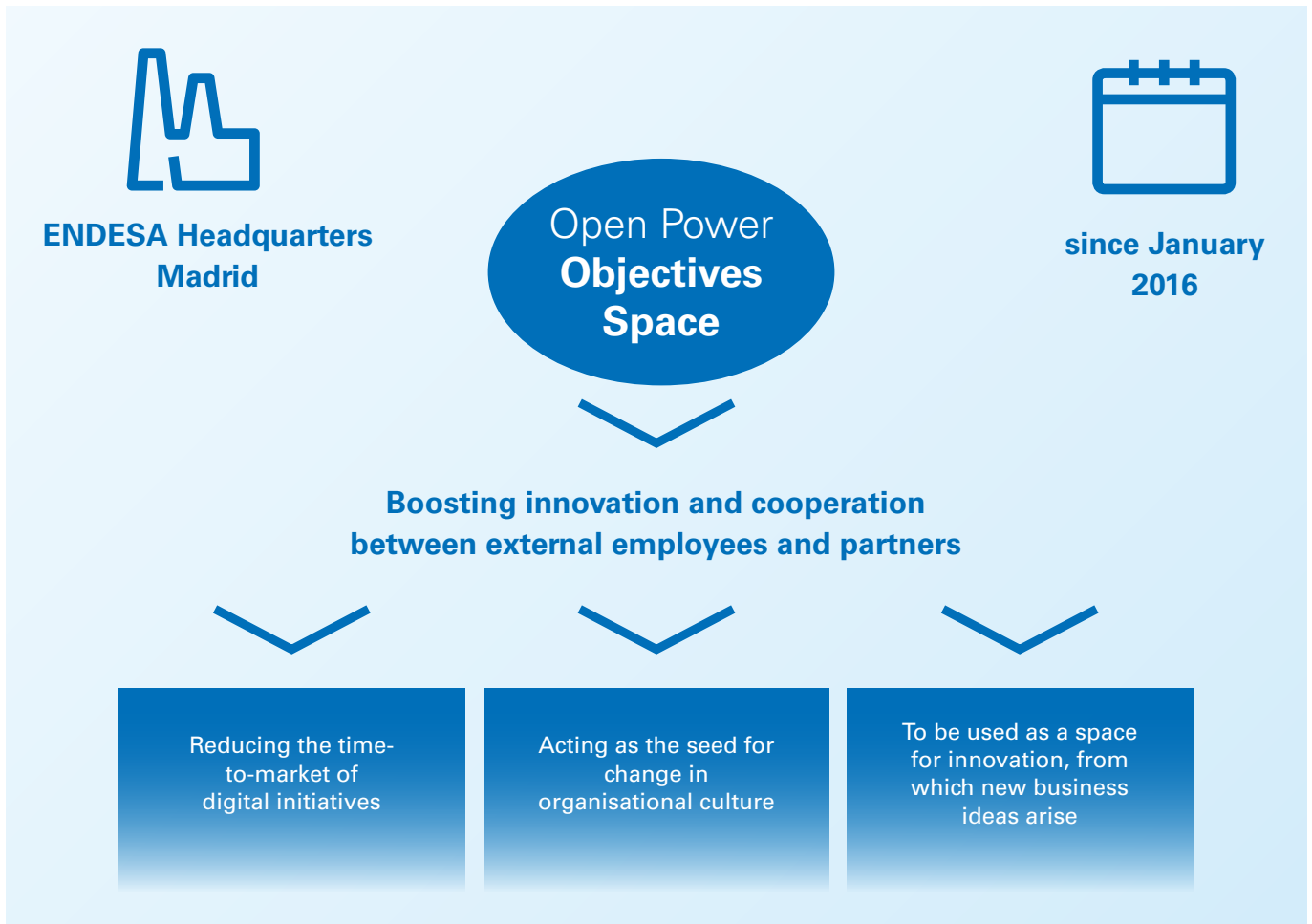
ogy and innovation, new collaborative methodologies, and tools. The speakers were experts from a variety of start-ups and other companies, but also company employees with experience in projects aligned with the three pillars mentioned above. The goal is to spotlight the work done in each area and to foster collaboration among the different business lines in relation to certain technologies in order to provide business solutions. More than 1,050 people took part, including employees from other companies in the Enel Group, from countries such as Peru, Mexico, Chile, Colombia, Guatemala and Germany. Surveys show that these sessions facilitate connections among employees in different business lines and are valuable for their work routines.

In addition, to demonstrate how Open Power Space goes beyond mere physical space, but also drives an innovative, collaborative, culture, three events were held at the offices in Lisbon, Barcelona

and Seville. Local experts discussed innovation, best practices, new methodologies and digital tools at these workshops. The goal of this experience, in which 258 people took part, was to establish a direct channel between company employees, fostering situations of interactivity and knowledge exchange. In fact, 90% of the participants in #TerritorioOPS believe that they can apply collaborative tools and new methodologies in their daily work.

Furthermore, the collaborative digital tool, Slack, was introduced in 2018 in the territories in which ENDESA is present. Through its use by all the participants, the company has approved this app and, after passing certain security analyses, any employee can ask to have it installed as a corporate tool.

In 2018, four Breakfast meetings with the Chief Executive Officer and the general managers of all the business lines were also arranged. In conjunction with the Harvard Business Review,



the latest trends in management and innovation were presented as part of this initiative, and useful tools to help the company’s leaders deal with challenges that are quickly arising in the energy and electrical sector were discussed in detail.

Moreover, Open Power Space also has a website that employees can visit to check on the activities and events organised. The materials presented at the sessions are also published on this website, fostering transparency in information sharing.

In 2018, Open Power Space partnered with the Training and Global Digital Solutions areas to develop the “Digital Routines in 21 Days” project. Experience has shown that 21 days are needed to adopt new habits. The goal is to promote good collaborative work habits among employees, optimising technological

resources and corporate tools. Through the Sharepoint app, employees can view short videos about virtual meetings, documents in the cloud, Outlook, etc.

| Tech Bar

This is an area located at ENDESA headquarters in Madrid, ENDESA focusing on supporting employees in their daily use of technology, with a better user experience in new, open, friendly surroundings, in line with the current manner of consuming technology. There the employees have personal support available to them through a technician that helps them resolve any problems or incidents with their corporate technology. In 2018, 2,550 employees visited Tech Bar to get assistance

and resolve incidents, with a 90% level of satisfaction in its management.

In addition, the digital transformation in which ENDESA is immersed with its consequent changes in processes, requires new work routines for company employees. The aim of the Tech Bar is to be a hub for the dissemination of these new working methods by means of workshops, demonstrations and talks through which we explain how to maximise the programmes used by employees in their daily activity.

Throughout 2018, 220 workshops on collaborative work tools were held, attended by 880 people whose responses to surveys show the effectiveness of these short, practical sessions, rating them highly.

Starting in November 2018, additional workshops are being taught under the Digital Routines in 21 Days plan aimed





at promoting a series of good digital practices intended to facilitate work inside and outside the office. ■■■

4.2. Development of digital skills

The main projects performed in the field of the development of digital skills in 2018 were: ■■■

E-talent training programme

For the third year in a row, ENDESA has identified the need to train its employees in the latest digital trends in the professional sector through the e-talent training programme.

The programme, aimed at all the job categories in the company, begins with a

general training phase known as Digital Introduction, in which the first seeds of digitalisation are planted in ENDESA's employees, and then offers a more in-depth look during the second training phase, Digital Tools, focused on providing new digital tools to different areas of the company: Marketing, Global Digital Solutions, People and Organisation, Generation and Renewables, Auditing, Legal Consulting, AFC.

At the same time, training sessions known as Digital Basic are being held, consisting in developing Smartphone skills among ENDESA's operators.

This program accompanies people in their digital transformation through a training process so that everyone involved develops the skills they need to become digital professionals, knowing how to apply them in their daily work and being motivated to continue with their development.

Both theoretical and practical contents are included for the development of digital skills. Interaction among employees and acceptance of the concepts is

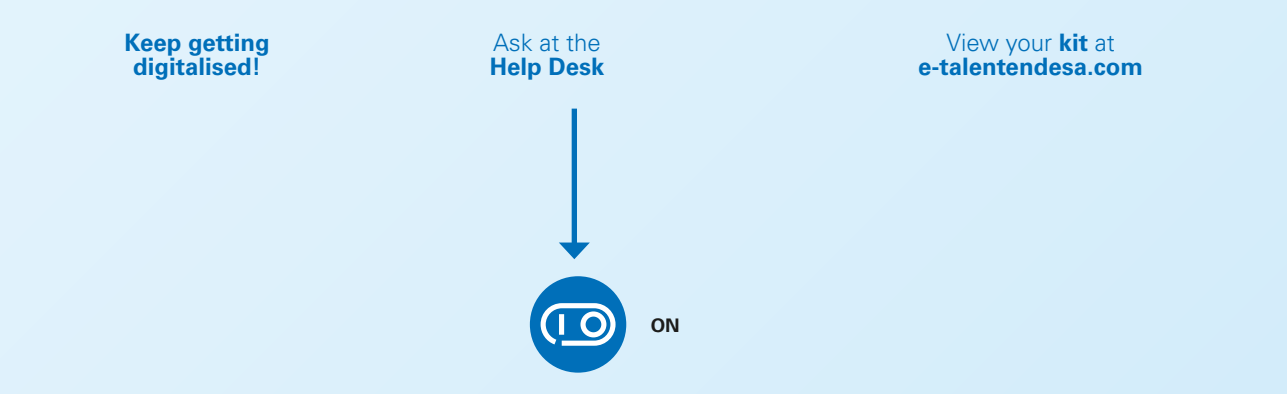
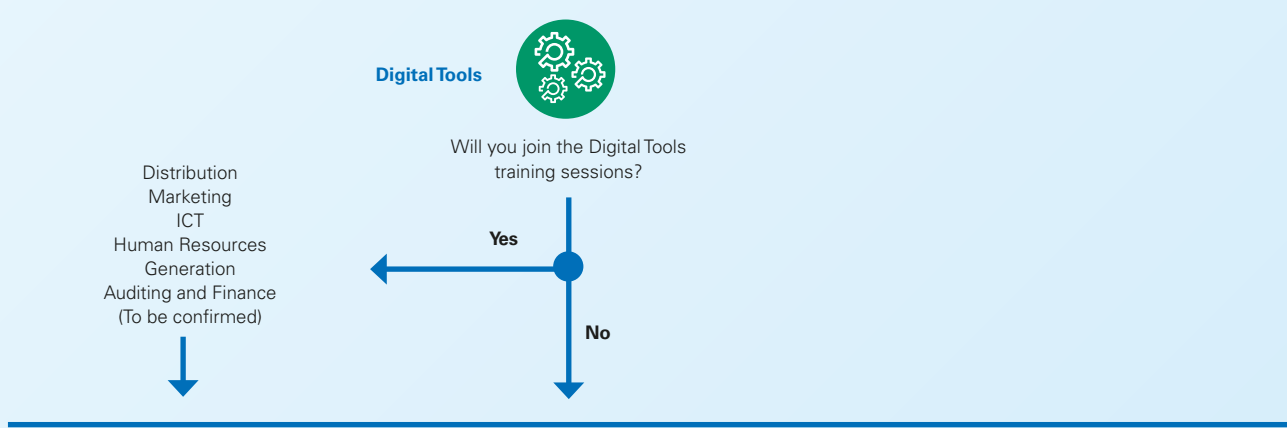
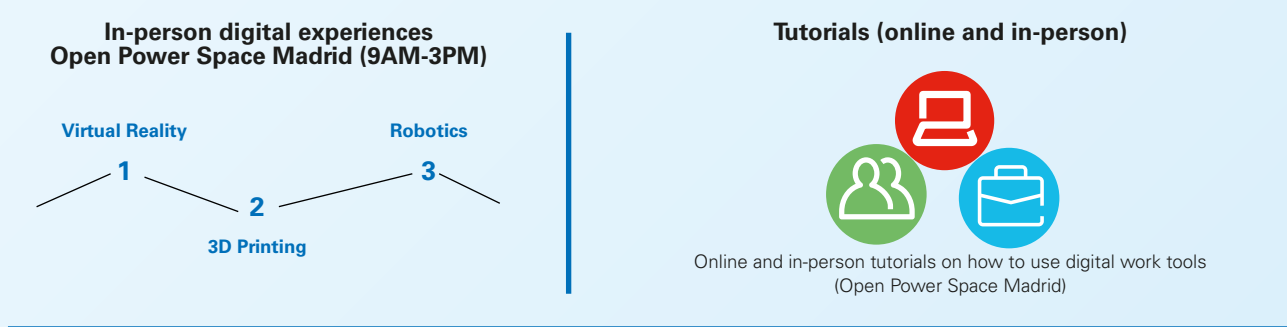
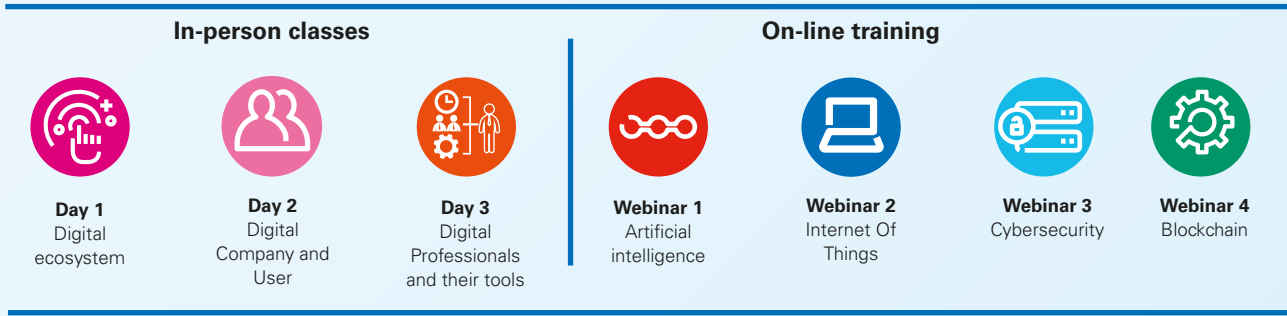
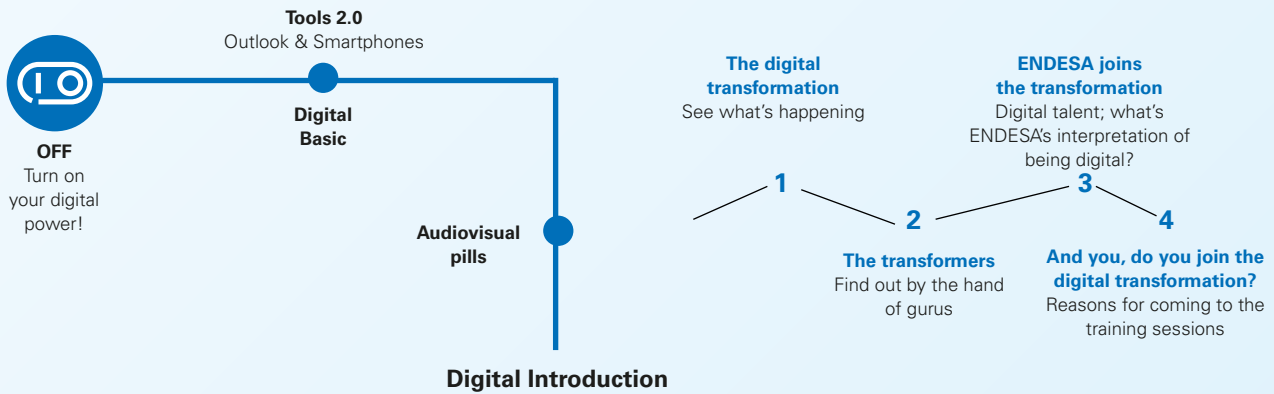
fostered through individual and group dynamics.

This training plan is based on three fundamental pillars: for people to Know, but also, be Able to and Want to.

The success of the programme is based on five pillars:

- > **Organisation:** Capacity to adapt to changes in contents and the needs of each department.
- > **Spaces:** taught in modern collaborative spaces outside the normal work areas so that the participants in the sessions can concentrate more.
- > **Participants:** Highly participative attendants, with high rates of attention and attendance.
- > **Tools:** The sessions focus on digital tools that can be used both in the employees' everyday routine and in their personal lives.
- > **Contents:** 30% of the content is theoretical in nature and 70% is practice work. ■■■







Digital Routines in 21 Days Training Programme

With the intention of promoting good digital practices in order to create new routines every 21 days, the People Digital Transformation, Open Power Space and Training departments have designed, developed and launched the initiative known as Digital Routines in 21 Days.

This online training programme offers practical tips and advice for taking better advantage of digital tools in both personal and collaborative settings. Brief 2- to 4-minute videos offer clear and concise instructions to help digitalise users in 21 days.



5. Cybersecurity

103-1 Management approach customer privacy

103-2 1 Management approach customer privacy

103-3 1 Management approach customer privacy

Technological components are included more and more in the digital life of the business world, and accordingly, the cyber threats inherent to each of these environments are becoming more frequent and sophisticated. For this reason, cybersecurity has become a global area of concern and one of the pillars on which the digitalisation strategy of the Group is based.

For this reason, the ENEL Group has a cybersecurity action and management model that encompasses all the companies of the ENEL Group, including ENDESA, sponsored by Top Management and involving all the corporate business areas, and the area responsible for managing the information systems. The ENEL Group also has a Cybersecurity Unit which notifies the Chief Information Officer directly, in order to expedite the decision-making process in a context where the response time is fundamental. The cybersecurity governance model includes a commitment by top management, global strategic management and true engagement by all the business areas and units, committed to the design and management of information systems and technological operation.

According to the 'risk-based' approach, the risk assessment is a basic step in all strategic decisions. A new cybersecurity risk management model has been in place in the ENEL Group since 2017. This model is based on the identifica-

tion, prioritisation and quantification of the existing security risks, in order to adopt security measures for their minimisation and mitigation. For this reason, ENDESA identifies the existing processes, the information systems and the assets requiring said risk analysis. On this basis, the appropriate mitigation activities are established in accordance with the type of risk.

Furthermore, by adopting a 'customised cybersecurity' approach, the project activities can focus on cybersecurity issues from the initial stages of system design and implementation in order to increase the efficiency of the Group's assets in response to cyber attacks.

This management model also includes the Company's business partners and suppliers, in order to identify possible risks that could impact ENDESA's activity.

When any type of risk or incident is detected concerning information security, it is analysed and classified according to its significance. In the event that the incident generates a crisis situation that may affect business continuity, the Company's profitability, its reputation or any of its stakeholders, ENDESA will immediately take the necessary action in accordance with the existing policies on crisis management and security emergencies.

All this was made possible thanks to the activation of a secure information exchange community for cybersecurity

and the creation of the *Cyber Emergency Response Team* (CERT), which received accreditation of CERT ENEL at the Spanish national CERT level in 2018. The *Cyber Emergency Response Team* (CERT) is characterised by its capacity for:

- > Prevention, detection and response to cybersecurity incidents;
- > Vigilance against threats to Cyber Security through the collection and management of sensitive information with regard to threats, perpetrators and other factors;
- > Exchange of information and cooperation in a 'secure' context and with 'trustworthy' players, in accordance with the principles of 'need to share' and 'need to know'.

With the aim of continuing to move forward in the management of cybersecurity, ENDESA has established the following goals in its 2019-2021 ENDESA Sustainability Plan:

- > Accreditation of the Cyber Emergency Response Team (CERT) and affiliation with international organisations (First and Trusted Introducer).
- > Achieving the protection of 100% of the Web applications by cybersecurity systems in 2021.
- > The performance of over 45 cybersecurity awareness and information security activities for employees and family members over the 2019-2021 period.





Customer orientation



10.754.000

million electricity customers in Spain and Portugal

2

% of advantage over the competition in customer satisfaction



99,99

% of service reliability for the year

More than **17**

million telephone calls handled by the Call Centre

Cumplimiento del PES 2018-2020

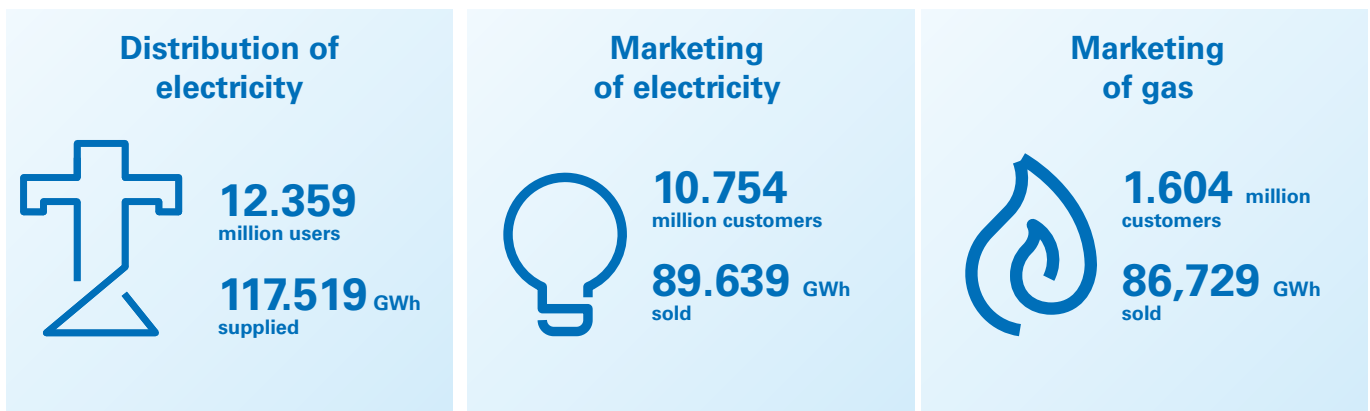
Strategic priority	Course of action	2018 goal	Result 2018	Key actions
 Customer orientation	Global customer satisfaction with the company (considers all segments).	7.2	7.4	<ul style="list-style-type: none"> > Creation of new ENDESA X business line. > ENDESA is the leader in satisfaction with the price in the gas market.
	Visits to the twenergy portal (millions of visits, considering visits to the blog and on-line store).	5.2	6	
	Number of VNG service stations open to the public associated with fuel changes.	14	12	<ul style="list-style-type: none"> > Two fuelling stations being built plus the 10 completed fuelling stations.
 Operational efficiency and innovation	Interruption time (own + programmed SAIDI) (min).	57.5	76.3	
	Recovery of energy (GWh).	733	1,203	





1. Quality and safety in electrical supply as a priority

EU3 EU26



ENDESA considers it a priority to guarantee access to the electricity supply, and also its continuity, safety, efficiency and quality; therefore, the development of the necessary infrastructures to achieve this is of the utmost importance.

The number of customers with contracts to access the company's distribution grids increased by 0.4% in 2018, reaching a total of 12.4 million.

ENDESA distributes electricity across 27 Spanish provinces in ten autonomous communities (Andalusia, Aragon, Balearic Islands, Canary Islands, Castile and Leon, Catalonia, Valencia, Extremadura, Galicia and Navarre) and the auto-

nomous city of Ceuta, covering a total area of 195,486.8 km² and a population of nearly 21 million inhabitants.

ENDESA supplied 102,911 GWh to its distribution grid customers in 2018 – 0.7% less than in 2017.

The total power distributed via ENDESA's grids reached 117,519 GWh in 2018, measured at the power plant busbars, representing 43% of total Spanish demand. The latter reached 269.4 GWh, according to the Spanish electricity system operator (the REE Report: 'The Spanish electricity system. 2018 year-end forecast').

In ENDESA's distribution areas there is no population without service. ■■■

Electricity sales

ENDESA had 10,754,000 electricity customers at the close of 2018, this representing a fall of 0.9% in comparison with 2017. The sale of electricity to this group of customers rose to a total of 89,639 GWh in 2018, representing a 7.1% decrease in comparison with 2017. Likewise, the number of customers in the liberalised market has grown to 5,725,000, entailing a 2.4% increase over the previous year, representing 53% of the total of customers. ■■■

Evolution of ENDESA's electricity supply in the Spanish and Portuguese markets

	2016	2017	2018	% variation 2018-2017
Number of customers in the regulated market (thousands)	5,593	5,255	5,029	-4.3
Number of customers in the liberalised market (thousands)	5,423	5,593	5,725	2.4
Energy sales in the regulated market (GWh)	13,815	12,920	12,356	-4.4
Energy sales in the liberalised market (GWh)	79,675	83,593	77,283	-7.6
Total sales	93,490	96,513	89,639	-7.1

Gas sales

ENDESA's gas sales increased by 8.6% in comparison with 2017. The total number of gas customers also increased by 2.8% due to the increase in deregulated gas market customers.



Evolution of ENDESA's gas supply in the Spanish and Portuguese markets

	2016	2017	2018	% variation 2018-2017
Number of customers in the regulated market (thousands)	262	246	233	-5.3
Number of customers in the liberalised market (thousands)	1,276	1,314	1,371	4.3
Gas sales in the regulated market (GWh)	1,464	1,372	1,430	4.2
Gas sales in the liberalised market (GWh)	48,270	46,578	47,810	2.6
Gas sales, international market (GWh)	19,474	24,523	25,270	3.0
Gas sales, wholesalers (GWh)	8,921	7,361	12,219	66.0

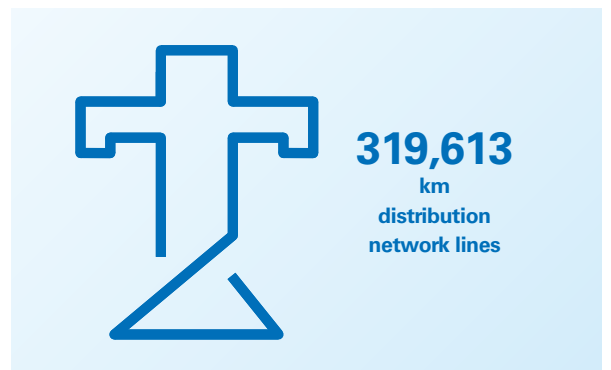
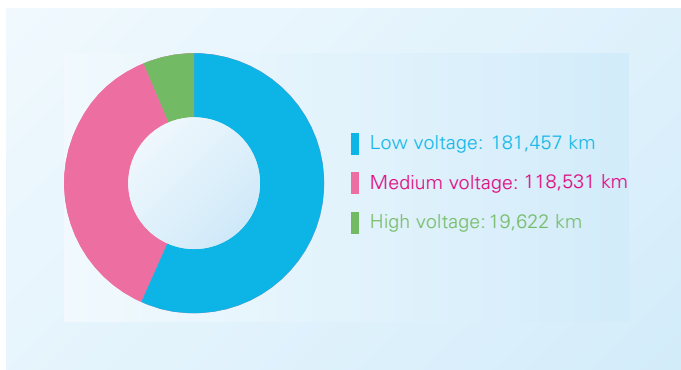
1.1. Development and improvement of distribution infrastructures

EU10 103-1 Management approach Availability and reliability EUSS 103-2 Management approach Availability and reliability EUSS 103-3 Management approach Availability and reliability EUSS

To ensure the correct supply of power to its customers, ENDESA's Distribution network infrastructures are planned and operated so as to adapt continuously to the capacity required by its current customers, to the extensions of the grid requested by new customers and to the attention necessary for regulatory or legal activities, or those subject to agreements. ENDESA's distribution network in Spain was 319,613 kilometres long, of which

39.7% were underground lines. There were 1,275 substations at the close of the year. Along with the development of these infrastructures, a large number of activities were performed aimed at improving the quality of supply, such as maintenance work, the renovation of facilities, or an increase in the automation of the high- and medium-voltage grid. With regard to this last, the Company's Network automation plan for the medium-voltage

network has continued to be implemented during 2018, with a total of 49,010 remotely-controlled elements. Other activities have concentrated on the reduction of the environmental impact of the grids and on the development of various specific plans agreed upon with the Authorities.





EU4

Electrical power distribution facilities in Spain and Portugal

	2016	2017	2018	% variation 2018-2017
Length of distribution grid lines	317,672	318,702	319,613	0.29%
High-voltage overhead lines (km)	18,774	18,791	18,838	0.25%
Underground high-voltage lines (km)	765	770	787	2.21%
Medium-voltage overhead lines (km)	77,389	77,347	77,343	-0.01%
Underground medium-voltage lines (km)	40,572	40,816	41,188	0.91%
Low-voltage overhead lines (km)	96,133	96,351	96,390	0.04%
Underground low-voltage lines (km)	84,041	84,626	85,067	0.52%
Substations (number)	1,270	1,270	1,275	0.39%
Substations (MVA)	86,380	86,407	87,149	0.86%
Transformer centres (number)	133,213	133,512	133,971	0.34%

1.2. Continuity of supply

Supply continuity in Spain is measured by two main indicators: the system average interruption duration index for installed power (SAIDI) and the system average interruption frequency index for installed power (SAIFI). The calculation procedure is regulated by Royal Decree 1955/2000. The SAIDI and SAIFI levels are audited annually by an independent external company.

During 2018, the company's own SAIDI in the markets supplied by ENDESA in Spain was 65 minutes, 4 minutes above the 2017 value. Dependability of service has stood at 99.99% of hours throughout the year.

EU28

In 2018, the own SAIFI level stood at 1.5, a one-tenth increase over last year's datum.

The chart shows the supply continuity indicators of the main autonomous communities where ENDESA operates. Mainland: 2018 has been characterised by a considerable worsening in own SAIDI in all communities except Aragon. In the community of Andalusia, the company's own SAIDI is 80 minutes, Aragon

is 69 minutes, Catalonia is 55 minutes and Extremadura is 63 minutes.

Islands: In the case of the islands, as on the mainland, there has been an increase in the value of the company's own SAIDI; in the Balearic Islands it is 51 minutes while in the Canary Islands it remained at 43 minutes.

The rise in the company's own SAIDI is primarily due to a higher number of faults and other incidents, i.e. more activity. A number of unforeseen major weather events in 2018 also played a part, such as tornadoes in Andalusia and Menorca and heavy floods in Andalusia and Catalonia.

EU29

1.3. Safety at facilities

103-1 Customer health and safety EUSS

103-2 Customer health and safety EUSS

103-3 Customer health and safety EUSS

ENDESA complies with current legislation regarding personal safety, both of its workforce and of the general public, at all its facilities:

- > The high- and medium-voltage facilities undergo triennial inspections of their safety and suitability.
- > The facilities connected to the HV/HV and HV/MV distribution substations feature protection that isolates any fault that may occur.
- > The MV lines feature intermediate protection such as lightning conduc-

System Average Interruption Duration Index (SAIDI) of ENDESA in Spain (minutes)

SAIDI own	2016	2017	2018	Change 2017-2018
Andalusia	53	75	80	7%
Aragon	53	82	69	-16%
Balearic Islands	39	41	51	24%
Canary Islands	27	43	43	0%
Catalonia	40	49	55	12%
Extremadura	42	60	63	5%
ENDESA	45	61*	65	7%

* Figure adjusted during 2018 continuity of supply audit.

tors and autovalves, to prevent power surges caused by lightning strikes.

- > The MV/LV transformer centres and the LV lines feature similar safety measures.
- > Regarding the hook-ups to the grid supply, the connection facilities feature their corresponding protection, as required by current legislation.

With regard to the health of the population, ENDESA shares with the remainder of operators from the electricity sector and with society in general the concern about the possible effect that might be caused by the electromagnetic fields generated by its facilities. It therefore carries out various technical verifications, and where applicable, adaptation procedures, to ensure that their operation will not cause any impact on public health.

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At ENDESA, all the products and services provided to customers comply with current legislation, including that concerning health. Furthermore, ENDESA is continuously updated by means of the latest studies performed in this field, and actively participates in the electrical sector forums to contribute with its knowledge and initiatives (technical, construction, operating, etc.) in terms of the prevention of health risks related to these causes. Seventy-eight percent of our products and services have been evaluated for their impacts on health

and safety in order to make any necessary improvements.



1.3.1 Tarifa case

On 5 August 2017, an unforeseen and entirely unusual incident occurred at an ENDESA transformer centre located on the N-340 by Valdevaqueros in Tarifa, which caused an explosion that resulted in the death of two workers at Hotel 100% Fun where the transformer centre was located and caused injuries to six other workers at that hotel.

From the outset, ENDESA put itself at the disposal of the Local Public Administration to offer its condolences to the families of all of the injured and deceased, offering to support them in any way requested of us and providing the assistance requested.

ENDESA also immediately launched an investigation into the accident, which is still in progress considering the complexity of what happened and the lack of access to key components, such as the transformer, which have been legally impounded. It is extremely rare that such an event could occur at a transformer centre. It was in normal operating condition, halfway through its useful life, with all the regulatory reviews carried out and complying with current regulations. With regard to the management of and response to the incident, ENDESA acted

in accordance with its internal protocols for the management of critical events, responding quickly and demonstrating its cooperation with the various public services involved. In addition, the company had electricity generators installed to guarantee supply to the 13 customers of the transformer centre affected. Subsequently, the affected transformer centre was repaired and service reconnected.

In addition, as a preventive measure, ENDESA strengthened its winter campaign to review the state of the electricity distribution network and transformer centres, increasing the scope thereof, analysing a greater number of centres and increasing the inspection work done.

In any case, ENDESA is doing a particularly prudent, careful and detailed investigation work to determine the causes of the incident, without ruling out any hypotheses. On the other hand, the case is currently under judicial investigation and, therefore, it will be necessary to await the court's decision to determine the cause of the incident and to attribute liabilities, if necessary.

Lastly, considering that this is a priority issue for the company, it is being monitored with much regularity through the various governing bodies of the company, including ENDESA's Executive Committee, represented by the Chief Executive Officer and top management.





2. Excellence in commercial attention

2.1. Commercial Service Excellence Plan

For ENDESA, excellence in commercial attention is the key value in the relationship with its customers, always seeking maximum efficiency in the functioning of its channels, tools and commercial attention platforms via a process of constant innovation and improvement.

ENDESA has a Customer Service Excellence Plan, with the purpose of offering its customers the best possible service. It aims to improve the main satisfaction indicators year after year.

During 2018, this plan focused its activities on the following aspects, among others:

- > Launch of the Universal Perceived Quality Measurement Plan.
- > Further work on dissatisfaction management in all measurable aspects of commercial quality.
- > Continuous improvement in the quality perceived by customers on Digital Channels and in creating a unified experience across all channels.
- > Redoubling of work to measure customer claims.
- > Improvement in the quality of email, mobile phone and (postal) address data.
- > Acting on the two levers with the greatest impact on the satisfaction of the company's business customers

concerning complaints (processing periods and steps).

- > RyN complaints: to reduce incidents in sales, to transform a complaint into an opportunity and to reduce resolution times.
- > Continuous improvement of First Call Resolution.

In order to achieve the improvements identified in the Plan, a monthly follow-up is performed of 20 key indicators, enabling the company to verify the impact on the quality of ENDESA's commercial operations.

Among the most significant results of the Plan in 2018, the following are of note:

- > Significant improvement in customer satisfaction in the non-mass market with management of their marketing area complaints (+1%).
- > Clear improvement in satisfaction with the ENDESA Customers website over the period (+4%).
- > Fulfilment of the objectives set regarding satisfaction with the Call Centre commercial channel.

- > Significant improvement in customer satisfaction with the e-invoicing service for the second year running (+6%).
- > Continued customer satisfaction with service at ENDESA's points of service (8.5).



2.1.1. In-person customer service

ENDESA's in-person customer service is organised by customer segment to better adapt to the requirements of each one:

> Large Customers and Companies:

ENDESA has a team of agents, organised by sector and territory, via which it seeks to achieve an in-depth knowledge of the customer's needs and to provide personalised, competitive solutions. The company has approximately 350 personalised commercial agents distributed across Spain, and supplements the coverage of this network by means of a telephone and internet helpline service.

	Points of service	Commercial offices
Andalusia-Extremadura	86	3
Aragon	24	1
Balearic Islands	18	1
Canary Islands	24	2
Catalonia	63	3
Our own territory	215	10
Expansion	59	1
Portugal	—	2
ENDESA	274	13

> **General Public:** ENDESA has 11 sales offices in Spain and 2 in Portugal, as well as 274 points of service distributed throughout the country, aided by the Call Centre (CAT) and ENDESA's virtual office (www.endesaclientes.com).



2.1.2. The Call Centre

During 2018, ENDESA's Call Centre handled upwards of 19 million interactions. Across ENDESA (including Portugal), there was a 4.2% decrease in traffic compared to 2018. Call demand rose in Portugal as a consequence of an increase in customers in this market, while Spain saw a sharp fall in calls thanks to the plans to improve first call resolutions, automation and management of customer relations using bots. Forty-five percent of customers contacting ENDESA through this channel did so in relation to the sales cycle, 13% regarding power cuts, and 4% with new contract requests. The Call Centre remains one of the company's main sales channels.

The mix of customer service channels also continued to increase, with 2% of traffic managed by the call centre team being received through the digital support channels that were created in 2017 to enhance communications with customers.

In 2016, the channel launched a Smart Contact Centre strategy involving a transformation of the service on the call centre channel. The projects performed in 2018 to enhance customer care fell into the following lines of work, which continue to contribute to rolling out the digital strategy in the spirit of this transformation:

- > **Digitalisation of the Contact Centre,** : a project is under way to update the channel's IT infrastructure: self-service is being driven by incorporating natural language processing dynamics and artificial intelligence (AI) support, and new voice channels employing virtual assistants have been developed.
- > **Process quality,** : the operational model has been diagnosed to roll out an ISO 19285-compliant system in the channel. A customer attraction and engagement plan has been launched, as have several process optimisation measures to cut average processing times supported by digital contracting.
- > **Improvement in First Call Resolution** through an analytical tool using a speech miner and a measurement to identify customer voice-based action plans.
- > **Focus on value,** strengthening the unique VIP Call Centre channels and developing an exclusive channel for business customers.

Of all these initiatives, the project setting the company apart the most from its competitors is the development of new voice channels using virtual assistant technology. The telephone channel has developed a skill for Alexa (Amazon's virtual assistant) that can be used to view information regarding bills and find out all the data associated with them. A function will soon be released offering advice on consumption and power. In 2019, another voice channel will also be launched using this technology through Google Home. Through these projects, ENDESA has set itself apart from other utilities, leading the way in rolling out this type of channel and, indeed, across all other company customer service channels.

For yet another year, this channel's efforts over this year and its transformation in recent years has been recognised by the contact centre sector at all levels, with it garnering the Contact Center Award for Best Customer Experience Strategy for its value-based service focused on the business segment. It



ENDESA's Customer Service Centre receives Best Contact Centre Operation award.

ENDESA recognized once more

ENDESA has been given an award for the Best Customer Experience Strategy in the Ninth edition of the Platinum Contact Center Awards, in the National Awards for Excellence in Colombia as Best Contact Centre Operation.





also received the Contact Centre Award for Best Operations for its value-based services at the National Contact Center Congress, and the CRC Gold Award for Best Customer Service.

In this framework, 2018 has been a very positive year for the channel and provides a firm foothold improving the service provided to our customers in 2019.



2.1.3. On-line service

At the end of 2018, ENDESA's commercial website, www.endesaclientes.com, achieved 2.1 million registered customers (17% more than in 2017), with over 3.3 million contracts and more than 294,000 new registered customers. These users performed more than 2.5 million interactions per month, with bill consultation being the operation most performed both on the website as well as in the app.

During 2018, electronic invoicing has also received a great boost. In 2018, there were 2.8 million contracts with e-billing. The main functionalities added in 2018 were:

- > New means of payment (payment and management by means of credit card).
- > Improved display of approved contracts.
- > Privacy section to configure General Data Protection Regulation permissions.
- > Chat accessible via app.
- > Display of cancelled/previous contracts bills.
- > Redesign of consumption and evolution of bills graphics.
- > Information on accumulated discounts for Happy 50 electricity contracts.



ENDESA's CAT has received the CRC Gold Award for Best Customer Service Operation.

ENDESA wins CRC Gold Award for Best Customer Service Operation

ENDESA's telephone channel, the Customer Call Centre (CAT), has been recognized with the CRC Gold Award for Best Customer Service Operation in the customer service excellence awards. This award recognised the standard of ENDESA's strategic and operational model and the quality of the service it provides customers.

ENDESA's Call Centre has eight platforms, seven serving customers in the Spanish market and one for customers in the Portuguese market. It has more than 2,000 agents in different time zones. Each year they manage 18 million calls, and over 6 million digital messages via email, text message and WhatsApp per annum.

2.1 million customers registered on [www.](http://www.endesaclientes.com)

www.endesaclientes.com, 17% more than in 2017.

Since March 2013, the ENDESA app has been downloaded more than 1.1 million times; 375 thousand times in 2018 alone.

In 2018, over 46,000 cases were managed through WhatsApp and Facebook. ENDESA is currently developing a digital transformation process where the

customer is positioned as a fundamental element of that transformation. For more information, see section 3 of the chapter *Digitalisation* of this report.



2.2. Resolution of complaints and new-contract applications

103-1 Management approach Customer privacy

103-2 Management approach Customer privacy

103-3 Management approach Customer privacy

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At ENDESA, complaints are managed centrally by the Complaints Unit (UAR) and via the people who work at the six existing Regional Complaints Units (UTR). Their main responsibilities consist of:

- > Ensuring customer satisfaction in the management of their complaints.
- > Detecting the causes that disrupt normal commercial activity.
- > Defining measures to be taken to resolve them, and specifying improvements in the management systems.
- > Seeking cost efficiency in complaint resolution.
- > Resolving complaints in the shortest possible time.
- > Acting as liaisons with public or private bodies in the defence of consumers.
- > Intervening in social networks when joint complaints are made in them.

During 2018, work progressed to digitalise the claims process to boost efficiency in terms of cost management and reduce average response times.

The main digitalisation project has been the Classifier of Claims project to analyse customers' comments when they open claims, classify them by type, and refer them to the right team for resolution.

The volume of claims generated in 2018 has been more than 436,000, a volume increased by 6% compared with the previous year. Requests, on the other hand, were down 19.5% compared with 2017 at over 459,000.

A total of 4,769 claims concerning customer privacy breaches were received in 2018, 57 of which have been received from the Spanish Data Protection Agency.

A total of 903,278 claims and requests were resolved (101.8% in the case of claims and 99.9% in requests). More claims were resolved than were received during the year because the aforesaid figure includes several pending from the previous year, while 0.12% of requests have yet to be resolved.

Despite rolling out the Claims Classifier, several incidents and systems modifications in 2018 led to average resolution times increasing from 8.1 days in 2017 to 11.

At the process level, the implementation of the Rates Subsidy led to an increase in workload regarding billing and changes in rates for customers who updated their supply address to be able to apply for the Rates Subsidy. Notably, there was a fall in customer requests for payment deferrals and power supply shut-offs thanks to the improved state of the economy in 2018. It should be noted that some claims are dealt with by the Third-party Grid Access channels which resolve them in the first instance directly with customers. Any claims that cannot be resolved in the first instance are passed to specific teams which resolve them, including the Commercial Cycle teams that also deal with claims.



2.3. Responsibility for informing customers about ENDESA's products and services

103-1 Management approach Marketing and labelling

103-2 Management approach Marketing and labelling

103-3 Management approach Marketing and labelling

417-1

ENDESA's customers have the right to be informed about the characteristics of the products and services that they consume. Therefore, the Company complies with regulatory requirements regarding the information provided to

customers at all stages of the commercial cycle. These regulations cover the following issues:

- > When a supply contract is entered into or amended, the customer is informed of the different rates available,

and the power rating most suited to his/her needs.

- > When power supplies are disconnected due to programmed work on the grid, customers and the general public are given sufficient notice.





- > When a customer's power supply is disconnected for non-payment, prior to that all substantial demands for payment as established by the current rules are carried out, including a notice given 15 days before the supply disconnection informing the customer of the date as of which it will take effect. Such shut-offs for non-payment are only carried out if the company has evidence of this fact. In no event are power supplies to customers considered to be 'essential' disconnected for non-payment.
- > There are also other circumstances under which time limits for providing information are prescribed, such as giving estimates for new supplies and dealing with customer complaints.

In the deregulated market, ENDESA complies strictly with the obligation to disclose the origin of the electricity billed.

It also goes beyond the legal requirements, in order to achieve excellence in the provision of information to its customers. Thus, in 2009 the Company created a business unit to manage relations with consumers' associations and public bodies, which has been consolidated since that time. This unit has held regular meetings and taken part in consumers' forums to communicate the measures taken by ENDESA with regard to its customers and to find out what their main concerns are, in order to be able to adopt the most appropriate measures as regards consumption.

2.3.1. Eliminating access barriers to information about products and services

103-1 Management approach Provision of information EUSS

103-2 Management approach Provision of information EUSS

103-3 Management approach Provision of information EUSS

ENDESA strives to eliminate potential communication barriers concerning information on its products and services, whether they be physical, social or language-related.

The endesaclientes.com website has a large section to explain in detail the electricity and gas bills both in the free and regulated markets, item by item.

All commercial and informative communications sent by ENDESA to its customers in Spain, including bills and leaflets, can be written in Spanish and Catalan.

The endesaclientes.com website is available in addition in English as well as Spanish and Catalan. This is to meet the requirements of foreign customers. It has been calculated that 900,000 British citizens live temporarily or permanently in Spain, mainly on the Mediterranean coast and on the islands, as well as other nationalities which use English as a second language. Users can also communicate in English via the apps and the on-line chat room, email, twitter, Facebook and WhatsApp covering the information and customer service needs of these customers on the internet.

The website has resources and supports to guarantee access to the customer services of people with disability or the elderly.

The call centre provides customer service in various languages, offering the possibility of being assisted in Spanish, Catalan or English. It also has the Telesor application, to assist communication with people who have difficulties speaking.

ENDESA's sales offices and points of service are located at street level, with accesses adapted to people with reduced mobility.



ENDESA implements a channel for people with disabilities

ENDESA becomes the first company in implementing a channel aimed at people with hearing or speech disabilities, which allows customers to make any consultations on their bill, contract, or receive personalised information.

3. Access to electricity for vulnerable customers

103-1 Management approach Access to electricity EUSS

103-2 Management approach Access to electricity EUSS

103-3 Management approach Access to electricity EUSS

ENDESA is a company firmly committed to the fight against energy poverty, and this is demonstrated by the numerous actions and initiatives it has undertaken in recent years for families that find themselves in such a situation. Some of these actions are pioneering in the sector.

Commercial service to customers in energy poverty has become a priority course of action for the company and, even beyond customers. As an example of the company's commitment to society, various initiatives for families in energy poverty have been launched in partnership with several voluntary sector organisations, regardless of whether they are customers of the company or not.

Since 2014 ENDESA has been signing various agreements with local and regional authorities and voluntary sector organisations to avoid power shut-offs for customers in energy poverty who are certified by the social services while they process emergency aid to cover the payment of electricity or gas bills for these customers. There are currently 272 agreements in force, six of them with the autonomous communities and five with federations of municipalities being covered the main geographical areas in which ENDESA operates. During 2018, ENDESA dealt with 33,341 customers and 94,217 requests and enquiries for a total of 25,978,929 euros. ENDESA is finalising a new Vulnerable Customer Service procedure in accordance with the new rates subsidy regulation, which will inform the various

government departments and social services of the processing of these requests.

In addition to the aforesaid agreements, some 160 workshops have been held to train the technicians of the signatory organisations on providing advice to vulnerable families about energy efficiency, optimization of bills and how to apply for the Rates Subsidy.

Training has also been provided to NGOs working to eradicate energy poverty. This training was arranged and provided in partnership with the European Anti-Poverty and Social Exclusion Network (EAPN) and Spain's Environmental Sciences Association (ACA) to deal with energy vulnerability, provide electricity bill advice and disseminate information on the new rates subsidy and ENDESA's work in this area. Eight workshops were held across the country in 2018, attended by over 150 participants. ENDESA has sent out over 2 million letters and emails about the new Rates Subsidy, specifically targeting customers who had been assigned the previous rates subsidy. National and regional press, radio, on-line, social network, text message and leaflet campaigns have also been run to inform the general public of the new rates subsidy and ENDESA's customer service channels dealing with enquiries about it.

From the outset ENDESA has enabled all of its customer service channels to provide information on the conditions for application of the new Rates Subsidy as well as the documentation that must accompany the application and the

channels by which customers can send this documentation to ENDESA.

Additionally, through its customer service channels ENDESA has also implemented a policy of splitting or deferring the payment of bills by up to 24 months, applicable to customers with vulnerability certified by the social services, with sufficiently flexible conditions so that customers can have payment of their energy bills covered without having to reach the point of supply suspension.

On 15 February 2018, ENDESA and the Spanish Red Cross signed an agreement to protect individuals and families at risk, which regulates collaboration between the entities to ensure vulnerable customers' energy supplies to their homes and avoid electricity or gas supply shut-offs due to non-payment of bills.

ENDESA, the Red Cross and Spain's Ecology and Development Foundation have also launched an energy volunteering project to mitigate the energy vulnerability of households by: (1) providing training on efficient energy use; (2) giving personalised advice; and (3) implementing safety and savings measures in homes. Some 310 volunteers have been involved in the project (188 of whom are ENDESA employees), running 126 workshops attended by 1,337 families. Personalised and face-to-face advice has also been provided to 306 households.

For more information, see the chapter *Responsible relationship with communities*.





4. Shut-offs for non-payment and re-connections in domestic customers

EU27

With the Royal Decree-Law 15/2018, of 5 October going into effect on urgent measures for energy transition and consumer protection, electricity supplies cannot be cut to consumers at risk of social exclusion or rates subsidy beneficiaries who have provided proof of at least one member of their household being under 16 years old, a second or third degree dependent or someone with a disability of 33% or more.

There was a drop in supply shut-offs in 2017 following the adaptation of the new disconnection procedure laid down in Royal Decree 879/2017, of 6 October, in which shut-offs were stopped. Meanwhile, following the introduction of Royal Decree-Law 15/2018 in effect, the number of shut-offs dropped in 2018 to below the 2016 figure. Of the residential customers disconnected due to non-payment, 51.4% were disconnected less than 48 hours and

9.4% were disconnected for duration of between 48 hours and one week, 6.3% between one week and one month and 2.5% between one month and one year. Likewise, 65.3% of the disconnected domestic customers have been reconnected in the following 24 hours, 3.6% between 24 hours and one week and only 0.5% more than one week after disconnection.

Shut-offs for non-payment in the residential sector, itemised by duration of disconnection and regulatory regime (number)

	2016		2017		2018	
	Domestic	General public	Domestic	General public	Domestic	General public
Disconnected domestic customers	160,819	205,297	55,034	74,468	92,062	123,455
Domestic customers disconnected less than 48 hours	91,923	115,455	34,393	46,353	47,285	68,079
Domestic customers disconnected less than 48 hours, regulated market	51,597	60,360	18,117	22,032	24,357	31,468
Domestic customers disconnected for less than 48 hours, liberalized market	40,326	55,095	16,276	24,321	22,928	36,611
Domestic customers disconnected between 48 hours and one week	13,112	17,136	4,350	5,883	8,653	11,621
Domestic customers disconnected between 48 hours and one week, regulated market	7,790	9,580	2,412	3,147	4,599	5,643
Domestic customers disconnected between 48 hours and one week, liberalized market	5,322	7,556	1,938	2,736	4,054	5,978
Domestic customers disconnected between one week and one month	10,106	13,045	3,239	4,424	5,762	7,775
Domestic customers disconnected between one week and one month, regulated market	5,931	7,232	1,698	2,241	3,191	3,953
Domestic customers disconnected between one week and one month, liberalized market	4,175	5,813	1,541	2,183	2,571	3,822
Domestic customers disconnected between one month and one year	5,593	7,065	1,592	2,317	2,292	2,832
Domestic customers disconnected between one month and one year, regulated market	4,699	5,612	1,245	1,740	1,256	1,562
Domestic customers disconnected between one month and one year, liberalized market	894	1,453	347	577	1,036	1,270
Domestic customers disconnected for more than one year	0	0	0	0	0	0
Domestic customers disconnected for more than one year, regulated market	0	0	0	0	0	0
Domestic customers disconnected for more than one year, liberalized market	0	0	0	0	0	0
Domestic customers reconnected in the following 24 hours	113,091	141,947	38,114	51,992	60,133	84,915
Domestic customers reconnected in the following 24 hours, regulated market	65,526	77,106	21,227	26,346	31,373	40,142
Domestic customers reconnected in the following 24 hours liberalized market	47,565	64,841	16,887	25,646	28,760	44,773
Domestic customers reconnected between 24 hours and one week	6,989	9,831	4,434	5,735	3,323	4,647
Domestic customers reconnected between 24 hours and one week, regulated market	4,108	5,210	1,877	2,359	1,762	2,169
Domestic customers reconnected between 24 hours and one week, liberalized market	2,881	4,621	2,557	3,376	1,561	2,478
Domestic customers reconnected after one week	536	731	906	1,100	473	667
Domestic customers reconnected after one week, regulated market	323	386	321	397	235	280
Domestic customers reconnected after one week, liberalized market	213	345	585	703	238	387



5. ENDESA's energy solutions

Management approach Demand-side management EUSS

ENDESA complies with all rules related to information and labelling for its products and services. 69% of ENDESA's information and labelling procedures require:

- > Reporting the origin of the components of the product or service.
- > Reporting the content, especially with regard to substances that could have an environmental or social impact.
- > Reporting the safe use of the product.
- > Reporting the way to dispose of the product, and its environmental impact.

416-1

In addition, ENDESA's product and service categories have been evaluated for their improvement in terms of health and safety impacts.

417-2

At ENDESA, in 2018 there were no cases of non-compliance with voluntary codes or rules relating to information or labelling for its products or services.



5.1. ENDESA X: products and services to customers

302-5

The energy sector is changing and ENDESA X aims to lead the way towards a new energy model that prioritises sustainability, flexibility and value creation.

Providing innovation through value added services and technological solutions forms the basic pillars on which to build the future of energy and achieve a more sustainable, open and digital model for industries, cities, homes and mobility:

> **e-Industries:** In this area, focusing on industry and businesses, ENDESA X is opening up new opportunities regarding distributed energy, energy efficiency and audit and consultancy services.

Today, Vehicle Natural Gas (VNG) is a real, environmentally sustainable solution for long-distance and heavy transport, urban/interurban transport and waste collection. ENDESA X has contributed to achieving this solution by developing 12 refuelling stations:

- Three private refuelling stations supplying gas to waste collection firms.
- Four refuelling stations supplying private or transport companies with public access to retail customers.
- Three new refuelling stations: two part of the European ECO-GATE project to develop natural gas refuelling infrastructure along European transport corridors, which complete the network in the south of the Peninsula which has enabled creating with partner companies, a network covering the main transport routes nationally.
- Two refuelling stations under construction.

> **e-City:** In the area of cities, to create the concept of a smart city, ENDESA

X is working on public lighting, the concept of full-electric buildings and the wholesaling of fibre optic cable and energy services.

> **e-Home:** In the area of the home, ENDESA X supports the growth of the home support and services businesses, providing its customers with innovative products to install energy equipment, maintenance and repairs, automation and the so-called Home 2 Grid.

In the area of homes, ENDESA X continues its work as the centre of excellence for B2C customers in mature markets thanks to its success in developing home energy solutions such as maintenance and repair services. ENDESA X has continued to offer its portfolio of end-to-end solutions during 2018. It also wants to transform homes to provide an easier, smarter and more comfortable life.

> **e-Mobility:** mobility is one of ENDESA X's strong points thanks to the development of recharging networks, the roll-out of proprietary public and private access infrastructure and advanced management services. This area encompasses e-mobility solutions for residential customers, industrial and commercial customers and public administrations. ENDESA X is driving the development of electric vehicles as one of the main channels for the fight against climate change. e-mobility is being promoted as a means to achieving a zero-emissions energy model.





During 2018, ENDESA X published an investment plan for public access re-charging infrastructure involving the installation of over 8,500 public recharging points with a total budget of 65 million euros, rolled out over two phases: more than 2,000 points in 2019-2020 enabling any electric vehicle to cross Spain, and upwards of 6,500 points in 2021-2023 offering more extensive coverage in urban areas, the main motorways and the islands.

There are three key activities forming the DNA of the brand: to be the leading infrastructure provider; to further promote energy as a service; and to boost the flexibility thereof to facilitate customers' access to electricity markets. e-mobility will be the standard-bearer of this transformation, with over 2,000 charging points being installed in Spain throughout 2019 and 2020, rising to 8,500 charging points in 2023.



Vitoria: revamping of systems in 42 public buildings will reduce CO₂ emissions by 493.2 tonnes per annum

ENDESA, in a joint venture, has reached an agreement in 2018 with the Vitoria City Council to carry out a revamp of systems in 42 public buildings: modernisation of electrical systems and replacement of indoor lighting for more efficient devices.

The project will enable the customer to save 1,281,000 kWh/year and reduce CO₂ emissions by 493.2 tonnes/year.







Móstoles: replacement of -vapour public street lighting for LED systems reduces CO₂ emissions by 209.63 tonnes per annum

ENDESA, in a joint venture, has replaced public street lighting with LED on behalf of Móstoles Town Council, cutting CO₂ emissions by 209.63 tonnes per annum and saving 544,482 kWh/year of energy.

In a second phase, during 2019, sodium-vapour and metal-halide lamps will be replaced with LED, leading to additional savings of 434,894 kWh/year and avoiding a further 167.44 tonnes of CO₂ emissions per year.

5.2. Raising customer awareness about the efficient use of energy

ENDESA continually performs communication activities to raise awareness about the efficient use of energy. The most noteworthy are

	<p>info energy</p>	<p>It is a free information and advice service so that customers can control and manage the energy consumption of their homes, based on a digital and easily customised service. Customers access detailed information which helps them understand their electricity consumption, comparing it with that of homes with a similar consumption pattern to theirs (in their district, municipality and province), and personalised advice and tools which inform them how to reduce the amount of their bills. In this way, they can be more aware of their energy consumption habits and discover how they can be increasingly efficient, thus having the possibility of reducing their electricity bills.</p>
	<p>diagnosis of energy efficiency energy</p>	<p>It is a free on-line advice service exclusively for small businesses. Through the On-line Diagnosis of Energy Efficiency website, a small business can assess its energy efficiency and receive improvement measures to optimise the consumption of its facility and, therefore, reduce its bill.</p>
<p>tw</p>	<p>twenergy</p>	<p>Twenergy is ENDESA's digital ecosystem focusing on sustainability and energy efficiency. Launched in 2009, it has registered over 5 million visits during 2018 (visits to the blog and on-line store). It has half a million registered users and more than 150 thousand followers on social networks. Twenergy is structured around a content blog, an on-line store of efficient products with more than 1,200 references and its own profiles on the main social networks: Facebook, Twitter, YouTube and Instagram.</p>
	<p>advice and guides</p>	<p>Bill advice: A space is reserved on the back of the bill to give customers advice on how to save energy and protect their facilities. Savings advice: www.endesaclientes.com Communications specific to customers in their first contract year (leaflets, information, guides, etc.)</p>
	<p>forums and platforms</p>	<p>By participating in national and international forums and platforms for energy efficiency knowledge sharing and dissemination, through the 'Companies for Energy Efficiency' Platform championed by ENDESA since 2011 and involving top-level companies in various sectors, the company aims to join forces to achieve greater energy efficiency by promoting more environmentally sustainable behaviour. Hence, it promotes cooperation in various efficient lighting and air-conditioning initiatives, the use of alternative energy sources in production processes, the modernisation of equipment and process optimisation. In this way, it has achieved savings of 3.5 million tonnes of CO₂, equivalent to the emissions of 750,000 average Spanish families each year.</p>

For more information, visit:
<https://www.endesaclientes.com/infoenergia>

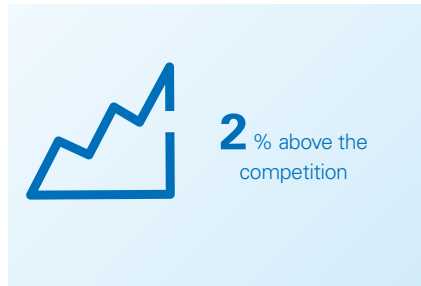
<https://www.endesaclientes.com/negocios/diagnostico-eficiencia-energetica-online>

For more information on energy efficiency, see section 1.3.3. *Transition risks. Energy efficiency*, in the chapter *Low-carbon business model*.





6. Customer satisfaction



103-1 Management approach
Marketing and labelling

103-2 Management approach
Marketing and labelling

103-3 Management approach
Marketing and labelling

102-43 102-44

The customer holds centre stage in ENDESA's business model, and for this reason, evaluating customer experience is fundamental. Therefore, all of the sections, products, channels, services and processes have suitable tools to perform this function.

In 2018, in order to measure customer satisfaction, over 200,000 customer interviews were conducted by telephone or on-line, covering around 1,500 points. In order to process this quantity of information in a BIG DATA environment, over 200 million records were processed with traceability in systems.

The main methodology used to measure customer satisfaction involves surveys through digital channels.. This reflects the technological transformation of the company and society as a whole. The

use of digital media has increased by 15 p.p. with 56% of the total of interviews exceeding telephone surveys in volume for the first time in 2018.

In 2018, ENDESA continues as the leading company in mass market in customer satisfaction in the electricity sector for the 9th year running, with a 2% advantage over the competition.

Likewise, ENDESA's perception is consolidated as the leading company in satisfaction with Advice (+5% above the competition), after 4 years of constant improvement. The company's Image is in a preferential position in relation to the competition (+3%). The same is true of the satisfaction with the Commercial Cycle (+2%), with the score for the Clarity of the Bill (+10% vs Competition) being particularly noteworthy. ENDESA can be said to be a benchmark in terms of customer orientation.

In terms of customer loyalty, the recommendations indicator is improving (+2%) compared with the previous year,

with the number of effective recommendations exceeding those of competitors (+7%).

Among mass customers in the gas sector, ENDESA leads the way in satisfaction as a company for the fifth consecutive year, with a noteworthy rating.

In Gas, ENDESA is a leader in Price satisfaction (+6%) compared to its competitors. With a score close to 8 for the Commercial Cycle, the Usefulness of Billing Information was notable (+5 percentage points compared to competitors). The company is also ahead for Advice (+3%) and Image (+2%) compared to its competitors.

Non-mass customers are evidently more satisfied with the Clarity of Bills (+2% vs 2017), positioning ENDESA above its competitors for Usefulness of Billing Information (+5%). In terms of Advice, there is a positive gap between the percentage of ENDESA's customers and the percentage of competitors' with the information delivered about Value-Added Products and Services (+21%).

Satisfaction with the service provided by account managers to non-mass customers increased significantly in 2018, with scores close to 9 (+1% vs 2017). The main significant improvements are satisfaction with Information and Advice, with scores of 8.97; and Resolution Capability (8.93 in 2018). The company's score for Proactivity was excellent in terms of Account Manager Availability and Service, which improved considerably (+1% in both cases).

Customer satisfaction index (general public electricity free market)

2015	2016	2017	2018
6.42	6.91	7.03	7.18

Customer experience-Sale

The Quality monitoring offered by the mass market sales channels (Task Forces and Telesales) in Spain reached scores of 8.14 for Task Force and 8.43 for Telesales. The satisfaction indicators of ENDESA's range of services, certified by the Spanish Standards Office (Aenor) reached scores over 8.

Customer experience – Service channels

The service level of the off-line service channels in ENDESA is rated as good both in customers served by telephone and in person.

In the telephone channel dealing with deregulated market customers, there has been a major improvement in scores for Personal Service (2%), Call-handler Knowledge (1%) and the percentage

of customers who considered they were properly dealt with.

In 2018, in-person channels remained the most highly rated at ENDESA with notable scores close to 9 both for offices as well as points of service. Among all of the attributes measured, the best scores were in satisfaction with Personal Service, Orderly Response and Clarity of Explanations. Punctuality and Service offered to customers requesting pre-arranged appointments stand out for their good scores.

Customer experience-Processes

Satisfaction with all the evaluated processes is up, especially among deregulated market customers who change their electricity contract (+4%). The most improved indicators in 2018 were Overall Satisfaction with Information

provided during contracting, Contracting Simplicity, and Contract Modification Advice (+2%).

New projects

Since the end of 2017, the Commercial Quality area has been involved in a project to obtain a 360° view of its customers; this project coexists alongside ENDESA's flagship projects in its digitalisation of the company target.

The Quality Thermometer project has been consolidated, allowing the dissatisfaction management to be an easy-to-use tool to better understand, correct and improve processes and customer experience, if necessary, through specific and individual measures for customers.



endesa

CONÉCTATE
AQUÍ

Innovation



10.47

Millions of euros invested in innovation

659

Employees with an Electric Vehicle

Endesa Sustainability Plan compliance 2018-2020

	Course of Action	2018 Objective	Result 2018	Key actions
<p>Operating efficiency and innovation</p>	Launching of innovation challenges on the Energy Challenges platform.	1	1	> ENDESA has continued developing its Endesa Energy Challenges open innovation platform.
	New start-ups selected each year.	2	11	
	New innovation projects launched each year.	3	5	> Innovative projects in generation and in the distribution network;
	Internal innovation events each year.	2	5	





1. Innovation at ENDESA

1.1. Investment in innovation

103-1 Management approach, research and development EUSS

103-2 Management approach, research and development EUSS

103-3 Management approach, research and development EUSS

ENDESA is solidly committed to the innovation taking place through all its business lines. The Company considers it to be a strategic function that should be a part of all its activities.

For this reason, ENDESA is working on projects, investing funds and decidedly taking the initiative in this area in all of its business lines. It is endeavouring to address the challenges in all areas of the company by this approach through innovation.

Investment in R+D (millions of euros)

	2016	2017	2018
Generation	4.70	4.54	3.81
Nuclear	1.52	2.09	2.09
Marketing	5.78	5.47	0.15*
Distribution	4.17	4.61	4.27
Renewables	0.00	0.24	0.15

* technological projects and the people that execute them have been transferred to Enel X Global

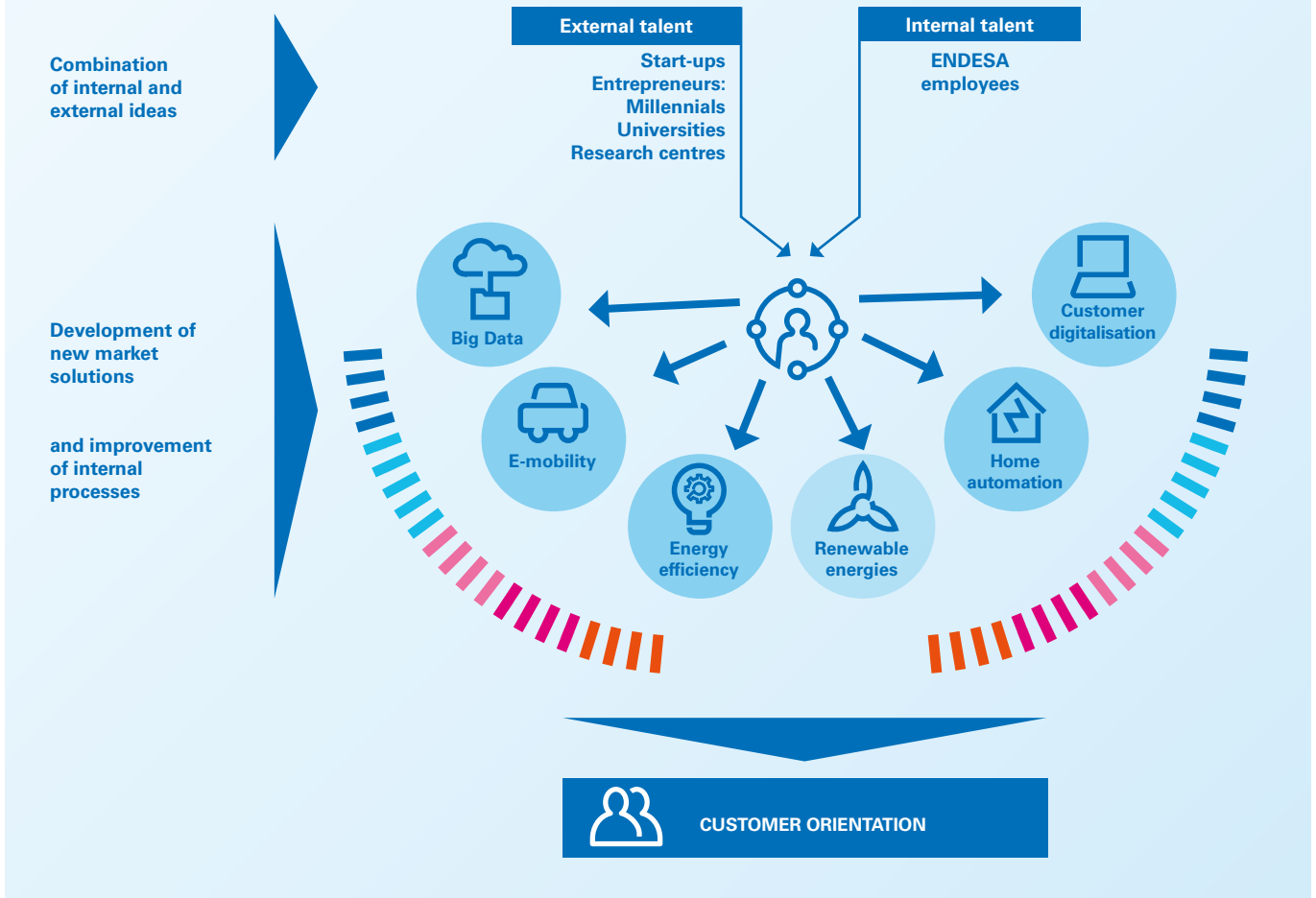
1.2. The open innovation model

ENDESA bets for an open innovation model that opens the company to outside players to promote collaboration and exchange of ideas to optimise their efforts.

Open innovation is a relationship model for companies with the innovation ecosystem (universities, start-ups, research centres, other companies in the same or different sectors...) that promotes collaboration and exchange of knowledge. ENDESA has adopted this model to maximise its capacities through collaboration with the most relevant players of the innovative ecosystem that contri-



ENDESA'S FOCUS ON OPEN INNOVATION



bute to the growth and creation of new business opportunities. The aim is to develop a new culture of innovation to enable the generation of creative solutions capable of transforming the current energy model.

Our focus is on the entire energy value chain: conventional and renewable generation, infrastructures and networks, value-added products and services for residential customers, S&MEs, companies and large clients, digitalisation of the company, the relationship with

our customers and trading, in addition to new vectors, such as e-mobility. We are seeking solutions that are disruptive from the technological point of view, new business models and improvement in our own business processes.



1.2.1. Openinnovability.com: our global digital portal

OPEN INNOVABILITY is the new platform that ENDESA, as part of the Enel Group, uses to launch innovation and sustainability challenges, both for the Group's employees as well as for start-ups, independent innovators, universities, research centres, potential

corporate partners, NGO's and other associations. Therefore, it is open to all and inspired by the Open Power philosophy.

Through this channel, the company publishes the specific challenges relating to themes of special interest that is open

to the entire entrepreneur ecosystem in addition to being converted into an internal identification channel for innovative initiatives of all group employees.





1.2.2. Attraction of external talent: ENDESA and entrepreneurs

ENDESA has a considerable interest in working with entrepreneurs and start-ups due to their capacity for disruptive innovation, the use they make of technology, their know-how and particularly their agility in developing products and services and placing them on the market in the shortest time possible.

To that effect, ENDESA, is benefited by the activity of the nine Innovation Hubs of the Group, and specifically, from the Enel Innovation Hub Europe opened in 2017 in Madrid. These Innovation Hubs are located in relevant entrepreneurship centres and markets that are strategic for the Group from around the world: Brazil, Chile, Spain, Israel, Italy, Russia and Silicon Valley. The Enel Innovation Hub Europe, has the responsibility to develop the

relationship with the relevant entrepreneurship ecosystems in Europe, including the start-up ecosystems of Spain and Portugal, markets in which ENDESA is present, and prospect for European start-ups that could answer ENDESA's challenges, as well as the rest of the Group companies.

As a result of work done during 2018, the Enel Innovation Hub Europe has carried out prospecting of over 800 start-ups, has introduced over 350 start-ups into the Group and has promoted holding over 90 meetings between start-ups and the Business Lines and Group companies. As a result, 9 collaborations with European start-ups have been generated, which add up to over 170 collaborations with start-ups that the Group developed on a global level. Among the collaborations generated from the work of the Enel Innovation Hub Europe, we can highlight pilots with two Spanish start-ups in ENDESA thermal generation plants aimed at improving efficiency and safety in the inspection of submerged areas as well as the application of IoT sensor systems in isolated areas; concept tests with Spanish start-ups to assess the technological feasibility of the solution for an ENDESA Trading area challenge and incorporation of the product of a Spanish start-up into one of ENDESA's market places. ■■■

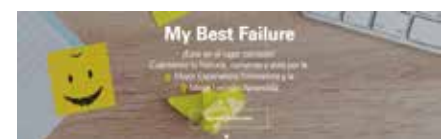
1.2.3. The culture of innovation at ENDESA Idea Hub

In order to promote creation of a culture of innovation among ENDESA's employees as a key transformation factor, the

ENEL IDEA HUB SPAIN was created, a unit dedicated to promoting the culture of innovation within the company through promotion of the use of creativity methodologies, intrapreneurship projects and training programmes in specific innovation tools.

Among the activities performed in 2018, the following can be highlighted:

- > CHALLENGE DRIVEN SESSIONS, workshops in application of the CPS (Creative Problem Solving) methodology to search for innovative solutions to the company's challenges. During the year, sessions have been held involving over 300 employees.
- > DESIGN THINKING: projects development using the Design Thinking methodology which allows incorporating the customer orientation focus in innovation projects.
- > INNOVATION ACADEMY, specific training programme that has the objective of training the employees in work methodologies and skills, that qualify them as facilitators of the culture of innovation in their field.
- > MY BEST FAILURE is a digital platform that allows sharing cases of 'constructive failure' among our employees as a means of learning, contributing to the creation of a culture unafraid of making mistakes, that empowers experimentation and the capacity of assume risks in the organization.



1.3. Innovation in electricity generation

During 2018, ENDESA has continued to develop technological innovations in order to improve the efficiency of its power generation processes and to reduce the impact on the environment. ■■■

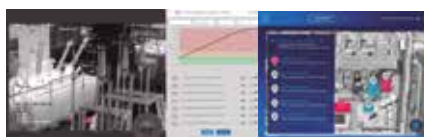
1.3.1. Innovation in generation from fossil fuels

ENDESA continues to be committed to better technology with the introduction of new technologies and processes that allow improving efficiency and consumption of natural resources in its plants, reducing the amount of emissions and waste from them.

One of the basic pillars in this period is digitalisation of the generation processes and introduction of new digital technologies that allow achieving these improvements in the production process. In the area of digitalisation, a series of pilot innovative projects stand out. They are intended to assess possible benefits that the introduction of new digital technologies could have in ENDESA's thermal power plant fleet and that compose the launching point of the DIGI PLANT deployment initiative. The technologies being evaluated address both improving the operation and maintenance of power plants and the improvement in safety and the

environmental improvements. The following projects are worth highlighting:

- > **'IOT Besós'**: Demo project for implementation of new digital technologies at the Besós Combined Cycle Plant. Among the technologies analysed are the use of wearables, predictive maintenance tools based on machine learning, IoT and wireless monitoring, computer vision, implementation of RFID and NFC technologies.



IoT Besos: Besos combined cycle A) Computer vision system. B) Digital Assistant for discharges.

- > **'MEMPHIS'**: Project financed in the CHALLENGES programme of the MICINN for development of a system that allows temperature measurement in boiler components via use of fibre optics as a direct application sensor.
- > **'MOP'**: pilot project for the introduction of an assistance system for the operation based on artificial intelligence and cognitive models.
- > **'E-SENSE'**: new, advanced monitoring and diagnostic systems for high, medium and low voltage breakers.
- > **'ROBOTICS'**: use of a new underwater robot for use in inspection and cleaning tasks in underwater infrastructures.
- > **'VR for training'**: use of Virtual Reality for immersion training within the scope of safety of people.

During this year and within the scope of innovative projects in the environmental area, the following projects have been undertaken, aimed at reducing pollutant gas emissions, the valuation of by-products and reducing consumption of natural resources such as water:

- > **Project Matching:** A project carried out in collaboration with a number of other companies and R+D centres, cofinanced within the EU's Horizon 2020 programme. Its objective is to reduce water consumption in the energy sector through the use of new technologies, and it involves validation of said technologies at pilot plants being installed at the As Pontes thermal power plant.



Matching: Meeting of European consortium members for the Matching project and membrane distillation pilot project at the As Pontes plant.

- > **Project Gyll:** Pilot project for recovery of dump leachate water and desulphurisation water using an innovative technology based on vibrating membranes.





> **Project Acticen:** A project oriented toward the valuation of the ash derived from the coal combustion process at the thermal power plants, by means of an alkaline pre-activation process to obtain Portland cement replacement products for use in prefabricated concrete products. Project cofinanced by Spain's MICINN I+D Retos Colaboración programme.

> **Innovaalga and A4HW Projects:** Valuation of CO₂ derived from combustion gases at the Litoral thermal power plant in Almería by the cultivation of microalgae, and the valuation of the biomass generated to obtain very high-value proteins as a source of high value-added nutrients and sustainable fertilisers. Project cofinanced by Spain's MICINN I+D Retos Colaboración programme. As a result of these projects, enlargement of the microalgae plant is in progress by increasing the crop surface up to approximately one Ha.

Likewise, various projects have also been developed to improve efficiency and flexibility in the electricity generation processes directly affecting the reduction of emissions and consumption of material resources, such as:

> **Project Conava:** Implementation of expert adaptive predictive control systems to optimise combustions and turbine steam temperature control in different generating plants.

> **Project MAYA:** validation of a measurement system for carbon composition in a feed belt using laser techniques.

> **Project Energy harvesting:** validation of an energy capture system for sensor system feed based on thermoelectric technology.

> **Protec:** development of new coatings to protect boiler pipes against corrosion at high temperature and against erosion combined. Project cofinanced by Spain's MICINN I+D Retos Colaboración programme.

> **COAT:** validation of new painting with microparticles for use as thin thermal and acoustic insulation.

> **DEMFORE:** development of a photovoltaic ramp prediction system to improve thermal generation management. Application at the island of Tenerife.

> **Project ACTS:** advanced systems to increase intrinsic safety of people.

> **LEAKS:** visual gas leak detection using adapted thermographic cameras.

> **Thermoelectrika:** validation of early detection system for fire-generating hot spots

Important innovative projects are being developed in the energy storage field, both in the area of batteries, with a larger facility of this type in Spain as well as with other types of storage solutions. Thus, we can highlight the following projects:

> **Litoral de Almería Battery:** based on 20 MW ion-lithium batteries with 11.7 MWh of stored energy, which is the largest facility of this type in Spain. The facility will allow the Litoral thermal power plant (Almería) to be adapted to the needs of the electric system without changing its generation rate.



Litoral Almería Battery: Installation of Ion-Li Batteries at the Litoral de Almería Plant.

> **Project SELF Second Life Batteries:** Project to validate an electric vehicle battery recycling solution for use in support of the Melilla thermal power plant auxiliary systems. The 4 MW system with 1.7MWh of stored energy will be installed at Melilla and contribute to providing backup and security to the autonomous city's supply.

> **El Hierro Battery:** installation of an energy storage system to support the auxiliary systems of the Llanos Blancos plant on the island of El Hierro.

> **Project TES:** study on integration of a thermal storage pilot in solid materials for recovery of residual heat at the Las Salinas plant in Fuerteventura.


For more information about energy efficiency, see section 1.3.3. *Transition Risks*, from the Chapter *Low-Carbon Business Model*.

1.3.2. Innovation in generation from nuclear energy

In the nuclear field, by means of its participation in different programmes, ENDESA has continued with its commitment to R&D. ENDESA holds the secretaryship of the Spanish nuclear fission technology platform CEIDEN, which coordinates the R&D&I activities of the sector. Likewise, via the Nuclear Energy Committee, the Company also sponsors research projects of interest for its nuclear power plants. Some of the programmes of particular significance are as follows:

- > **EPRI nuclear programme**, the purpose of which is to achieve operating excellence of nuclear power plants. During 2018, investment was 1.5 million €.
- > During 2018, an analysis was performed of the **R&D and Technological Innovation (TI) projects at**

- the Ascó and Vandellós nuclear power plants (ANAV)**. The amount of the projects described has been 125,048.2 euros at Ascó I; 117,668.6 euros at Ascó II and at Vandellós II: 318,001.4 euros.
- > During 2018, within the ANAV scope, **ENDESA has carried out a project**

with the School of Engineers of the Polytechnic University of Catalonia (UPC), to execute a programme for emptying used fuel in fuel pools at the plants in which ENDESA has interests. The project was carried out during 2018, with a total cost of 30,984.30 euros. 

| 1.4. Innovation in the electricity distribution grid

103-1 Management approach, research and development EUSS

103-2 Management approach, research and development

103-3 Management approach, research and development EUSS

The following distribution network-related projects were developed during this year :

The Advanced Low and Medium Voltage Distribution Network Monitoring and Control project ('MONICA') was successfully completed, validating the low and medium voltage estimator's statement. During the project, over 1.5 billion measurements from among 20 clients were processed. This system will provide more in-depth knowledge of the low voltage grid, improving the quality of supply and reliability, to foresee events that could cause breakdowns.

To continue with the MONICA project, ENDESA launched an additional project in December 2018 called PASTORA, which will construct a layer of intelligence over the next 3 years, in order to take advantage of the potential offered by the more than 10 million measurements per day generated through the infrastructure deployed for MONICA.

In 2018, the 'La Graciosa' project was completed, enabling us to assess technology that could, in the future, reduce

technical restrictions for the penetration of low voltage renewable energy, thanks to dynamic grid management, collaboration with customers and producers, and the addition of storage capacity to allow distributors to counteract voltage ramping caused by low voltage solar generation.

Growsmarter Project: In October 2014, the proposal presented by the partners in the Horizon 2020 Programme was approved by the European Commission, and 25 million euros were granted for the development of the project over five years, commencing in January 2015. The cities selected to lead the project were Stockholm, Cologne and Barcelona, which will act as lighthouse cities' with the implementation of 12 Smart City solutions under the umbrella of the creation of mobility, infrastructure and smart, environmentally-committed districts. ENDESA takes part in a number of solutions in the Barcelona demo, mainly in the area of integration of sustainable urban mobility and infrastructures, and whose main objectives are the provision of value-added, ener-

gy efficiency services via ICT thanks to the integration of various systems and components to improve the management of municipal assets and also the demonstration of a sustainable urban mobility system by means of the integration of different components with a new electric vehicle management system. During 2018, ENDESA progressed in the development of a model based on digital technologies to support work at the transformation centres, which has enabled improving the physical safety of the workers and increased knowledge of the facilities before starting work in them. Thus, it has incorporated the concept test called 'I am in' into the project scope, enabling the people who are in the remote control facilities to get to know the control centre in real time in order to guarantee safe operations.

Flexiciency Project: The FLEXICIENCY project, 'Energy services demonstrations of demand response, FLEXibility and energy efficiency based on metering data', is a European project, financed by the European Commission, in which four large European distributing com-





panies with remote management infrastructure already in operation, among which are Enel and ENDESA, along with marketing companies, aggregators, software providers and research centres will carry out five large-scale tests for the deployment and exhibition of new services in the electricity markets (from advance monitoring to local energy control).

ENDESA takes part in the development of innovative models to provide value-added services in the city of Malaga, with the City Council as the participating end customer, for the local management of distributed generation and storage systems and the application of methods and tools for the maintenance of the assets of the grid.

In 2018, the final phase of the Demonstration was held, within the Málaga LivingLab. It was characterised by the potential for flexibility offered by the low voltage, large-scale microgrids and by the new services for all European electrical market agents based on accessibility to the meter data in nearly real time.

Project 'Smartnet': with the objective of improving efficiency and stability of the electric grid, profiting from the flexibility that the new role of consumers offers to the grid, using collaborative models, since they may also be energy producers. Field tests were conducted in 2018 for congestion management at sub-stations through the flexibility offered by third-party assets, establishing the conditions for provision of flexibility services for the distributor.

Project 'Resilience to Cope with Climate Change in Urban Areas (Rescue)': Focused on assessing the impacts caused by climate change on the functioning of essential services in cities, such as water or power, and on providing practical, innovative models

and tools to improve urban resiliency in the face of current and future climatic scenarios.

IdEAS Project (Substation Automation Equipment Interoperability):

The final purpose of the IdEAS project is the development and demonstration of a complete system for an IEC 61850 digital substation project, totally interoperable and integrated in the grid. Interoperability is one of the main pillars of the Smart Grid of the future, recognised as such by the European Commission Task Force (SGTF). However, the concept of interoperability associated with Standard IEC 61850 is often addressed from the erroneous viewpoint of a mere exchange of messages. As established by the SGTF, this characteristic should go further, based on the unification of criteria, the design of profiles and practical validation, aspects covered specifically and integrally by this project.

Therefore, a design for a substation with complete, interoperable equipment will provide all the advantages sought in Smart Grids, and will enable the establishment of more ambitious goals, such as interchangeability, in addition to exploring all the possibilities provided by the digital substation, supported by TCP/IP communications networks.

Commencing in September 2016, the general architecture of the system, the information and communications profiles, and the specification of the equipment to be validated in the laboratory have been defined. Training has also commenced, based on the solutions of each of the manufacturing partners.

As a continuation of the work done in previous years, in 2018, the validation tests were completed in an electric functionalities (protection and control) laboratory on the equipment in-

cluded in the scope of the project and the integration tests, ending with the deployment of the pilot in the field, which will permit us to obtain the final conclusions on the application of this technology.

3S-CS Project (Standardization- Security-Synchronization Connected Substation):

The purpose of the project is the development of an integral system for the control of electrical substations based on the IEC 61850, with wireless capability and IoT (Internet of Things). Considering the RTU (Remote Terminal Unit) as the central element of the electrical substation, a set of components focused on improving the efficiency and safety of electrical infrastructures will be developed. The project began on 1 November 2016 and will be completed on 31 December 2019.

The main objectives of the project are:

- > Standardisation: the development will be carried out within the framework of the most innovative regulations and standards, and are a worldwide referent for future electrical substations, as is the case of last edition of edition 2 of the IEC 61850, which will be the fundamental objective.
- > Security: electrical substations are considered by the EU to be critical infrastructures; it is for this reason that in any new development, cybersecurity must be considered a main requirement. New vulnerabilities and threats to this infrastructure will be analysed in order to minimise possible attacks, by means of the improved protection of the assets.
- > Synchronisation: the new Smart Grid will require the use of high-accuracy synchronisation protocols. Standards such as IEEE 1588, which enable time frames around high accuracy, will be considered, bearing

in mind the future peak of the process bus.

> Wireless communications: which will bring reductions in maintenance costs, ease of implementation, portability and mobility and above all else the capacity to use the wireless infrastructure as a back-up network at low cost in a challenging

electromagnetic environment, as can be those of the substation.

> Internet of Things (IoT): positioning the electrical substation for the first time in the IoT world, something totally unprecedented worldwide. The IoT connectivity substation will be provided locally, supporting us in wireless communications and at the

general level, connecting it to the IoT platform that is most relevant.

During 2018, validation and installation of a ENDESA's run substation was completed. Thus, a pilot that combines the latest IEC 61850 technology, cybersecurity, high-accuracy synchronisation, wireless communication and IoT connectivity in an actual substation was validated for the first time worldwide.



1.5. Participation in technology platforms

In 2018, ENDESA continued to play an active role in various technology platforms oriented toward promoting the development of a much more advanced distribution network, able to respond to future challenges. Among these, of particular note is its cooperation with the Futured platform, in which is part of the steering group, and consists of a forum for dialogue and debate between different agents, to make possible a better

awareness and to define a shared vision of the grid of the future.

Likewise, since 2018, Endesa Distribución holds the chairmanship of the association Meters and More, which is comprised of over 45 members, that promotes standardisation of the communications protocol for metering solutions, of which over 40 million meters have already been installed throughout the world.

In addition, for yet another year, ENDESA collaborated with the Pro Rebus Foundation, whose purpose is to cooperate with the Royal Academy of Engineering, driving and developing all those activities that contribute to their furtherance and dissemination, and particularly to their application to the business world and to society in general.





2. Sustainable Mobility

Mobility has a considerable influence on the framework of Sustainable Development due to its environmental impact and social and economic effects, as well as its inter-relationship with other sectors. The continued growth experienced by the transport sector over the past years and its foreseeable increase makes that the challenge of achieving a more sustainable model is a strategic priority at a local, national, European and worldwide level. This priority is even more evident in urban environments, where the private vehicle (mainly internal-combustion powered) is the most widely-used means of transport by residents of urban centres, in spite of the presence of an extensive public transport service. Due to the impact caused by internal combustion vehicles on air quality, in

large cities measures are being adopted, such as restricting access to the city centre by internal combustion-powered vehicles or the promotion of vehicles using alternative fuels, principally electricity, with aid plans for the purchase of the same.

In this regard, modern societies demand high and varied mobility, which requires a complex transport system adapted to social needs, that can guarantee the movement of people and goods in a safe, economically efficient way. We must therefore move toward a low carbon emission economic model; to achieve this, it is essential to develop efficient and flexible transport systems that provide smart, sustainable mobility patterns, thus improving the quality of life of people and protecting the environment.

Therefore, the process necessary to make possible this change toward new sustainable mobility habits includes raising awareness of the citizens and the promoting of solutions, electric transport being a key item among these, for an integral, sustainable, urban mobility system.

ENDESA views sustainable mobility as a strategic element in its sustainability plan, and so it has launched a series of projects covering different fields, from technological to social fields, promoting e-mobility as one of the main *drivers* toward a new, zero-emission energy model, responding to the new requirements and expectations more and more demanded by society.



2.1. 2018-2020 Sustainable Mobility Plan E- Movement

The E-Movement is the plan that brings together the set of sustainable mobility measures that ENDESA is promoting and that it plans to promote during the 2018-2020 period among its employees and fleets. The plan requires homogenising the numerous courses of action under a single comprehensive vision, that the company carries out on subjects of mobility.

This is the second plan that the company put into action and gives continuity to the previous one. This plan is focused along the internal management courses of action directed toward the company's employees and fleets. Due to their magnitude, external actions of a commercial nature fall outside of the plan and can be viewed in section 2.2.5 of this chapter: ENDESA's e-mobility tender

The following are the overall environmental impact objectives of the E-Movement with regard to savings during the 2018-2020 period:

- > **650,885 trips**
- > **9,500 tonnes of CO₂ emissions**
- > **5,200 kg of NO_x emissions.**
- > **550 kg of particulates emissions**
- > **< Noise**

Savings of CO₂ emissions accumulated during the 2018-2020 period will be 9,500 tons, which is the equivalent of emissions from 175 flights from Barcelona to Moscow, for which compensation in the amount of 19,000 mature trees would be necessary.

The plan is structured around two strategic objectives: The first is promotion of modal shift and the use of rational and safe transportation for employees and the second is the promotion and drive for electrification of transportation. To achieve these two strategic objectives, the plan incorporates a broad set of measures in various scopes:

> **Promotion of means of transportation other than a private vehicle:**

- **E-carsharing service** by means of promotion of the electric vehicle pool at the main offices for use by labour management employees and broadening their use for personal use on weekends.
- **Corporate shared taxi service**, prioritising shared commutes among users, and, in addition, done with ecotaxi
- **Transportation service with a driver** for employees, prioritising the use of an electric or hybrid vehicle.
- **E-carsharing**, a programme in which employees can share commutes to and from work.
- **E-bike** Electric bicycle pool at the main offices to promote their use among employees.
- **Transportation card**.

> **Work outside the office drive** with the objective that, on a voluntary basis and based on the good reception of the current programme, 1,400 people may be included in this sys-

tem which currently allows working one day per week outside of the office.

> **Facilitates work hour flexibility:**

- **Work hour flexibility measures** that allow making the time of coming to work centres and leaving earlier or later.
- **Uninterrupted shift** that allows converting a split shift into an uninterrupted shift (according to the conditions of the framework agreement).

> **Implementation of the electric vehicle in ENDESA's fleets:**

- **Reduction of the internal combustion fleet.**
- **Increase of the electric fleet.**
- **Optimization of the hybrid fleet.**

> **Promotion of the electric vehicle for employees:**

- **Development of e-mobility plans for employees.**
- **Electrification drive for the managers' fleet.**

> **Implementation of infrastructures at workplaces:**

- **Electrification of parking areas.**
- **Bicycle parking.**

In addition to these lines of work, the plan is completed with other management actions, such as development of local transportation plans, an internal communications plan, which includes communication to the employees through the banner on the Intranet, sending an electronic postcard, an awareness video to inform employees of the programmes that the company makes available to them as well as an incentive activity that consisted of a stand in the office lobbies, handing out organic juice to those who came to work in sustainable transportation. The mobility plan also includes assessment of the

environmental impact of the actions implemented as well as a set of training and sensitivity measures on the subject of mobility safety, which make up a total of over 20 activities and demonstrate with numbers that ENDESA's commitment to sustainable mobility is firm and decided.

Execution of the actions from the plan has entailed a 94.2% achievement of the objectives established for 2018 and implies confirmation that another type of mobility based on the usage modal shift and electrification of transportation, is possible.



2.2. ENDESA's commitment to e-mobility

ENDESA, in its commitment to the struggle against climate change and to the furtherance of a more sustainable mobility, is committed to the electric vehicle as a key tool.





ENDESA celebrates the Second Edition of Vuelta a España in an Electric Vehicle. It travelled 1,000 km in 16 provinces for 10€ in consumption

From 18 October to 11 November, during 10 stages, the second Vuelta a España in an Electric Vehicle was held, travelling over 1,000 km and covering 16 provinces. Consumption was only 145 kWh, which is the equivalent of about 10€. In this second edition, Endesa was partnered with KIA Motors during the entire trip, one of the benchmark brands in sustainable mobility.

The official car of the Vuelta had an Endesa employee at each stage as a driver and some very special co-drivers: The prestigious gastronomy professionals Pepe Rodríguez and Samantha Vallejo-Nágera, judges from the well-known Masterchef television competition.

With this initiative, Endesa wishes to continue promoting e-mobility as the engine of change toward a new zero emissions energy model, a key tool in the struggle against climate change.

ability are fundamental lines of action, wishes to involve its employees by offering specific solutions, thus providing an opportunity to take specific steps to encourage a change of behaviour in favour of a more sustainable energy culture.

As part of the E-Movement, on 10 May 2018, ENDESA launched the fourth edition of the Employee E-Mobility Plan with the goal that new employees might decide to test the advantages of the electric vehicle (EV), in order to reduce the pollutants and greenhouse gas emissions caused mainly during their commute to work.

This new Plan designed a value proposition for the employee comprised of the following elements:

- > 100% electric cars.
- > Offer of installation of an *ENDESA Comprehensive Solutions* domestic recharge point in the home.
- > Additional benefits, such as preferential access to a pool of parking spaces reserved for electric vehicles at the offices and the possibility of emergency recharges
- > An all-inclusive *renting* offer giving access to an electric car for 36 months to break the technological obsolescence barrier.
- > An economic incentive to contribute to the purchase or *renting* of the electric vehicle in exchange for the employee's cooperation in aspects related to the dissemination and image of the project.

Finally, on 31 December 2018, the Plan was wrapped up with 154 new recruitments of company employees with an electric Vehicle and 202 renewals of previous plans.

The aggregate results of the 2015, 2016, 2017 and 2018 Plans represent a total

To this end, ENDESA carries out a number of initiatives to boost the development of e-mobility in three supplementary directions: promotion and dissemination, technological development and commercial offering.



2.2.1. The Mobility Plan for Employees

ENDESA, in line with its strategic positioning, where innovation and sustain-



ENDESA receives an award for its mobility infrastructure plan

ENDESA X has received the award for the best mobility project for its new Infrastructure Plan for the next five years, issued by Capital Radio, a national chain specialising in economic and business news. The awards have the purpose of recognising the best companies in our country that drive our economy.

of 659 electric cars among ENDESA's employees, representing on average 5% of the total market share over these four years. These 659 electric cars in circulation will not only prevent the emission of 1,318 tons of CO₂ annually,

but at the same time will also contribute to reducing the emissions of NO_x and other pollutants that impact people's health, especially people who live in cities.

By means of this initiative, ENDESA's employees have become ambassadors of the mobility of the future and a referent for society, contributing to the furtherance of e-mobility and to the change toward sustainable consumption habits. Overall, almost 7.5% of the staff is driving around with zero emissions as a result of these four editions of the plan. The new vehicular traffic restriction measures recently implemented in cities such as Madrid or Barcelona for polluting cars further bear witness to the need to implement sustainable mobility policies among which electrification of transportation figures as a key option to achieve this goal.

ENDESA's objective is not only to promote these mobility habits among its employees, but via these, to launch a message to society and to achieve an ever greater penetration of electric vehicles in cities, making this technology available to other citizens and favouring an improvement in air quality in cities, and its corresponding impact on people's health.



IMPACT OF THE EMPLOYEE E-MOBILITY PLAN IN 2015-2018



659 electric vehicles purchased by employees in four years



5% of the total market share of electric vehicles in four years

CO₂ free

+1,318 tons of CO₂ prevented per year





ENDESA E-Mobility Climate Project 2018

The CLIMATE Projects of the Carbon Fund for a Sustainable Economy (FES-CO2) are projects for the reduction of GHG emissions developed in Spain. Every year the FES-CO2, a climatic financing tool of the Ministry, holds a call for the selection of Climate Projects that promote a transformational path for the Spanish production system leading to a low-carbon model.

ENDESA's E-Mobility Program was selected at the 2016 Call for CLIMATE Projects, an award presented by the former Ministry of Agriculture and Fishing, Food and the Environment, which is a significant recognition of the methods used to combat climate change developed by the company. In this case, these measures include promotion of the use of electric vehicles in place of internal combustion vehicles for personal and professional travel for ENDESA's employees. The programme selected is developed based on two main activities: The Employees' E-Mobility Plan and the Mobility Plan through E-carsharing. The aim of these initiatives is to reduce greenhouse gas emissions (GGE) through the promotion of the use of 100% electric vehicles for commuting by ENDESA employees. This recognition demonstrates that electric vehicles play a fundamental role in the reduction of GHG emissions and help Spain to achieve its objectives in the struggle against climate change.

The project CLIMATE 2016 may incorporate new activities over four years (2016-2019), provided that they are within the limits of maximum reduction of GHG emissions planned for the project. That

has allowed incorporating new activities from the E-mobility and E-carsharing Plan in 2018. Therefore, in 2018 the new edition of the Employee Mobility Plan was submitted and recognised by the Ministry for Ecological Transition as a Climate Project, allowing ENDESA to continue with its commitment to e-mobility and its commitment to reduction of GHG emissions.

For further details on climate projects, see section 1.6.2. of the Chapter *Low-carbon business model*.

2.2.2. E-mobility policy for managers

ENDESA has launched a new plan for the electrification of the fleet of its managers' company cars. The aim is that in four years, 4 out of every 10 vehicles in this segment will be hybrids or 100% electric (10% of the total fleet, consisting of about 216 cars). The project is part of the E-Movement.

To encourage the managers to choose this type of model, the company will increase the amount they receive for renting and facilitate recharging infrastructure at their offices.

In the cases where the choice continues to be a traditional internal combustion vehicle, the company will reduce the emissions of this segment even below the stipulations of the European Directives.

The plan for the replacement of the managers' company car fleet by another which is less pollutant is another of ENDESA's measures to develop an energetically more sustainable transport model and thus, to improve the quality

of life in cities, where 70% of the population will live in 2050 (currently 50%).



2.2.3. Sustainable management of ENDESA's fleet

Another of ENDESA's lines of action to promote sustainable mobility is that related to the management of its own fleet. For several years, ENDESA has implemented related measures designed to optimise its fleet, reducing the number of internal combustion vehicles and promoting its electrification.

Thus, in 2018 ENDESA had a total of 100 electric vehicles and 529 hybrid vehicle, which together represented almost 30% of the fleet, 6% more than in 2017. In order to continue to move forward in this field, ENDESA's new 2019-2021 Sustainability Plan reflects the actions and objectives defined in the E-Movement and establishes the following goals:

Another scope of operation is the promotion of the sustainable mobility of its employees in their workday commute. Thus, the company considers two fronts within the E-mobility :

> Promotion of the E-carsharing service:

This service, which began in 2016, continued to develop during 2018, aims the provision of electric vehicles for employees at main ENDESA offices for their business travel needs. Thus, in 2018, 87,745 km were travelled with these vehicles, which entails over 282,000 km since their commissioning. It is expected to reach a rate of 150,000 km annually in 2021.



> Responsible management of taxi usage:

ENDESA has provided its employees since 2016 with a mobile application they can use to share taxis with other employees for work-related travel. In 2018, 24% of services managed through the application have been shared, which means that 44% of users have shared on some occasion. For 2021, it is expected to reach 49 % of users who opt to share taxi usage for their commutes. In addition, the application prioritises the use of taxis that operate with the following technologies: electric, hybrid or natural gas. In 2018, 70% of kilo-

metres travelled were done with this type of taxi and it is expected to exceed 76% in 2021.

> Alternative mobility solutions for employees

During 2018, as part of the E-Movement, ENDESA commissioned other solutions to contribute to employee sustainable mobility, such as 'Carsharing', a digital application that enables employees from the main offices to share a private vehicle in their daily commutes between home and the workplace. Additionally, as a supplement to the E-carsharing service, 'E-bike' has put into operation at the Borbolla office,

an electric bicycle pool made available to employees for work and private activities. Throughout 2019, it is expected that this service will be extended to other territorial offices such as Ribera del Loira, Vilanova or Aznar Molina, as well holding pilot tests with electric scooters at the regional offices in Barcelona and Madrid.

Sustainable management of the fleet has made it possible to achieve a reduction in fleet CO₂ emissions by 12.9% compared to 2017. Likewise, according to the established goals, a further reduction of 14% is expected in 2020, compared to the 2018 result. ■■■





2.2.4. Innovation and technological development of e-mobility

Smart and ENDESA launch the first public charging network in order to tour IBIZA in an electric car

Smart and ENDESA have deployed the first public charging network in order to tour Ibiza in an electric car. The semi-fast recharging network, has five chargers with two stations at each one, strategically located for travelling throughout the entire island with no fear of being out of battery power. At these stations, charging from 10 to 80% of the Smart EQ battery takes less than 40 minutes.

The new charging network is supplied with energy from a renewable source and is linked to the ecaR app. This app for new mobile phones already operating successfully in Mallorca, allows members to locate the nearest recharging points, reserve them, find the best route there, calculate the travel time and pay.

All chargers on the island are universal 22 kW. The user only needs to download the app for free from the Club Endesa ecaR (available at Google Play and at the Apple App Store) to begin enjoying the experience of easy, simple and worry-free e-mobility. Also, if not registered in ecaR, it is possible to charge with no complications by downloading

the app and paying by credit card, without needing to have a signed contract with ENDESA. Thus, universal access to the network is ensured.

In March of last year, Smart and ENDESA signed an alliance to promote e-mobility, breaking down entry barriers and enabling the public to join 'zero emissions mobility'.



2.2.5. ENDESA's e-mobility tender

ENDESA X try to boost e-mobility by developing solutions that meet the different users' needs, through implementation of charging stations for public use and offering private recharging solutions that are more adapted to private and company use.

To that end, ENDESA X has developed a complete range of comprehensive infrastructure of proprietary technology for public and private access as well as a Comprehensive Mobility Services plat-

form that offers advanced management services.



Charging stations for public use

ENDESA, which has been operating public access infrastructures since 2012, has published its Plan through which it will install over 8,500 public access points by 2023, with a total investment of 65 million euros, guaranteeing broad coverage in urban zones, at main strategic access nodes and the islands. All infrastructure deployed in the Plan will be connected to the Enel X global

digital platform, which will enable interoperability and remote control of the recharging points. ENDESA X has the goal of offering a seamless charging experience through its mobile app that will provide users with complete access to information about the status of the charging infrastructure and will enable managing charging sessions.



Recharging stations for private use

ENDESA's e-mobility plan includes private recharging, offering packages with everything included (charging station,

installation, maintenance and smart charging), both for private users and companies.

> Recharging services for private users

ENDESA X has developed recharging solutions for domestic use conceived for private owners of electric vehicles. The home is the main recharging point, where the e-car can be charged during long pauses, in particular, during the night.

The comprehensive domestic recharging solutions are specified in the universal charging equipment designed to charge the electric vehicle under maximum safety conditions, that also include

maintenance, warranty and payment facilities. Recharging with charging stations offers important inducements, such as the possibility of scheduling distance charging in terms of hourly cost of the electric power or other needs and of obtaining information about the charging status in real time.

Additionally, ENDESA uses the Electric Vehicle ZeroTime rate, designed specifically for users of e-mobility, which permits charging the electric vehicle at no cost at certain times, besides protecting the environment.

> Recharging services for companies

ENDESA X makes the most innovative products available to companies with

an electric vehicles fleet to guarantee a customised charging solution.

In addition to the physical infrastructure, a commercial offer directed expressly toward corporate clients has been developed, which includes a series of extra services, from the initial consultation to accompany customers during the transition to e-mobility, helping them to select the solution that best meets their needs. ENDESA offers a complete solution that includes installation, equipment supply, maintenance associated of the infrastructure, to remote management with all of the use information from the charging infrastructure.



Left to right: Elena Bernárdez, head of e-mobility at ENDESA X; José Bogas, Managing Director of ENDESA; Borja Prado, President of ENDESA; Josep Trabado, General Manager of ENDESA X, and Francesco Venturini; Head of Enel X.

ENDESA will install over 100,000 recharging points for electric vehicles in the next 5 years

On 16 November 2018, ENDESA announced its Plan to install over 108,000 public and private recharging points for electric vehicles in Spain, which will be executed by ENDESA X, the new business line that offers value-added services and innovative technological solutions in the energy world.

With the deployment of over 8,500 public recharging points in 2019-2023, which entails an investment of 65 million euros, as well as around 100,000 private points, ENDESA

launches by far the most ambitious plan to promote e-mobility put into operation in Spain.

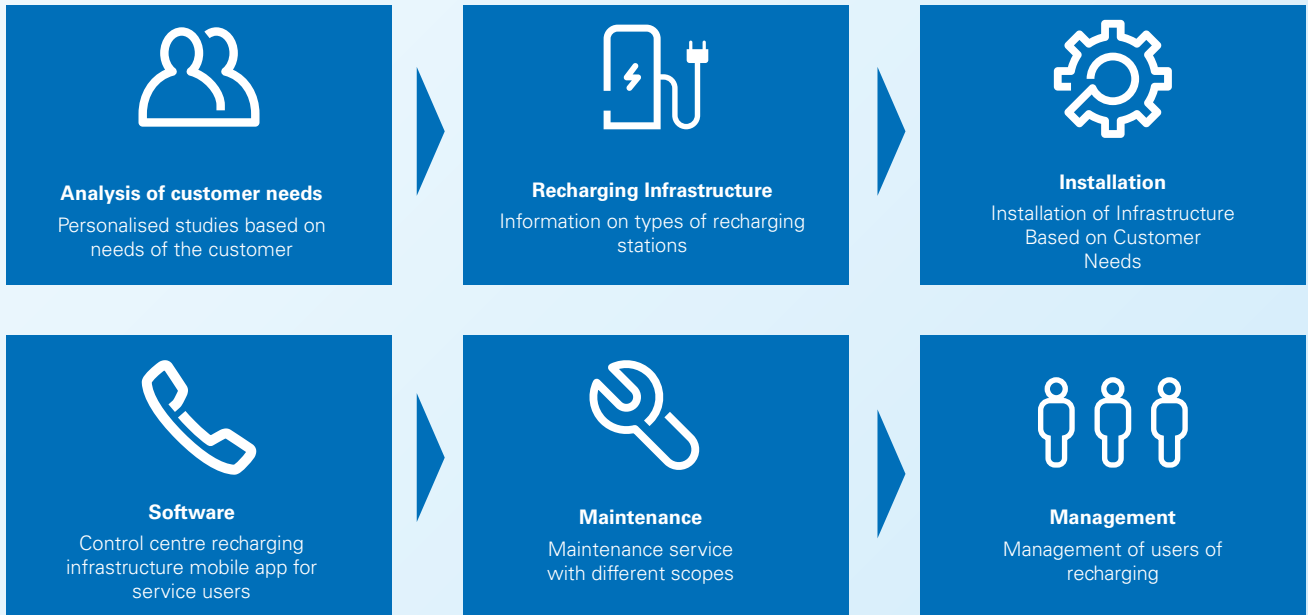
Electricity supplied to over 8,500 public access recharging points will be 100% certified from renewable sources, which ensures that this energy will come from clean generation sources.


E-mobility is a strategic pillar for ENDESA, since it deals with a key element to move toward a totally decarbonised energy system by 2050.





COMPREHENSIVE E-MOBILITY SOLUTIONS FOR COMPANIES



For more information about electric vehicles, see section 1.3.3. *Transition Risks*, from the Chapter *Low-Carbon Business Model*. 





Environmental Sustainability





1,705

Millions of euros of accumulated environmental investment

100

% of the generation and distribution certified by ISO 14001

89.6 and 49.9

% reduction of SO₂ and NO_x emissions compared to 2005

25

biodiversity actions performed in 2018

Endesa Sustainability Plan compliance 2018-2020

	Course of Action	2018 Objective	Result 2018	Key actions
<p>Environmental Sustainability</p>	Reduction of environmental footprint (vs 2016 estimate)	10.70%	22.1%	<ul style="list-style-type: none"> > Energy efficiency improvement programmes: <ul style="list-style-type: none"> - Process redesign - Equipment revamping - Changes in employee conduct
	Specific SO ₂ emissions (g/kWh)	0.76	0.64	<ul style="list-style-type: none"> > Implementation of efficiency and environmental protection measures at facilities. > Installation of new Automatic Metering Systems for atmospheric emissions in the chimneys of 15 combustion facilities begins: Ten turbines of the Canary Islands thermal power plants and five turbines of the Balearic Islands.
	Specific NO _x emissions (g/kWh)	1.09	0.95	
	Specific particulate emissions (mg/kWh)	28	21	
	Specific water consumption in generation (m ³ /MWh)	0.88	0.8	<ul style="list-style-type: none"> > Reuse of surplus water from plant operation in the desulphurisation process at the Teruel thermal power plant. > Reuse of a portion of bleed water in the desulphurisation process at Litoral de Almeria thermal power plant. > Increased recirculation cycles in the cooling towers.
	Hazardous and non-hazardous waste in generation (ton)	45,202	57,496	<ul style="list-style-type: none"> > Gradual removal of polychlorinated biphenyl (PCB) transformers and gradual replacement with PCB-free transformers. > Gradual removal of components containing asbestos in buildings and auxiliary structures.
	Execution of biodiversity conservation projects	>20	25	> Development of a project to launch and apply a biodiversity indicator system.
	Electrification of the fleet (electric vehicles)	299	100	> 94 electric vehicles currently in service in our fleet.
	Electric vehicles purchased by employees	750	659	
	Electrification of parking places at Endesa branches	451	461	> 5 car parks for electric vehicles, with a total of 165 spaces.
	Furtherance of e-carsharing (km travelled)	100,000	87,745	> 20 electric vehicles in service.
	Reduction of CO ₂ emissions in fleet management (tons CO ₂)	4,062	4,468	> More than 10 tons of CO ₂ avoided.
	Power consumption in buildings (%)	-0.5%	2%	> Optimisation in the use of space: Amount of office space reduced by 6,240 m ² .





(continued)

Endesa Sustainability Plan compliance 2018-2020				
	Línea de actuación	Objetivo 2018	Resultado 2018	Acciones a destacar
 Environmental Sustainability	Water consumption in buildings (thousands of m ³)	-0.5%	-10%	> 15 branches have a triple certification system: ISO 14001, ISO 50001 and UNE 171330-3.
	Overall reduction in office space (m ² reduced)	18,625	6,240	
	Investment for the integration of space into the surroundings (million €)	22	11.5	
	Social and environmental actions on company assets	10	11	> 11 sustainability actions on assets in disuse, including: <ul style="list-style-type: none"> - Formalized assignment of premises in Hospitalet de Llobregat to the Archbishopric of Barcelona for use by Caritas (Barcelona) for social purposes. - Formalized assignment of recreational centre to the Seira City Council for recreational use (Huesca). - Formalized authorisation to the Binefar City Council for environmental use of land by means of installation of a paper, plastic, glass and other container recycling station (Huesca).
 Operating efficiency and Innovation	Efficiency of the renewable wind power facilities (availability)	95%	94.60%	
	Efficiency of the renewable hydraulic power facilities (availability)	98.20%	98.70%	
	ISO 9001-certified thermal generation facilities	100%	100%	> ENDESA Generación renewed the integrated multi-site certification of its thermal power plants according to ISO standards 9001, 14001 and the OHSAS standard 18001 in 2018.
	ISO 9001-certified renewable generation facilities	100%	100%	
	Electricity losses in distribution (%)	7.70%	7.49%	

1. Environmental management

103-1 Management approach - Materials

103-2 Management approach - Materials

103-3 Management approach - Materials

103-1 Management approach - Energy

103-2 Management approach - Energy

103-3 Management approach - Energy

For ENDESA, sustainable development is a cornerstone of its strategy, including the protection of the environment as one of its most important commitments. This attitude is a sign of positive and differential identity for the Company, since it is an essential principle of behaviour that is expressly set down in its corporate values.

Through this commitment, the aim is to minimise the impact of ENDESA's indus-

trial activity in the environment where it operates. It fundamentally tackles aspects related to the fight against climate change, correct waste management, atmospheric emissions, dumping, polluted soils and other potential negative impacts.

Furthermore, ENDESA's environmental management has the objective of the sustainable use of natural and energy resources, committing to protecting

biodiversity and the ecosystems of the environments where it operates.

The assessment of the environmental risks associated to execution of company activities and the environmental certifications granted by external bodies help to ensure excellence in ENDESA's environmental management, which is integrated and aligned with its corporate strategy.



ENDESA participated in CONAMA 2018 under the motto 'Energy for a new era'

Endesa was once again a strategic partner at the 14th National Environment Congress (CONAMA), held in Madrid in November under the motto Destination 20.30.

The authorities visit Endesa's booth at the CONAMA opening event. From left to right: Gonzalo Echagüe Mendez de Vigo, President of the CONAMA Foundation, Carlos Izquierdo, Regional Minister of the Environment and Territorial Planning for the Community of Madrid, Teresa Ribera, Minister for Ecological Transition, José Casas, General Manager of Institutional Relations and Regulation at Endesa, and Jorge Arosemena, President of Foundation Ciudad del Saber (Panama).

Endesa's participation was divided into different workgroups, which presented their conclusions over the course of the Congress and in a permanent booth in the exhibition area, where information was shared based on three cornerstones: leading the energy transition, sharing experience and knowledge, and preserving the environment.

Endesa also took part in CONAMA Kids, in which the Endesa Foundation organised a workshop on the energy transition for secondary school students.





1.1. ENDESA's Environmental Policy

- 103-1 Management approach - Materials
- 103-2 Management approach - Materials
- 103-3 Management approach - Materials
- 103-1 Management approach - Energy
- 103-2 Management approach - Energy
- 103-3 Management approach - Energy
- 103-1 Management approach - Environmental Compliance
- 103-2 Management approach - Environmental Compliance
- 103-3 Management approach - Environmental Compliance

ENDESA approved and published its first environmental policy in 1998. Since then, it has evolved to adapt to the current environmental concerns.

ENDESA considers environmental excellence to be an essential value of its business culture. With this in mind, it operates in a way that respects the environment and following principles of sustainable development. It is also firmly committed to conservation and the sustainable use of the resources it uses.

In compliance with its environmental commitments, ENDESA applies the following basic principles for acting that make up the foundation of its environmental policy:



ENDESA's environmental policy

Basic principles for acting

- > Integrating environmental management and the concept of sustainable development into the corporate strategy of the Company, using environmental criteria documented in the planning and decision-making processes as well as in the process of analysing new business opportunities, mergers or new acquisitions.
- > Maintaining continuous monitoring of compliance at all centres with legislation in effect and voluntary agreements adopted, and periodically reviewing the environmental behaviour and safety of its facilities, reporting the results obtained.
- > Establishing satisfactory management systems based on continuous improvement and focusing on prevention of pollution.
- > Making sustainable use of energy, water and raw material resources, and measuring and reducing environmental impact through the implementation of the best available technology and practices.
- > Protecting, conserving and promoting biodiversity, ecosystems and their services in operations related to ecosystem activity, reducing negative impact to a minimum and offsetting residual impact, aiming at No Net Biodiversity Loss.
- > Contributing to the struggle against climate change through progressive decarbonisation of the energy mix, fostering development of renewable energy, energy efficiency and the application of new technologies.
- > Promoting sensitivity and awareness of environmental protection, providing internal and external training in cooperation with authorities, institutions and civic associations in the areas where activity is developed.
- > Creating a constructive dialogue with Public Administrations, official entities, shareholders, customers, local communities and other stakeholders.
- > Requiring its contractors and providers to implement environmental policies based on these same principles, covering all the processes along all of its value chain.

1.2. Environmental objectives

102-11

ENDESA revises its environmental objectives established in the Sustainability Plan annually in order to update its ambition and bring them in line with the expectations of its stakeholders. Con-

sultations made within the framework of the 2018 materiality study brought to light that the most relevant environmental issues for promotion of a sustainable business model are the decarbonisation

of the energy mix and minimization of environmental impacts. Thus, ENDESA has set the following objectives for 2021 in its 2019-2021 Sustainability Plan.

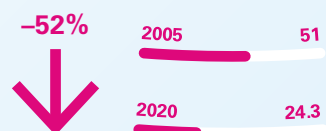


32% REDUCTION IN ENDESA'S DIRECT ENVIRONMENTAL FOOTPRINT IN 2021 (vs 2018)



Decarbonisation

Absolute CO₂ emissions (Mton)



Specific CO₂ emissions (g/kWh)



2021



-17%

Fleet CO₂ reduction (vs 2018)



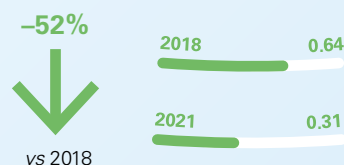
-17%

Building CO₂ reduction (vs 2018)



Air quality

Specific SO₂ emissions (g/kWh)



vs 2018

Specific NO_x emissions (g/kWh)



vs 2018

Specific particulate emissions (g/kWh)



vs 2018



Water consumption (m³/MWh)



Waste management

Waste production in generation

<37,000 tons in 2021

Product reuse of combustion products in coal-fired power plants (ash, tailings and gypsum)

35% in 2021

Closures: Reduction in electricity losses

2015 9.90% 2017 8.12%

2016 8.41% 2018 7.50%

Targets: Reduction in electricity losses

2018 9.65%

2021 8.89%

1.3. Significant investment effort

ENDESA makes a significant effort to achieve excellence in environmental management.

In 2018, the investments made by ENDESA in environmental activities represented a 4.3% increase in accumulated investments compared to 2017.



Annual gross environmental investment

	Millions of euros		% Var.
	2018	2017	
Property, plant and equipment			
Generation and Marketing	64	92	(30.4)
Distribution	6	18	(66.7)
Structure and Other ¹	—	—	N/A
Total	70	110	(36.4)

Accumulated Gross Investment Environment

	Millions of euros		% Var.
	2018	2017	
Property, plant and equipment			
Generation and Marketing	1,354	1,290	5.0
Distribution	351	345	1.7
Structure and Other ¹	—	—	N/A
Total	1,705	1,635	4.3





Annual Environment Expenditure

	Millions of euros		% Var.
	2018	2017	
Annual Expense			
Generation and Marketing	78	69	(13.0)
Distribution	32	31	(3.2)
Structure and Other ¹	—	—	N/A
Total²	110	100	(10.0)

¹ Structure and Services.

² Of the total environmental expenditure, 47 million euros in 2018 and 45 million euros in 2017 match to depreciation amortisation of the investments

Itemisation of investments

	2018 (Millions of euros)*
Waste management	0.79
Protection of atmospheric air	9.99
Protection and decontamination of soil, groundwater and surface water	3.62
Reduction of noise and vibrations	1.39
Protection of biodiversity	0.99

*The breakdown only includes the most relevant investments and applies different criteria than the criteria established in the General Accounting Plan.

1.4. Management of environmental risks and impacts

To comply with the requirements of the Spanish Environmental Responsibility Law, ENDESA has developed the MIRAT Project, which aims to establish the compulsory financial guarantee required by this law for conventional thermal and combined-cycle power plants with a thermal capacity of over 50 MW, through an environmental risk analysis.

The methodology used to perform the environmental risks analysis was created at the sector level and approved by the Spanish Ministry for Ecological Transition.

In view of the results of the environmental risk analyses of all our thermal power plants and combined cycle plants, and pursuant to the deadlines set under Ministerial Order APM/1040/2017 of 23 October 2017, in 2018 the statements of compliance were submitted to the Administration showing that these environmental risk analyses were conducted and that it is not compulsory for our thermal power plants and combined cycle plants to set a financial guarantee by virtue of the exemptions set forth in paragraphs a) and b) of article 28 of Act 26/2007, of 23 October, on Environmental Responsibility.

As a result of its commitment to protecting the environment, ENDESA fe-

els obliged to eliminate environmental liabilities, and, therefore, each facility identifies these liabilities and addresses them within the framework of their environmental management programmes,

which may result in their elimination, final disposal or reuse.

1.5. Environmental management systems

ENDESA is committed to achieving excellence in the environmental management of its business activity through the value chain. Hence, its 2018-2020 Sustainability Plan established the objective of maintaining

100% of its generation and distribution facilities certified for International Standard ISO 14001. This objective, which has been fully fulfilled in 2018, is maintained in the new 2019-2021 Sustainability Plan.

1.5.1. Certification of environmental management systems



1.5.1.1. Thermal generation

At year-end 2018, all of ENDESA's installed thermal capacity was certified according to the standard UNE EN ISO

14001:2015 as well as all of its port terminals and mining operations.



ENDESA Generación renewed the integrated multi-site certification of its thermal power plants according to ISO standards 9001, 14001 and the OHSAS standard 18001 in 2018, adapting the Integrated Management System to the high level structure and requirements set under standard versions 9001:2015 and

14001:2015. It also integrated the requirements of ISO standard 50001 Energy Management into the System (20% of the thermal power plants are certified under this standard), thus achieving a firm, consolidated and aligned management and control scheme.

What is more, 78.3% of the installed net power or capacity of all the thermal power plants as a whole comes from plants registered with the European Eco-Management System and Audit Scheme (hereinafter, 'EMAS'). Likewise, all port terminals are registered in EMAS.

1.5.1.2. Renewable generation

ENDESA's management system has been certified for all of its facilities (hydraulic, wind, solar and biogas) since

2017, meeting the international standards ISO 14001, ISO 9001 and OHSAS 18001.

1.5.1.3. Distribution

All of the energy distributed by the company and its infrastructures is included within the scope of the certified Environmental Management System, which ensures that the environmental impacts that could be generated by its facilities and operations are regularly and sys-

tematically identified, monitored and controlled. This management system is based on international standard ISO 14001:2015 and is audited annually by an official accreditation agency. Specifically, in 2018 the company renewed its ISO 14001 certification, so

that it is now valid for a three-year period. The external audit was conducted in the final quarter of the year by the Spanish Association for Standardisation and Certification (AENOR), which confirmed the involvement of the entire organisation in meeting the environmental





objectives and targets established in line with the corporate strategy.

One of the environmental initiatives worth noting in the field of environmental management was the launch of an internal training campaign to raise awareness about environmental issues, in which more than 1,600 employees participated. Environmental training also helped bolster the skills of key staff members on subjects such as noise control, felling and pruning, transport of dangerous goods and waste (ADR), etc.

In addition, external communication channels have been reinforced in terms of environmental issues through the development of a specific section included in the design of the new corporate website. In the field of digitalisation, taking advantage of synergies generated with the initiatives underway for the implementation of new digital tools and platforms; the environmental information associated with the main types of financial and operational transactions was reviewed.

works were made in 2018 to update several documents relating to the Environmental Management System. For example, the environmental indicators model and the method for assessing them was revised in order to conduct a more in-depth analysis of the significance of environmental aspects relating to the company's activities and infrastructures. The technical instruction referring to environmental control for construction projects and work was also updated.



1.5.1.4. Marketing

Within the Integrated Management System that certifies the gas and electricity supply activity according to the ISO standards for Quality and Environment, improvements in the management processes continued in 2018, thus ensuring compliance with legal requirements and

the objectives sought by the organisation.

In late 2018, the scope of the certification according to ISO 9001 Quality Management for technical and financial management of products and services related to energy for industrial custo-

mers and public administrations was extended to cover technical and financial management of products and services related to energy for private customers and small businesses.



1.5.1.5. ENDESA offices

In 2018, the Omeya-Cordoba, La Catalana-Manresa and Aznar Molina-Zaragoza buildings were included in the SIGAEC triple certification system (Environmental Management (ISO 14001), Energy Efficiency Management (ISO 50001) and Indoor Environment Quality (UNE 171330-3)).

Some 5,340 employees work at certified branches, representing 72% of the workforce, and accounting for 61% of the total office area.

Enhancements in the control over environmental, energy and indoor environmental quality continued in 2018, successfully ensuring that legal requi-

rements and the planned objectives are met.

Demand for printed documents for consumers continued to drop over the year, leading to a reduction in paper and toner consumption linked to this activity as well as a reduction in paper waste.



1.5.2. Environmental authorisations

The project for the environmental retrofit of the As Pontes de García Rodríguez thermal power plant to adapt it to the European Industrial Emissions Directive was divided into two types of actions:

those aimed at reduction of Nitrogen oxide (NO_x) emissions and those aimed at reduction of sulphur oxide (SO_x) emissions. The work for the first of these has been completed and the facilities are in

service, and the second type of adaptation is currently in the execution phase. In addition, certain production units pertaining to plants located in non-mainland territories have also been affected

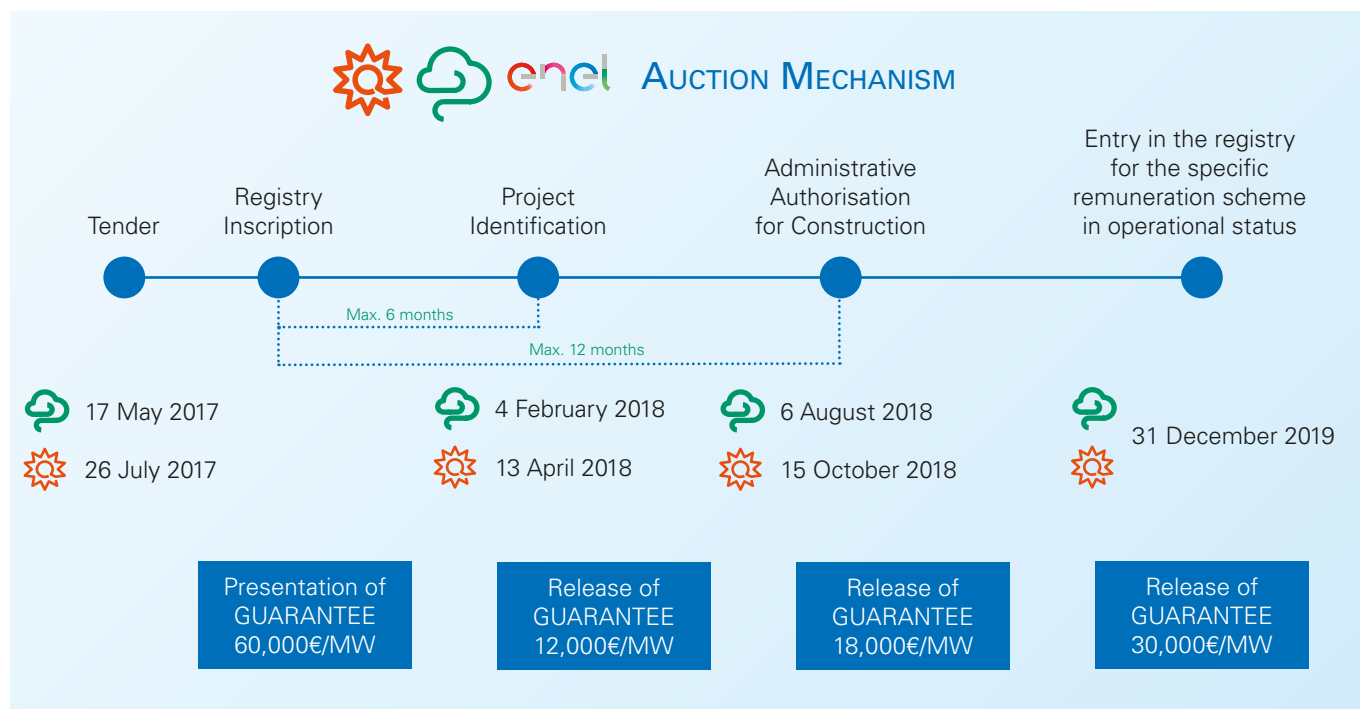
by the new environmental regulations, therefore, significant investments must be made to reduce the concentration of certain pollutants present in their atmospheric emissions before 1 January 2020.

This is the case with steam units 1 and 2 at the Barranco de Tirajana plant (Gran Canaria), steam units 1 and 2 at the Granadilla plant (Tenerife), and gas turbines 3, 4 and 5 at the Mahon plant (Menorca). Enel Green Power España was awarded 540 MW of wind power and 339 MW of photovoltaic power in the auctions held

in 2017. As a requirement for participation in the auction, a guarantee amounting to 60,000€ per MW awarded had to be deposited. In 2018, the requirements set in the first two milestones of the auctions were to be met: identification of projects and obtaining administrative authorisation for construction for the MW granted.

Enel Green Power España completed 100% of the two milestones in 2018: on 4 February 2018 the wind projects were identified, and on 13 April 2018 the photovoltaic projects were identified. Fulfil-

ment of the first milestone gave rise to the release of the first 12,000€ /MW. As regards the second milestone, on 6 August Enel Green Power España provided proof that it had obtained the administrative authorisations for construction of a total of 540 MW of wind power, and on 15 October 2018 it submitted proof of the administrative authorisations for construction of a total of 339 MW of photovoltaic. Fulfilment of this second milestone gave rise to the release of the second tranche, of 18,000€/MW.



1.6. Management of nuclear activity

ENDESA has always been firmly committed to the safe management of its nuclear activity, and this is shown in its nuclear policy, approved by the Board of Directors in 2011 and published on the website of the companies that operate in this activity.

This policy establishes the commitment to act in such a way that all the nuclear investment projects, whether these are as with ENDESA as majority or minority shareholder, include the following as their main priorities: the safety and protection of workers, the general public

and the environment and to promote excellence in all activities beyond mere legal compliance.





1.6.1. Risk Prevention and Management

103-1 Management approach - EUSS Spills and waste

103-2 Management approach - EUSS Spills and waste

103-3 Management approach - EUSS Spills and waste

ENDESA supervises compliance with the nuclear policy for participating nuclear power plants, among which is minimization of discharges of waste into the environment and generation of radioactive waste.

Following the specific technical features of the facilities, ENDESA's nuclear

plants have a continuous monitoring and control system in place for liquid and gas discharges, with very strict limits established by the regulatory body, the Nuclear Safety Council, designed to prevent the environment and the population from being affected. Furthermore, as stated in these specifications, radia-

tion monitoring is carried out of the surrounding environment by analysing the air, water, the soil and widely sampling and analysing foods. These environmental controls are also monitored and inspected by the regulatory body.



1.6.2. Emergency Management

103-1 Management approach - EUSS Disaster/Emergency planning and response

103-2 Management approach - EUSS Disaster/Emergency planning and response

103-3 Management approach - EUSS Disaster/Emergency Planning and Response

All of ENDESA's nuclear plants are prepared for emergency situations with the resources and procedures defined in its Internal Emergency Plan, which is structured according to State regulations. Furthermore, all the measures adopted in preparation for emergencies are coordinated with the State's External Emergency Plans.

The measures to protect the population in the event of an actual emergency are defined by the state authorities following the advice of the nuclear regulatory body and based on the continuous information provided by the emergency centres of the affected nuclear plant and on their own information systems, and the characterisation of the emergency situation ranging from Pre-alert to General Emergency. Preparation for emergencies is guaranteed through regular

exercises and specific training of all the intervening staff.

The stress tests concerning safety margins, which were performed in Spain and throughout the European Union immediately after the Fukushima accident, measured the safety margins in extreme scenarios (earthquakes, flooding, complete power cuts or absence of water for cooling the reactors) in order to check the plants' response and whether measures were necessary to make them more robust in this scenario.

As a result of this exercise, a series of improvements were implemented by all of ENDESA's plants. Among these, for example, is the availability of portable pumping equipment and power generation that can be easily connected to the plant in the event of

a complete blackout, the installation of passive hydrogen recombiners in the containment building, the construction of a new centre for emergency management and filtered venting systems for the containment building's atmosphere.

The regulatory agency maintains a safety supervision system for the power plants called SISC, the results of which are updated quarterly and posted on their web page (https://www.csn.es/sisc/index_i.do) along with the score of each of the power plants. One of the areas assessed is preparation for emergencies and there are three indicators called E1, E2 y E3 that describe the situation of each power plant in this area.



1.6.3. Decommissioning

103-1 Management approach - EUSS Plant decommissioning

103-2 Management approach - EUSS Plant decommissioning

103-3 Management approach - EUSS Plant decommissioning

In Spain, the State is responsible for the decommissioning of nuclear plants and the management of radioactive waste, including spent nuclear fuel. This responsibility is assigned to ENRESA, a state-owned company.

The General Radioactive Waste Plan, an official document approved by the Ministry of Industry which is currently in its sixth edition, describes the scope, planning and economic cases for the fund provisions for decommissioning

and managing the radioactive waste in all Spanish nuclear plants. This fund is contributed by a monthly fee by the owners of the nuclear facilities.



1.7. Environmental Sanctions

307-1

Despite ENDESA's efforts to go beyond the environmental legislation, during 2018 some environmental incidents have been recorded.

For more information, see section 2.7 *Litigation* in the chapter on *Good Governance and Ethical Conduct*.



2. ENDESA's environmental footprint

ENDESA calculates its environmental footprint based on a proprietary calculation methodology involving the most important international benchmarks, among which we can highlight the guides developed by the European Union to calculate the environmental footprint of organisations and products. The environmental footprint allows showing the 'pressure' exerted on the environment by all its businesses.

This year, ENDESA's commitment to excellence in environmental sustainability once again prompted it to set targets for reducing its environmental footprint as part of its 2019-2021 Sustainability Plan, which calls for a reduction of more than 32% by 2021, compared to the figures for 2018.

For 2018, the company established a goal of reducing by 7% compared to 2017. In fact, the figure achieved was a 22% reduction in the footprint value

compared to 2017, thus surpassing the target set by far.

Evolution of the most representative environmental indicators in 2018 has been positive, showing generalized improvement in the separate indicators individually (which are shown in the following sections), and also in the environmental footprint value that represents them as aggregate data. The thermal power plants operated at a lower rate in 2018 than in the previous year, but improve-





ment in this indicator is also seen in this specific value thanks to the implementation of efficiency and environmental protection measures at the facilities.



2.1. Energy Resources

103-1 Management approach - Energy

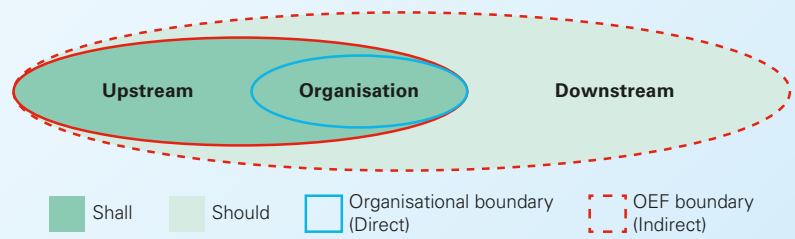
103-2 Management approach - Energy

103-3 Management approach - Energy

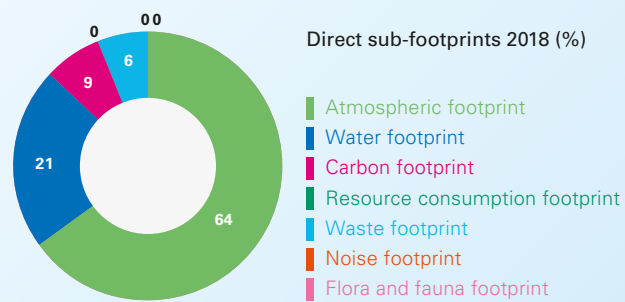
ENDESA upholds its commitment to energy efficiency, spanning everything from generation process optimisation, reduction of losses in distribution grids and in the energy consumption of our buildings and facilities to the offer of a large range of efficient products and services to our customers. ENDESA is also involved in communication and raising awareness in citizens and takes part, both domestically and internationally, in the most relevant knowledge and dissemination forums of energy efficiency.



Organisation Environmental Footprint Guide - CONSOLIDATED VERSION



Organisational and OEF boundaries. Note: Any exclusion (e.g. downstream activities) shall be explicitly justified within the context of the study and the intended application.



2.1.1. Electricity consumption

302-1

In 2018, there was a drop in the consumption of electricity at the thermal and nuclear power plants and the hydroelectric pumping plants due to the

introduction of efficiency measures in conjunction with lower operation of the technologies.



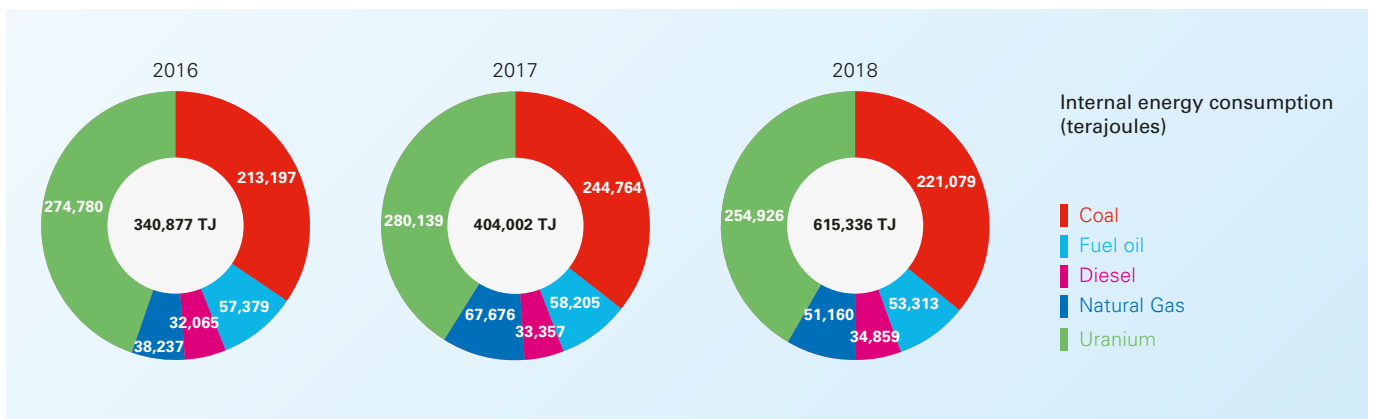
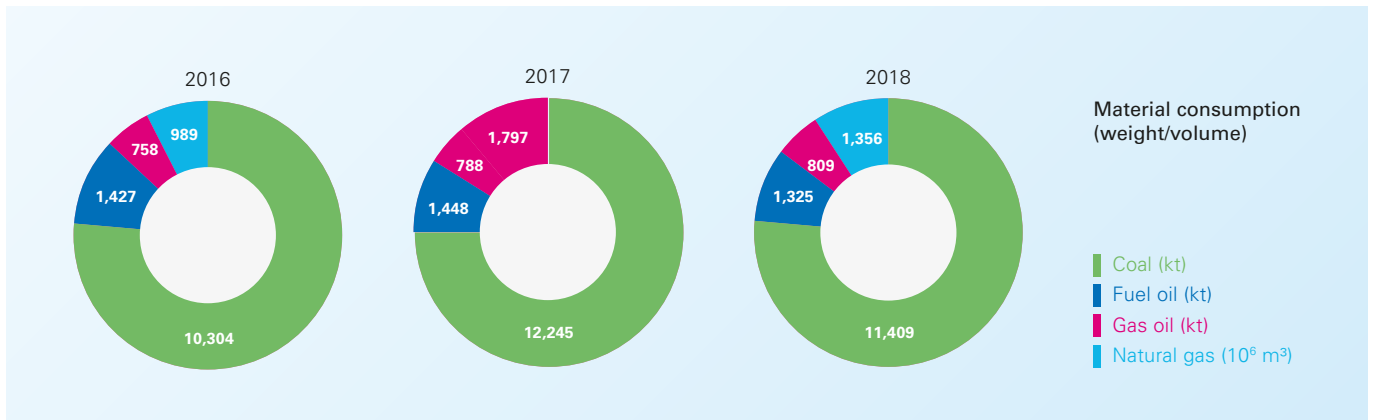
Electricity consumption (GJ)*

	2016	2017	2018
Thermal power unit (TPU)	6,931,183.3	8,162,076.8	7,410,953.4
Hydroelectric Power Unit (HPU)	487,954.0	350,096.4	501,451.8
Hydroelectric pumping stations	3,517,513.5	2,011,836.8	1,319,616.0
Nuclear power	3,861,835.2	3,939,458.4	3,470,428.8
Mining operations	5,977.2	1,682.3	1,279.7
Port terminals	27,092.2	29,250.9	30,196.2
Wind power	154,103.7	688,269.2	472,970.2
Photovoltaic power	567.1	2,153.7	2,645.6
Biomass generation	Included in thermal production	166.0	1,025.5
Office Buildings	95,902.4	100,037.0	103,217.1
Total	15,082,128.8	15,285,027.6	13,313,784.3

*GJ: Giga Joules

2.1.2. Fossil fuel consumption

301-1/302-1



The materials used to produce electricity based on thermal generation are mainly fuels and are considered non-renewable. A drop in almost all fuels was observed due to lower operation of the thermal power plants.

The organization's energy consumption is relative to the fuels consumed for power generation. Electrical self-consumption was not considered to avoid double accounting, since the facilities are supplied from electricity produced by the organization.

302-2

For the year 2018, external power consumption was estimated at 65.41 TJ, considering the fuel expense for vehicles of suppliers who regularly work with ENDESA and the same scope as in previous years. The calculation was done based on a carbon footprint tool verified by AENOR according to UNE EN ISO 14064. The data may be subject to change since, at the time of publication of this document, the external verification process was being performed according to standard UNE EN ISO 14064.

2.1.3. Other Consumption

ENDESA uses other consumables necessary for electricity production. During 2018, total consumption has been 433 kilotons, 25% less than in 2017 (577 kilotons) in Spain and Portugal.

The high rate of urea consumption at the As Pontes thermal power plant due to the start-up of denitrification operations (included in the 'other' category in the table), and the increase in ammonia consumption at the Litoral thermal power plant due to operation of the SCR system are worth noting.





ENDESA consumables (tons)

Spain and Portugal	2016	2017	2018
Lime	570.59	524.41	773.11
Ferric chloride	442.81	450.83	486.87
Ammonia	102.1	707.46	2,711.47
Caustic soda	786.42	959.42	895.8
Sulphuric and hydrochloric acid	440.78	2,074.18	1,668.11
Sodium hypochlorite	621.19	762.18	694.40
Chlorine dioxide	1.16	1.77	0.99
Magnesium oxide	134.31	128.00	129.9
Limestone used for combustion-gas desulphurisation	408,565.11	559,569.94	406,745.43
Lubricating oil	5,763.85	5,423.03	12,328.12
Dielectric oil	242.66	5,751.25	549.65
Other*	350.43	467.40	5,746.35
Total	418,021.39	576,816.87	432,730.19

* Includes chemical components used infrequently.

2.1.4. Energy efficiency and outage in electricity generation

EU11

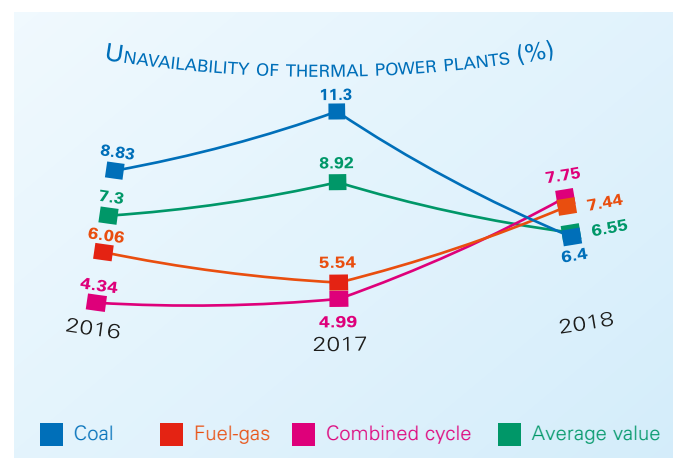
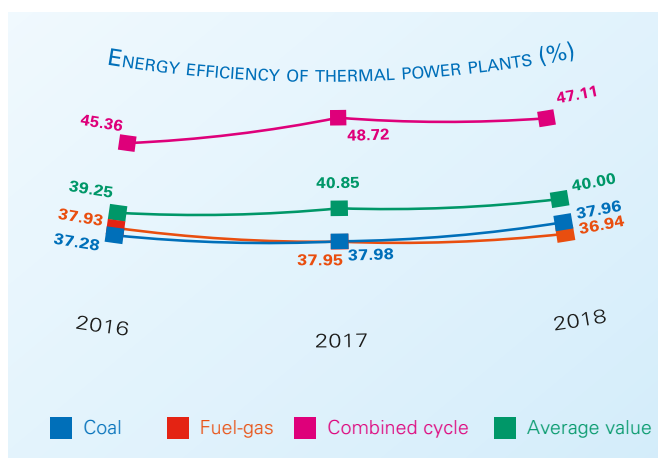
ENDESA upholds its commitment to energy efficiency, spanning everything from generation process optimisation, reduction of losses in distribution grids and in the energy consumption of our buildings and facilities to the offer of a large range of efficient products and services to our customers. ENDESA

is also involved in communication and raising awareness in citizens and takes part, both domestically and internationally, in the most relevant knowledge and dissemination forums of energy efficiency.

For ENDESA's generation business, the energy output obtained from the natu-

ral resources used is primordial. Thus, efficiency at ENDESA's thermal power plants remained at similar values in 2018 as in the previous year.

EU 30



Power plant outage (%)

	Fortuitous outage	Outage for inspections	Total outage
Coal thermal power plants	4.13	2.21	6.4
Combined-cycle thermal power plants (Mainland)	5.89	2.82	8.70
Combined-cycle thermal power plants (outside the Mainland)	2.20	1.99	3.35
Thermal power plants with turbo generator	4.12	1.90	6.00
Diesel thermal power plants	3.87	3.42	7.3
Steam turbine thermal power plants	3.26	4.46	7.70

In 2018, the nuclear power plant efficiency rate was 35.35%, quite similar to the values from the previous year (efficiency in 2017 was 35.36%). The outage rate in 2018 was 17.24 percent, which is higher than the previous year (outage in 2017 was 11.07%) due to the interventions required at the Vandellós II plant.



2.1.5. Energy efficiency in internal processes

302-4

In 2018, ENDESA saved 171 GJ of energy thanks to development of energy efficiency programs, including programs focusing on equipment upkeep and adaptation, which mainly entailed modifications in the lighting systems to convert them to LED. This energy saving

means a decrease in the Company's carbon footprint and contributes to reducing the business' operating costs. During 2018, several efficiency measures were also launched in buildings, but no reduction was observed in their power consumption.

302-3

The energy intensity, understood as total energy consumption (TJ) per net production unit (MWh), in 2018 was 8.29 TJ/MWh, compared with 8.75 TJ/MWh of 2017. The power intensity value is affected by the proportion in the different generation technologies and the operation of each of these during the year.

Domestic power consumption was considered for calculation of power intensity. The total energy consumption figure

Energy savings due to conservation and improvements in efficiency (GJ)

Fuel Type	2016	2017	2018
Process redesign	5,389.22	0	0
Equipment conservation and adaptation	10,322.88	415.78	171.49
Changes in staff behaviour	1,256.81	0	0
Total	16,698.98	415.78	171.49

	Total energy consumption (TJ)	Net production (MWh)	Energy intensity (TJ/MWh)
2016	615,657	69,566	8.85
2017	684,142	78,222	8.75
2018	615,336	74,193	8.29

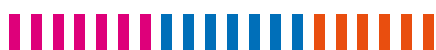


171.78 GJ
energy saved in 2018 due to efficiency measures



Equipment conversion and adaptation

Modifications in the lighting systems to convert them to LED.





used to make the calculation includes the direct and indirect energy consumption, in addition to fuel consumption. Energy consumption deriving from the

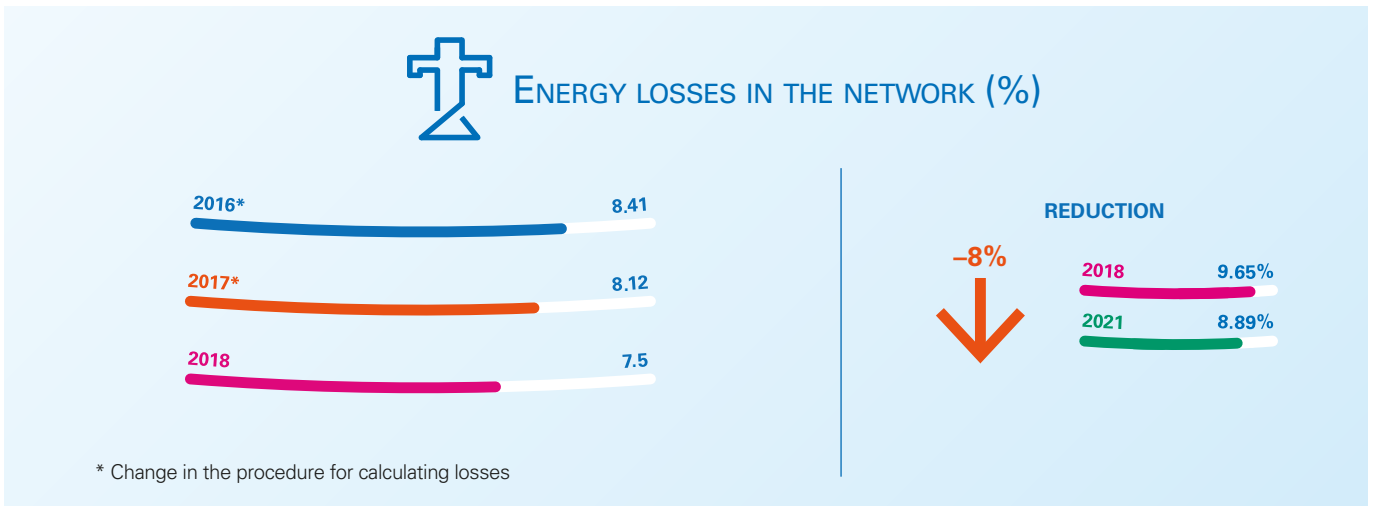
use of uranium was included in the fuel category for the first time in 2018, prompting the power intensity values for 2016 and 2017 to be recalculated in

order to provide a comparable value that shows the evolution over the years.



2.1.6. Energy losses in the distribution network

EU12



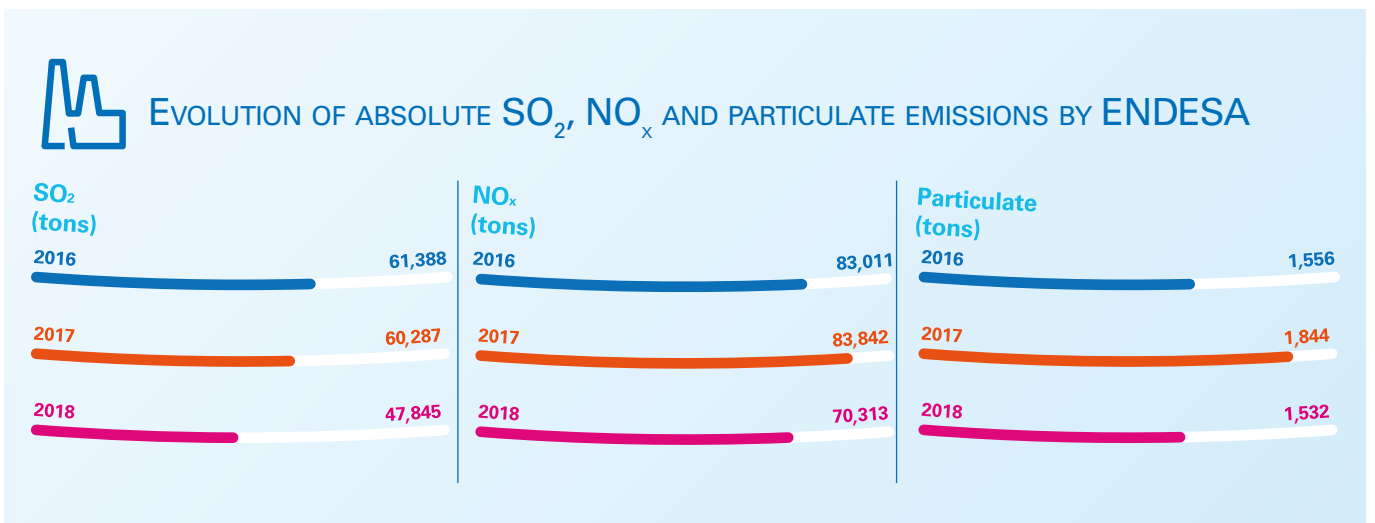
2.2. Air quality

103-1 Management approach Emissions

103-2 Management approach Emissions

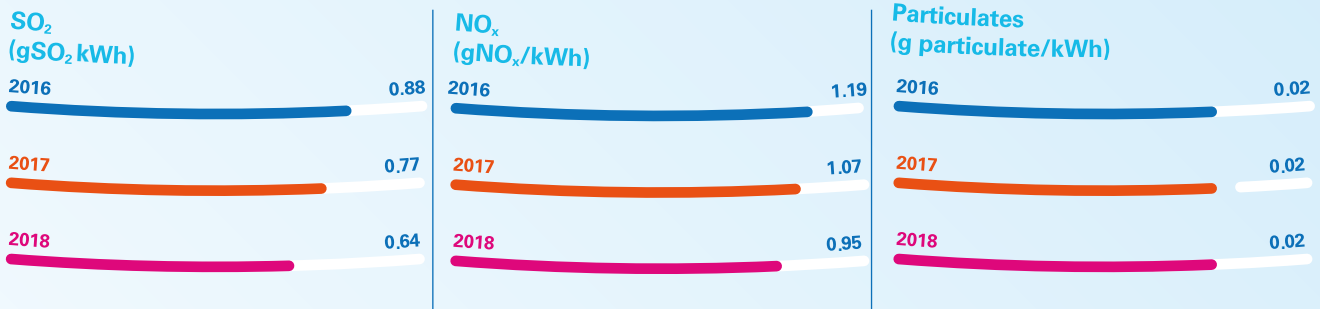
103-3 Management approach Emissions

305-7





EVOLUTION OF SPECIFIC SO₂, NO_x AND PARTICULATE EMISSIONS BY ENDESA



In addition to the drop in emissions of pollutants due to lower operation of the thermal power plants, a significant reduction in specific emissions was observed thanks to the implementation of efficiency and environmental protection measures at the facilities.

ENDESA has a stringent supervision system for all its emissions to control the characteristics and volumes emitted. The Company complies with the parameters required by applicable legislation, implements technologies to minimise emissions and designs and applies corrective measures of the impacts generated.

During the 2008-2015 period, when the National Emissions Reduction Plan (PNRE) was carried out for the Large Combustion Facilities (GIC), the Company performed important actions in its facilities to reduce the atmospheric emissions of the main conventional pollutants (SO₂, NO_x and particulates). Up to 2015, this brought about a reduction of 87% in emissions of sulphur dioxide (SO₂), a 62% reduction in nitrogen oxide (NO_x) emissions and an 83% reduction in particulates with respect to the base year 2006. With the incorporation in the Spanish legal system of Industrial Emissions Directive 2010/75/EU, through Act 5/2013 and Royal Decree 815/2013, new

and stricter environmental requirements are introduced for polluting emissions. Specifically, the existing facilities must respect new requirements and comply with the emission amount limits on the due date for each of the transition mechanisms.

All mainland coal facilities have become part of the Transitional National Plan whereby maximum annual emissions ceilings are established, prompting a progressive reduction of emissions between 2016 and mid-2020. This progressive reduction in emissions ceilings will entail a reduction of over 50% for SO₂ and NO_x and approximately 40% for particulates between 2016 and 2020 for ENDESA facilities taking part in the plan. This mechanism (the Transitional National Plan) means, if possible, greater stringency and greater commitment to decreasing current emissions from ENDESA's main thermal power plants.

Likewise, in terms of new mechanisms established under industrial emissions legislation, the island facilities affected by Directive 2010/75/EC have had recourse to the Small Isolated Network Mechanism, whereby the application of the Limit Emission Values is extended until 31 December 2019.

In 2017, the Best Available Techniques Reference or Best Reference Document

(BREF) for large combustion plants was approved ('Commission Implementing Decision (EU) 2017/1442 of 31 July 2017, establishing best available techniques (BAT) conclusions under Directive 2010/75/EU of the European Parliament and the Council for large combustion plants'). This entails the review and adaptation of the Comprehensive Environmental Authorisations within a maximum of four years for all thermal power plants to adapt them to and adopt the best available techniques regarding environmental performance and management.

ENDESA has undertaken important actions and procedures aimed at complying with the emission levels required by the industrial emissions legislation, such as:

- > At the Litoral de Almeria thermal power plant, denitrification systems (SCR) and combustion gas desulphurisation systems were installed in 2016. Through implementation of these measures, the plant can reduce its emissions to the future emission levels established by the new industrial emissions legislation and is a benchmark for best available practices. Considering specific emissions, reductions of about 70% were achieved for SO₂ and 30% for NO_x.





- > The As Pontes power plant is currently in the process of implementing denitrification (SNCR) techniques with urea injection and wet desulphurisation. These systems have been designed not only to meet the limits set under Directive 2010/75 on Industrial Emissions but also to reach the BREF (Best Available Techniques Reference), leading to very significant reductions of SO₂ and NO_x emissions compared with current values. The actions are planned to begin in 2019.
- > Also in relation to Directive 2010/75 on industrial emissions and the BREF for large combustion plants, abatement measures are in the process of being studied and authorised for certain units at the thermal power plants in Mahon, Barranco de Tirajana and

Granadilla, and foster to limited operation schemes for certain facilities at the Jinamar, Candelaria and Alcludia thermal power plants.

- > Finally, the scheduled closure of the Compostilla and Teruel thermal power plants in 2020 and for units 1 and 2 at Alcludia no later than 1 January 2020, must also be noted.

As well as the major investments aimed at reducing emission levels, ENDESA's facilities continue to make small modifications within the continuous improvement process, with a view to optimising the emissions control systems and reducing them. The most outstanding actions of 2018 are:

- > Automatic metering machines: ENDESA's installations have continued with the calibration and verification of

the automatic metering systems of its installations under Standard EN-UNE 14181. During 2018, new Automatic Metering Systems were put into operation for atmospheric emissions in the chimneys of 15 combustion facilities: Ten turbines for the Canary Islands thermal power plants and five turbines for the Balearic Islands. Furthermore, during 2018 the investment for installation and commissioning of four new Automatic Metering Systems for independent atmospheric emissions for each of the engines at the Ibiza plant was approved, in an effort to further increase the degree of control over emissions and the efficiency of the plant's generation units.



ENDESA starts refurbishing As Pontes power plant to reduce emissions by 80%

In March, Endesa began revamping its Thermal Power Unit (TPU) in As Pontes. This project requires an investment in excess of 200 million euros, converting the facility into a highly environmentally efficient coal-fired power plant by reducing its sulphur dioxide emissions by 71%, nitrogen oxide emissions by 62.5% and particulate emissions by 80%.

By revamping the facility, the gas resulting from coal combustion will be denitrified and the sulphur removed, in order to minimise the environmental effects of the activity. When the work is completed, the plant will not only comply with the requirements of the European Industrial Emissions Directive (IED), but also the even more stringent BREF values, the European benchmark values on the Best Available Techniques in industrial sectors.

Revamping the As Pontes TPU represents one of Endesa's contributions to the decarbonisation process being led by the European energy sector because it affords a renovated, highly environmentally efficient, thermal power plant that will act as

a backup to the electrical system in light of the unpredictable nature of renewable sources.

On 13 March, the day revamping officially kicked off, the President of the Galician Regional Government, Alberto Núñez Feijoo, in the company of Endesa Chairman, Borja Prado, toured the plant, pointing out that the transformation of the As Pontes complex represents a strategic commitment to Galicia.



2.3. Emissions of ozone depleting substances

305-6 103-1 Management approach Emissions 103-2 Management approach Emissions

103-3 Management approach Emissions 305-7

Additionally, in Spain and Portugal 0.66 tons of CFC11 equivalent were emitted, distributed as follows: 0.036 tons of CFC (0.036 tons of CFC11), 0.048 tons of HCFC (0.0024 tons equivalent of CFC11), 0.005 tons of R22 (0.003 tons of CFC11 equivalent) and 0.77 tons of Freon (0.616 tons of CFC11 equivalent). During 2018, ENDESA has kept commitments agreed upon within the framework of the 2015-2020 Voluntary Agreement signed in April 2015 between the Ministry of Agriculture and Fishing, Food and Environment and

the principal players from the Spanish energy sector (manufacturers and providers of electrical equipment that use SF₆, electric power transportation and distribution companies and authorized managers of SF₆ gas waste and the equipment containing them), for joint coordination in terms of comprehensive management of the use of SF₆, in a manner that is most respectful of the environment. The fundamental driver is contributing to the objective reduction of greenhouse gas emissions in wide-

spread sectors assigned to Spain (10% in 2020 regarding 2005 levels).

In 2018, in addition to issuing the 'Manager Tracking Report' containing the management data for each manager, in 2017 a new version of the *SF6 Recovery Protocol* was issued, now featuring the need to provide a record of emptying according to the pressure levels during the emptying period. With recycling management, SF₆ can be regenerated and reused, in addition to minimizing the environmental impact from decontamination work of equipment containing it.



2.4. Water resources

103-1 103-1 Management approach Water 103-2 Management approach Water 103-3 Management approach Water

103-1 Management approach EUSS Water 103-2 Management approach EUSS Water 103-3 Management approach EUSS Water

303-1

ENDESA signals water as a critical resource that will be affected by climate change and that, therefore, must be protected and conserved. According to the report 'Making Every Drop Count: An Agenda for Water Action', prepared by eleven heads of state and a special advisor on water issues and jointly presented to the UN and the World Bank, 40% of the world population is affected by water shortages and at least seven hundred million people run the risk of being displaced by 2030 due to a shortage of this resource. Furthermore, each year the World Economic Forum prepares a Global Risks Report that addresses the

main concerns worldwide, requesting information from companies, governments, civil society and thought leaders. In the report from 2018, the water crisis holds fifth place among the most worrying risks.

Companies will play an important role in the development and implementation of solutions to water problems. This is why ENDESA, assuming a position of leadership among Spain's power companies, adhered to the *CDP Water Disclosure* in 2018, for the ninth year in a row. This initiative provides water and water-management data from the world's largest corporations to inform the global marke-

place on investment risk and commercial opportunities and to guide investors towards sustainable use of this resource. This year ENDESA reached 'Management' level with a B rating, which is lower than last year's 'Leadership' grade. This decrease was caused mainly by the changes made in grading criteria.

Since water is a common resource, its management has become a delicate social, cultural and the Environmental issue, particularly in times of shortage. For this reason, solutions to improve the conditions of supply, treatment and quality of water require an approach involving collective associations and actions.





ENDESA expects to have a competitive advantage by aligning its corporate water strategies with the aims of public policies and initiatives put forward by the many stakeholders. Through flexible and ongoing contact with the stakeholders, it should be possible to understand, anticipate and respond to new problems and expectations. An open dialogue could also be useful for preventing and reducing the risk of future water-related conflicts.

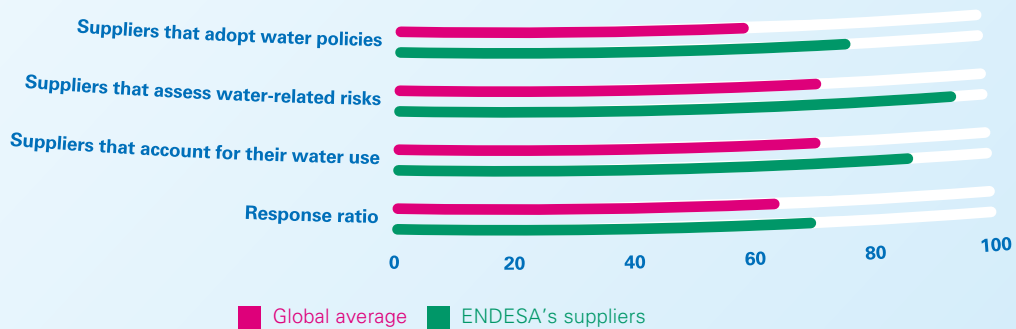
have stated integrating water issues into the management of their business. In the years ahead, the list of providers invited to participate will be refined with the objective of identifying the ones that could have the greatest impact on water resources.

Out of the suppliers that reported information on their water strategies, 77% have well-defined objectives and targets for tackling water issues; a well-defined objective is one that speci-

The facilities built for power generation enable greater availability of water for other purposes such as irrigation, supply or ecosystem conservation. This availability is achieved by optimising thanks to cooperation with the catchment area bodies.

In turn, building hydroelectric plants in reservoirs designed for irrigation or water supply makes it possible to obtain renewable energy without altering the availability of the resource for the main users.

COMMITMENT TO WATER IN ENDESA'S SUPPLY CHAIN



As a result of ENDESA's interest in improving its performance with water, not only taking into account its own management, but also pursuing collaboration and promoting transparency among its suppliers, ENDESA participated in the *CDP Supply Chain Water Programme*, as it did for the first time in 2017. Thus, the Company demonstrates its commitment to value chain management, also asking its suppliers for information about their water management, in order to tackle the risks associated with water and make the most of opportunities.

The rate of response was 67%, compared with 64% on average for global companies participating in the initiative. In ENDESA's case, more than 40% of the suppliers that filled out the survey

defines the scope, metrics and target year of compliance.

In its efforts to preserve water quality and continually improve in its interaction with this resource, ENDESA carries out efficient and responsible water catchment, complying with regulations in force at all times and following the principles of the environmental management system implemented at all its facilities. All water uses made in the power facilities have been clearly devised bearing in mind their compatibility with the pre-existing users. Power plant operation is performed at all times in coordination with the catchment area bodies to guarantee compliance with the easements, maintain environmental flow capacities and favour the more rational use of the resource.

Water conservation is one of the most relevant factors in environmental management at ENDESA. For this reason, the company follows the principle of low consumption at both the industrial level and at its offices and among employees. Moreover, wastewater is always discharged in accordance with applicable regulations and following the environmental management system in place

ENDESA is aware of the impact that its activities may have on water resources, most notably eutrophication, wastewater discharge, heating water as it is returned to riverbeds, and the effects on aquatic ecosystems. The company conducts an impact identification process through its environmental management system, and once the impacts are identified,

they are addressed in order to determine which of them are most significant and to reduce them as much as possible, following a policy of low water consumption and water quality conservation.

ENDESA sets targets for improvement in its interactions with water each year.

To achieve these goals, the company conducts a comprehensive analysis of each impact and target, implementing diverse solutions such as water consumption control systems, reuse of rainwater for irrigation, ongoing improvement of water quality by controlling discharge and wastewater, and con-

servation of the ecological conditions of reservoirs and the related regulated stretches of river.



2.4.1. Water consumption

- 303-3
- 301-2
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- 103-1 Management approach - EUSS Water
- 103-2 Management approach - EUSS Water
- 103-3 Management approach - EUSS Water

Integrated water management is one of ENDESA's greatest concerns. The main courses of action in this area focus on efficient consumption, water quality by controlling discharges and wastewater, and reservoir management, assessing the ecological potential to provide shelter for birdlife, the possibilities to control invasive species and prevent the existence of dried up sections of regulated rivers.

During 2018, 14,794 m³ of wastewater was reused in the processes, which represents 0.033% of the total caught freshwater.

99% of ENDESA's water catchment for use in its facilities is returned to the environment so that it can be reused.

In addition, pursuant to the new water reporting requirements set by the GRI, the following table shows the water consumed by different technologies:

Water consumption (Hm³)

	2018
Thermal power unit (TPU)	24.38
Nuclear power	32.10
Mining	0.02
Total	56.50

Process water catchment (Hm³)

	2016	2017	2018
Thermal power unit (TPU)	44.02	50.43	42.90
Nuclear power	1.60	1.75	1.71
Mining	0.29	0.02	0.02
ENDESA	46.03	52.21	44.63

Recycled water (%)

2016	0.016
2017	0.015
2018	0.015

Water consumption specifically for electricity generation in 2018 amounted to 604 m³/GWh.

The reporting criterion for process water consumption at nuclear plants has been corrected; up until 2017, a part of the open circuit cooling system was reported as process water consumption, while it should have been water use. To see the evolution of the values and the decreasing trend in water catchment, the figures for catchment at nuclear power

plants were recalculated (both the total value and the breakdown per source) for 2016 and 2017.

In the water per source detail, a decrease is seen compared to 2017 in water catchment for industrial use, and a slight increase in catchment for cooling use. It is worth noting that the water used for cooling is returned to nature in adequate conditions to guarantee subsequent use of the water, representing a volume of 99% of total water catchment.





303-3

Total water catchment by sources (Hm³)

	2016	2017	2018
Industrial use			
Catchment of fresh water	43.50	49.39	41.49
From surface water	42.33	48.44	40.27
From wells	0.29	0	0
From municipal mains	0.87	0.95	1.22
Catchment from seawater			
Catchment from seawater (desalinated)	2.51	2.80	3.12
Catchment from waste water (internal use)	0.016	0.015	0.015
Use for refrigeration			
Seawater (open cycle)	3,083.31	3,265.27	3,290.99
Surface water (open cycle)	1,607.97	1,502.80	1,753.91
Water (closed cycle)			
Processed water volume	242.93	285.29	272.40
Drainage from cooling towers	221.99	246.27	251.81
Civil use	1.05	0.20	0.13
Total¹	4,960.35	5,066.74	5,341.46

¹ The total does not include the volume of processed water used for cooling in a closed circuit.

306-5

Water masses affected by discharges

Water masses significantly affected

By catchment ≥ 5% total annual average vol. of the water mass	2015	4
	2016	4
	2017	4
By catchment in water masses considered significant	2015	34
	2016	34
	2017	34
By catchment in Ramsar wetlands area or in protected areas	2015	3
	2016	3
	2017	3
By catchment in sources located in national protection areas	2015	61
	2016	61
	2017	61
By catchment in sources located in international protection areas	2015	56
	2016	56
	2017	56
Total water masses significantly affected	2015	158
	2016	158
	2017	158

Characteristics of the significantly affected water masses

Volume (m ³)	2015	341,000,000.0
	2016	341,000,000.0
	2017	341,000,000.0
Flow (m ³ /sec)	2015	1,043.8
	2016	1,043.8
	2017	1,043.8
Classed as protected	2015	60.0
	2016	60.0
	2017	60.0
With value due to its biodiversity	2015	59.0
	2016	59.0
	2017	59.0

Water sources significantly affected by water catchment (No.)

Water masses significantly affected

By catchment ≥ 5% total annual average vol. of the water mass	2015	124
	2016	124
	2017	124
By catchment in water masses considered significant	2015	9
	2016	9
	2017	9
By catchment in Ramsar wetlands area or in protected areas	2015	8
	2016	8
	2017	8
By catchment in sources located in national protection areas	2015	76
	2016	76
	2017	76
By catchment in sources located in international protection areas	2015	73
	2016	73
	2017	73
Total water masses significantly affected	2015	290
	2016	290
	2017	290

Characteristics of the significantly affected water masses

Volume (m ³)	2015	395,324,000
	2016	395,324,000
	2017	395,324,000
Flow (m ³ /sec)	2015	2,525.70
	2016	2,525.70
	2017	2,525.70
Classed as protected	2015	76
	2016	76
	2017	76
With value due to its biodiversity	2015	76
	2016	76
	2017	76

2.4.2. Water discharge

103-1 Management approach - Effluents and waste

103-2 Management approach - Effluents and waste

103-3 Management approach - EUSS Effluents and waste

306-1

303-4

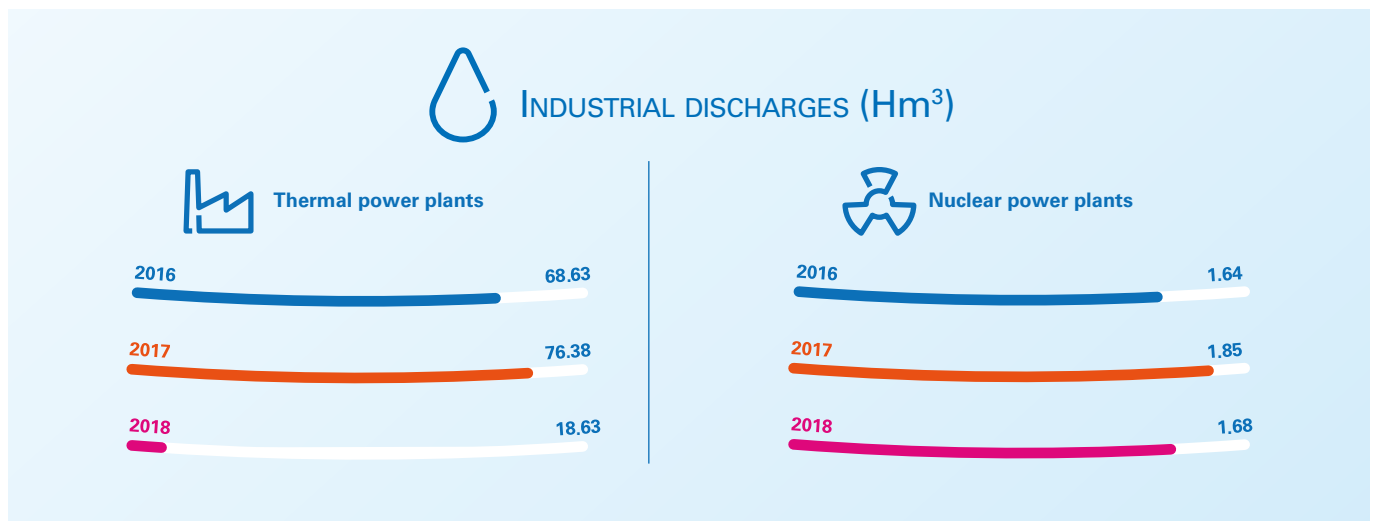
303-2

ENDESA has a series of procedures in place to help control and reduce discharges into water systems and improve water quality, mainly through waste water treatment facilities. Discharge va-

lues remain similar to those from 2017. The *reporting* criterion for discharge at the Litoral de Almeria thermal power plant was modified in 2018; now, only discharge from the plant is included,

but not discharge from the desalination plant, as in previous years, prompting a significant drop in this value.

303-4



As part of the process of continuing improvement of ENDESA's generating facilities, during operation of the power plants, specific actions aimed at reducing water consumption and improving discharge conditions are carried out, most importantly:

- > Teruel Thermal Power Plant: reuse of surplus water from the plant operation (cooling tower bleed) in the desulphurisation process. This achieves a decrease in clean water consumption.
- > Litoral de Almeria Thermal Power Plant: reuse of a portion of bleed water in the desulphurisation process, thus avoiding consuming the same volume of desalinated water.
- > As Pontes Thermal Power Plant: has increased recirculation cycles in the

cooling towers, achieving a reduction in the specific consumption of cooling water.

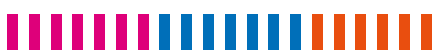
- > Hydroelectric Production Units: the policy of elimination of the discharge points of sanitary waste waters remains in place, with the purpose of replacing authorised discharges with watertight confinement systems and controlled removal. The waste confinement, separation of phases and selective management of final waste system was developed and also has oil detectors in the disposal tanks that are being replaced with more current technology. These measures guarantee a minimum risk of discharge into the hydraulic public domain.

In 2018, an oil discharge prevention plan was launched, and the first step

consisted in updating the inventory of components containing oil and assessing the risk of environmental incidents for each of them. Even though less than 3% of the oil poses some sort of risk, based on this information, an action plan has been established to continue reducing the risk to a minimum.

2.4.3. Water stress

In 2018, ENDESA performed a new analysis to identify which of its facilities are in water stress areas. It should be noted that the water stress of an area is an inherent feature of the area, and is in no way caused by the presence of a facility.





An area under water stress is defined as one with a water resource availability of less than 1,700 m³/person and year, defined by the FAO as the minimum fresh water supply needed to meet nourishment, health and hygiene needs.

This year, water stress analysis is being performed using a software tool, the 'Global Water Tool for Power Utilities' (GWT), developed by the World Business Council for Sustainable Development (WBCSD) and is aimed at helping companies and organisations identify and analyse water consumption in their production activity, and assess the risks related to their overall operations and supplier chain regarding water use.

The analysis was performed on 47 energy production facilities: 30 thermal plants and 17 hydro plants in Iberia.

The conclusions drawn from the study are similar to those from the previous year:

- > A total of 20 facilities are in areas defined as under water stress, representing 42.6% of ENDESA's plants. However, it should be noted that 65% of the facilities located in areas under stress do not use fresh water; in the case of thermal plants because they are supplied exclusively with salt water for all uses, or in the case of hydroelectric power plants, as they use fresh water without consuming it.
- > Facilities located in areas under water stress (< 1,700 m³/ person and year) with consumption of fresh water represent only 10.6% of ENDESA's installations, producing 5% of the power.
- > ENDESA optimizes fresh water usage at all of its facilities that are located in zones under water stress and at those that are not. This is demonstrated by the fact that 55.5% of all production centres in zones with sufficient and abundant water resources also do not consume fresh water.

It should be highlighted that all ENDESA's production plants that do consume water do so within the normal values expected for plants with the corresponding technology employed.

It should also be stressed that all plants have a certified ISO 14001 environmental management system in which environmental management programmes, many of which have set goals for reduction of water consumption or improvement on discharges, measures that will enable reducing the impact of the plants on the availability of fresh water resources in their respective catchment areas.

303-3

Catchment of fresh water for industrial use at thermal power plants located in zones under water stress in 2018 amounted to 0.22 Hm³. It is important to recall that 99% of water catchment is returned to nature in adequate conditions for subsequent use.



2.5. Waste

301-2 306-2 103-1 Management approach - EUSS Materials 103-2 Management approach - EUSS Materials

103-3 Management approach - EUSS Materials 103-1 Management approach - EUSS Effluents and waste

103-2 Management approach - EUSS Effluents and waste 103-3 Management approach - EUSS Effluents and waste

ENDESA has environmental management systems that include specific operating procedures regarding the management of waste generated in all its activities, which are reviewed on an ongoing basis to detect and promote improvements.

The main waste materials generated by ENDESA's activities are:

- > **Coal combustion products** — (Gypsum, ash and slag) in thermal coal-fi-

red production units, part of which is marketed.

- > **Waste from reservoirs** associated with hydroelectric plants, comprised of materials removed from the outlets and of sediment generated as a result of the reduced speed and volume of the river flow. This waste must be removed on a regular basis.
- > **Low- and medium-intensity radioactive waste** from ENDESA's

nuclear power plants, managed by Enresa and deposited in specially-designed facilities located at El Cabril (Cordoba).

- > **Waste associated with renewable production**, mainly absorbent cloths and lubricating oils, which are used by the authorised managers for reuse.
- > **Waste generated by distribution activities** such as electrical and electronic equipment (transformers,

switches, condensers, meters, etc.), mineral oils, treated wood posts and other non-hazardous waste such as scrap metal, plant waste from felling and pruning, and cardboard, etc. All are managed by authorised agents in strict compliance with the applicable environmental regulations.

Some of the hazardous waste-reducing measures applied are reuse of oil, removing transformers contaminated with PCB (polychlorinated biphenyls) (gradual replacement by PCB-free transformers), gradually removing components containing asbestos in buildings and auxiliary constructions.

Furthermore, ENDESA always prioritises recovery and recycling treatments of the waste generated, especially inert waste, in addition to treatment for reuse of hazardous waste that can be reused (e.g. used oils or cleaning solvents).

In 2018, ENDESA has maintained the collaboration agreement with a Collective System of Expanded Product Res-

possibility (SCRAP) to manage via this system the removal and recycling of 100% of the waste of fluorescent tubes and lights produced in their thermal generation and electrical distribution facilities.

Of the total waste produced by ENDESA in 2018, a significant portion is valued in external facilities, 90% of total non-hazardous waste in Spain and Portugal and 58% of hazardous waste being recovered in the same geographical area of Spain and Portugal.

In 2018, as a result of the revamping activities at the thermal power plants to adapt them to new environmental regulations, the production of non-hazardous waste has increased, but the percentage of these materials that is recovered also increased. Specifically, there was a 50% increase in non-hazardous waste production (not including coal combustion waste, the data for which is included further on in a specific table) and production of hazardous waste dropped by 7%.

During 2018, certain actions continued being executed at the thermal power plants, aimed at continuous improvement and increasing the efficiency of combustion facilities. These specific actions involve a necessary increase in generation of certain waste. Among these works highlights the projects to improve performance and reduce emissions of pollutants from the generation units, changes in fuels designed to optimise operating and environmental performance, and execution of various maintenance actions in the generation units.

Recovered waste is considered to be delivered to an authorised waste manager to undergo recovery by this company. The previous table does not include waste from coal fired production (ash, slag and gypsum). Data for this type of waste are shown in a separate table.

Evolution of ENDESA's waste (tons)

	Hazardous waste (HW)		Non-hazardous waste (nHW)	
	2018	2018	2018	2018
	Produced	Recovered	Produced	Recovered
Total	10,577.91	6,186.03	69,586.81	62,712.14
Thermal Power Units (TPU)	6,644.72	3,013.32	47,463.81	41,375.88
Hydroelectric Production Units (HPU)	418.49	354.31	717.60	678.65
Mining	0	0	33.65	33.65
Port terminals	104.94	98.88	422.50	407.19
Nuclear	303.84	81.86	2,040.00	1,444.40
Distribution	3,002.30	2,536.34	18,872.18	18,735.31
Wind power	102.26	99.96	37.06	37.06
Photovoltaic production	1.03	1.03	0	0
Production with biomass	0.32	0.32	0	0

used materials recovered

	Unit	
Dry sludge for energy use	ton	7,365.92
Wood	ton	0.6
Lubricating oil, filtered and reused	ton	412.23
Dielectric oil, filtered and reused	ton	233.23
Empty containers and packaging	ton	2.10
Total Recycled	ton	8,014.76

The significant increase in sludge production was due to the new desulphurisation facilities at the thermal power plants.





Types of non-hazardous and hazardous waste and its fraction recovered

	Unit	2016	2017	2018		Unit	2016	2017	2018
Non-hazardous waste					Hazardous waste				
Sludge	ton	8,404.96	5,310.56	15,592.55	Used oils	ton	876.46	1,243.73	1,468.83
Fraction recovered in external facilities	ton	690.77	796.81	9,721.60	Fraction recovered in external facilities	ton	591.36	663.55	850.55
Machinery and equipment	ton	547.35	1,063.74	1,066.38	Machinery and equipment	ton	1,439.87	2,071.25	570.84
Fraction recovered in external facilities	ton	546.22	1,059.39	356.17	Fraction recovered in external facilities	ton	307.40	1,115.65	488.88
Packaging materials	ton	418.75	426.74	288.23	Used batteries	ton	139.37	76.00	200.08
Fraction recovered in external facilities	ton	383.7	423.94	282.98	Fraction recovered in external facilities	ton	77.59	39.98	191.53
Other waste	ton	33,006.55	39,405.37	52,639.64	Materials with asbestos	ton	632.92	596.84	197.78
Fraction recovered in external facilities	ton	28,892.50	38,197.97	52,351.39	Fraction recovered in external facilities	ton	194.02	30.36	4.8
Total produced	ton	42,377.61	46,206.41	69,586.81	Sent to vitrification treatment	ton	0.00	0.00	0.00
Total recovered	ton	30,513.19	40,478.12	62,712.14	Other waste	ton	6,612.54	7,347.87	8,140.39
					Fraction recovered in external facilities	ton	2,687.36	2,970.35	4,650.27
					Total produced	ton	9,701.16	11,335.69	10,577.91
					Total recovered	ton	3,857.73	4,819.89	6,186.03

Radioactive waste (m³) produced

	2016	2017	2018
Liquid	0.6	1.67	1.78
Solid	2,321.8	196.8	212.88
Compactable	139.5	143.26	166.42
Other treatments (fragmentation, cementation, etc.)	57.6	38.43	32.84
Remaining	24.6	15.11	13.62

2.5.1. Coal-fired products

ENDESA recovers part of waste ash, slag and gypsum produced in the coal-fired plants, mainly located in the Iberian Peninsula, as raw material for other industrial uses. In this way, the Company generates additional income arising from the sale of these products.

Recovery of these products is carried out mainly at facilities located in Spain. In 2018, non-hazardous waste continued to be exported to other countries in the EU and to the USA in order to increase the recovery percentage as much as possible. The main recovery markets are

the cement and construction industries, which use ash and slag, and construc-

tion panel manufacturers, in the case of gypsum.

Production and management of ash, slag and gypsum in ENDESA's coal-fired thermal plants (Spain and Portugal)

	2016	2017	2018
Ash (t/year)			
Produced	936,414	1,315,879	1,034,177
Recovered	236,579	399,792	472,078
Restoration	0	0	0
Landfill	699,835	916,086	562,099
Slag (t/year)			
Produced	161,170	242,739	196,464
Recovered	22,869	36,880	17,190
Restoration	0	0	0
Landfill	138,301	205,859	179,273
Gypsum (t/year)			
Produced	791,359	1,165,933	864,235
Recovered	39,659	80,060	84,890
Landfill	751,700	1,085,873	779,346

3. Circular economy

The Circular Economy is a new paradigm that aims to generate economic prosperity by conserving resources and reducing the waste generated; in other words, its ultimate purpose is the development of a sustainable economy.

This new paradigm has been the inspiration for ENDESA X to minimise the use of raw materials by giving preference to the use of renewable materials and secondary raw materials and to ensure that the solutions offered are used as long as possible and to their maximum capacity, through a new approach to consumption models.

For ENDESA X, the current transition from a linear economy model to a circular model represents an important opportunity in sustainable innovation, which also affords tangible benefits for the environment and its impact is further extended through the process of digitalisation and new technologies.

Indeed, ENDESA has already taken steps in this direction by incorporating sustainability into its business strategy and promoting the Circular Economy within the business strategy concept itself. One crucial example of this is the objective set in its 2018-2020 Sustainability Plan calling for full decarbonisation of the generation mix by 2050, with interim targets for 2020, 30 and 40, aspiring to achieve an energy model based on consumption of renewable energies. This leads not only to increased efficiency and reduced emissions and pollution, but also minimises the consumption of raw ma-

terials through the use of renewable resources.

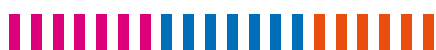
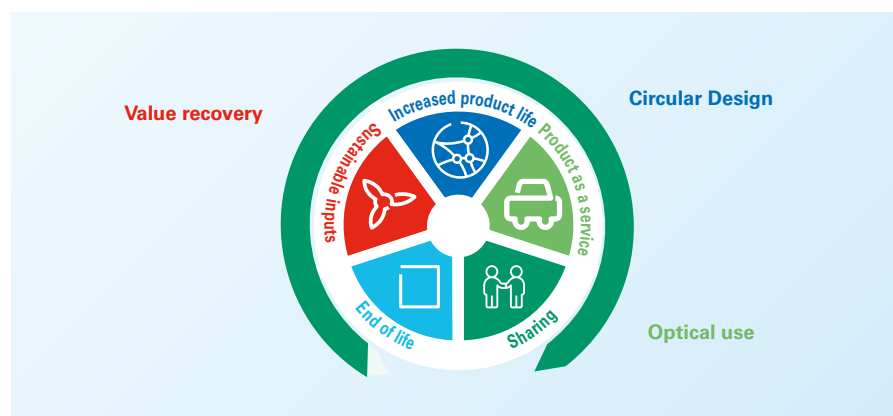
From the business perspective, the company has taken an open, inclusive approach, and is committed to developing new products and services based on five pillars that will enable us to address the challenges faced in the coming years and decades:

- > **Sustainable procurement:** using primarily renewable and reusable products and recycled materials, to minimise consumption of raw materials
- > **Extending the useful life of products:** implementing modular design methods so that separate parts can be replaced instead of the entire product, prolonging product life through ongoing maintenance
- > **Platforms for sharing:** encouraging users to exchange products to increase the usage factor of the products.
- > **Products as services:** moving from an ownership model to a service model, in which use of the products is valued more than possession. This

fosters product quality, but also improves the usage factor, product useful life and product management and elimination.

- > **Recovery of resources at the end of the useful life:** regenerating products after their useful life by partially replacing worn components and reinserting them into the market or in other secondary markets.

The infrastructures that ENDESA is implementing deserve special mention, since they facilitate the transition to a Circular Economy model, and Circular Economy principles are also applied in their construction and management such as: a) 'Smart Power Grids', which efficiently integrate distributed power generated from renewable sources and allow customers to become not only consumers but also producers of electricity, and b) the 'recharging point infrastructure', which is the network of charging stations available to all electric vehicle users, following the 'Products as Services' model, so that customers only pay for what they need.





Furthermore, ENDESA is developing diverse Circular Economy initiatives in which the following can be highlighted:

Recovery of ash generated at coal-fired power plants. As a by-product of coal combustion, ash is used as a substitute for the limestone needed in cement and asphalt production, thus reducing the raw materials used to manufacture cement and minimising the amount sent to landfills. In 2018, 27.4% of ash produced was recovered.

Cultivation of microalgae for CO₂ capture. The Litoral (Almeria) and Alcudia (Palma de Mallorca) thermal plants operate facilities that recover CO₂ from combustion gases at each plant through the cultivation of microalgae.

Second life for batteries. In the **2nd Life Battery Energy Storage System**, carried out at the Melilla generation plant, new and recycled batteries for electric vehicles have been integrated to develop a rapid-response storage system. Its purpose is to act as a back-up in the event of possible generation failures to prevent load shedding and potential penalties, thereby reducing consumption of raw materials and extending the useful life of the batteries.

Creation of fish farms adjacent to thermal power plants. At the Alcudia (Palma de Mallorca) power plant, re-

sidual heat from the cooling circuit is recovered, thus avoiding losses, and converted into a temperature and performance increase for fish fattening and growing at the fish farm.

Environmental Management, Energy Efficiency and Indoor Air Quality System (SIGAEC). As the body responsible for managing ENDESA's office buildings, the Resources Department strives to promote prevention, recycling and reuse of waste, in addition to the use of less contaminating materials, in order to prevent natural resources from being wasted and to guarantee that the waste generated at ENDESA's offices is properly managed and disposed of.

In this regard, with the aim of achieving 'Zero Paper Offices', the amount of paper and cardboard generated has been reduced by 21 tons in the last 3 years.

Moreover, by separating paper and cardboard from plastic packaging from the outset, these materials can be recovered, and the Collaboration Agreement with Save the Children to donate the amounts raised from these recoverable materials to this NGO remains valid. In 2016 and 2017, a sum of 11,214.03€ was obtained from this recovered material and allocated to the fight against child poverty.

Car Sharing: This is an electric vehicle car-sharing service for employees. Within the Sustainable Mobility Plan for employees and corporate fleets, there are currently 23 vehicles at ENDESA's main offices available to employees for work-related travel during working hours. This raises the rate of usage of ENDESA's fleet of electric vehicles and encourages e-mobility among employees.

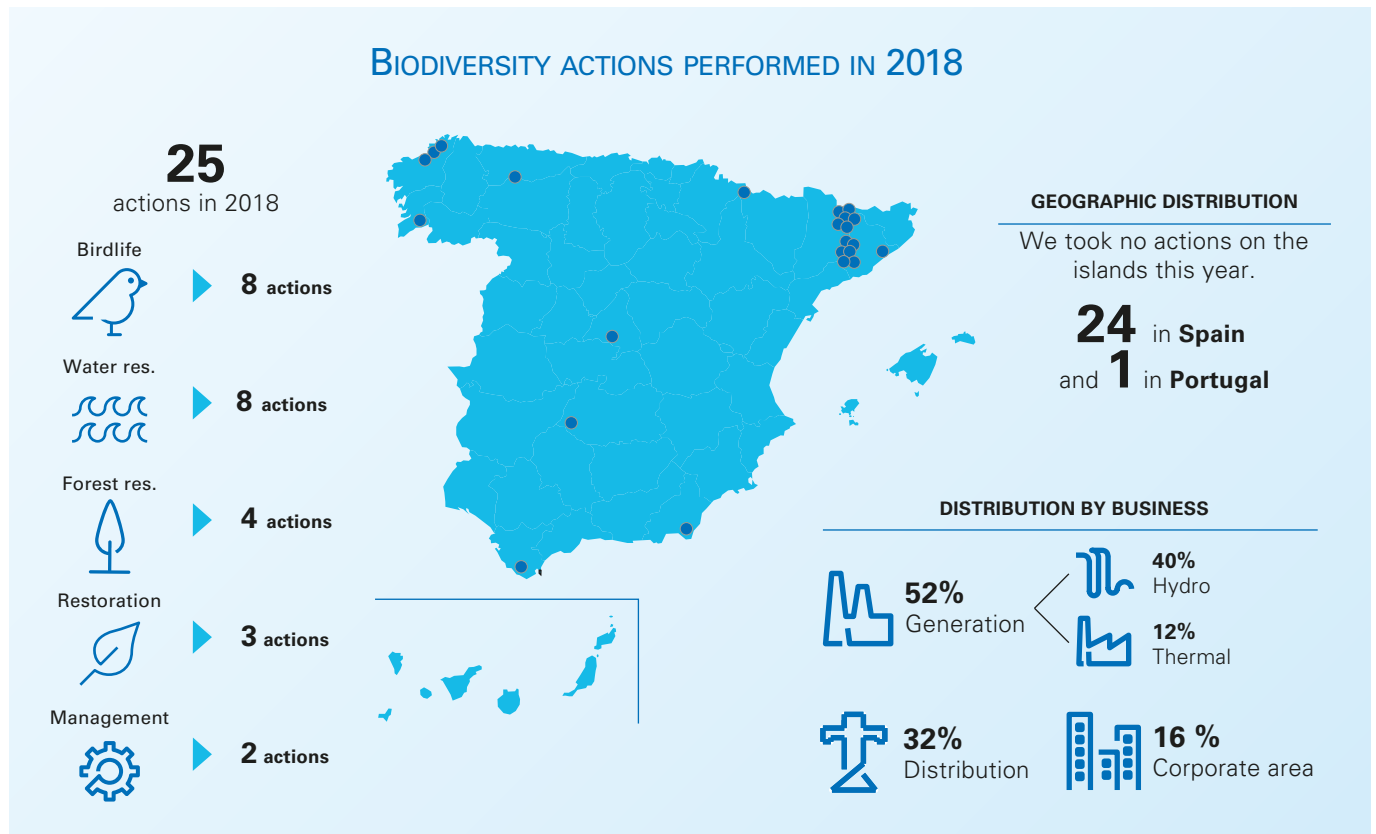
Circulability Model. In a concept that is as vast as the Circular Economy, the role of metrics is crucial. Circulability Model is a project aimed at defining and implementing effective KPIs for measurement, comparison and improvement of the circularity of projects and products.

Customer Circularity. Analysis of the degree of customer circularity following a measurement model from two perspectives: the global perspective, which assesses the degree of maturity and dissemination of the Circular Economy, and specifically, focusing on an energy analysis of the facility.

Therefore, the Circular Economy poses an excellent opportunity for ENDESA to gain in competitiveness through innovation and the increasing importance of sustainability.



4. Biodiversity Conservation



[EU13](#) [103-1 Management approach - Biodiversity](#) [103-2 Management approach - Biodiversity](#)

[103-3 Management approach - Biodiversity](#) [103-1 Management approach - EUSS Biodiversity](#)

[103-2 Management approach - EUSS Biodiversity](#) [103-3 Management approach - EUSS Biodiversity](#)

Biodiversity conservation is not a new concept for ENDESA. Already in its first Environmental Policy approved and published in 1998, it established as one of its reference principles: 'Conservation of the natural environment of its facilities by adopting

measures to protect the species of flora and fauna and their habitats'. Likewise, biodiversity conservation was already established as one of the seven Commitments for Sustainable Development within the framework of ENDESA's first Sustainability Plan.

ENDESA's corporate website provides information about ENDESA's main projects about study, management and conservation of biodiversity: <https://www.ENDESA.com/es/sostenibilidad/a201610-conservacion-biodiversidad.html>.





4.1. Biodiversity conservation plan

103-1 Management approach - Biodiversity 103-2 Management approach - Biodiversity 103-3 Management approach - Biodiversity
 103-1 Management approach - EUSS Biodiversity 103-2 Management approach - EUSS Biodiversity
 103-3 Management approach - EUSS Biodiversity

ENDESA's Biodiversity Conservation Plan is the culmination of the Company's extensive experience in this area. In 2012, it designed a Biodiversity Conservation Plan and, in 2013, began to put it into practice, with the result of notable

efficiency and a high degree of achievement of the first milestones.

ENDESA's biodiversity conservation plan provides a structure that enables selecting and appraising, firstly, and under criteria of scientific, social and applied, all the initiatives received, both

internal and external, regarding biodiversity. Each initiative is typified and classified within the Plan, according to the following matrix, and finally, it is entered in a database to monitor it until project conclusion:

Areas of action	Scope of application (biodiversity components)				
	Spaces		Species		
	Management of uses and infrastructures (A)	Habitat management (B)	Native (C)	Invasive exotic (D)	
Own facilities (1)	A1	B1	C1	D1	
Areas of influence (2)	A2	B2	C2	D2	
Research projects (3)	A3	B3	C3	D3	
Socio-environmental projects (4)	A4	B4	C4	D4	
Emblematic projects (5)	A5	B5	C5	D5	

Regarding the goals of the Biodiversity Conservation Plan, in 2018 the main lines of action set forth in 2012 have been maintained:

- > Conditioning the physical environment in ENDESA's lands and facilities in order to increase their biodiversity capability in a biogeographical manner consistent with the environment.
- > Managing natural factors surrounding facilities to improve the conditions of the habitats of certain specific species, or the biotopes to which they belong.
- > Recognising ENDESA's natural heritage and the ecosystems it shelters, their value and state of conservation.
- > Protecting native species in and around ENDESA's plants and controlling invasive species that have a high ecological impact and an impact on ENDESA's business.

ENDESA monitors development of the degree of compliance with the objectives of each one of the active projects of the Biodiversity Conservation Plan. For this, it has been essential to demand specific, achievable, measurable and verifiable targets for each project, and to plan project progress monitoring and an assessment of the final results in terms of degree of compliance with the originally set targets.

In order to characterise and describe the annual activity of ENDESA's Biodiversity Conservation Plan, there are a series of indicators for which annual values are obtained and which will be described below:

- > Total number of projects in the Biodiversity Conservation Plan.
- > Number of projects started in the year in progress.

- > Number of projects started in previous years.
- > Number and % of projects by area of action.
- > Number and % of projects by area of application.
- > Number and % of projects by large subject areas (birdlife, water resources, forest resources, space restoration and biodiversity management tools).
- > Number and % of projects by associated line of business.
- > Number and % of projects by territory.
- > Number of scientific publications resulting from the Biodiversity Conservation Plan, with express recognition of ENDESA.
- > Number of communications to congresses arising from Biodiversity

Conservation Plan projects, with express recognition of ENDESA.

By the end of 2018, the Biodiversity Conservation Plan had a total of 25 activities under way, with the following balance: 22 started in previous years (with 6 of them ending in 2018 and 16 which continue active) and 3 further actions started in the last year.


The following table shows the distribution of ENDESA's Biodiversity Conservation Plan actions under way in 2018, classified in accordance with the governing matrix of the Plan and the 20 types of actions it houses, which can be deducted from the cross of rows by columns.

Areas of action	Areas of action (biodiversity components)				Total
	A. Management of use and infrastructures	B. Habitat management	C. Native species	D. Invasive exotic species	
1. Own facilities	5	1	2	0	8
2. Areas of influence	2	1	2	1	6
3. Research projects	2	1	3	1	7
4. Socio-environmental projects	1	2	1	0	4
5. Emblematic projects	0	0	0	0	0
Total	10	5	8	2	25

Distribution of actions by subject

	No. of Actions	%
Birdlife	8	32
Water resources	8	32
Forest resources	4	16
Restoration of Natural Spaces	3	12
Biodiversity management tools	2	8
Total	25	100

The Plan's actions have been performed throughout almost all of Iberia and encompassed a substantial share of the business lines of the Company. Specifically,

the generation area received 52% of the Plan actions; while Distribution received 32% and the corporate area 16%. 

4.2. Key actions

4.2.1. Studies and research

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The main activities in the scope of research of the Biodiversity Conservation Programme carried out during 2018 are described below.

During the past year, progress was made on the project to assess the ecosystem services associated with ENDESA's

hydroelectric infrastructure, a subject already begun through the project regarding assessment of ecosystem services in the Noguera Pallaresa river basin, which was concluded in 2016. According to the latest version of the Common International Classification of Ecosystem

Services (CICES 5.1) (<https://cices.eu/>) promoted by the European Environmental Agency, ecosystem services are understood to be the contribution that the ecosystems make to human well-being. This definition includes, on the one hand, the purpose or use that the





population makes of the services and also the attributes and processes of the ecosystems that make them possible. Ecosystem services may be classified in three large groups:

- > Procurement services, such as production of food, water, energy, wood and fibres among others.
- > Services for regulation and maintenance of the environment for humans: e.g., regulation of climate, floods, illnesses or water quality. The aforementioned support services, such as soil formation, pollination or operation of nutrient cycles are included in this section.
- > Cultural services, including recreational, aesthetic and spiritual benefits.

Only the good operation of the ecosystems that produce these services guarantees that their flow is maintained and is sustainable. Hence, an adequate appraisal of the ecosystem services that a territory may provide includes the appraisal of the state of the ecosystems forming it.

Out of the four reservoirs assessed, Talarn was completed in 2017, although the methodology used for assessment remained open for review in 2018, given that the analysis of reservoirs in other geographic areas raised new questions and solutions. In the past year, progress continued in the analysis of the ecosystem services related to the Eume reservoir at UPH Noroeste, and Cordobilla reservoir at UPH Sur. This latter replaced the Cala reservoir, which was initially planned in the project, based on two main criteria:

- > The Cordobilla reservoir and the surrounding areas are declared as a Nature Site and SPA for birds, making them especially interesting for the assessment of ecosystem services.

- > The integrity, coherence and level of detail of the available river basin data was greater for the Cordobilla reservoir.

For each ecosystem service identified, four different flow values are calculated (provided it makes sense, given the type of service): real, potential, a scenario without a reservoir and a future scenario taking into account climate change. In general, it can be said that the real flow values are calculated using real demand data from the population and the potential flow values are based on the capacity for service provision of each ecosystem, given its typology and state of conservation.

The comparison between potential and real flows allows measuring to what point the ecosystems are near their load capacity with regard to the service provision, in other words, it gives an idea of the sustainability of these ecosystem services in time. The potential flow in the future scenario serves to fine tune this sustainability measurement, in addition to detecting possible facilities with ENDESA activity respecting certain services that may be critical in the future.

In November 2018, the preliminary results of the project were presented in poster format at the National Environment Congress (CONAMA).

The project for research and development of new anti-collision technologies also continued in 2018. The objective of this project was to develop a prototype for an anti-collision device that would allow improving the performance of currently available commercial solutions based on a series of criteria.

The main criteria pursued was that of minimizing the impact on birdlife. Ideally, a signalling device was sought after that would be as visible as possible in any environmental conditions (day, ni-

ght, sunny, rainy or cloudy). In addition, the device to be developed should avoid any interference with its environment or putting the service at risk, have a competitive cost and have simple installation and maintenance as well as a long useful life.

In 2018, the design and materials of the prototype selected in 2017 were optimised, especially as regards the fastening clamps. New durability criteria for harsh weather conditions and ease of installation have been integrated into the design. Pilot testing at ENDESA facilities has been postponed to allow this optimisation to be completed.

During the past year, Phase IV of the HIDSOS Project on sustainability of water resources under global change was concluded. In the previous phases, hydrology and sediment transport phenomena in the study area, the Noguera Pallaresa river basin, were researched. Phase IV focused on analysing and describing the nutrient dynamics (nitrates and phosphates) in the studied river basin. Concentrations of these nutrients are closely linked to the physical-chemical and ecological quality of water masses, since they play an important role in eutrophication processes.

To conduct this analysis, the network of monitoring stations available in this river basin was used, thanks to previous project phases. The data obtained from the stations were supplemented with monthly samples recording the nitrate and phosphate concentration in the water at each location monitored. Additional samples were taken periodically after intense precipitation.

Afterwards, the degree of correlation between the nutrient concentration and a series of meteorological, or dynamic, variables (total precipitation and maxi-

mum daily precipitation) and static variables (soil use, livestock farming and demographics) in the river basin was measured. Ascertaining these degrees of correlation is of particular interest in order to predict changes in the quality of the water resource in a scenario of global change (climate change and changes in soil use). Some of the most important conclusions from Phase IV are as follows:

- > In general, low concentrations of nitrates and very low phosphate concentrations were found throughout the river basin, which indicates that the water there is of high quality. Specifically, phosphate concentrations were so low that a correlation analysis could not be made; this analysis was only conducted for nitrates.
- > A general seasonal pattern was observed, with high concentrations in late winter and low concentrations in late summer.
- > A positive correlation is observed between the farming surface area and the nitrate concentration, and there is also a moderate positive correlation between the combined indicator population size/distance to sampling point and the nitrate concentration.

No significant correlation was found with the other variables studied. It is possible that the steady nature of the nutrient concentration at times of heavy precipitation could be a result of compensation between greater nutrient mobilisation and greater dilution due to the increase in run-off water.



4.2.2. Birdlife protection actions

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In 2018, the Coracias Project continued: conservation measures for the European Roller (*Coracias garrulus*) in the environs of the Aiguamolls de l'Empordà Natural Park (PNAE). The main objective of this project, which began in 2017, is to take advantage of the potentially positive impact on this species thanks to the presence of power distribution lines in PNAE and its environs.

The European Roller is a species protected by the Birds Directive and is on the Spanish List of Wildlife Protected by Special Protection Order. It is the only representative from its family (Coraciidae) in Europe and the population bred at Empordà is the most fragile on the Iberian peninsula, due to having the lowest population. The greatest problem it faces is the lack of natural holes in which to nest.

Since 2001, ENDESA has been installing nesting boxes on the power line pylons by mutual agreement with the Park's Management. The project was launched in 2017, and helped these measures gain momentum and increase their level of technology. In 2018, the courses of action defined the previous year were further implemented and new ones were launched, mainly in terms of informing the public about the project. Specifically, the following actions have been taken:

- > Installation of 5 new, more durable, nesting boxes with features that make them perfect for occupancy by the target species. Thus, there are

now 35 nesting boxes with these characteristics in the PNAE.

- > Replacement of worn nesting boxes.
- > Monitoring of the degree of occupancy of the nesting boxes and the reproductive success of the Roller pairs that nested in the new boxes as well as in the old ones. Other nesting boxes not installed by ENDESA were also taken into account in the study, with the understanding that all of the Roller pairs from the environment are part of a single population.
- > Banding of Roller chicks hatched in 2018 in nest boxes installed by ENDESA. This action enables later recognition and monitoring of specimens hatched at the PNAE once they return from their wintering areas.
- > GPS tagging of two European Roller adults. This action allows detailed recognition of the habitats, preferences and critical domain of the Roller nesting pairs in the PNAE, which in turn enables optimal selection of future locations for installation of new nesting boxes. In addition, thanks to this action and monitoring of the nesting pairs, new scientific knowledge about the species is generated.
- > Communication actions: in July 2018, as part of the #ENDESACHallenges event, a tour of the Natural Park was conducted, during which the Coracias Project was presented to a group of experts in social networks on topics related to the project (sustainability, rural tourism). This event is described in further detail in section 4.2.5 of this Report. In addition, the results of the Coracias Project were presented at the National Environment Congress (CONAMA) held in Madrid in November 2018.





The results obtained in 2018 confirmed that the measures taken by ENDESA were suitable, while also contributing to expand the existing knowledge about this species, its behaviour and preferences.

An high occupation of the nesting boxes by several species was recorded: 70% of available boxes.

In 2018, 21 pairs of Rollers reproducing in the nesting boxes installed by ENDESA were detected, and it is the most widespread species in the monitored nesting boxes (although some of them also hosted other interesting species like the Little Owl and the Scops Owl). The Rollers laid between 2 and 6 eggs, with an average of 4.86 eggs per nest. Successful hatching (% of nests in which at least one egg hatched) was 71.43% and the reproductive success of the pairs (% of nests where at least one chick fledged) was 52.28%.

Population data recorded in 2018 are satisfactory, although slightly lower than in 2017. Some 80 European Roller chicks were successfully fledged in the Park and its environs, of which 55 were

banded. This raises the number of successfully fledged chicks to 176 since the Coracias Project began (99 of which are banded).

The results for this year are likely to be affected by the prevailing weather conditions in 2018, which were not as favourable for this kind of species. The conclusion that can be reached from this is that the population continues to have good rates of reproductive success, even in harsh years, which is a sign that the project is progressing in the right direction.

The two individuals marked with GPS-VHF technology in 2018 contributed large amounts of localisation data until they migrated. Thus, we currently have data on 4 individuals: two from 2017 and two from 2018. Through Kernel point calculation, these data were analysed to estimate the vital domain of the

ENDESA's new devices to prevent electrocution of birds deliver a good result

Technicians from the Fauna and Flora Service in the Generalitat have issued a report confirming the success of the anti-electrocution devices tested on ENDESA's power lines in Lleida. The company asserted in a statement on Wednesday that the report confirming the success was issued 'after 248 field observations in Plana de Lleida made by the Rural Agents Squad of the Generalitat and 2,634 observations in the main flight cage at the Vallcalent Wildlife Recovery Centre (CRFS)'.

The study was conducted with support from ENDESA, as part of its Biodiversity Conservation Plan, to provide alternatives and promote the development of new solutions for the inevitable impact of electrical infrastructures throughout the territory on birds. The features of these new devices are different from those used up to now: they are rectangular elements made of recyclable materials into which 10-millimetre fibreglass rods are fitted, and the height and distance between rods may vary depending on the most common bird species in the location where they are to be installed.

The power company has declared that actions like this one demonstrate the company's will to improve the interaction between its activities and nature, and for this reason they are developing projects as part of ENDESA's Biodiversity Conservation Plan.

(Europa Press, 28/11/2018)



nesting pairs of Rollers during their breeding season, revealing that the central territories of each pair do not overlap with territories of other pairs breeding adjacent to them. These data are of vital importance when it comes to optimising conservation measures for the European Roller.

In 2018, the first cross-border project in ENDESA's Biodiversity Conservation Plan was launched: tagging and tracking young black vultures (*Aegypius monachus*) in the Tagus International Natural Park, located along the border between Spain and Portugal.

The black vulture is an endangered species throughout Europe, and its area of distribution has shrunk considerably from its original area. In Portugal, the species disappeared as a breeder in the 1970s and it was not until 2010 that the black vulture once again reproduced along the International Tagus, where there are currently some 15 pairs. The species is considered Critically Endangered in Portugal.

The aim of this project is to introduce and study in depth the population dynamics of the black vulture colony present in this protected area. The method used for this is based on tagging the chicks born in the colony with wing bands and GPS-GSM transmitters. These transmitters provide representative information about the dispersal movements of young birds.



During the summer of 2018, in collaboration with Natural Park staff, 8 black vulture chicks - in other words, all the chicks born in the colony - were located and tagged. Out of the 8 tagged individuals, 4 are still in freedom sending data, two died (one of the two transmitters was recovered), and two other individuals were moved to a wildlife recovery centre after suffering from incidents of a natural kind. The latter will be released after recovery and can continue to provide location data. In 2019, the number of tagged individuals is expected to rise and the data resulting from tracking will be analysed.

Also worth special mention is the conservation project involving the osprey (*Pandion haliaetus*) in the province of Cadiz, which began in 2018 in conjunction with Fundación Migres. This species had become extinct as a breeder in the province of Cadiz in the 1960s, until the Department of the Environment of the Government of Andalusia, the Spanish National Research Council (CSIC), and Fundación Migres began reintroduction in 2003.

The aim of this conservation project carried out by ENDESA is to guarantee the expansion of the reproductive population of osprey in the province of Cadiz, especially in the vicinity of the Bay

of Cadiz and reservoirs such as Bornos and Arcos de la Frontera. Another objective set was to spread information, raise awareness and foster citizen participation in the project through the 'Friends of the Osprey' group and the Fundación Migres platform.

To encourage expansion of the species, the decision was made to install 4 nesting platforms and 6 artificial perches in the surroundings of the reservoirs where the osprey's habitat is found. In addition, the reproductive success of the population was tracked and the chicks born in the colony were tagged in 2018, as well as performing upkeep of the newly installed structures and inspections to ensure that any possible disturbances are removed. Besides providing a record of the evolution of the population in the colony, the information obtained will be used for decision-making on future expansion areas.

In 2018, 10 occupied territories were detected in which 8 pairs began breeding and, in the end, 4 of them successfully hatched 9 chicks, which were tagged. In 2018, a total of 23 osprey chicks were successfully fledged in Andalusia.

Within the framework of the osprey conservation project, in November 2018, a volunteering workshop was held in which ENDESA employees had the



opportunity to learn about the zone and collaborate in installation tasks of one of the nesting platforms.

In addition to the projects included in the Biodiversity Conservation Plan, in 2018, ENDESA has developed other activities related to birdlife protection in the main geographic areas where it has power lines, prioritising actions relating to protected species, including the following:

> Andalusia:

As in previous years, ENDESA kept up its commitment to the Department of the Environment to manage sensitive birdlife protection needs in relation to facilities that are hazardous by design or due to their location. In this regard, in 2018, 756 pylons were adapted, and a total of 1,130,000 euros were allocated. The work of Company and the Environment and Territorial Planning Department of the Government of Andalusia for the protection of birds of prey in Andalusian territory has served as an international example in some sessions organized by the prestigious International Union for Conservation of Nature (IUCN) which encompasses 213 countries and government agencies around the world. The meeting, entitled *'Identification and mitigation of the impact of electrical structures on birdlife in Morocco'* and held in mid-May 2018 in Rabat, brought together about 50 experts and companies from around the world to analyse and exchange experiences about how to identify the best strategies to mitigate the impact of electrical structures on birdlife.

The IUCN Centre for Mediterranean Cooperation and the Moroccan High Commission for Water and Forests and the Fight against Desertification (HCEFLCD) organised the sessions in collaboration with the National Office for Electricity and Drinking Water of Morocco (ONEE), the Association of Ornithology Groups of Morocco (GOMAC), the Research

Group for the Protection of Birdlife in Morocco (GREPOM), the Moroccan Association of Falconry and Conservation of Birds of Prey, the European Foundation for Falconry and Conservation, the Emirates Centre for Wildlife Propagation (ECWP) and the MIDSun Group.

The objective of these sessions was to learn to recognise the problems and impacts that electrical infrastructures have on birds, as well as the assessment and mitigation methods for such impacts on migratory birds, promoting an exchange of experiences and knowledge among the different parties involved, based on the experience by the Company and the Government of Andalusia in applying joint measures for protecting birds in Andalusia.

Swivelling, reflective, luminescent anti-collision beacons have been approved and are being tested in the Province of Seville that not only increase the visibility of the cables under normal and low visibility conditions but also are easier to install on existing lines than the devices normally used.

Finally, the Company collaborated in the course organised by the Andalusian Institute for Public Administrations (run by the Department of the Environment) entitled 'Impact of Electrical Lines on Endangered Birdlife. Procedures for Updating Regulations', held from 25 to 27 September, by giving the presentation 'Electricity Companies facing the problem. The Case of ENDESA in Andalusia'. These sessions highlighted the Company's involvement in protecting birds and its commitment to continue working closely with the competent authorities on this matter, as well as with other agents involved.

> Aragon:

Actions have been continued to protect bird life contained in the Decision of 19 May 2015 of the Secretary of State for the Environment, whereby declaration

of environmental impact of the Mularroya Dam was formulated, the environment of which affects several protected species Red Natura 2000, especially the ZEPA Gorges of the River Jalon, within which a critical area of Bonelli's eagle is extended, which has special protection, by means of Decree 326/2011, of 27 September. During 2017, layouts, assessments and other studies of the lines indicated in the Decision were agreed upon, the compensatory measures of which also include actions in other protection areas for Bonelli's eagle outside the setting of the Mularroya project construction. In the Company's case, 32 lines are affected, with a total of 194 km in length and 1,215 pylons. The reforms are included in a multi-year plan, and in 2018 the Company signed an Agreement with the Ebro Hydrographic Confederation, which includes the adaptations to be made to lines in the province of Teruel, execution of which is scheduled for 2019.

On 13 July 2018, the Government Council of the Provincial Government of Aragon passed the Collaboration Agreement between the Government of Aragon and the Company for the development of projects on electrical lines, aimed at reducing or eliminating the risks of collision and electrocution of endangered birdlife. There is no expiry date on the agreement, and it is renewed annually through an addendum. Under this agreement, in 2018, five medium voltage lines were adapted at a cost of 125,234.34€.

On 24 September 2018, the Agreement for modification of overhead electrical lines in Navarra was signed with the Department of Rural Development, the Environment and Local Administration of the Government of Navarra, with the aim of reducing the impact on birdlife. This agreement was valid until 30 November of the same year, and un-

der it, two medium voltage lines were adapted to regulations, amounting to 107,020.81€.

> Balearic Islands:

The Company is collaborating in the European Project Aquila a-LIFE in coordination with the 'Species Protection Service of the Balearic Islands Government' for recovery of Bonelli's eagle (*Aquila fasciata*) on mainland Spain and the Balearic Islands. It has collaborated by modifying and adapting the pylons considered hazardous on lines within the area of distribution of this bird of prey in the areas of the Sierra de Tramuntana mountains, west and southeast of the island of Majorca, completing 82 actions since collaboration started.

These activities are part of the 'Collaboration Agreement between the Department of Agriculture, Environment and Territory of the Balearic Islands Government and ENDESA for the Coordination of Environmental Actions Arising from Electricity Distribution and Protection of Biodiversity' (in force since 2004 and renewed in 2010), which calls for refitting and isolating pylons or marking power lines that may pose a risk of collision and/or electrocution for the birds. To date, over 1,390 actions have been performed.

For yet another year, in a commitment spanning 22 years, sponsorship of the publication 'Balearic Ornithological Yearbook', published by the GOB (Balearic Ornithology Group), was renewed, now in volume 32 (2017). Besides an annual bird census, the publication contains a series of scientific articles and short features on ornithology incidents observed during the

year on the islands. The annual census is clearly the main point of interest in this publication, since it shows the evolution of different species over the 32-year period on record. Collaboration with the GOB was also extended in relation to the Conservation Plan for red kites (*Milvus milvus*) through support for the placement of GPS-GSM tracking devices on released adult or young specimens, a total of 12 in 2018. Since the conservation actions were launched with the creation of a recovery and breeding centre, in which the Company also collaborated 15 years ago now, more than 30 devices have been placed. Fortunately, the red kite is once again a commonly spotted species in the sky above the islands of Majorca and Menorca, where it had virtually disappeared.

> Catalonia:

Of note is ENDESA's investment of approximately 4.5 million euros during the 2017-2019 period in the Serra de Collserola Natural Park. The objective of the project is to integrate and streamline the electrical grid that crosses this uniquely preserved natural space in the middle of the metropolitan area of Barcelona. The action plan is part of an agreement signed by the Company and the Consortium, which reinforces the collaboration between these parties that began over 20 years ago.

It should also be noted that almost all the actions have now been carried out on an overhead medium voltage power line that runs through the Massís del Montgrí in the Baix Empordà, entailing installation of birdlife protection devices aimed at reducing the risk of electrocution and at the sa-

me time improving the power supply to almost 5,000 customers. This work, which had a budget of over 116,000 euros, was executed within the area of the Montgrí Park.

> Canary Islands:

The actions that began in 2010 continued this year, with the aim of minimising the risk of birds colliding into medium-voltage power lines on the Canary Islands. To minimize this risk, in 2018, 180 new beacons were installed on two lines on Lanzarote and 30 new beacons on one line on Fuerteventura, in addition to the 24 kilometres of power lines with beacons already in place on these islands for birdlife protection.

In 2018, corrections were made to prevent bird electrocution on 56 medium voltage power line pylons on Fuerteventura and Lanzarote, as part of the actions scheduled for the first year of the LIFE project approved by the European Union in 2017, in which the Company has partnered with e-distribuzione, S.p.A. (a distributor in the ENEL Group in Italy) and several Canary Island and Italian Administrations to improve conservation of the Canarian Egyptian vulture (an endemic subspecies of the Egyptian vulture) present on Fuerteventura and Lanzarote in the Canary Islands, and of the Egyptian vulture in Italy.

In December 2018, the Company and the Department of Territorial Policy, Sustainability and Safety of the Canary Islands Government signed an agreement that will be valid for three years, under which actions will be performed on 57 medium voltage power line pylons in the Canary Islands to minimise the risk of birdlife electrocution.





4.2.3. Projects with a socio-environmental component

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In 2018, four projects were continued with a marked socio-environmental component started in previous years.

One of them is the enrichment of biodiversity in areas with bears in the Lleida Pyrenees. These actions form part of the Piroslife project, headed by the Brown Bear Foundation and seek the improvement of habitats to encourage the reintroduced population of brown bear in the Lleida Pyrenees and the compatibilisation with human activities in the area.

To achieve the first of the objectives, actions such as planting native fruit trees in copses or the restoration of habitats in danger of degradation took place. The compatibilisation with human activities, including ENDESA's hydroelectric activity, is guaranteed through the selection of areas of activity and by holding training and information seminars. The choice of these solutions that integrate and make the presence of bears in the area sustainable, as well as offering jobs to local people at risk of exclusion to perform the biodiversity enrichment tasks, is what gives the project its eminently socio-environmental nature.

During the first quarter of 2018, plant samples were gathered from local apple tree varieties that, in some cases, were over one metre high already and flourishing, and raspberry propagules were collected for reproduction in nurseries. Plant material was collected in zones in the environs of reforestation areas within the bear distribution area in the Pyrenees and in similar environments

to guarantee quality and suitability, thus maximising the success of the plantings.

The Brown Bear Foundation has held several meetings with mayors of the municipalities that have public land on which activities could be done, and also with local residents who are interested in territory safekeeping agreements. Upon entering into these agreements, plantings can be made on their lands, in a long-term commitment to conservation. Last summer, the nursery plants were growing properly and developing a suitable root system for them to be planted within the territory. In November 2018, planting began in the territory, and a local forestry company was hired for this in order to also help generate local jobs. During 2018, three other socio-environmental projects started in recent years continued:

> **A study of the cascading trophic effect of the actions for improvement of the forest ecosystem carried out in the hunting natural reserve of Boumort.** Activities in 2018 focused on completing specification of the integrated methodology for recovery of local plant life, continuing with ecological restoration work and consolidating the pilot plan for recovery of the grouse.

> **ENDESA Forest Initiative – La Atalaya,** in which the second field inventory was taken, missing items replaced and the project status was reviewed. The aim here is to assess

the status of the reforestation work done in 2016 and to consolidate the review and maintenance work on the mass done in 2017. The project's ultimate purpose is to ensure 100% survival of the plants introduced in 2016, guaranteeing the persistence of the forest and the long-term ecosystem services it generates. As in the past, the field work was done by local workers, giving priority to the unemployed, young people, women, those over 45 or at risk of exclusion. Thus, the project continues to fulfil the three-fold objective set at the beginning, seeking to contribute to the mitigation of climate change (CO₂ absorption by the plants introduced), generating a social benefit and at the same time fostering biodiversity recovery.

> **Creation of a breeding group of Mediterranean tortoises.** Maintenance work on the property and tracking of specimens continued in 2018. In addition, on 31 October 2018, another 33 adult specimens were released. They were provided by the Catalonia Amphibian and Reptile Recovery Centre, and join the adults released in previous years and the individuals that were born in the breeding group in Bovera. The media were invited to attend the event and, thanks to their presence, it was reflected in the local and provincial press.



4.2.4. Publications

ENDESA has continued to promote dissemination and knowledge of biodiversity in 2018 through active participation in technical and scientific forums, as well as the publication of its research. This year, 2 articles were published, one scientific and one informative, and

6 presentations were made at congresses, arising from various Biodiversity Conservation Plan projects.

ENDESA promotes and encourages that all the activities of its Biodiversity Conservation Plan with results that may be of interest due to their scientific, techni-

cal or simply popularisation value be published in the most appropriate manner. Thus, a significant portion of the Plan's activities are eventually published in journals and various information media.



4.2.5. Training and seminars

In July 2018, the #ENDESACHallenges event was held, in which diverse experts in social networks were invited to learn about a series of ENDESA projects related to sustainability, mobility, energy efficiency and biodiversity conservation first hand.

On 5 July, the group travelled to Sant Adrià de Besòs and did a diving session in order to see the reef ecosystem created around the plant. On 6 July, the group took an e-bike tour of the Parc Natural dels Aiguamolls de l'Empordà (PNAE), where they learned about the Coracias Project for conservation of the European roller.

During the tour, the participants had the opportunity to attend two interesting events:

- > Placement of a camera trap in a nest with known cases of predation: The participants were able to examine the camera up close and watch it being installed near the nesting box.
- > Roller specimen entering and leaving the nest in search of food: Aided by a

spotting scope, the participants were able to observe the activity of a roller specimen in its habitat.

- > Upon their return to the park's interpretation centre, the participants had the chance to examine up close objects such as the bands used to tag chicks and the radio tracking antenna through which the location data of the tagged individuals are downloaded.

In November last year, a workshop was held on tools for assessing the suitability of the physical habitat and potentially useful habitat for fish, sponsored by the Flumen research group at the Polytechnic University of Catalonia. Representatives from the academic field, the public administration and the corporate sector, including ENDESA, attended this workshop. During the workshop, ENDESA gave a presentation about the Company's experiences in assessing the water habitat, where they shared the most significant conclusions reached in the studies conducted by ENDESA in this

field in recent years with the rest of the participants.

As mentioned above, the Coracias Project was presented at CONAMA 2018, held in Madrid in November of that year. The presentation of the project outcomes and its contribution to the Aichi Targets took place within the 'Companies and Biodiversity' Workgroup, whose focus in 2018 was integration of international biodiversity objectives into the corporate sector.

In addition to these initiatives to inform the public about ENDESA's activities in biodiversity, an in-house volunteering session also took place within the osprey conservation project in the province of Cadiz, as described in section 4.2.2. Measures like these increase the awareness of employees about biodiversity conservation and protection values, encourage them to learn more about the natural spaces in their own region, the species that live there and the actions that the Company is carrying out to conserve them.

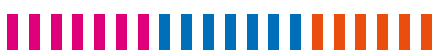


4.2.6. Other initiatives

As part of the commitment acquired by signing the Biodiversity Pact led by the Biodiversity Foundation, ENDESA is

an active member of the Spanish Company and Biodiversity (IEEB) initiative. This initiative established specific wor-

kgroups in 2015 which have continued their activity in 2016, 2017 and 2018. These groups are formed by experts





from various corporate sectors, technicians from the administration, representatives from the academic world and

territory conservation and safekeeping entities.



4.3. Environmental restoration

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In 2018 ENDESA's biodiversity study of the restored mining areas continued. Specifically, sampling was repeated in the two restored areas that were still owned by ENDESA in 2018: Corta Ballesta Este in Peñarroya (Cordoba) and the Puertollano mine (Ciudad Real). The conclusions about the presence of vertebrate fauna in Puertollano were also reached this year, making it possible to update the number of species recorded. The final results for Corta Ballesta will be available in 2019. A summary of all the data available up to now is shown below:

as such in the European, Spanish and autonomous legislation were taken into account.

The aim of this biodiversity study in mining areas is to increase the knowledge held on these ecosystems resulting from environmental restoration of open-cut mining areas; monitoring their condition, evolution and integration within the landscape and territory, collecting information on their colonisation process by species of flora and fauna, paying special attention to those which are protected, and in short, enhancing them. An inventory has

On the other hand, as the landfills of ash, slag and gypsum are an environmental liability caused by the electricity generation activity using solid fuel, it is necessary to generate the knowledge that enables providing restoration solutions for these facilities, in addition to the partial or total restoration of the landfill infrastructures that have reached the end of their useful life.

In this regard, the second phase of the SEBIECO Project began in 2018: using bioindicators to monitor the eco-restored ash dumps at CT Litoral (Carboneras, Almeria). These indicators offer highly relevant information about the structure and functioning of the restored semi-arid habitats.

The second phase of SEBIECO sought to increase the representativeness of the available data on the structure and functioning of the studied habitats and to expand the information on several crucial aspects (number of plant species studied, stoichiometric analyses of stems and roots, invertebrate fauna, soil microbiota, soil evolution), besides other more specific objectives.

Location	Number of vertebrate fauna species detected	% of species protected to some degree
Corta Barrabasa (Teruel)	85	70
Corta Gargallo (Teruel)	73	75
Corta Ballesta (Cordoba)	101	70
Corta Cervantes (Cordoba)	90	66
Puertollano (Ciudad Real)	169	80

The number of species includes those found during field work associated with this project and outside references to it. To calculate the percentage of protected species, all of those considered

been made of all species of flora and vertebrate fauna, censuses have been carried out of water birds and digital maps are being prepared for each area studied, among other analyses.



For these purposes, 10 plots of land were defined for ongoing study within the restored area, each measuring 10 square metres. In these plots, the evolution of the vegetation and the invertebrate fauna was monitored, soil samples were taken, stoichiometric analyses of bioindicator species were taken, the eco-physiological behaviour of structural species was recorded, and the microbiota linked to species of interest was analysed using environmental DNA techniques. Additionally, samples were taken to detect endangered flora. The final results of this second phase will be ready in 2019, but the data available at this time show that the eco-restored dump has evolved positively, as seen in the results from the first phase.



4.4. Impacts caused by activities and operations in protected areas

304-2

As one of the processes included in the environmental management systems implemented in ENDESA's business lines, and in accordance with the terms of the environmental authorisations and environmental monitoring plans that apply in each case, ENDESA monitors all significant environmental aspects and ensures that the environmental impact in each case is minimised and offset. This includes all facilities that are inside some kind of protected natural space in particular.

It has been deemed relevant to discern the surface area occupied by the Company's centres and infrastructures

that is inside spaces belonging to the Red Natura 2000 (SAC, SCI and SPA for birds), as a measure of the impact caused by the mere presence of ENDESA's facilities. These data were obtained as part of the biodiversity indicator system implemented over the last two years. In addition to the occupied surface area, in reference to hydroelectric production, data on the volume of water retained and the number of kilometres of regulated river within Red Natura spaces are also included. These data are shown below. In 2019, renewable energy facilities are expected to be added to the biodiversity indicator system.



Thermal generation	
Surface area (km ²) occupied in Red Natura 2000 spaces	1.57
Hydroelectric generation	
Surface area (km ²) occupied in Red Natura 2000 spaces	282.57





Responsible relationship with communities




Nearly **1.15**
millions of beneficiaries in the 163 social development projects managed in 2018

25
% of the investment aimed at projects to promote energy access

13.99
millions of euros invested in 2018 according to LBG methodology

272
agreements with the Public Administration to facilitate access to electricity

Endesa Sustainability Plan compliance 2018-2020

	Course of action	2018 Objective	Result 2018	Key actions
 Local communities	Promotion of access to energy (No. of beneficiaries)	240,000	403,390	<ul style="list-style-type: none"> > Twenergy > Agreements entered into with the government to tackle energy poverty rise to 272 > Programmes to tackle energy poverty: <ul style="list-style-type: none"> - Energy poverty social innovation programme - Energy volunteering - Training for tertiary sector and social services technicians.
	Access to electricity for vulnerable groups (No. of people)	60,000	130,928	
	Support for education (No. of beneficiaries)	32,000	52,526	<ul style="list-style-type: none"> > Education projects: <ul style="list-style-type: none"> - The Country of Students - Promoting STEM learning among girls - School and Talent. Quality and inclusive education - Reto Tech. Promoting STEM careers - Pontificia de Comillas University Foundation study grants and awards - Professional training in the electric sector for people at risk of exclusion.
	Social economic development (No. beneficiaries)	42,000	120,731	<ul style="list-style-type: none"> > Social economic development projects: <ul style="list-style-type: none"> - Candelaria youth training - Assignment of use of company assets - Projects to improve employability and job creation.
	Environment and biodiversity	78,000	149,958	<ul style="list-style-type: none"> > Projects that have enhanced knowledge, dissemination, and regeneration of natural spaces.





1. ENDESA's commitment to the communities

413-1

103-1 Management approach Indirect economic impacts

103-2 Management approach Indirect economic impacts

103-3 Management approach Indirect economic impacts

103-1 Management approach Local communities EUSS

103-2 Management approach Local communities EUSS

103-3 Management approach Local communities EUSS

ENDESA's commitment to developing the communities in which it operates forms part of the company's Creating Shared Value (CSV) Policy. This policy sets out the general principles, roles, responsibilities and procedures to be used to define, implement, fund, monitor and report social actions, processes and projects along the company's entire value chain and all its business lines and functions. Its aim is to legitimise the business and reinforce its sustainability, generating roots in the community and promoting social progress in the local environment where it operates.

The Creating Shared Value (CSV) Model seeks to incorporate sustainability into the Company's strategy, boosting the competitive advantages it offers, by adopting an approach that brings together the Company's objectives with the priorities of stakeholders.

To do this, it is necessary to effectively and efficiently make use of and optimise the capabilities and skills the Company has from an integrated standpoint and generate measurable benefits in society responding to its current or future requirements.

This approach is a key tool, which is added to the other actions planned to give a response to the strategic priority of 'responsible relations with the commu-

nities' to tackle three identified critical factors:

- > Unfavourable public perception of the energy sector, which demonstrates a wider disconnect between electricity companies and the needs and requirements of stakeholders and society in general. This leads to calls for greater transparency and dialogue with them and the need to bolster social legitimacy, because the sector is under public scrutiny regarding a number of issues, the most noteworthy of which is energy poverty.
- > The role that ENDESA can play in current society, as key agent for its development, is mainly at a local level in the business environment, with electricity as vital element to maintain social well-being. This leads to greater socio-economic development in communities as they become actively involved in the Company's decision-making process.

> A political, technological, environmental and social context with complex, interconnected global challenges, which makes it essential to innovate in the way of approaching and interacting with customers/citizens to meet society's new expectations and build trust-based links that guarantee the sustainability of the business in the long-term.

Three areas of action have been identified to respond to these challenges:

- > Fostering of active listening of major social and institutional agents in affairs affecting the company, establishing partnerships and creating shared value, which nurture closer ties with the local community and social trust.
- > Implementation of sustainability initiatives and projects aligned with the materiality and commitments of the United Nations Sustainable Development Goals assumed by ENDESA, in-

ENDESA has provided 14 million euros to boost the social development of the communities where it operates, of which 11.3 millions are monetary contributions or in kind.

corporating creating shared value into the company's business strategy.

> Measurement, dissemination and awareness raising: Measure the im-

pacts on the community and the returns for the Company of sustainability projects, improving the quality of the information offered and commu-

nicating it suitably, thus bringing the company closer to citizens, with internal and external sensitivity measures, both for society and employees.



2. Action under the Creating Shared Value approach

413-1 413-2

Since 2016, ENDESA has been working to incorporate sustainability into its business strategy and operations under the new Creating Shared value (CSV) approach. This is a step forward in how the company operates, integrating the social variable into its operations and strategy across the entire business chain, to maximise the value that can be generated in the local community. This entails a shift in the sustainability approach from the traditional corporate social responsibility (CSR) perspective to the generation of shared value that is shared by the company and the community in which it operates.

An exhaustive and stringent methodology is therefore used to monitor the company's assets across all phases of the value chain from the start with the construction project, through operating the facility, until it is closed and dismantled at the end of its useful life. This method enables the social and en-

vironmental variable to be factored into the company's decision-making and provides unique value, setting it apart from the other operators in the sector. This is because it maximises the company's contribution to the local community and environment from a shared value perspective, thereby aligning the company's goals with the priorities and needs of the community in which it operates.

There is a series of phases involved in applying the CSV model to an asset or project. First, an exhaustive analysis is carried out of the local community where the asset or project is located and is being supported. This offers a complete snapshot of local conditions from a socio-economic and environmental perspective. Next, social agents representing the community are contacted and consulted to identify the community's priorities and needs, and the perceived risks and impacts of the business asset/project in question. A CSV Plan is then drawn up together, which will be

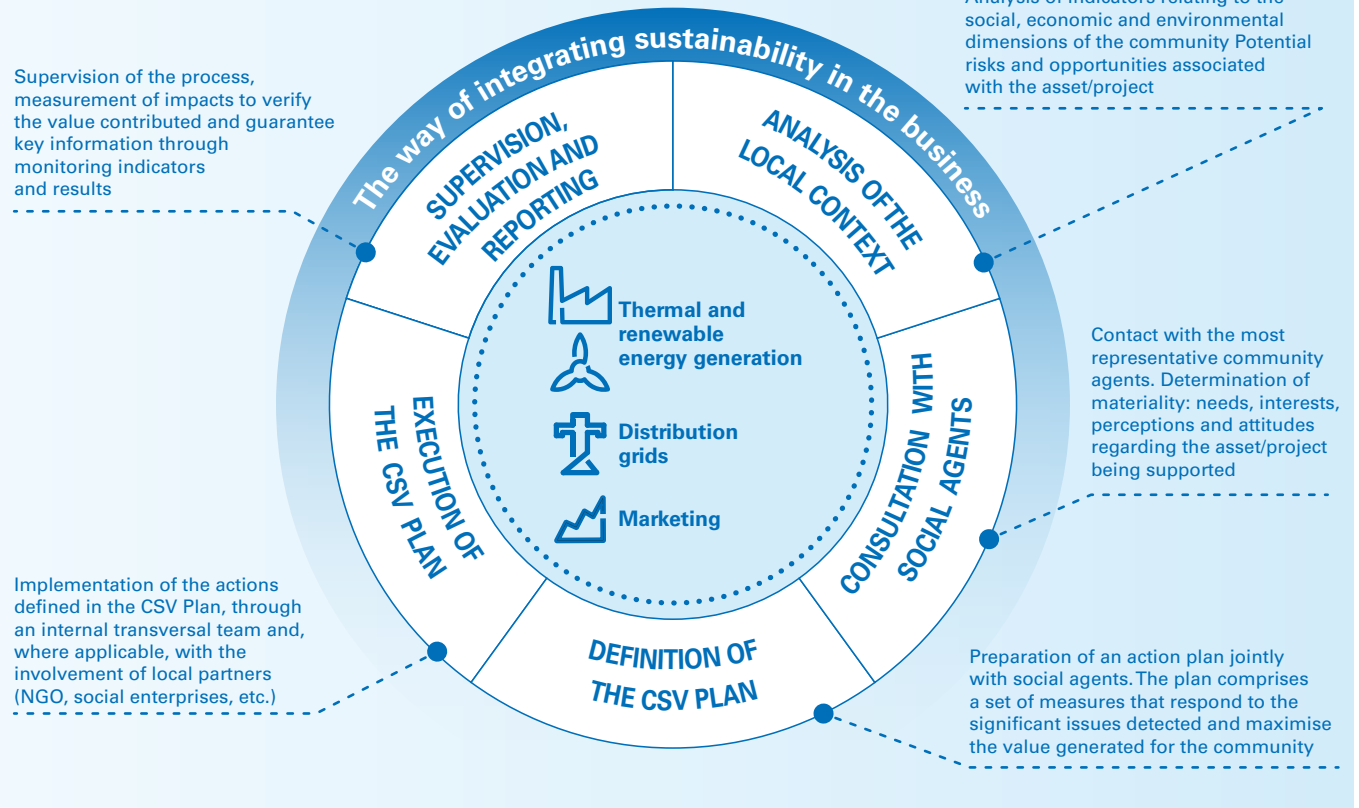
the result of the consultation process described beforehand. The actions and projects included in this CSV Plan are designed and executed in partnership with local agents and must be aligned with ENDESA's general strategy and the United Nations Sustainable Development Goals (SDG). An approach is adopted that includes society and efficiently and effectively exploits and optimises the company's capabilities and skills from an end-to-end perspective to generate measurable benefits for society, responding to its current and future requirements. The plan will be overseen in conjunction with the agents in the community to monitor its outcomes, and will be updated fairly regularly based on changing needs.

The plan is to progressively roll out the CSV model across all the company's businesses: generation, distribution and marketing. It has already been implemented at 100% of the thermal and renewable energy generation facilities, al-





CSV - CREATING SHARED VALUE



though to differing degrees, and is also in place for 100% of the wind and solar farm construction projects, covering the 879 MW of capacity allocated in the last two auctions in 2017.

An example of the CSV action taken during 2018 is the work carried out for new renewables projects being built in 2019, as well as the support being provided under this approach to operational

thermal power plants and those in the process of being closed:

2.1. CSV support for new renewable energy construction projects



There are currently CSV support projects underway for the 25 new renewable energy construction projects being built (18 wind farms and seven solar farms), which are at differing stages of

completion. The CSV plans for each of these projects during the construction phase have been defined. The plans set out four courses of action:

1. Sustainable construction: Measures to minimise the environmental impacts of the construction project:

- > Installation of solar photovoltaic panels to reduce the use of diesel ge-

nerators, which could be donated to the local community at the end of the project and installed on a public service or municipal building.

- > Rainwater harvesting tanks to minimise water usage, which could also be donated to the local community at the end of construction.
- > Provision of electric vehicles for the engineering teams to use during construction, with on-site recharging points.
- > Efficient lighting of the construction site.
- > Selective recycling, composting of organic waste and possible donation of materials to the local population.
- > Advance communication with the community of work to be carried out on the project using an information board at the construction site. In some cases, this has been supplemented by CSV events to present this approach to local community agents and the engineering teams involved in construction.

2. Action to enhance the employability and employment of the local population:

- > Training courses: ENDESA has designed two types of training course to hire more local labour, provide jobs

and build up the economic fabric of the area:

- Solar panel installer course. Three courses have been given in municipalities near the Valdecaballeros and Totana solar farms (Totana, Logrosán and Casas de Don Pedro), attended by 359 students. It is a training program that requires no previous experience in the sector and courses last a week and are for people who are unemployed. The aim is to offer a practical and theoretical course that helps participants gain employment building the farms, enabling them to gain a professional foothold in a cutting-edge industry that is undoubtedly set to grow in the area.
- Course on renewable energy farm operations. The goal is to enhance the employability of individuals with a certain level of experience in the renewables sector and living near to the new farms being built. Ten wind farm courses are planned for 2019 (six in Zaragoza, one in Burgos, one in Lugo, one in Motilla and one in Malaga), as well as three solar farm courses (two in Logrosán and one in Totana) for 10 students each. This will

enable a total of 130 people to be trained.

- > Increase in use of local workforce to work on construction, transport, catering and accommodation for workers.
- > Other actions to boost local tourism: restoration of artistic and historic heritage in a number of municipalities, improvement of footpaths and signposting, etc.

3. Actions to improve energy efficiency in the local or surrounding municipalities:

- > Audits and energy efficiency solutions in municipal buildings. Fifteen projects will be developed in 2019 to improve the energy efficiency of public facilities.
- > Replacement of conventional public lighting with LED. Seventeen projects will be developed to replace lighting for more efficient technology during 2019.
- > Photovoltaic facility for water pumping.

4. Environmental actions

Voluntary initiatives by the company not included in the environmental impact assessment:

- > Environmental awareness and reforestation programmes.
- > Footpath signposting.
- > Tree replanting.

2.2. CSV support for thermal power plants in operation

The plants that have made the most headway in developing their CSV plans are in the Canary Islands and Balearic Islands, although shared value work is under way at all assets and will be developed and expanded in forthcoming

years. Each site is at a different stage of implementing this work, which primarily depends on the specifics of the local community where assets are located.

Key projects being included in the CSV plans supporting these generation plants include:

Open Plant actions: Events of opening plant to local community, in which diffe-





rents activities are seen, depending on the facility being built. Highlights:

> **Plant visits:** The aim of these is to inform the local community of the business through scheduled visits to each plant by different groups. Specifically, during 2018 over 2,800 visits were made to plants in the Canary Islands, the Balearic Islands, Catalonia, Andalusia, Ceuta and Melilla by local schools, universities and the general public.

> **ENDESA Educa's Play Energy campaign:** One of the most popular activities being offered to the local communities of all plants. Managed by the ENDESA Foundation, Play Energy is a programme of workshops at local schools to raise awareness of social issues, sustainability and energy efficiency among children from training rooms. The programme involves hands-on experiences showing children how installations work and the importance of appreciating energy, encouraging the efficient and rational use of electricity. During 2018, approximately 52,000 children benefited from the programme, over 2,805 of which attended the 35 workshops held near the company's plants.

Access to energy projects: Measures responding to society's demands of the sector that are being implemented in the most vulnerable communities neighbouring the company's plants under the CSV ENDESA umbrella. Highlights:

> **Energy volunteering** An energy-related social project which was launched by ENDESA and the ENDESA Foundation in 2015 to help energy-poor households through a two-pronged approach. First, these

families receive advice over the phone or through workshops to reduce their energy consumption and cut their electricity bills. This includes handing out energy efficiency kits for them to install themselves. And second, the most vulnerable households' electricity circuits are checked for any hazards, which are then put right by approved installers. The initiative is run with the support of ENDESA's current staff and early retirees, who are given the possibility of performing charity work as volunteers. During the 2018 edition, the Spanish Red Cross was involved as lead NGO and coordinator of the programme, while ECODES worked on a tool for diagnosis and measurement of outcomes. Within the scope of the programme (14 regions), four sites were included where CSV measures would be taken to enhance relations between the local community and four thermal power plants. Work took place with families in the municipalities neighbouring the Salinas power plant on Fuerteventura, Punta Grande on Lanzarote, Candelaria on Tenerife and Alcudia on Mallorca. Some 55 workers from the four plants and neighbouring offices volunteered for all the project's activities, speaking at workshops for the locals, visiting homes, and running the supplementary activities alongside the programme. Upwards of 700 families attended the workshops and received home visits. As well as the partner NGOs, the programme received the backing of other local stakeholder groups who felt they should be involved in this community initiative, such as municipal social services, other local en-

vironmental and social NGOs, and neighbour communities. Fourteen installers were also given work.



> **Technical workshops for social services and third sector organisations on efficient energy consumption habits and how to save on energy bills through public welfare and citizen engagement departments** in the communities around the plants in the Canary and Balearic Islands.

> **Support for different sector-related local events.** This included staff from the Energy Volunteering programme at the Salinas plant being involved in the Puerto de Rosario 'Sembrando Color' Associations Fair on the island of Fuerteventura. This was held in November 2018 with the involvement of another 40 associations and NGOs and was used to showcase the volunteering work to the local community and other visitors.

Socio-economic development projects

> **"Capacitate Empleo" programme, as part of the Candelaria plant's CSV plan:** Candelaria Town Council and ENDESA, along with the Spanish Red Cross, signed an agreement in April 2018 to help local residents



find a place in society and the job market through a combination of educational, socio-educational and occupational activities and training for work aimed at developing their social and professional skills. The goal of this partnership is to foster a desire to find work among the population neighbouring the Candalaria plant, and acquire the right tools to take personal responsibility for actively looking for a job. This edition benefited 30 long-term unemployed. The programme has been updated based on the nature of the demand for jobs in the area, with a special focus in 2018 on providing

comprehensive training for warehouse operatives with classroom sessions supplemented by technical and workplace training at local companies requiring staff with the right profile. Another 15 young people also benefited from guidance, training and intermediation activities. After a year of classroom-based training and work experience at partner companies from Valle de Güimar, a total of 18 beneficiaries found work (60% of participants), exceeding the objectives for the project.



> **Installation of a fish farm at the Alcudia plant as part of the CSV plan:** Fish-farming project to make use of water used in the Es Murterar plant's cooling circuit and breed marine species such as bream and bass that are very popular dishes. During 2018, 800,000 young bream stock were bred thanks to this initiative involving local businesses. The aim of the project is to generate revenue from the heated process water, creating a local economy while also giving researchers an opportunity to study whether fish grow more quickly in this artificial environment.



2.3. CSV support for thermal power plant closure projects: Future plans in Compostilla and Teruel

ENDESA is firmly committed to decarbonising society, resulting in it making a public pledge in 2016 to fulfil Sustainable Development Goal 13. It set a tar-

get of decarbonising 100% of its energy mix by 2050, with a roadmap of clear milestones in 2020, 2030 and 2040, as explained throughout this report. This

commitment has been set out in both the 2019-2021 Strategic Plan and in the 2019-2021 Sustainability Plan, which include objectives to increase production





with renewable sources and increase CO₂ free production, reduction of absolute and specific CO₂ emissions and, lastly, reduce the installed thermal generation capacity.

This commitment to pare back thermal generation is confirmed in the 2019-2021 Strategic Plan through the announcement to close the Compostilla and Teruel plants in 2020. The outcome of this was ENDESA submitting a request on 19 December to close both plants.

As part of its commitment to local communities, ENDESA has voluntarily drawn up Future Plans to promote economic development and job creation in the catchment areas of the two plants as part of its efforts to responsibly manage the plant closures. It is also open to including new viable initiatives that may be proposed in the future to achieve these goals.

The Future Plans include ENDESA protecting the jobs of all workers at the two plants, striving to minimise geographical mobility. The company's efforts re-

garding contractors will revolve around giving preferential treatment to local firms to carry out the work of closing and dismantling both plants and build the new renewable energy facilities in the areas of the two plants. The closing and dismantling work will take a long time (currently estimated between four to six years) and will create some 130 jobs, rising to 200 at certain times, at each of the two sites.

The company's Future Plans also include high levels of investment in renewable energy projects. Specifically, ENDESA intends to develop up to 1,000 MW of new solar photovoltaic capacity in the area of Andorra plant at a cost of around 800 million euros, as well as 513 MW of wind energy capacity planned for Aragón at a cost of 500 million euros.

In relation to the Compostilla plant, the company is considering solar photovoltaic projects totalling 300 MW in the area of Ponferrada, plus 20 MW of wind energy capacity, which will give coverage to the capacity allocated to the com-

pany in the last two auctions. This would bring the total investment in the region to approximately 260 million euros.

The facilities included in the Future Plans would also raise significant revenues for the local municipalities in the form of taxes and rates, while also boosting the rental income of the owners of the land on which the projects are developed.

The plan also sees the company putting a system in place to enable local businesses, institutions and other public and private agents to submit viable alternatives through an open, transparent and participatory process, with a view to identifying investment and job creation projects for the sites of the both plants or in their surrounding areas. This programme would be developed in close collaboration with local and regional agents, and would allow anyone to present reconversion projects. An independent committee will be tasked with evaluating each project, including a significant number of representatives from local and regional agents.



3. Categorisation of sustainability projects

203-2

E NDESA's sustainability projects and initiatives are implemented in the different territories where the company operates and by each of the company's business areas, as well as by the ENDESA Foundation.

As regards the new categorisation of projects implemented, four project groups have been established that have an impact on communities, as well as a fifth group concerning internal operating

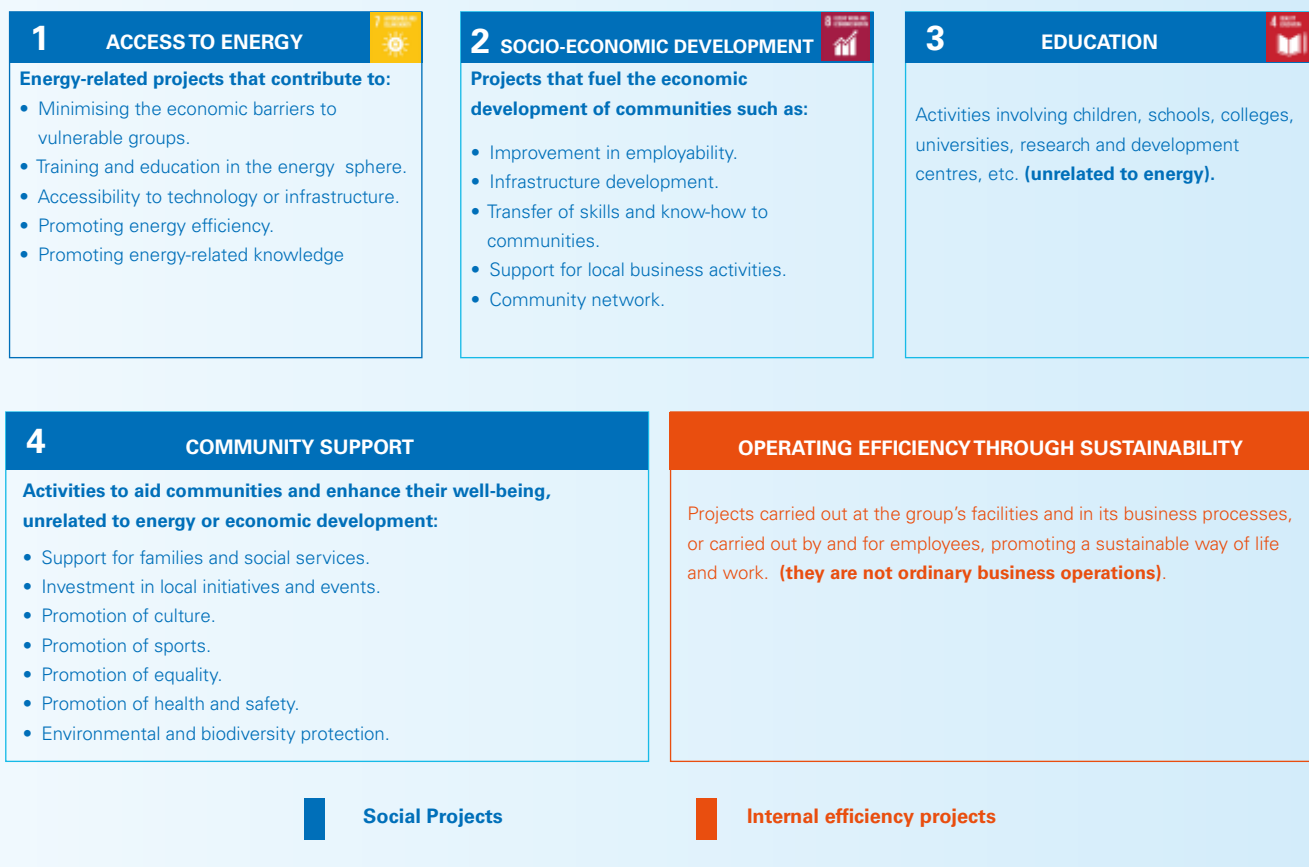
efficiency, which is beyond the scope of this chapter (for this reason, hereinafter the analysis will be centred on categories 1 to 4).

The categorisation of projects has been changed this year compared to 2017 in order to prioritise 'Education' (which was previously included as a sub-category of the 'Local community support' category), since it is one of the public pledges made to fulfil the United Na-

tions Sustainable Development Goals (SDG 4 Quality education).

This categorisation seeks to improve how projects are managed to align them with the company's materiality and priorities according to its commitments to the United Nations Sustainable Development Goals (SDGs), through their monitoring and tracking, in addition to the measurement and enhancing thereof.

SUSTAINABILITY PROJECTS: CATEGORISATION OF THE PROJECTS/INITIATIVES





SOCIAL DEVELOPMENT PROJECTS MUST:



The basic motivation that guides ENDESA's social contribution is:

- > Providing business activities with social value, by creating relationships of trust which, in the long term, generate support in communities and encourage social progress.
- > Supplementing the company's function as a basic service provider, facilitating access to electricity for the most vulnerable groups.
- > Providing a response to the needs of the main stakeholder groups, on both a local and global level, with whom the Company interacts.
- > Enhancing, by means of its contribution, the generation of wealth and the progress of society.

For this reason, the shared-value social projects will be projects that:

- > Accompany business, generating wealth for the local community.
- > Respond to the material social issues identified by our stakeholders (tackling energy poverty, entrepreneurship and economic development, employability and job creation, conservation of biodiversity and the environment, quality education and training).
- > Concentrate particularly on susceptible groups (disadvantaged families, persons under vulnerable circumstances, children and young people, new entrepreneurs, etc.).
- > Are managed in cooperation with the social representatives of the communities participating in the project.
- > Are long-lasting and have the potential to replicate successful actions.
- > Provide benefits for society and returns for the company which are verifiable and measurable.
- > Are systematically, transparently reportable, and are appropriately transmitted to society.

ENDESA's regional divisions and their sustainability committees, as well as ENDESA's various business lines and the ENDESA Foundation, have launched projects and initiatives in accordance with the above criteria, coordinated and monitored by the Sustainability Department.



4. Quantification of ENDESA's social investment in the community

203-1

London Benchmarking Group LBG España

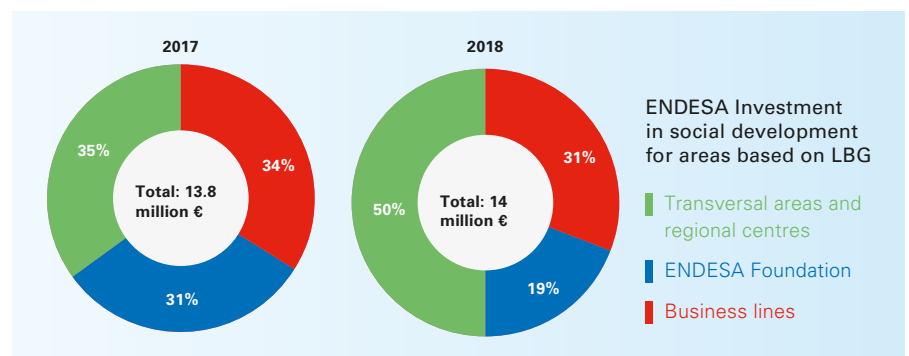


For the tenth year running, ENDESA's report on social activities has been presented according to LBG methodology. ENDESA has belonged to the work group of the London Benchmarking Group (LBG) Spain since 2008. This methodology enables the measurement, management, assessment and communication of the contributions, achievements and impacts of the Company's investment in social development in society.

In 2018, and according to LBG methodology, ENDESA has provided 14 million euros in social investment allocated to the communities in the areas where it operates, of which 11.3 million are monetary contributions or in kind. Of the total investment, 2.4 million euros were distributed through the ENDESA Foundation, 4.2 million euros through the transversal areas and regional centres and 4.7 million euros through the company's various business lines.

ENDESA's investment in social development projects 2018 (thousands of euros)

By area	Money + kind	Time spent	Administrative costs	Total
Transversal areas and regional centres	4,191	172	13	4,376
ENDESA Foundation	2,430	244	19	2,693
Business lines	4,690	2,080	158	6,927
Total Iberia	11,310	2,496	190	13,996



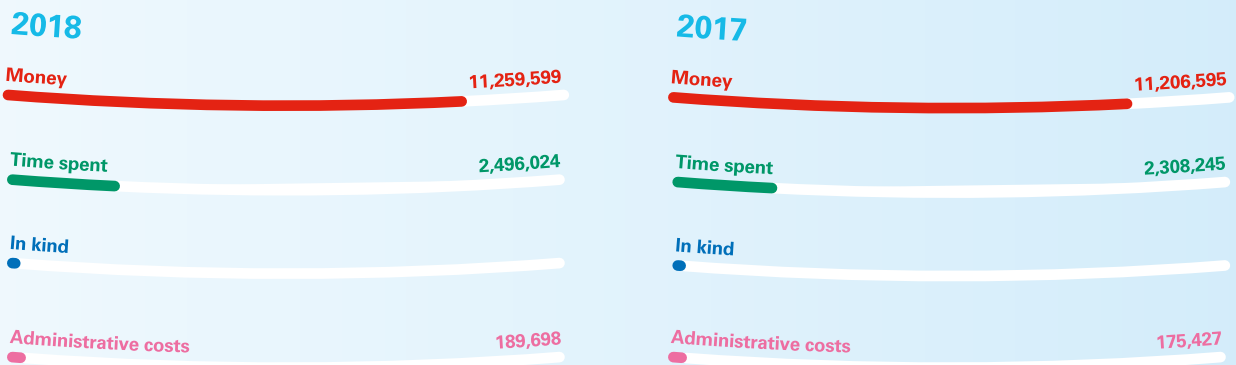


Investments according to LBG methodology in ENDESA's social projects continued to rise in 2018 – albeit at a lower rate than in previous years – increasing by 1.5% with respect to 2017 (14 million euros in 2018 compared with 13.8 million euros in 2017). This investment has benefited 20% more people than the

previous year (1,148,888 direct beneficiaries in 2018 versus 958,335 in 2017) thanks to ongoing management improvements and optimisation, use of synergies, involvement of employees, and minimisation of associated costs. It is notable that, for the first time, half the investment in social development

projects has come from the company's business lines thanks to the rollout of the Creating Shared Value (CSV) model that aims to support each business along its entire value chain, strengthening its ties with the communities in which it operates.

EVOLUTION OF THE INVESTMENT IN SOCIAL DEVELOPMENT IBERIA



The number of projects has remained practically unchanged, with 166 performed in 2017 and 163 in 2018, continuing the trend of focusing on the manage-

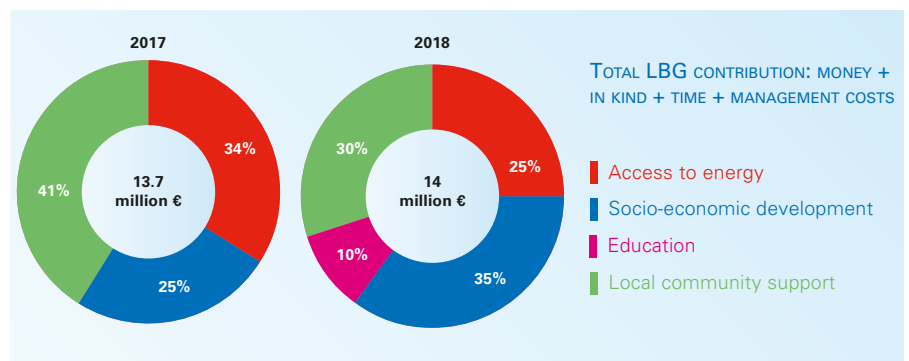
ment of fewer but better optimised activities and with a greater level of impact. Social investment in 2018, considering only monetary and in kind contributions,

represented 0.8% of net profit from continuing operations attributable to ENDESA shareholders, which is in line with the previous year's figure (2017: 0.8%).



4.1. Distribution of social investment by project type

If we follow the internal project classification (explained in the previous section), the distribution of the investment has been as follows:



There has been a decrease in investment in access to energy projects from 34% in 2017 to 25% in 2018. This is due to a reduction of efficient lighting initiative in buildings with significant cultural importance as these projects have come to an end. Nevertheless, the number of projects in this category has risen slightly (34 in 2017 and 35 in 2018), as has the number of beneficiaries, especially in the “Reducing economic barriers to accessing energy” category (from 106,000 beneficiaries in 2017 to 131,000 in 2018). This demonstrates the company’s continued efforts to honour the proven commitment to bolster this course of action in the social sphere.

Investments in socio-economic development projects are significantly up in both absolute and relative terms, going from 25% in 2017 to 35% in 2018 because this course of action is one of the three priority material issues for our stakeholders, above all in relation to employability and job creation. Lastly, the scope of local community support projects has changed compared to the previous year. A new ‘Education’ category has been created, which had previously featured as a sub-category of ‘Local community support’ projects, since this is one of the publicly assumed commitments to achieving the Uni-

ted Nations Sustainable Development Goals.

Nonetheless, the level of investment in education projects (10% in 2017 and 2018) and in the new scope of local community support projects (30% in both years) remains unchanged.

Finally, we should comment that in 2018, there have been no physical or economic displacement of people due to Company activities.



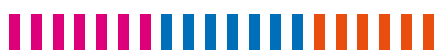
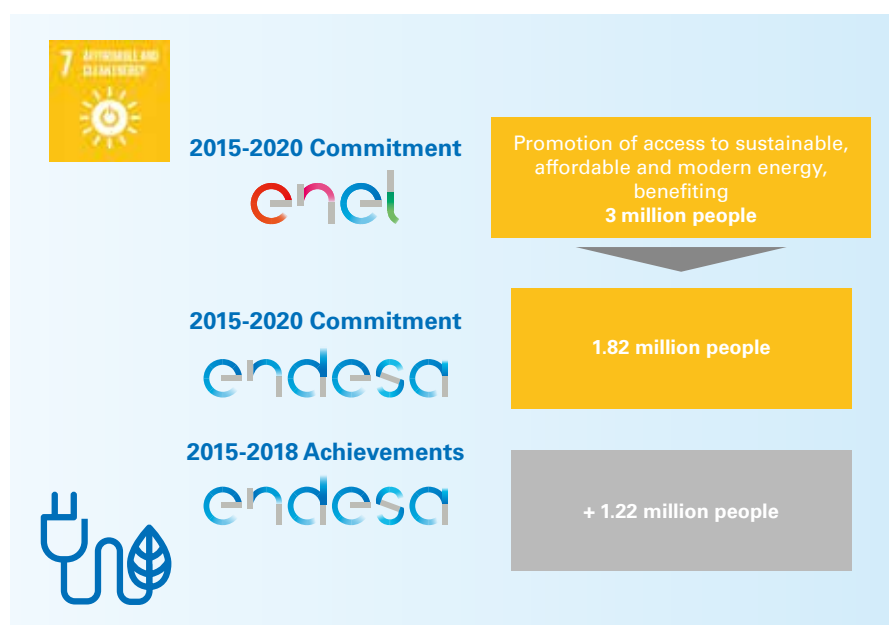
5. Details of sustainability projects

5.1. Access to energy projects

One of ENDESA’s main approaches in social development is the development of projects in line with the Company’s *core business*, with initiatives to favour access to energy. This framework includes all energy-related projects that minimise the economic barriers faced by vulnerable groups, offering education and training in the field of energy, guaranteeing access to technologies and infrastructure, and promoting energy efficiency and awareness regarding its use. This type of initiative also responds to the commitment of ENDESA to the United Nations Sustainable Development Goal 7: ‘Affordable and clean energy’. According to the 2018 Materiality Study,

this is the type of initiative that many of our stakeholders call for. In 2018, and according to LBG methodology, ENDESA invested more than 3.5

million euros in social projects in this area, with the management of 35 initiatives, which have benefited 403,000 people.





25% of ENDESA's social investment, according to LBG methodology, has been dedicated in projects to facilitate energy access.

The most relevant are:

- > **Agreements signed against energy poverty.** ENDESA is aware of the serious problem of energy poverty in many Spanish homes and has taken steps to find solutions to this social problem since 2015. Indeed, the Company has been pioneering in signing agreements with town councils, provincial councils, autonomous communities and public bodies to guarantee the supply to vulnerable families, suitably accredited by the social services and who are in a default situation. In 2018, the number of agreements in force rose by 19%, from 229 in 2017 to 272 in 2018. Thanks to this, some 108,125 customers have benefited from these actions since its inception, favourably managing bills totalling approximately 26 million euros. Furthermore, thanks to the agreements reached throughout Spanish geography, ENDESA can cover in this regard more than 10 million homes from 26 Spanish provinces. ENDESA plans to reinforce and expand on this type of initiative.
- > **Energy volunteering:** See section '2.2. CSV support for thermal power

plants in operation: Access to energy projects'

- > **Training for social services and/or tertiary sector workers on efficient energy consumption habits and reducing energy bills.** A series of training courses for staff from social institutions have been given since 2016 in partnership with Spain's Environmental Sciences Association (ACA) and the Spanish arm of the European Anti-Poverty Network (EAPN-ES) on energy efficiency and saving, the new rates subsidy, how to reduce electricity bills, and how to avoid shut-offs for non-payment. The aim is to enable these entities to offer better advice and support for vulnerable families. Course participants receive useful practical training to help them in their advisory and support roles. During 2018, eight training sessions were held in Tenerife, Madrid, Badajoz, Huesca, Malaga, Toledo and Granada, attended by some 140 institutions. It is estimated that around 23,000 people in energy poverty receive advice each year. ENDESA plans to maintain and expand on this type of initiative.



- > **Twenergy.** ENDESA's digital ecosystem focusing on sustainability and energy efficiency. This digital ecosystem is used to encourage and increase responsible consumption of energy, providing users with solutions and tools to enable them to use energy more efficiently. It is also committed to giving a voice to energy efficiency professionals via articles, digital meetings, and by supporting different industry initiatives. It is the leading Spanish language channel for such matters. Launched in 2009, it attracted over 5 million visits during 2018 and has half a million registered users and more than 150,000 followers on social networks. Twenergy is structured around a content blog among others, and its own profiles on the main social networks: Facebook, Twitter, YouTube and Instagram.



The 'Access to energy' category also includes action to boost employability and job creation in the sector. Here, there is

In 2018, Twenergy has more than 54,000 registered users and more than 150,000 followers on social networks, with more than 5 million visits.

a 'Training and education in the energy sphere' sub-category comprising courses, work experience and the creation of job opportunities for the unemployed. In 2018, over 600,000 euros were invested on eight such projects to the benefit of 764 individuals, 35% of whom it is estimated find work on average.

> **Professional training in the electric sector for people at risk of exclusion in Spain.** The ENDESA Foundation develops projects that seek to improve the employability of especially vulnerable groups and the long-term unemployed. The aim is to provide access to the job market, and consequently social integration, to young people and adults by means of the educational development of their personal and professional skills. These programmes are carried out across seven regions (Andalusia, Catalonia, the Canary Islands, the Balearic Islands, the Northeast, Aragón and Madrid) by the Foundation in partnership with non-profit organisations such as Cáritas, Asociación Padre Pulgar and Norte Joven, and shoulder-to-shoulder with public administrations and public and private educational institutions. The practical experience for training the students takes place at the Company's own facilities (for example, the pupils at El Ferrol perform their practical experience at the As Pontes Thermal Power Unit) or with other contractors. During 2018, 100 people received electricity sector training on the 'Build-

ing telecommunications and electro-technical installations assembly auxiliary operations' course through the NGO Cáritas, while another 20 completed the same course through Asociación Norte Joven. A further 120 individuals received 3D printing training through the ENDESA Classroom programme in partnership with the NGO Padre Pulgar. Fifty-one of the students trained in 2018 have found a job, while another 148 have continued with their training, making up 83% of activity ratio. Since 2011, the ENDESA Foundation has trained upwards of 1,500 people and plans to continue in the same vein in forthcoming years, increasingly benefiting more people on low

incomes who face difficulties accessing the job market.

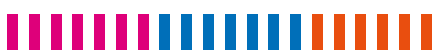


> **Renewable energies training programmes.**

For further information on *Access to energy projects*, more examples are provided in section 3.5. *Corporate volunteering projects.*

5.2. Projects for socio-economic development of communities

ENDESA is committed to the socio-economic development of the communities where it is present, providing initiatives to drive their progress via the support,





41% of social investment in Spain and Portugal (35% according to LBG methodology) was devoted to socio-economic development projects.

generation and creation of the local economic fabric and jobs. In this way, ENDESA contributes to its commitment regarding the United Nations Sustainable Development Goal 8, and responding to one of the priorities of our stakeholders according to the latest materiality survey.

This includes non-energy-related projects for the furtherance of employment, generation of infrastructures, transfer of abilities and skills and support for local business activities.

In 2018, and as per LBG methodology, the company invested over 4.8 million euros in this type of initiatives, representing 35% of social investment with the management of 36 projects that have benefited over 185,000 people.

Some of the most significant initiatives are as follows:

Candelaria “Capacitate Empleo”: See section 2.2. ‘CSV accompanying for thermal power plants in operation: Economic development projects’.

Compe10cias LED: In 2016, the ENDESA Foundation joined Youth Business International: a global network of independent private and non-profit organisations specialising in providing support services for young entrepreneurs and operating in more than 40 countries. Fruit of this membership,

was the launch by the ENDESA Foundation and the Youth Business Spain (YBS) Foundation in 2016 of ‘Compe10cias LED’: an entrepreneurial skills development programme to nurture the talent of disadvantaged young people between 18 and 35 years old. The aim was to enable the creation of 300 new businesses and 500 new jobs by training over 1,100 young people in a three-year period. The project’s beneficiaries are young people between 18 and 35 years of age who have a business idea but do not have the training, the funds or the experience to get it off the ground. Students across Spain received training on the 10 skills a successful entrepreneur must have. The training was provided through dynamic, hands-on workshops.

Since its launch, 215 new businesses and 380 jobs have been created through the project. Around 70 ENDESA volunteers take part in the programme, mentoring the young entrepreneurs.



SAVIA: In April 2018, the ENDESA Foundation launched SAVIA: a joint project with the Máshumano Foundation designed to help the one million-plus people in Spain who are over the age of 50 and out of work, contributing to a create a movement of change towards senior talent. These unemployed are professionals who, for one reason or another, have been forced to leave their companies early and are now especially vulnerable. SAVIA provides a digital platform as a meeting point for people, businesses and institutions to boost the employability of older professionals, bringing together services and resources and driving change to unlock the experience of an entire generation: The SAVIA generation. Savia is therefore a benchmark space for these people and somewhere they can go to when they lose their job or need help in getting back into the job market. The platform provides them with resources such as advice, training, online and face-to-face events, information and, of course, knowledge of the professional services that can keep them in work.



During the first seven months since its launch, SAVIA has received 50,000 unique visitors, around 11,000 older professionals have registered, and it has built up a network of more than

90 partners providing these people with tools and resources to enhance their employability and find new job opportunities.

Assignment of use of Company assets: Throughout 2018, ENDESA assigned numerous company assets and buildings to municipal councils and other social institutions, in order to favour the social and economic development of communities, boost local tourism, and revitalise local economies by bringing in visitors and tourists. Examples include:

- > Giving access to some assets of UPH Ebro Pirineos and UPH Sur for different uses: mountain refuge, land for different uses (sailing club, green paths, bee-keeping, tourist viewing point, fishing area, gardens, well boring, establishments, etc.), hunting grounds, and a cable car to boost tourism, etc.
- > Regulation of the water flow from the facilities of UPH Ebro Pirineos and UPH Este to facilitate adventure sports that contribute to economic development in the area: rafting, river descents, canoeing, swimming,

adventure racing, competitions, contests and fishing competitions, etc.

- > Lending objects from the company's historical archive for exhibitions: Action taken by the ENDESA Foundation, lending items from the company's historical archive to other entities for analysis, research, and exhibitions or to create electricity-related educational spaces.

For further information on *Socio-economic development projects*, more examples are provided in section 5.5. *Corporate volunteering projects*.



5.3. Education Projects

ENDESA is committed to improving access to inclusive and quality education, in line with United Nations Sustainable Development Goal 4.

In 2018 and as per LBG methodology, the company invested over 1.4 million euros in this type of initiative – accounting for 10% of total social investment,

managing 20 projects that have benefited more than 52,000 people (61% increase in beneficiaries compared to 2017).

Multiple initiatives linked to this area have been developed, among which we can highlight:

- > **The Country of students.** Journalism programme for Key Stage for teachers and students at secondary schools and professional training and involved in middle and intermediate, with students producing a newspaper as an editorial resource, involving a fun learning proposal founded on teamwork and personal development.

At the end of the course, the teams producing the best national newspapers are rewarded with a trip, and other prizes are given out in various categories. Some 14,200 pupils from 1,600 schools took part during the year.





The financial investment in the education projects of both ENDESA and the ENDESA Foundation in 2018 totalled over 1.3 million euros with more than 52,000 beneficiaries.

> **Promoting STEM learning among girls:** For yet another year, ENDESA was involved in running the *Orienta-T* educational programme along with the *Junior Achievement Foundation* and other companies. Aimed at secondary school students (14 to 16 years of age) and secondary education teachers, the initiative was intended to create a space for careers advice through a series of events combining presentations with inspiring personal and professional stories from company volunteers and practical workshops. The programme goal is to inform young people of the job opportunities in *STEM* (science, technology, engineering and mathematics) careers and boost the leadership role of women in this area. Additionally, the teaching community has been provided with educational materials to use in their schools and thus promote the multiplier effect of the initiative.

As a result of this collaboration, 762 students and 92 teachers from secondary schools in Madrid, La Coruña, Barcelona and Seville have benefited. An open and collaborative career guidance channel for young people has been created with over 30 inspiring videos by professionals for use at educational centres through-

out Spain; and after the impact study was performed by the Junior Achievement Foundation in 2017, it was concluded that the *Orienta-T* programme encourages females to take up careers in *STEM*, as the number of females wishing to study this type of career increased by 10% after they had participated in the programme.

The programme involved 12 ENDESA volunteers who gave talks to children at various schools and attended national events.



Likewise, one of the ENDESA Foundation's main courses of action is to establish and promote projects that transform and innovate primary, secondary and baccalaureate education and higher education for students and teachers alike. Furthermore, they promote academic excellence in universities through subsidies, study grants and chairs. Some remarkable examples of these actions are:

> **School and Talent. Access to a quality inclusive education:** Driven by the ENDESA Foundation, the programme aims to provide quality inclusive education to gifted children from low-income families in rural areas of Andalusia attending schools in the Sagrada Familia Foundation's network. This initiative is part of the strategy to promote education as one of the most powerful drivers of sustainable development. The ENDESA Foundation opened the programme up to more than 1,380 children across eight provinces from 26 schools, mentoring 19 of them. The programme's goal is to ensure all the boys and girls selected for School and Talent complete their primary and secondary education, and help them gain a place and accompany them through quality higher education.



> **ENDESA Foundation Tech Challenge. Promoting STEM careers.** Public-private initiative between the ENDESA Foundation and the Education Department of the Madrid regional government, to foster educational innovation through technological enterprise at schools. During the 2017/2018 academic year, 3,900 students and 260 teachers from 65 schools across Madrid took part. The scope of the initiative was broadened for 2018-2019 to include Aragón, with 5,400 students and 360 teachers from 85 schools (70 in Madrid and 15 in Aragón) receiving support.



5.4. Local community support projects

> **Pontificia de Comillas University-ENDESA Foundation Study Grants and Awards for Academic Excellence programme.** For the third year running, the ENDESA Foundation has run its Study Grants and Awards for Academic Excellence programme in partnership with the prestigious Pontificia de Comillas University, aimed at students with

ENDESA gives support to local communities through various types of projects designed to enhance the well-being of people and communities, preserve their cultural identity, conserve their heritage, improve the local environment and biodiversity, promote sports and healthy habits, and help meet basic needs.

When performing these actions, ENDESA bases itself on the knowledge and sensitivity of each local reality and collaborates with the main social organisations in the environment where it opera-

Close to 4 million euros allocated to local community support projects, of which almost 700,000 euros was allocated to the environment and biodiversity and more than 3.2 million euros to the other initiatives.

low incomes. In 2018, the programme saw 32 students receiving study grants and two being given awards, while 45 study grants and five awards is planned that will be handed out for the 2018/2019 academic year.

For further information on *Education projects*, more examples are provided in section 5.5. *Corporate volunteering projects*.

tes, getting support from the territorial units. This line of action has taken up 35% of the budget (30% as per LBG), with a spend of around 4 million euros, 72 projects managed and more than 500,000 beneficiaries.

5.4.1. Support projects for the family and social services.

In 2018, ENDESA has performed various actions to mitigate critical situations in families and people at risk of exclusion. We can highlight some of these:

> **Resource collection campaigns and assistance to disadvantaged groups.** ENDESA has cooperated with various NGOs to collect resources for disadvantaged families through a variety of initiatives. Toys were collected for children from at-risk families in Aragón and the Canary Islands during 2018. The campaigns attracted around 1,200 donations of toys, which were delivered to the NGO Cooperación Internacional in Aragón and several local charities in the Canary Islands. These activities were possible thanks to the solidarity of ENDESA staff and especially the efforts of the volunteers who set up the donation points and organised collections by the various partner institutions.





Meanwhile, over the last three years ENDESA has worked with the Madre Coraje Foundation to run a collection point of used garments at the corporate headquarters in Madrid where employees can donate clothing. This enables the company's staff to not only help protect the environment by recycling but also contribute to a social cause. The second-hand clothing is collected by the foundation and handed out to people in vulnerable situations or sold to raise funds for social projects. Some 2,538 kg of clothing was collected in 2018, equating to approximately 24 containers.



> **Donation of company furniture and equipment:** Following the relocation of ENDESA's regional offices in Huesca, 2,000 euros worth of furniture from the previous premises was donated to the Red Cross for use at its facilities.

A charity market was also held at ENDESA's Seville office in partnership with Asociación Alienta, with ENDESA's Resources area contributing furniture and decorations and the ENDESA Foundation, pictures and books. Staff also donated belongings. A total of 2,787 euros was raised, with all the money going to fund a nursery run by the association

in the El Vacie shanty town in the city of Seville.

> **Partnerships with several NGOs and foundations to improve precarious situations of vulnerable people.** ENDESA has run several initiatives to support these institutions among which highlights the contribution to the NGO Ningún niño sin techo en Tánger, which helps homeless children in need of support to re-connect with their families, school or, as a last resort, a centre that can meet their needs. It also supports the Nazaret Foundation in the Balearic Islands which looks after the children of families that cannot meet their essential needs.



5.4.2. Culture promotion projects

ENDESA remains interested in promoting culture in society, collaborating on many initiatives in this field, such as the Royal Theatre Foundation in Madrid, the Palau de la Música Catalana or the Maestranza Theatre in Seville. It also supports initiatives to involve the general public in the cultural activities such as 'Liceu Outdoors', the ENDESA E-scenario by the Maestranza Theatre or the Digital Theatre Box by the Royal Theatre Madrid. Throughout 2018, it also participated in exhibitions, concerts, museum activities, etc., such as its collaboration with the Amigos del Museo del Prado Foundation and the 'Discover the Thyssen' exhibition. It is estimated that these initiatives have benefited around 170,000 people.

Likewise, the ENDESA Foundation continues with its commitment to preserve and recover culture and art in its different facets. In particular, in 2018 it has devoted part of its resources to the artistic lighting of high-impact heritage, in addition to promoting their energy efficiency with these actions. The best examples are the artistic and efficient lighting of the Church of Santa Maria Maggiore in Rome, the Medinaceli Collegiate Church in Soria, the Magdalena Parish Church in Seville and Vitoria Cathedral.

Furthermore, since 2004 the ENDESA Foundation has managed the Company's historical archive to recover and make available to the Group's personnel and other parties the historical heritage of ENDESA and its subsidiaries spanning back over 100 years. More than 20 projects were carried out in partnership with numerous public and private entities in 2018 that involved lending objects from our industrial heritage, thereby opening them up to a wider audience. At the end of the year, the Foundation also launched the digital historical archive to provide access to the company historical heritage to anyone interested in it.



5.4.3. Health and safety promotion projects

In 2018, it invested 479,000 euros in this type of project, to the benefit of more than 18,000 people. There were two main courses of action:

> **Health Projects.** The Company supports different NGOs and associa-

tions in the field of health, either in disease research, or monitoring and aiding patients and their families. These included the collaboration with the ProCNIC Foundation working on cardiovascular research; the NGO Ojos del Mundo, which is tackling avoidable blindness; and the Spanish Cancer Association. It has also backed institutions that help hospital patients, such as the NGO Sonrisa Médica in the Balearic Islands: a pioneer in providing Hospital Clowns, which provides service to intensive care and paediatric and chronic disease units., for bringing laughter to curative care.

> **Projects to care for people with disabilities.** ENDESA collaborates with different associations and foundations which have the aim of supporting people with physical or intellectual disabilities and their families. Examples of this work include the partnership with Asociación de Padres de Personas con Trastorno del Espectro Autista (ASPANAES) helping the parents of autistic children in the province of La Coruña; ASPRONA Bierzo which helps meet the needs of individuals with intellectual disabilities and their families; and the agreement with the Spanish Federation of Sports for the Physically Disabled to buy sports wheelchairs for amateur players for instance. ■■■

5.4.4. Projects to protect the environment and biodiversity.

These are projects which, on a voluntary basis with regard to the Company, encourage the disclosure, preservation,

investigation, recycling, regeneration and improvement of the environment in general and of biodiversity in particular, for the preservation and improvement of community environments. In 2018, ENDESA allocated 6% of its total social investment spend to these projects. Some of the initiatives are highlighted below:

> **Activities for research and dissemination of environmental and biodiversity issues.** During 2018, ENDESA sponsored the publication of a number of studies, in order to drive the dissemination and awareness of society regarding these matters. Examples include: the *'Sixteenth Balearic Islands Ornithology Yearbook'*; *publishing of the book on rivers entitled 'La fuerza de nuestros rios' by José María Pérez López*; *the collaboration with Club Español para el Crecimiento Verde and the Fondena Foundation*; *research on the sustainability of water resources in the event of climate change*; *research into the effect of genetic and metabolic factors on the upstream movement of native trout in Pyrenean rivers*; and *the research on biodiversity in the mining areas restored by ENDESA*. These projects have entailed an investment of over 138,000 euros.

The ENDESA Foundation also runs environmental and ecology initiatives. An example is the agreement signed in 2018 with the NGO Banco de Alimentos de Cataluña, the objectives of which include replacing 250 thousand plastic bags with reusable ones. As part of the 'El gran Recapte' campaign, this annual project encompasses the commitment to people with the goal of improving the environment, making it more sustainable,

not only the CO₂ emissions but also minimising the environmental impact of using plastics in our daily lives.

> **Programs to protect bird life and other species.** ENDESA undertakes numerous voluntary projects to protect birds in general and those in danger of extinction in particular, as well as some other species of animals (bats, tortoises, etc.) and flora (*Centaurea ultrae*). During 2018, its efforts included: the conservation of endangered bat species nesting at ENDESA's hydroelectric plants; conservation measures to protect the black vulture (*Aegypius monachus*) and other scavenger birds; the project to boost the population of red kites in the Balearic Islands; and conservation measures to protect the European roller or study colonies of shearwater (a protected bird species) by identifying nests and migratory routes using GPS or for monitoring of individual. ENDESA has contributed over 165,000 euros to this type of initiative in 2018. For further information, see the chapter *Environmental sustainability*, section 4 *Conservation of biodiversity*.



Centaurea ultrae - Galicia



Pardela cenicienta - Canary Islands



6% of ENDESA's social investment was invested in projects to protect the environment and biodiversity.

> Regeneration of natural spaces.

In line with tradition, ENDESA goes beyond its obligations where the regeneration of natural areas is concerned, and in addition to complying with the corresponding legislation, continues to invest in the improvement of the areas near the power stations. In 2018, numerous projects were carried out in this area, such as enriching biodiversity in the Pyrenean region of the province of Lleida to facilitate reintroducing brown bear and their coexistence alongside human activities. This work also boosts employment by creating jobs for locals that are out of work and/or at risk of social exclusion. Work continued to reforest an area destroyed by a forest fire by sowing native forest species and another area suffering the same fate in Gouveia (Portugal) with the help of seven ENDESA volunteers. Lastly, a project was managed by the ENDESA Foundation in the Balearic Islands to restore and reforest 1.4 hectares with resilient native species.

Furthermore, each year important work is carried out to clear overgrowth and maintain access roads to the company's wind farms, which the local communities can use and serve as fire breaks. They are also used by walkers, campers and the security forces, forest fire servi-

ces, civil defence agency, etc. in case it is necessary

In total, over 354,000 euros have been allocated to projects in this category.



Access road maintenance



5.5. Corporate Volunteering

With its commitment to corporate volunteering, ENDESA cooperates in the performance of many social development projects with the involvement of its employees. Corporate volunteering acts as a catalyst for the remainder of the initiatives which increase the closeness and involvement of the Company with its stakeholders and offers development and commitment to the participants. In 2018, 18 volunteering projects were run involving 463 volunteers during office hours and 225 outside work. In total, there were 688 volunteers, 188 of whom took part both in and outside office hours. Volunteers gave up 4,041 hours during the working day and 3,000 hours of their free time.

As a result of these activities, in 2018, more than 8,400 people have benefited. Some of the most outstanding projects in this field are as follows:

EU26

a) Volunteering on Access to Energy projects

> **Energy Volunteering Program**, see section 2.2. CSV accompaniment for thermal power plants in operation: Access to energy projects.

> **Energy Programme for the future:** The aim of this project is improving the employability of young people at risk of social exclusion in the energy sector through training volunteering, aligned with labour needs close to the business world. Depending on the professional profile, volunteers hold workshops to provide a professional perspective that supports and motivates training of students. Among the themes requested are basic concepts of the electrical system, safety measures and protective equipment, maintenance of facilities and types of electrical contracts. This volunteering activity seeks to promote the development of the volunteers' skills, such as innovation, team work, leadership and communication. The 2018 edition was held in As Pontes (A Coruña) with the participation of four volunteers, benefiting 120 students.

> **Workshops on saving on energy bills and energy efficiency.** Training provided by ENDESA volunteers to neighbourhood associations, social institutions and the general public on how to cut energy bills, the subsidised rate and energy efficiency

measures. Seven events were run in the Canary and Balearic Islands in 2018, involving five ENDESA volunteers and more than 70 beneficiaries.

b) Volunteering on socio-economic community development projects

> **Project Coach:** In collaboration with the Exit Foundation, this corporate volunteering programme aims to improve the employability of young people at risk of social exclusion, dealing with their self-esteem, motivation and career guidance, using coaching or mentoring techniques. For young people, it is a great experience to discover the business world and encourages them to continue studying. After taking part in the programme, 82% of the young people pass the course, while 75% continue their training. In 2018, ENDESA took part in programmes in Madrid, Palma de Mallorca, Seville, Zaragoza and – for the first time – Valencia, benefiting 21 young people with the support of 21 volunteers

> **Project Job:** In partnership with the Exit Foundation, this corporate volunteering programme aims to train up young people to ready them for the job market, equipping them with the necessary tools and helping them achieve their career goals. Following the programme, 50% of the young participants find work, and 38% go back to studying; 15% of whom work and study at the same time. In 2018,

ENDESA took part in the Barcelona edition with one company volunteer helping one of the young participants to learn how to stand out in selection processes.

> **Sabes + si compartes lo que sabes (You know more if you share what you know) project:**

In collaboration with the Randstad Foundation, this corporate volunteering programme offers staff the chance to help people at risk of exclusion (individuals with different abilities, immigrants struggling to find work, women and men over the age of 45, victims of gender-based violence, single-parent families, etc.) to find a foothold in society and the job market. The skills, knowledge and experience of ENDESA's employees are put to good use through a training programme in which each individual volunteer acts as a trainer. The 2018 edition saw 13 volunteers taking part in Barcelona, Las Palmas de Gran Canaria, Madrid and Seville, running 35 workshops and training 206 people.

> **Cambiando vidas (Changing lives):**

Since 2016, the ENDESA Foundation has worked with the Integra Foundation on the 'Cambiando Vidas' project to improve the employability of people at risk of exclusion, equipping them with the tools needed to join the job market. During 2018, 188 people received training, with 132 of them found work. To date, 'Cambiando Vidas' has improved the employa-

bility of over 600 people, with 335 individuals being given a total of 447 employment contracts. Part of the training is provided through strengthening schools and provided by ENDESA's own staff; 41 volunteers were involved in 2018.



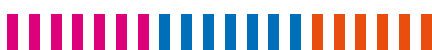
c) Volunteering in Education projects

> **Speaking without frontiers:** A corporate volunteering programme run jointly with the Universia Foundation to improve disabled university students' spoken English, Italian and Portuguese, to prepare them for examinations and expand their business-related vocabulary. ENDESA volunteers hold telephone/online conversations with these students every fortnight. In the 2018 edition, two volunteers from Las Palmas de Gran Canaria and Madrid provided two students with one-on-one training.

d) Volunteering in local community support projects

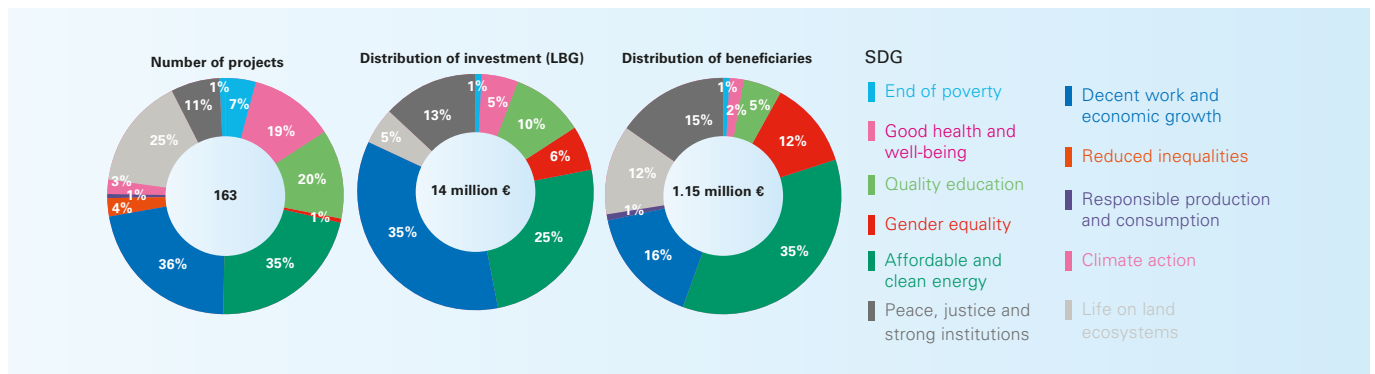
> **Christmas collection campaign:** see section 5.4.1 Community support projects.

> **Regeneration of natural spaces:** see section 5.4.4 Projects to protect the environment and biodiversity.





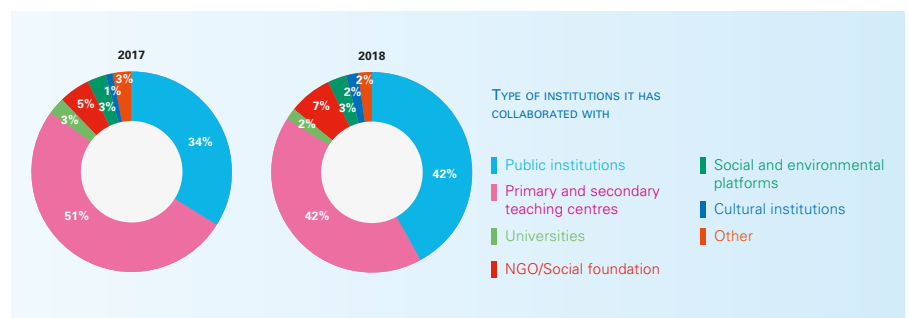
6. Contribution to the United Nations Sustainable Development Goals (SDG)



ENDESA has announced in its Sustainable Plan its aim of contributing to four of the United Nations Sustainable Development Goals by 2020. These goals are integrated into the categorisation and objectives of its social strategy. These Sustainable Development Goals are: 4 – Quality education, 7 – Access to energy, 8 – Socio-economic development, and 13 – Climate action. These goals have been covered in detail in previous sections. However, ENDESA has also managed, promoted and funded initiatives to achieve some of the other goals.

ENDESA has contributed to 11 of the 16 United Nations Sustainable Development Goals through its efforts to forge responsible relationships with communities. The SDGs with the greatest

number of projects, investments and beneficiaries have been those that the company has assumed a commitment to achieve and that form part of its strategy (SDG 4, 7 and 8).



7. Achievements, impacts and returns

203-1 203-2

In 2018, the implementation and development of the methodology has been maintained enabling a strict estimation

of the achievements, impacts and returns of social development projects in communities. To do this, a new tool was

used defined under the LBG framework in 2015, a result of ENDESA's participation in the LBG Spain work group, who-

se aim was to establish the premises, criteria and variables for the estimation of said information.

Furthermore, progress has been made in the improvement of systems to measure project impacts and returns on a quantitative level. A system has been used to do this, which involves measuring a series of indicators that enables monetising the benefit provided to society (SROI method) and the possible return for the company (own method). During 2018, ENDESA measured 16 impacts and quantitative returns on current or planned projects. The average estimated return on the five projects executed in 2018 was that for every euro invested, over five years, society would receive the equivalent of 10.3 euros and the company would recoup the equivalent of 2.2 euros.

Further quantitative measurements of the value contributed by projects will be performed in the coming years.



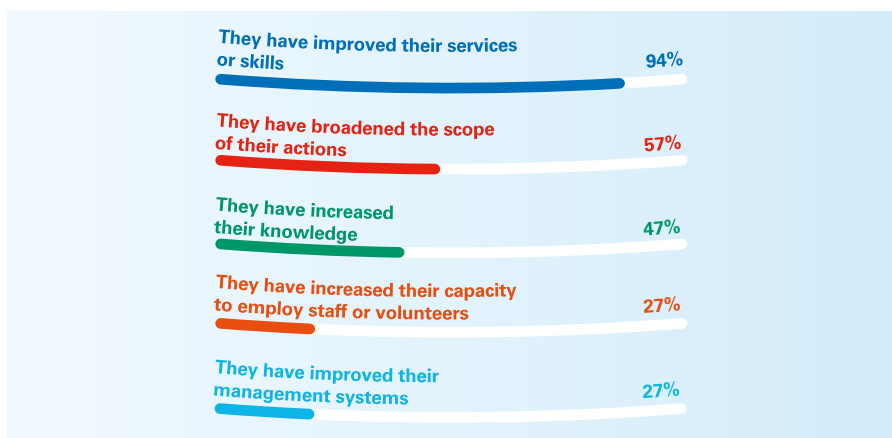
7.1. Achievements and impacts

Achievements are considered to be the quantified or estimated result of an investment performed via a social development project in a certain period of time, and *impacts* are the estimation of how the initiative has influenced the reality of the actors involved.

In 2018, 96% of the projects have been managed through strategic alliances with public and private bodies, a signal of ENDESA's commit-

ment to contributing in projects with lasting vocation. It has collaborated with a total of 1,671 public and private institutions to develop 163 projects which have been carried out in the social sphere. Of these, 42% were primary and secondary schools, and another 42% public institutions. Collaborations with social NGOs and foundations made up 7%.

Furthermore, it is estimated that the benefits enjoyed by the institutions from working with ENDESA have resulted (in 94% of cases) in an improvement in their services or increase in capacities; in 57%, an increase in their scope of action; and in 47%, greater awareness of their work. Four percent of the institutions enjoyed all three of these outcomes at the same time.



Approximately 1,149,000 beneficiaries of 163 social development projects managed in 2018.

With respect to number of beneficiaries, in 2018 an estimated 1,148,888 people benefited directly from the 163 social development projects performed by ENDESA, which is a 20% increase compared to the previous year (958,335 in 2017).

From these, 35% correspond to local communities as a consequence of the creating shared value objective where the Company operates.

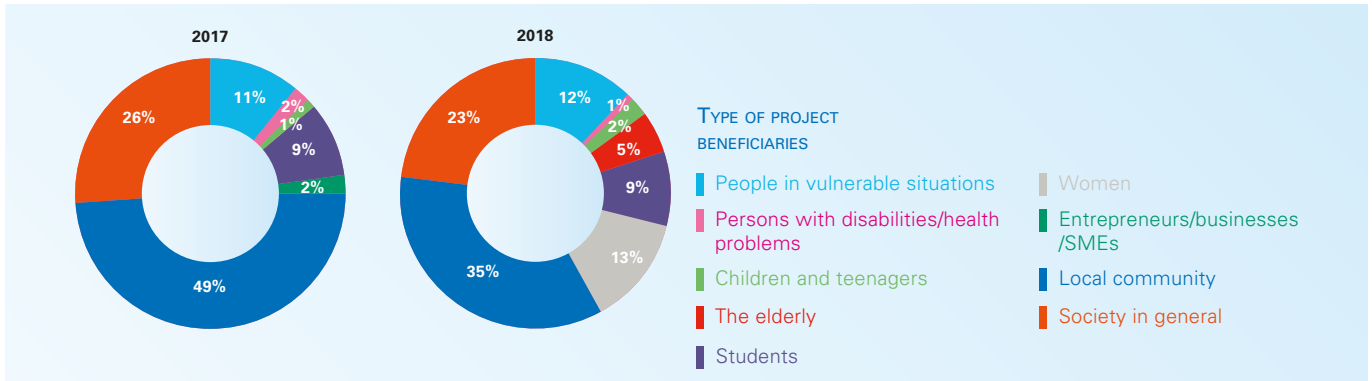




Next come the projects aimed at society in general with 23% of beneficiaries. Third, with 13% and 12% of the total, respectively, are those aimed at women

and people at risk, benefiting around 29,000 more people than the previous year. Students made up the same 9% of beneficiaries as in 2017, although there

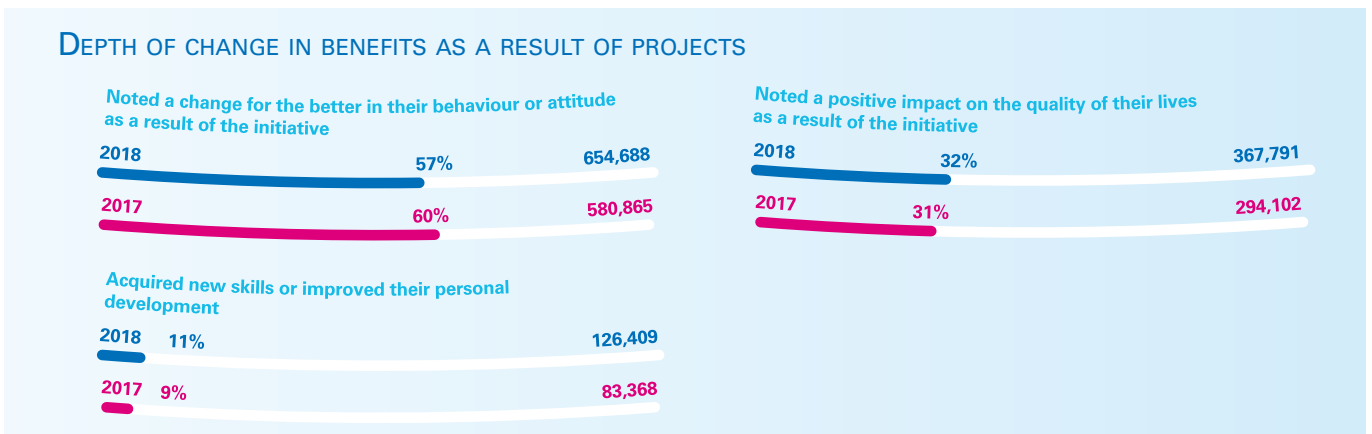
was an absolute increase of over 17,000 people (98,710 in 2018 and 81,697 in 2017).



Of all the estimated beneficiaries, approximately 367,000 (294,000 in 2017) saw a positive impact on the quality of their lives, with 32% of total

beneficiaries being in 2018. Eleven percent – some 126,000 people – acquired new skills or improved their personal or professional development, and over

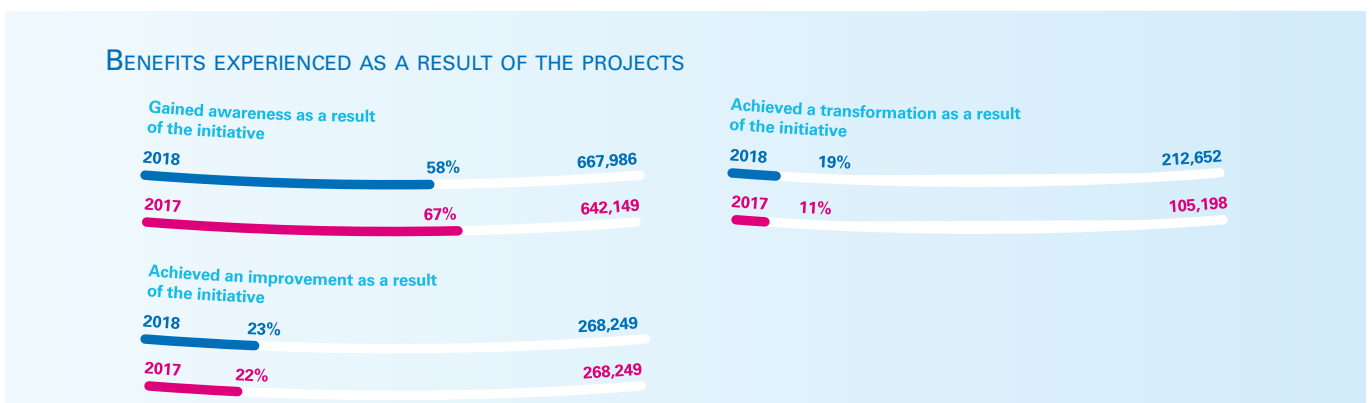
654,000 (57%) experienced a positive change in their behaviour or attitude as a result of the initiative.



Likewise, more than 213,000 people (105,500 in 2017) achieved a positive and significant transformation in their lives as a result of the initiatives. This is a

rise of eight percentage points with respect to the level achieved the previous year. Twenty-three percent achieved an improvement and 58% – approximately

668,000 people – became more aware of the issues at hand thanks to the projects.

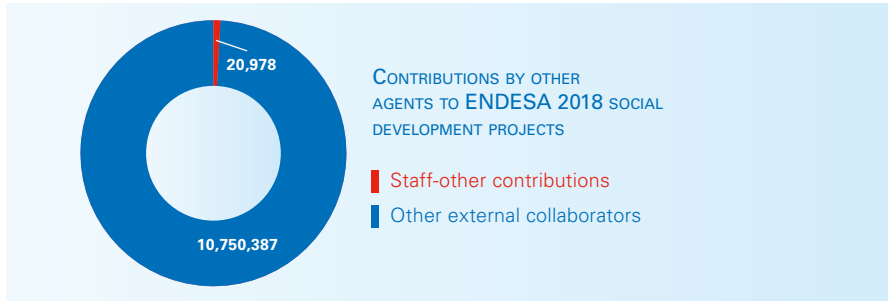


These estimated results demonstrate an increase in the quality of the projects managed as the percentages and absolute values of enhancement of quality of life and achievement of transformation

with respect to the previous year have improved.

Besides, taking into account the multiplier effect, as an additional result of ENDESA's social development projects,

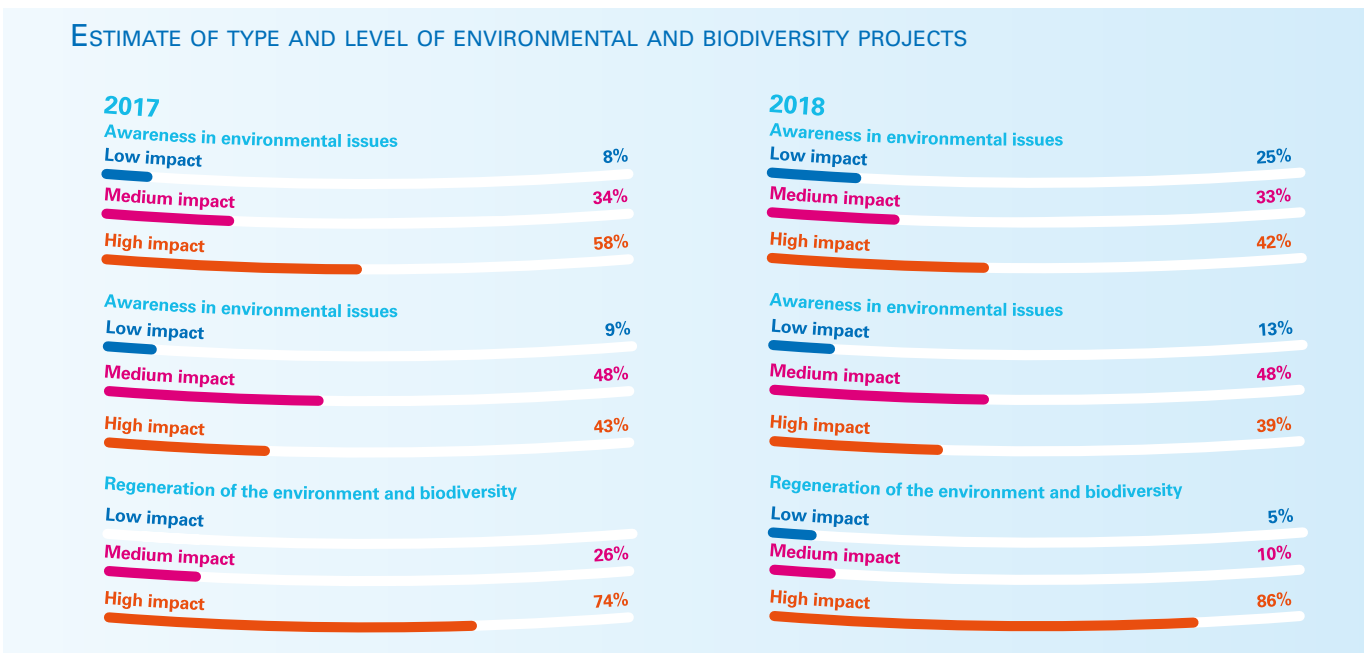
other agents have provided a total of 10.7 million euros to these, by means of economic investment or in kind.



Finally, the types and level of positive impacts on the environment have been assessed, and on biodiversity in 29 social development projects aimed at this subject area. The most significant impact has been felt through the environmental

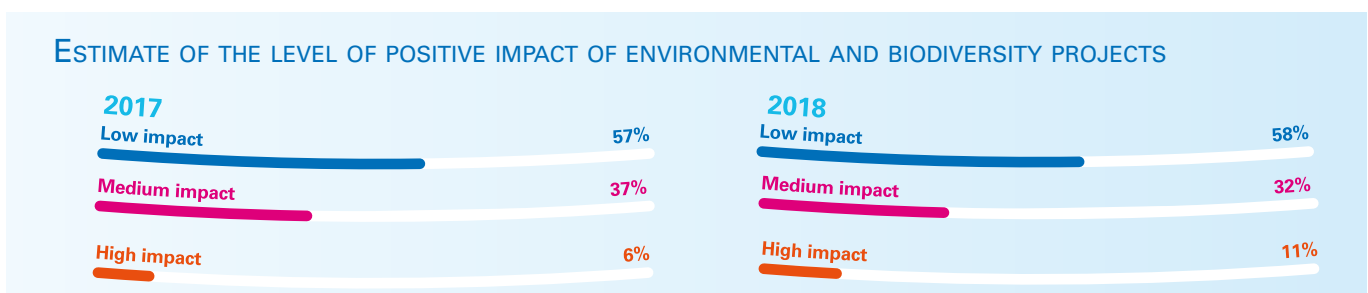
regeneration projects in specific areas and biodiversity conservation actions, with special focus on species in danger of extinction. The most noteworthy medium impacts have involved knowledge expansion and dissemination projects,

which include specific study initiatives and research on this subject area, in addition to educational and scientific dissemination actions.



Of the 29 biodiversity and environmental projects managed, 58% had a very

positive impact, which is slightly higher than in 2017.





7.2. Returns

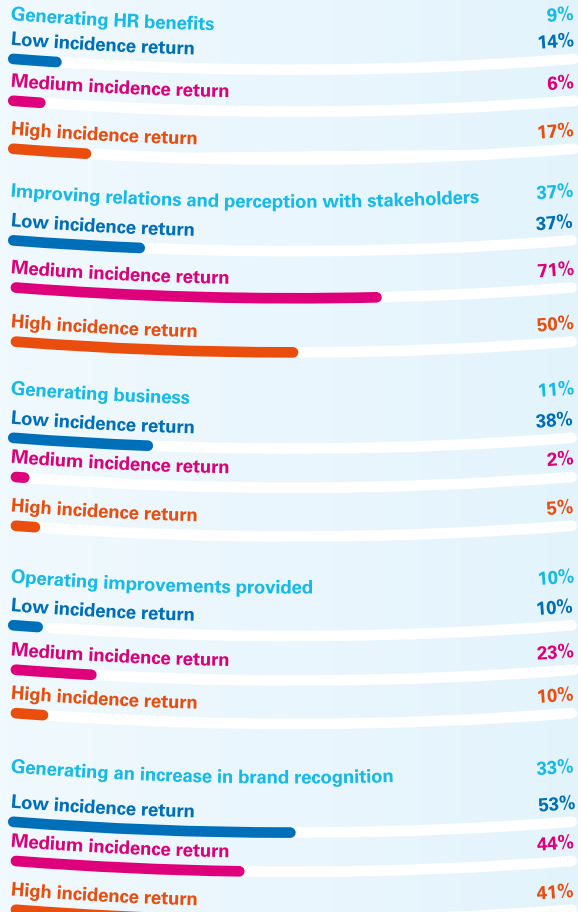
Returns are considered to be the benefits the Company may obtain due to the management of social projects beyond its social license.

With regard to the returns and level of incidence for ENDESA of the social projects carried out, it is estimated that there have been 444 positive impacts in the Company from 163 social projects carried out in 2018. The greatest impact

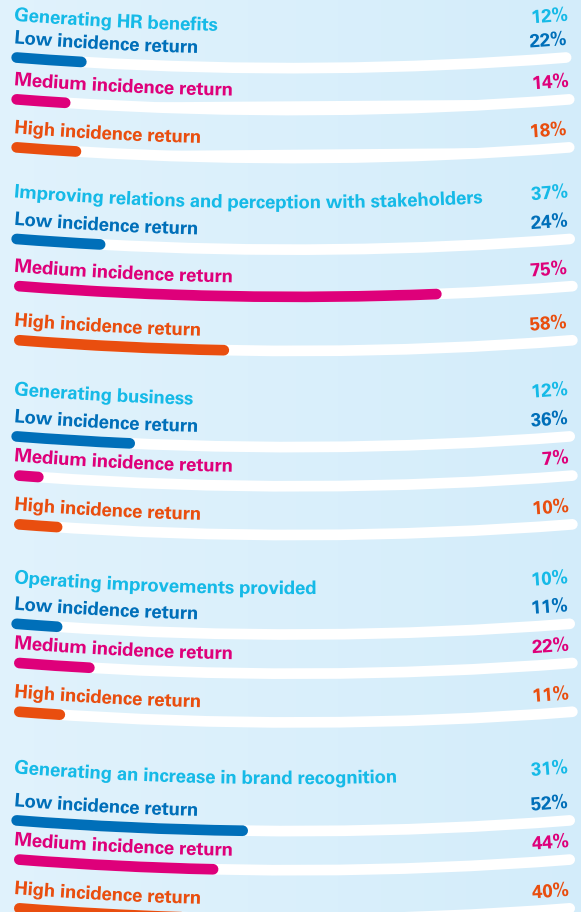
of said project returns is in the improvement of the stakeholder relations and perceptions (37%) and in second place, in the increase in brand recognition (31%). These two returns coincide with the two main ones estimated in 2017.

ESTIMATE OF RETURNS TO ENDESA FROM SOCIAL DEVELOPMENT PROJECTS UNDERTAKEN

2017



2018

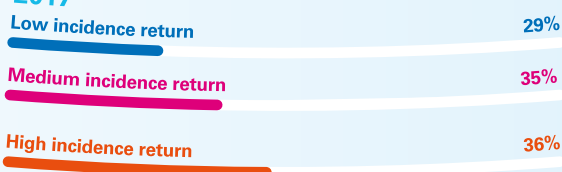


Furthermore, 33% of projects have had high incidence in the Company, an in-

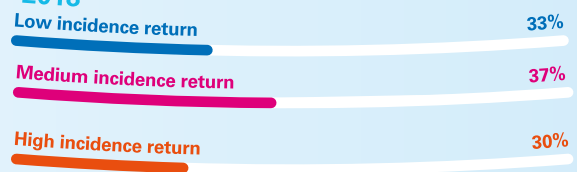
crease of 4 points with respect to the previous year.

ESTIMATE OF TYPE AND LEVEL OF ENVIRONMENTAL AND BIODIVERSITY PROJECTS

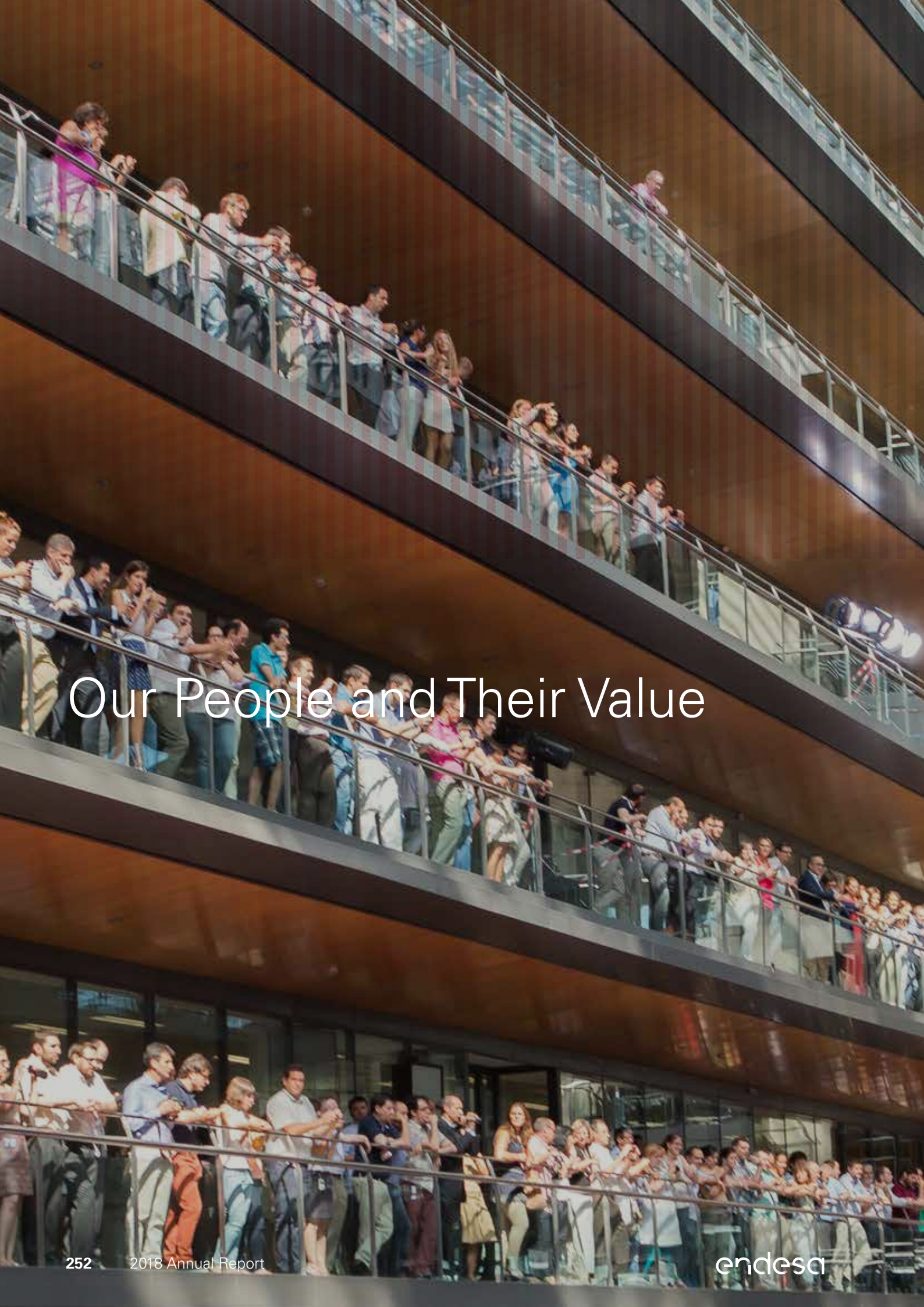
2017



2018







Our People and Their Value



9,763

employees in the workforce

2,372

Employees benefited from any of the conciliation measures in 2018

38

Hours training per employee (average)

96.5

% of the workforce with an open-ended contract

Compliance with ENDESA Sustainability Report 2018-2020

Basic Pillar	Course of action	2018 Goal	Result 2018	Key actions
<p>Human capital</p>	Gender diversity: Overall Women hires.	35%	32.14%	> Action plan to promote gender equality.
	Gender diversity: Women in executive positions.	17.50%	17.50%	
	Boosting employee training (hours/employee/year).	36	38	> Training in Digital and 'Agile' transformation. > Training on the Use of Collaborative Tools.
	Boosting on-line employee training (hours/employee/year).	10	7	
	Employees benefited by improvements in work areas in offices.	1,800	507	> Transformation of spaces at the Madrid office of ENDESA X.
	Services in ENDESA offices that favour conciliation.	60	68	> Car service arrangements. > Dry cleaners and footwear repair service. > Locker room service. > Personnel management service. > Clothing repair service. > Car cleaning service. > Nursing rooms (Madrid, Barcelona).





1. ENDESA's workforce

102-8 405-1

ENDESA had 9,763 employees on 31 December 2018, 9,723 in the Spain workforce and 40 in the Portuguese workforce.

During 2018, 505 people were hired, of which 393 are new hires in Spain and Portugal and the rest are due to transfers from Group companies and people returning from leave. During the year, 448 contract terminations were recorded in the same area, of which 27 pertain to voluntary departures, 194 were incentive-based redundancies, 6 retire-

ments and 221 other departures (contract terminations, leaves of absence and transfers to the company from the Group).

Below are some data that detail ENDESA's workforce as a whole.

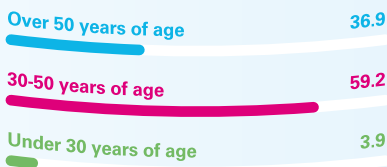
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The segmentation of the workforce by age shows that the largest number of employees, 59.2%, was in the age range 30 to 50. The average age of the workforce was 46 years.

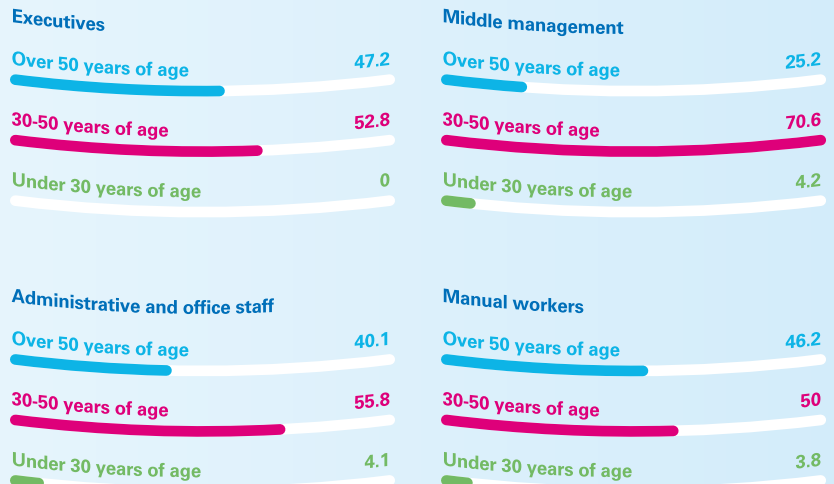
96.5% of the workforce had an open-ended contract, which meant 9,426 contracts. The figure of temporary contracts was 337. The average time an employee has been in the company is 17.88 years: it should be pointed out that 71.9% of employees have been working in the company for over 10 years.

As regards working day, the large majority of employees work full-time. 9,762 employees have full-time contracts and one is part-time.

AGE PYRAMID FOR SPANISH AND PORTUGUESE STAFF (%)



AGE PYRAMID OF STAFF BY PROFESSIONAL CATEGORY IN SPAIN AND PORTUGAL (%)



96.5% of the workforce with an open-ended contract.

ENDESA's workforce at 31 December

	2016	2017	2018
Spain and Portugal	9,694	9,706	9,763

Average workforce

	2016	2017	2018	% variation 2017/2018
Spain and Portugal	9,819	9,856	9,695	-1.63

Workforce distribution by gender

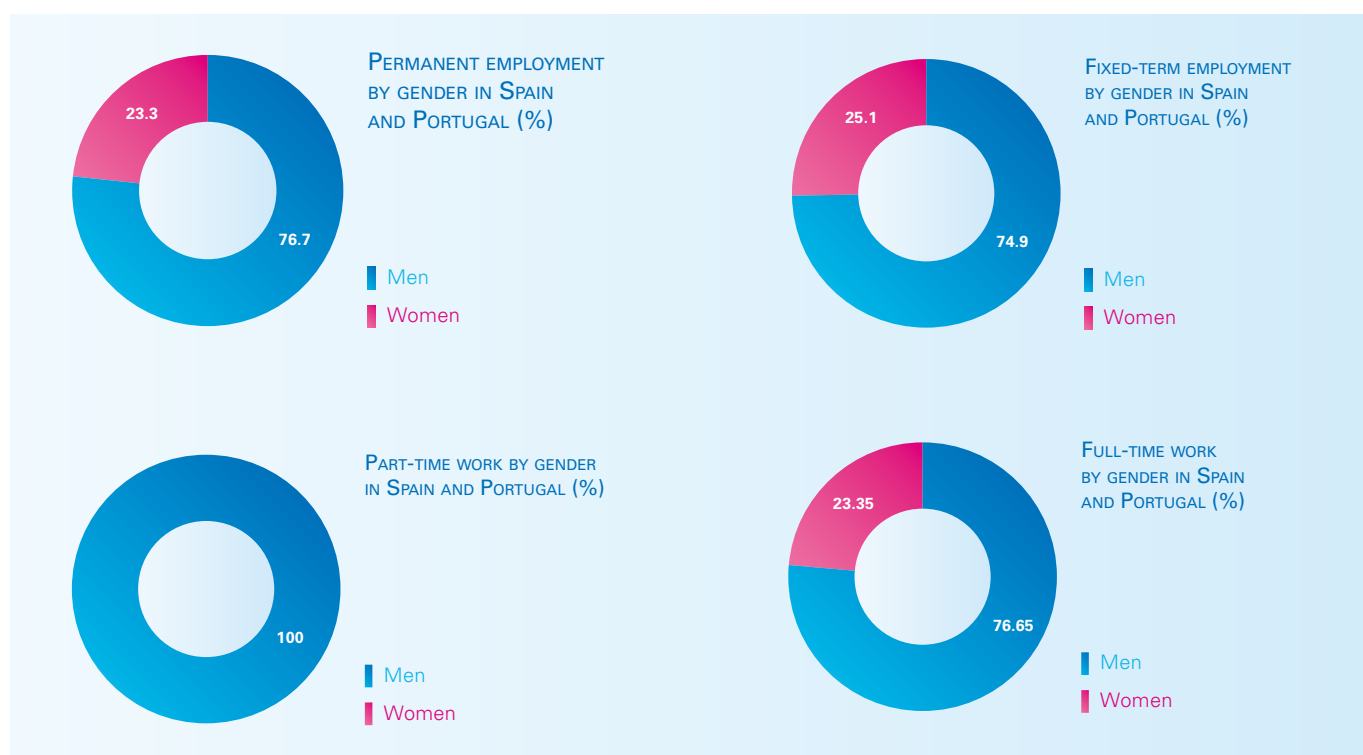
		Number	%
Women	2016	2,168	22.4
	2017	2,248	23.2
	2018	2,279	23.3
Men	2016	7,526	77.6
	2017	7,458	76.8
	2018	7,484	76.7

Workforce composition by age

Year	<30	30-50	>50
2016	299	5,826	5,368
2017	336	5,849	3,521
2018	384	5,776	3,603

Workforce distribution by professional classification and gender (%)

	Executives			Middle management			administrative and office staff			Manual workers		
	2016	2017	2018	2016	2017	2018	2016	2017	2018	2016	2017	2018
Men	83.6	83.6	82.5	69.2	68.1	67.5	71.1	70.9	71.2	96.9	97.3	97.2
Women	16.4	16.4	17.5	30.8	31.9	32.5	28.9	29.1	28.8	3.1	2.7	2.8

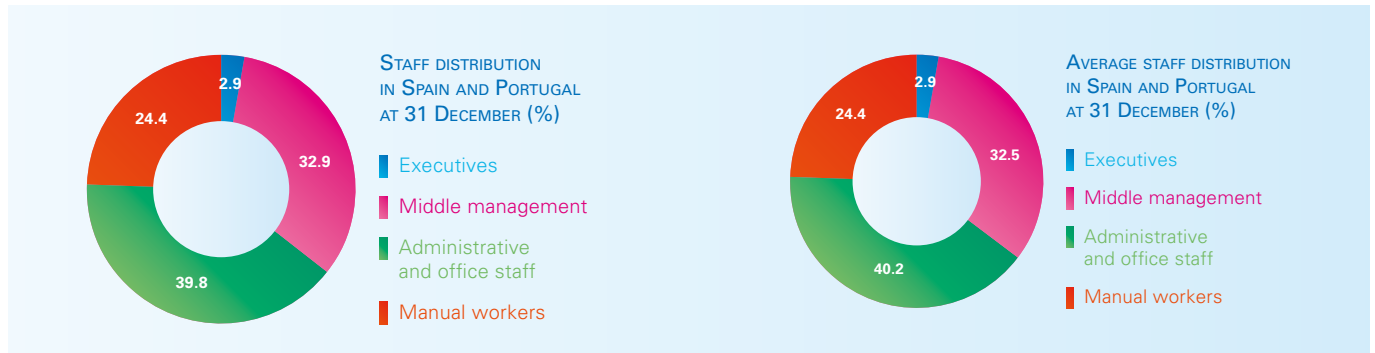




By workforce category, 39.8% were administrative and office staff, followed by middle management (32.9%), manual workers (24.4%) and executives (2.9%). With respect to the distribution by sex, the workforce was composed of 76.7% men and 23.3% women.

Contractor employees hired by type of employment Spain

Full-time	2016	13,183
	2017	13,535
	2018	15,838
Part-time	2016	2,957
	2017	2,699
	2018	3,034
Total	2018	18,872



Distribution of the workforce in Spain and Portugal by gender (%)

	Executives		Middle management		administrative and office staff		Manual workers	
	2017	2018	2017	2018	2017	2018	2017	2018
Men	83.6	82.5	68.1	67.5	70.9	71.2	97.3	97.2
Women	16.4	17.5	31.9	32.5	29.1	28.8	2.7	2.8

EU15

Employees in Spain eligible for retirement in the coming years by professional category (%)

	Retirement during next 5 years	Retirement during next 10 years
Executives	4.90	20.92
Middle management	3.42	14.22
administrative and office Staff	5.90	24.88
Manual workers	8.54	31.22
Total	5.71	22.84

403-9

		Spain	Portugal	Iberia
Workforce on 31 December	2018	9,723	40	9,763
Total hours worked during the year	2018	15,882,885	63,728	15,946,613

The total number of hours worked regarding contractors in 2018 was 35,208,274.



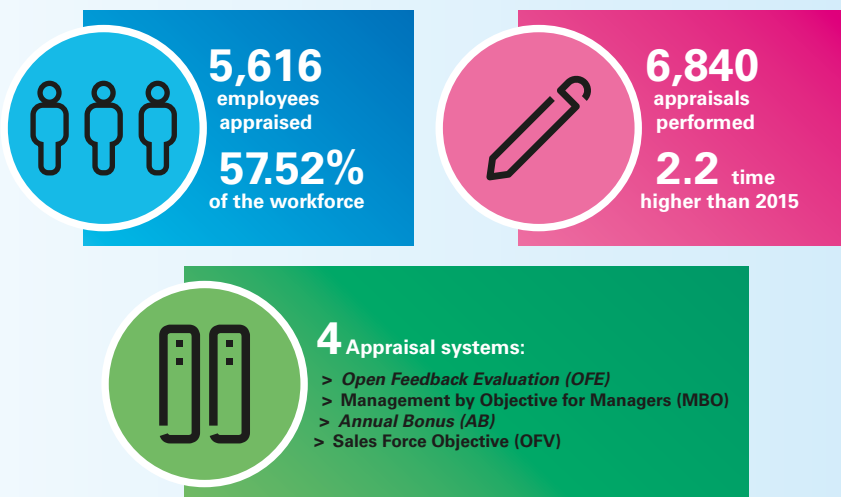
2. Leadership and Personal Development

In October of 2018, the name Human Resources and Organisation division was changed to People and Organisation.

This transformation, in line with the Company's *Open Power* values, further strengthens the concept of valuing people within a context that is more oriented toward collaboration, opening dialogues, transparency and inclusion.

The new company name fully expresses the vision of People and Organisation: to make ENDESA a place where people can realise their aspirations and generate value. This change is a statement of intentions that seeks to place people at the centre of the Organisation's decisions. Likewise, it is intended to be a reflection of an organisation that is sustainable in time and always looking to the future, capable of sensing and addressing market challenges and people's aspirations in advance.

COMPREHENSIVE PERFORMANCE APPRAISAL SYSTEM



2.1. Leadership model

404-3

ENDESA's leadership model is based on the Group's vision, mission, values and

behaviour. The Open Power values are present in all personnel management systems.

In 2018, ENDESA incorporated an innovative processing for evaluating people's conduct based on the exchange of *feedbacks* among all of the Organisa-

VALUES

Responsibility

Each of us is responsible for the success of the group at all levels. We place our energy at the service of people to improve their lifestyle and to make it more sustainable.

Innovation

We live and work with curiosity, strive to surpass the everyday and conquer our fears to expose energy to new uses, technologies and persons. Learning from our mistakes as well as successes.

Trust

We act competently, honestly and transparently to gain the trust of our colleagues, customers and external collaborators, valuing individual differences. We also trust in their capacity to create value and share it.

Proactivity

We take charge of our work in first person. We are continuously interpreting scenarios and global challenges to anticipate change, redefining priorities if the situation so requires.





2.2. Talent development

404-2

ENDESA has carried out different professional development activities adapted to the specific needs of each line of business. Among these are the following: personnel management (*Onboarding*, getting acquainted interviews, *Coach* and Let's Go management courses), *coaching* (both for teams and individuals), *mentoring*, consulting adopted to the specific requirements demanded by each line of business (e.g. *team building*) and the implementation of other key development actions such as the processes for appointing of executives and succession plans.

Some of these actions are detailed below:

> **Onboarding:** Project that has the objective of reinforcing the integration process for new employees into the Organisation and values of the ENDESA culture. Based on a model of pro-

tion's people: *Open Feedback Evaluation* (OFE). This process replaces the *Performance Appraisal* (PA) and introduces two important new features: 1) appraisals that can be done by any person in the Organisation (previously, only the manager did appraisals) and 2) the *feedback* evaluation process is open throughout the year (previously, it was done at a precise time). The indicator included in the ENDESA Sustainability Plan regarding performance appraisal only incorporated the concept of *Open Feedback*

The Management by Objectives (MBO) and the *Annual Bonus* (AB) were added to the appraisal systems, which apply to managers and employees respectively with variable remuneration.

Finally, there is the Sales Force Objectives system, which affects all sales representatives with variable remuneration, excluding that of the MBO and AB. Some 57.5% of employees have participated in one of these appraisal processes, which involves a total of 5,616 people. This figure is significantly less than that of 2017, since at the year-end

close, the 2018 OFE campaign had not yet concluded, which involved everyone in the Organisation. However, some people were involved in another appraisal system, therefore, the total figure for appraisals held in 2018 reached 6,840. The appraisal systems with variable remuneration (Management by Objectives (MBO) system, the Annual Bonus (AB), as well as the Sales Force Objectives) closed in 2018. Regarding the *Open Feedback Evaluation* process, the close will be at the end of February.

Number of Performance and Professional Development Appraisals

2016	10,522 (1)
2017	11,395 (2)
2018	6,840 (3)

(1) Includes the *Annual Bonus*, *Management By Objectives* (MBO), *Sales force Objective* (OFV) and *Performance Appraisal* (PA).

(2) Includes the appraisals *Management By Objectives* (MBO), *Sales force Objective* (OFV), *Performance Appraisal* (PA) and for the first time this year, the *Annual Bonus* (AB).

(3) Includes the appraisals *Management By Objectives* (MBO), *Sales force Objective* (OFV), *Annual Bonus* (AB) and for the first time this year, the *Open Feedback Evaluation* (OFE).



Dissemination of regular appraisals (at least once per year) of performance and professional development

		Spain and Portugal	
Employees that receive regular performance and professional development appraisals		2016 (1)	85.35
	%	2017 (2)	89.33
		2018	57.52
Employees that receive regular performance and professional development appraisals (men/total appraised)		2016 (1)	77
	%	2017 (2)	76
		2018	55.93
Employees that receive regular performance and professional development appraisals (women/total appraised)		2016 (1)	23
	%	2017 (2)	24
		2018	62.75
Total employees appraised	No.	2016 (1)	8,273
		2017 (2)	8,670
		2018	5,616

(1) Includes Performance Management (GR) appraisals, *Management By Objectives* (MBO), *Sales Force Objective* (OFV).

(2) Includes the appraisals *Management By Objectives* (MBO), *Sales force Objective* (OFV), *Performance Appraisal* (PA) and for the first time this year, the *Annual Bonus* (AB).

(3) Includes the appraisals *Management By Objectives* (MBO), *Sales force Objective* (OFV), *Annual Bonus* (AB) and for the first time this year, the *Open Feedback Evaluation* (OFE).

(4) Management evaluations held in 2018 are greater than their number in the staff due to departures in this group.

Appraisals by professional category

		Number	% Appraised
Executives appraised		2016 (1)	298
		2017 (2)	281
		2018 (3)	308 (4)
Middle management appraised		2016 (1)	2,440
		2017 (2)	2,842
		2018 (3)	2,797
administrative and office staff		2016 (1)	3,516
		2017 (2)	3,485
		2018 (3)	1,704
Manual workers appraised		2016 (1)	2,019
		2017 (2)	2,062
		2018 (3)	807

ject 'agile', during 2018, redefinition of the *onboarding* process has taken place, based on four pillars: 1) Start of the process before the actual arrival of the new employee; 2) Digitalisation of the process for real time coordination of all of the organisational units that manage the related tasks; 3) Reinforcement of the tutor as a monitoring figure who provides support to the new employee during his/her integration; 4) Ongoing evaluation of the new employee's satisfaction with the process. Through a specific *web* portal, the new employee accesses knowledge about ENDESA's culture and values, the main work tools and special benefits to which the employee is entitled. As a result of this project, the time necessary to complete the related administrative tasks has been reduced by 70% and it is achieving nearly 90% employee satisfaction.

- > **Knowledge interviews:** During 2018, ENDESA continued carrying out knowledge interviews with its people. Their purpose is to know, first hand, their interests, aspirations and motivations. As part of the Company's digital transformation, in 2018, a new tool, *People Analytics* was introduced which allows, among other functions, more detailed monitoring of the getting acquainted interviews held as well as extracting indicators such as satisfaction indicators. During the year, 1,627 of these new interviews were held.
- > **Coaching:** ENDESA has continued making a strong commitment to *coaching*. During 2018, 105 people have benefited from this type of individual or group actions held using the internal *coaching*, network with over 30 internal *coaches*. This participation of the part of internal trainers posi-

tions ENDESA as one of the benchmark companies of the Ibex35.

- > During this year, actions to empower and professionalise the Internal *Coaching* Network (RiCE) have been implemented, increasing the skills of internal trainers who use their knowledge to help with the development of other people in the Company. This translates into sessions with mentors, tutors and training that, thanks to knowledge of the internal reality, allow higher quality of services provided.
- > **Skills workshops:** Two courses have been developed (*Manager Coach* and *Let's Go*) using internal trainers of almost 70 people. The content of the *Manager Coach* course covers *feedback*, communication, listening, creation of trust on the team and coordination of activities that offer managers *coaching* tools to transform the ENDESA manager profile. In 2018 the *Manager Coach* courses were developed specifically in the different plants that ENDESA has in Spain, which has enabled adaptation that is more specific to needs in the Thermal generation business. In all, 38 workshops have been held in 18 locations using internal trainers for 504 people managers compared to the 166 who attended in 2017. Additionally, the 'Let's Go' programme has been developed and offered to 209 people, specifically within the Infrastructure and Networks line of business. This course is directed toward the technical personnel from this line of business and has the purpose of facilitating the skills and capabilities necessary for their functions.
- > **Mentoring:** Is a project for the transfer of knowledge using individual

mentoring. In 2018, 77 people participated in the mentoring programme. The programme called *Women Mentoring* continued during 2018. This development action has resonated directly throughout the entire business in that it has been participated in by both women executives in the roll of *mentees*, as well as those from the Top 200 group in the role of mentors, 22 and 18 people, respectively.

- > **People and Organisation Consulting:** During 2018, ENDESA reinforced an internal consulting line which gives ad hoc solutions for the needs posed by the business. This action is performed by internal development experts applying *coaching* techniques and tools and people consulting. The main actions carried out had clients from the fields of Thermal Generation, Health and Safety, Renewable Energies, *Big Data* Office and Support areas (Personnel Administration). These actions were for the purpose of improving the workplace environment and/or enhancement of people management skills as well as team creation at the Alcudia (Mallorca), Los Guinchos (La Palma) and Salinas (Fuerteventura) plants. Among these actions, it also collaborated in the design and leadership in the creation of the Data Community, establishing the bases, objectives and guidelines for the functioning of that community. In collaboration with the Health and Safety area, it has worked on a monitoring programme, offering psychological support to family members affected by an accident that occurred at the end of 2017 at the Andorra (Teruel) plant. In collaboration with this area, collaboration with this area also resulted in implementation of





the *SHE365* Programme, conducting nine idea creation sessions in the Infrastructure and Networks, Thermal Generation, Energy Management and ENDESA X lines of business. Finally, a highly developed, high impact line of consulting stands out, the holding of *Team Building* in the Personnel Administration and Renewable Energies areas with five specific actions in: Safety, Health, Environment and Quality, Hydraulic and Wind/Solar Power, that has allowed intensifying the group creation for improved well-being and workplace environment among people.

- > **Shadowing:** In 2018, a new training project was designed based on empowerment of people within the framework of experiences outside of the work context. This program is linked to *shadowing* activities among people in top management positions and young people with professional potential (*Growing Youth*). The goal is to explore extraordinary challenges together, relating to the challenge that comes with being agents of change, with special attention to generational interchange.
- > **Succession plans:** In 2018, ENDESA continued the succession plans to

identify suitable candidates to cover positions of greater management responsibility. The succession plans identify both people prepared for success in the short-term and those in the medium- to long-term. The identification is governed by segmentation criteria, giving relevance to the groups of women and young people. Specific development actions according to their needs are also identified for the successors, that are included among the annual development plans.



3. Training

3.1. Key figures and relevant aspects

ENDESA presents a training offer to its employees to provide and improve technical qualifications that they need to carry out their duties and to encourage growth in attitudes and aptitudes for their personal development. This offer is focused on achievement of the Company's strategic objectives and on promoting its values.

To perform this activity, ENDESA has invested 25.47 million euros, 6.55 million euros in direct costs of the training activity.

404-1

During 2018, 2,802 training sessions have been performed in ENDESA. 8,395 employees took part in these sessions. 370,416 training hours were given,

achieving an average of 37.9 hours per employee.

	2016	444,063.4
Total training hours	2017	342,744.7
	2018	370,416

TRAINING IN ENDESA IN 2018



Total hours in-person and on-line training	People trained	Participations	No. of events	Total Costs of Training (thousands of euros)
370,416	8,395	64,791	2,802	25.47

* Includes cost of working hours.

404-1

It features a trained staff and constant adaptation to the new requirements for which the sector should be prepared and is a strategic initiative on the part of ENDESA to maintain its leadership. The data for the average training hours per employee is information that confirms this strategy.

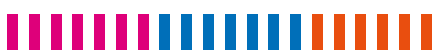
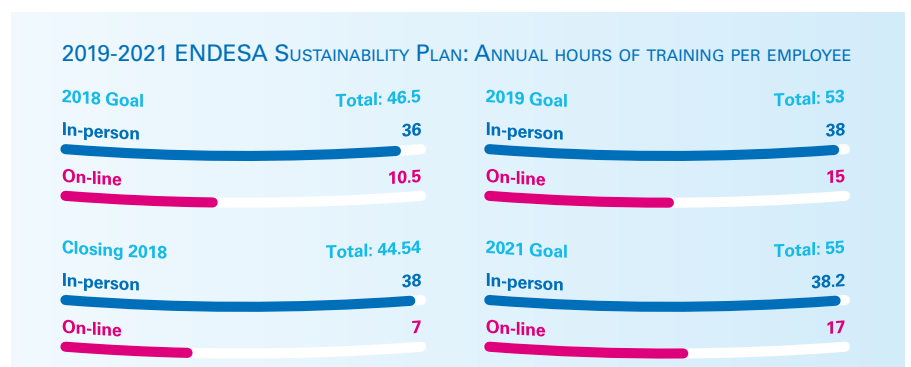
Number of hours of training according to the type of training

		Spain and Portugal	
On-line management training	2016		14,274.0
	2017		11,918.0
	2018		11,855.5
In-person management training	2016		50,353.0
	2017		54,028.8
	2018		180,011.4
On-line technical/specific training	2016		110,309.0
	2017		70,718.0
	2018		52,988
In-person technical/specific training	2016		242,936.4
	2017		175,444.9
	2018		125,560.7

Average hours training per employee, itemised by gender and professional category

Executives	2016	29.9	Administrative and office staff	2016	42.3
	Men	28.8		Men	44.7
	Women	35.4		Women	36.4
	2017	36.9		2017	31
	Men	36.2		Men	32.8
	Women	40.7		Women	26.6
	2018	35.0		2018	35.4
Men	34.1	Men	37.9		
Women	39.2	Women	29.2		
Middle management	2016	52.9	Manual workers	2016	45.4
	Men	52.8		Men	45.7
	Women	53.2		Women	36.1
	2017	43.8		2017	31.2
	Men	43.3		Men	31.4
	Women	44.9		Women	22.3
	2018	37.6		2018	42.9
Men	37.2	Men	43.3		
Women	38.4	Women	28.3		

To continue promoting training (both *on-line* and in-person), ENDESA has established a new objective in its 2019-2021 Sustainability Plan:





3.2. Type and content of training

404-2 410-1 412-2 103-1 Management Approach - Education and Training

103-2 Management Approach - Education and Training

103-3 Management Approach - Education and Training

103-1 Management Approach - EUSS Employment

103-2 Management Approach - EUSS Employment

103-3 Management Approach - EUSS Employment

ENDESA's commitment to people is to promote professional and personal development through continual training aligned with the company's strategic objectives throughout its scope of operation in order to contribute to the Company's excellence.

Training activities respond to the needs detected in different analysis processes that ensure continual and updated learning in the different defined categories:

1 Skills	Transversal training to develop personal and professional attitudes and aptitudes.
2 Technique	Training necessary for correct performance of each work position
3 Safety	Mandatory occupational risk prevention and health and safety training.
+ Recommended	Training necessary to comply with the standards (legal or company), for certificates required by units other than those of the student.

ENDESA is firmly committed to compliance with legislation in effect with each and every one of the spheres in which it carries out its activities. This entails inclusion of numerous training activities, among which those relating to occupational health and safety, criminal risks prevention, anti-corruption, respect for human rights, sustainability and the environment stand out.



Sustainability Training

Hours of training in issues of sustainability (environment, safety and health, etc.) per Employee	2016	18
	2017	13
	2018	11
Total training hours in sustainability	2016	175,882
	2017	127,079
	2018	109,092

Energy sustainability training

ENDESA's commitment to sustainable development is an essential part of its activity. In this way, training in this matter takes on great importance with the design, development and providing of courses in which ENDESA employees can internalise the principles of sustainability in its scope of operation, both professional and private. Further, ENDESA wishes to become a benchmark for society once its employees have embraced these principles and adopted sustainable energy behaviour.

Health and safety training

In the area of occupational health and safety, the Occupational Safety and Health courses are aimed at all the workforce with mandatory character, combining *online* and in-person methodology, depending on the content and public objective. Additionally, specific actions are carried out for specific positions of responsibility as regards oc-

cupational safety and health such as: the Occupational Safety and Health Delegates, the Occupational Safety and Health Resources and members of the emergency teams. In order to update knowledge both in legislation and ENDESA's own procedures, courses and the corresponding refreshers are

Training in human rights

Coinciding with the 70th anniversary of the Universal Declaration of Human Rights, a specific, *online* course directed at the entire workforce was developed. Its objective is to increase knowledge of this crucial theme and to report on actions taken by the Company to promote respect for human rights in all spheres.

Likewise, in 2018, ENDESA created a new section in its intranet dedicated exclusively to Human Rights. The objective is to promote fundamental values relating to respect and dignity of the individual and the community in social, civil and cultural aspects.

Environmental training

During the 2018 fiscal year, environmental training has continued to be reinforced by providing approximately 7,707 hours training for ENDESA employees. This training enables compliance with the requirements established to renew the different ISO 14001 certificates, energy efficiency and the Integrated Environmental, Energy and Indoor Environmental Quality Management System (SIGAEC) the company has.

It highlights the plan and makes an *online* course about Environmental Awareness available to the Company's employees, which reviews the road travelled by people in their relationship with the environment and in particular, ENDESA's relationship and commitment to it.



Digitalisation training

Training in digital transformation has been an important chapter in 2018, of which 31,277 hours have been given.

For the third consecutive year, ENDESA identifies the need to train its employees in the latest digital trends in the professional sector, through its *e-talent* training programme. The programme begins with a general training first phase called *Digital Introduction*, which include basic concepts about digitalisation for ENDESA employees and later continues to go in-depth in a second training phase called "Digital Tools", focused on offering new tools in different areas of the Company (Commercial, *Global Digital Solutions*, People and Organisation, Generation and Renewable Energies, Auditing,

Legal Advice and Administration, Finance and Control). Similarly, training called *Digital Basic* has been carried out, which consist of developing the skills of ENDESA's workers in using a *smartphone*.

In September 2018, an *online* training programme called 'Digital Routines in 21 Days', directed at all employees, was set in motion. Its objective is to promote good digital practices by adding new routines every 21 days. This programme will continue being developed and expanded throughout the coming year.

As part of its objective to be an agile and innovative organisation, ENDESA has increased its offer of courses relating to digitalisation, and those relating to *bigdata*, *salesforce*, *business analytics*, marketing digital and *social media management* have acquired a notable presence .



Other training activities

Through training in managerial, social and leadership skills, ENDESA provides employees with tools for their personal and professional development. This type of training is transversally adjusted between the different business lines and support areas. The skills management programme hours reached 152,708 hours in 2018.

Below are some highlights of the commissioning of several training programmes relating to the different dimensions of diversity:

- > Regarding the gender dimension:
 - The *Take the lead* course: aimed at pre-executive level women or those with potential.

- The Unconscious Bias Course to generate more equal environments.

> Regarding the age dimension:

- Generational diversity workshop: to encourage intergenerational teamwork.
- The educational workshop, Managing Children, that offers ENDESA's employees, both mothers and fathers, information and keys to encourage their children's talents and obtain a new viewpoint on 'poor behaviour' and its meaning.

> Regarding the disability dimension:

- Training seminar aimed at People and Organisation employees to raise awareness about the importance of their labour inclusion.

The strategic objective of implementing agile management models has been another course of action during 2018. Thus, during the month of September, the *beComeAgile* programme began, aimed at all employees with the purpose of adapting agile methodologies in the Company's internal operation . The objective is to achieve greater flexibility and immediacy in the response from areas to the needs of the business.

Another of ENDESA's fundamental commitments upheld throughout the years is technical training of employees. This enables their professional progress and gives them the necessary qualifications to perform their activity. Thus, in 2018, 71,076 hours of technical training were provided in the areas of Generation, Renewables, Distribution, Marketing, *Global Digital Solutions* (GDS), Procurement and Support.

Finally, since it forms part of a multinational, ENDESA is keen to provide language classes, chiefly English and Italian, with a wide range of program in different formats.





Training security staff

410-1 103-1 Management Approach – Security 103-2 Management Approach – Security
103-3 Management Approach – Security

The security in facilities (surveillance) services are provided by external staff and their organisation adapts to the coverage requirements of the services

necessary to guarantee the company assets at any given time. In any case, these services are provided by properly accredited professionals au-

thorised by the Ministry of the Interior. Part of their training includes aspects about private security legislation, basic rights of people and Human Rights.



Employee training in human rights policies and procedures

412-2

Coinciding with the 70th anniversary of the Universal Declaration of Human Rights, an online course on Human Rights directed at the entire workforce, was developed. Its objective is to increase knowledge of this crucial theme and to report on actions that ENDESA has put into practice to promote respect for all human rights.

A new section in its intranet dedicated exclusively to Human Rights was created. The objective is to promote fundamental values relating to respect and dignity of the individual and the community in social, civil and cultural aspects.

Human Rights Training

Training of employees about policies and procedures related to relevant human rights for their activities	(hours)	2016	200
		2017	1,200
		2018	335
Employees that received training in human rights	(No.)	2016	1
		2017	6
		2018	1,014
Total number of employees	(No.)	2016	9,694
		2017	9,706
		2018	9,763
Employees that received training in human rights	(%)	2016	0
		2017	0.06%
		2018	10.39%



4. Attracting and retaining talent

In order to attract the best talent, ENDESA focuses on *Employer Branding* to improve Company positioning in the job market and present itself as an attractive place to work. The focus in recent years has been attracting young talent. As part of these initiatives, in order to attract and retain this talent in the Company, it has attended trade shows at different universities, international employment conventions and professional training centres. Further, different events relating to innovation, technology and diversity have been held, mainly devoted to young people to improve their technological skills and abilities. Other initiatives have also been started that help improve employability among young people and thus facilitate their inclusion in the job market, such as *Millennial Day* in various forms. The public target of this action is young people about to graduate or recent graduates.

Another action carried out with the purpose of attracting talent to the Company has been *Recruitment Day*, focused on the search for the profiles most in demand in the business. Further, these profiles are sought to be aligned with the Company's values: trust, responsibility, innovation and proactivity.

Given the necessity of incorporating *STEM* (Science, Technology, Engineering and Mathematics) profiles, medium- and long-term actions are being taken to promote technological vocations among those of younger age (colleges and in-

stitutes), placing special focus on girls, according to the corporate strategy of gender diversity.

In a digital environment, communication and relationships with candidates change quickly, for this reason the presence in social networks and other *online* platforms has been strengthened and improved. Currently, these digital approaches are one of the main recruiting channels. One example of this is over 100 video interviews held, which have helped to digitalise and reduce selection processing times.

In 2018, 174 young *Millennial* graduates have joined the company through ENDESA's Scholarship programme. This programme offers young people the opportunity to put into practice the knowledge they acquired during their training and to begin their professional career. Of these young people, 60 were added to the staff upon finishing their scholarship.

ENDESA uses internal promotion to cover vacancies, giving preference to professionals with outstanding performance of their duties. Thus, employee merit is recognised, enabling development of their professional career within the Company.

In line with ENDESA's Diversity and Inclusion Policy, specifically in the gender

dimension, in 2018 training was given to women in middle management to improve their leadership skills and facilitate their professional promotion.

102-8

New hires are an indicator that show that ENDESA is an employment generator. These figures are important since they are a thermometer for the Company's renewal and adaptation to new trends.

401-1

New Hires

Total new hires	2016	556
	2017	256
	2018	393

New hires 2018 (%)

New hires under 30 years of age	45.8
New hires between 30 and 50 years of age	52.2
New hires over 50	2.0

New hires by gender (%)

Men	67.9
Women	32.1

Percentage of hires (%)

	Open-ended hiring		Temporary hiring	
	Men	Women	Men	Women
2016	77.5	22.5	82.6	17.4
2017	76.8	23.2	78.5	21.4
2018	76.7	23.3	74.9	25.1





No. of employees

	Open-ended hiring			Temporary hiring		
	<30	30-50	>50	<30	30-50	>50
2016	230	5,667	3,561	69	159	7
2017	258	5,689	3,512	78	160	9
2018	270	5,563	3,593	114	213	10

No. of employees

	Open-ended hiring				Temporary hiring			
	Executives	Middle Management	administrative and office staff	Manual workers	Executives	Middle management	administrative and office staff	Manual workers
2016	292	2,763	3,974	2,428	0	44	105	87
2017	280	3,053	3,821	2,305	0	54	115	78
2018	284	3,131	3,739	2,272	0	77	148	112

Contract terminations for the last three years, by gender are as follows:

Contract terminations by gender

Total women terminations	No.	2016	81
		2017	92
		2018	126
Total men terminations	No.	2016	590
		2017	360
		2018	321
Total women terminations compared to total women in the workforce (%)	%	2016	3.74
		2017	4.09
		2018	5.55
Total men terminations compared to total men In workforce (%)	%	2016	7.84
		2017	4.83
		2018	4.29

401-1

ENDESA wants to be an excellent company to work for, therefore, it pays attention to the low personnel turnover

as a satisfaction indicator for the people who work at our Company. The personnel turnover rate in Spain in 2018 was 4.58%, which is within the amounts expected by the company.

Average seniority in the company of employees who have left the Company in 2018

Average seniority in the company of the male employees who have left the company during the year	25.40
Average seniority in the company of the Women employees who have left the Company during the year	19.84
Average seniority in the company of the employees under 30 years of age who have left the company during the year	1.44
Average seniority in the company of the employees between 30 and 50 years of age who have left the Company during the year	10.45
Average seniority in the company of the employees over 50 years of age who have left the Company during the year	33.25
Average seniority in the company of all employees who have left the Company during the year	23.83

4.1. International mobility

During 2018, ENDESA has continued with international mobility programs for employees with the aim of promoting development in international scenarios, expanding their global vision of the business and their technical knowledge.

The international mobility programs were efficiently managed and promoted a global career, thus enhancing a multi-national culture. In 2018, ENDESA managed 72 expatriate employee processes and 18 impatriate processes.

In these processes, special attention is paid to the following aspects:

- > Guaranteeing that the expatriate staff maintains living conditions similar to that of the country of origin.
- > Compensating for the difficulties related to expatriation.
- > Offering a significant benefits package regarding well-being.

Within the framework of complying with the Diversity Policy, special attention is paid to integration of the expatriates in the destination, by assigning a tutor/mentor during the expatriation period.

4.2. Personnel selection

202-2 103-1 Management Approach - Market Presence

103-2 Management Approach - Market Presence

103-3 Management Approach - Market Presence

In 2018, ENDESA continued promoting its employees' participation in the selection processes, giving priority to internal publication of employment offers. Thus,

it has empowered internal mobility, offering the opportunity for professional development and learning for its employees, according to the interests and motivations of each person.

In 2018, ENDESA published 333 internal selection processes.

In cases in which it is not possible to draw upon internal promotion, ENDESA selects from among people who have been directly linked to activities with the Company. These previous links can be through internships, scholarships or specific contracts as well as contact with people who have registered in any of the Company's databases. Likewise, where internal promotion is not possible, ENDESA advertises on the job market for new hires.

In 2018, more than 395 external processes were carried out in Spain and Portugal for permanent and temporary vacancies.

Total employees who have joined the workforce during the year	2016	556
	2017	256
	2018	393
Total local employees who have joined the workforce during the year	2016	509
	2017	241
	2018	361
Total local Senior Managers (executives + middle management) who have joined the workforce during the year	2016	275
	2017	116
	2018	189

In relation to senior management (members of the Executive Management Committee) they come from the local community.

Number of senior executives from the local Community	13
Total number of senior executives	17



Rejection of forced and child labour

[103-1 Management Approach - Child Labour](#)

[103-2 Management Approach - Child Labour](#)

[103-3 Management Approach - Child Labour](#)

[103-1 Management Approach - Forced Labour](#)

[103-2 Management Approach - Forced Labour](#)

[103-3 Management Approach - Forced Labour](#) [408-1](#) [409-1](#)

ENDESA expressly condemns child labour, in addition to forced labour through its Ethics Code, committing to strict compliance with international standards such as the UN Global Compact, with the aim of favouring a working environment that respects Human Rights. Condemnation of child labour and forced labour has also been expressly reflected in ENDESA's Human Rights Policy approved by its Board of Directors on 24 June 2013. Likewise, ENDESA operates in an environment (Spain and Portugal) where there is a legislative framework that establishes the necessary guarantees so that violations regarding child or forced labour

do not occur. ENDESA, to guarantee strict compliance with international standards and the principles of the ILO in this regard, has the most advanced prevention, control and monitoring mechanisms. As a result, no complaint has occurred in this area during 2018.

Likewise, this approach extends to all the contractor and supplier companies with which it has a relationship. To do this, it incorporates Human Rights clauses in the general conditions of contract, assesses Human Rights aspects in the supplier qualification system and performs social audits to check compliance. For more information, see the *Supply chain chapter*.



4.3. Remuneration policy

[102-36](#) [103-1 Management Approach - Market Presence](#)

[103-2 Management Approach - Market Presence](#)

[103-3 Management Approach - Market Presence](#)

ENDESA's remuneration policy is aligned with the national and international legislation regarding Corporate Governance. Its principal objective is to retain, attract and motivate the best professionals, guaranteeing internal equality is preserved, external competition and establishing remuneration in accordance with the best market practices. The remuneration is determined by analysing the external competitiveness based on market salary surveys, using a job rating methodology with criteria from similar

companies in terms of employee numbers and turnover.

Likewise, ENDESA's remuneration policy takes into consideration the interests of the shareholders and prudent risk management. ENDESA works so that financial economic performance is such that it safeguards and increases the Company's value for the purpose of adequately compensating for the risks that the shareholders assume when investing their capital.

On the other hand, ENDESA is prepared to adapt its remuneration policies to the





demands of a corporate environment in rapid evolution, marked by the growing role of agile work methodologies that call for recognition of individual contribution beyond the traditional forms of remuneration.

ENDESA's remuneration policy values the principles of meritocracy. This policy defines the management criteria for the salary adjustments based on the merit of people as differentiating criterion avoiding automatic adjustment due to seniority. In 2018, it has continued to apply the meritocracy policy, covering all of the Organisation's professional categories. The purpose of this practice is to reward a person's individual effort and their commitment to the Company, assigning differentiated remuneration adjustments. At the same time, it seeks to guarantee the minimum established in an Agreement. This policy, furthermore, enhances the role of the manager in people recognition.

During 2018, ENDESA has been immersed in the process of negotiating the collective agreement. Regarding the remuneration context, the Company understands the necessity of adapting to the new business model and homogenising and modernising its social benefits. This is specified in a social benefit cost redistribution proposal, focusing on its active personnel. For employees, it would assume the possibility of selecting certain social benefits in terms of their life cycle.



Company benefits not required by law

401-2

		Spain and Portugal	
Medical care	(Thousands of euros)	2016	3,908
		2017	3,086
		2018	3,176
Cultural and leisure activities	(Thousands of euros)	2016	931
		2017	972
		2018	983
Financing of electrical consumption	(Thousands of euros)	2016	13,427
		2017	12,735
		2018	15,230
Insurance for non-professional accidents	(Thousands of euros)	2016	1,085
		2017	1,090
		2018	625
Pension funds	(Thousands of euros)	2016	51,816
		2017	51,407
		2018	50,621
Other (e.g., seniority bonus, special assistance for marriage, house purchase, etc.,)	(Thousands of euros)	2016	18,380
		2017	17,675
		2018	15,405
Number of employees involved in the Company benefits policy	(No.)	2016	9,575
		2017	9,599
		2018	9,946



Flexible Remuneration

In 2018, ENDESA's employee participation in its Flexible Remuneration plan continued to grow, achieving 45% membership (4,154 employees). It entails a compensation system by which each employee voluntarily decides how to receive part of their monetary remuneration so as to adapt it to their personal and family needs at any time. By contracting certain products and services through the Company, employees may increase their net availability due to tax advantages that the IRPF Law grants to certain products and services. ENDESA's plan includes health insurance, childcare vouchers, meal vouchers, transport vouchers and training.



Overtime

Furthermore, through the different Collective Agreements, the Company Management and the Social Representation agree on the need to reduce overtime to an essential minimum, by establishing working organisation tools and systems that enable a permanent improvement in the organisation's efficiency, respecting in all cases the legislation in force and in particular, the provisions of RD 1561/1995, of 21 September 1995. Thus, the Collective Agreement establishes that should overtime be required, employees can choose between mechanisms of financial compensation or mechanisms of mixed compensation (financial and hours of rest).



Inequality and salary gap

At ENDESA, up to the year 2000, before signing the Framework Agreement I, salaries were defined based on the different collective agreements of the companies that composed the Group. As of the year 2000, with the signing of the Framework Agreement I, uniform salary tables were defined for all of ENDESA's new hires. As of 2013, with the signing of Framework Agreement IV, salary scales were implemented that were more in accordance with market practices for external hires.

ENDESA recognises the need to accelerate reduction of the salary gap and is committed to that through various measures: promotion of gender equality in the external and executive selection processes (inclusion of at least one woman on the finalist candidate short-list) and in the succession plans for strategic positions in the Company (inclusion of at least one woman in the successor short-list); analysis of gender indicators in the meritocracy processes; development programmes specifically for women in positions of responsibility; initiatives to promote the participation of young women in technical and technological studies; development of parenting programmes aimed at personal and professional balance as well as the rest of the measures covered in the Diversity and Inclusion Policy, which promotes equal opportunities in the Company. Taking into consideration fixed salaries, variable salaries and social benefits, in 2018, the ratio between the salaries of women and of men would be:

Average fixed remuneration of men in euros in line with their professional category

		Spain and Portugal	
Executives	2016	152,507	
	2017	143,391	
	2018	141,899	
Middle management	2016	72,786	
	2017	71,085	
	2018	68,924	
Administrative and office staff	2016	57,811	
	2017	57,981	
	2018	56,697	
Manual workers	2016	52,575	
	2017	50,931	
	2018	50,974	
Media	2016	62,912	
	2017	62,240	
	2018	61,101	

Average fixed remuneration of women in line with their professional category

		Spain and Portugal	
Executives	2016	123,942	
	2017	119,226	
	2018	119,364	
Middle management	2016	65,048	
	2017	63,813	
	2018	61,802	
Administrative and office staff	2016	49,378	
	2017	49,996	
	2018	48,638	
Manual workers	2016	45,698	
	2017	48,143	
	2018	48,551	
Media	2016	56,688	
	2017	57,374	
	2018	56,214	

405-2

Average fixed remuneration (% earned by women less than fixed remuneration for men)

		Spain and Portugal	
Executives	2016	18.7	
	2017	16.9	
	2018	15.9	
Middle management	2016	10.6	
	2017	10.2	
	2018	10.3	
Administrative and office staff	2016	14.6	
	2017	13.8	
	2018	14.2	
Manual workers	2016	13.1	
	2017	5.5	
	2018	4.8	
Media	2016	9.9	
	2017	7.8	
	2018	8.0	





	Man	Woman	Salary Gap (1) Women vs Men
Executives	193,017	156,028	19.2
Middle management	77,805	67,474	13.3
Administrative staff	61,970	50,958	17.8
Manual workers	57,695	54,562	5.4
Media	69,300	60,937	12.1

(1) The figure represents the % that a woman earns less than a man, taking into consideration fixed and variable salaries and social benefits pursuant to Law 11/2018 of 28 December

In order to understand the existence of salary inequality between men and women in ENDESA, the following different factors must be taken into account: The industrial nature of the Company, the low turnover rate, which implies that there are no drastic variations in staff composition and the historic gender composition of the company due to historical cultural and socio-demographic

factors (historically, fewer women had access to university studies, a lower female presence in technical careers, etc.), which translates into greater average seniority for men than for women. To this other historic variables are added, such as the original agreement conditions.

202-1

Ratio between starting remuneration and minimum remuneration

	2017		2018	
	Women	Men	Women	Men
Starting remuneration	23,680.92	23,680.92	23,680.92	23,680.92
Minimum remuneration Spain	9,906.40	9,906.40	10,302.6	10,302.6
Ratio between starting remuneration and minimum remuneration	2.39	2.39	2.30	2.30

4.4. Pensions

201-3

All employees of ENDESA Group companies are members of the Pension Plan unless they expressly renounce this. After signing the first Framework Agreement, on 25 October 2000, a defined-contribution pension system was defined for retirement contingencies, and defined benefits for disability and death contingencies. In 2018, the total number of employees with an individual pension fund sponsored by the company was 9,631.

A shared company-employee contribution system was established, with a maximum of 6% of the pensionable remuneration paid into the pension plan by the company and 3% of this same remuneration for the employee. The company's contribution to the pension plan in 2018 was 31.48 million euros (this figure only includes the defined contribution).

There are also employees covered by origin agreements pre-dating the Framework Agreement. Among these, two large groups are identified:

- > Defined contribution for retirement contingencies, and defined benefit for disability and death contingencies and with benefit and contribution systems differing from those described above. The specific circumstances vary depending on the origin.
- > Defined benefit for all contingencies of retirement, death or incapacity, differentiating two large groups:
 - Electrical Ordinance workers of the former ENDESA. This is now closed, for which the predetermined nature of the retirement benefit and the fact that it is fully assured means that there is no risk.
 - Workers from Fecsa / Enher / HidroEmpordá. A collective that is closed for which the benefit is linked to the consumer price index (CPC) and not assured, with the exception of benefits arising up to 31 December 2011, the date on which an insurance policy was taken out to cover these benefits, thereby eliminating any future obligation as regards this collective.

For this group there is an internal fund provision, calculated according to the International Accounting Standards, which, together with the plan's assets cover to date 100% of the obligation.

The administration of ENDESA's pension plans is carried out in accordance with the general limits of management and risk assumption laid down in the respective current legislations applicable in Spain.

ENDESA's pension plan is operated by a management company that takes into account socially responsible investment criteria.

Currently, the pension fund to which the pension plans promoted by ENDESA companies are adhered assumes those risks that are inherent to the assets in which they are invested, mainly:

- > Risks of investment in fixed-income assets arises from interest rate variations and the credit risk of the portfolio shares.
- > Risks of investment in equities arises from the potential impact of volatility (changes) in the prices of the related assets, which is greater than that of fixed income.
- > Risks of investment in derivative financial instruments arise in accordance with the degree of related leverage, making them especially vulnerable to variations in underlying asset price (reference asset).

- > Investment in assets denominated in currencies other than the Euro bear additional risk related to changes in exchange rates.

- > The investments in non-negotiable assets, as it is carried out in markets of limited liquidity and less efficiency, have valuation risks both in the methods used and the absence of contrast prices in the market.

ENDESA's pension plan is operated by a management company that takes into account socially responsible investment criteria. To this end, the fund manager has prepared and approved a Socially Responsible Investment Policy Statement, which summarises the framework within which the company activity is performed in this regard with the assets managed.

The Plan Fund manager shall incorporate environmental, social and good governance issues (ASG) in the investment analysis and decision-making processes. It is expected that the companies and issuers in which it will invest perform and carry out an ESG strategy which maximises, in the long-term, the value for shareholders and investors. This means that the companies must generate added value considering the investors' interests and also those of the employees, customers, suppliers, the community and the environment. It shall positively assess the membership of the companies to the United Nations Global Compact.





5 Social dialogue

102-41 402-1 407-1 103-1 Management Approach - Freedom of Association and Collective Bargaining

103-2 Management Approach - Freedom of Association and Collective Bargaining

103-3 Management Approach - Freedom of Association and Collective Bargaining

103-1 Management Approach - Relations between Workers and Management

103-2 Management Approach - Relations between Workers and Management

103-3 Management Approach - Relations between Workers and Management

Consulting and participation of workers on matters of occupational health and safety is carried out through Article 116 and the following of IV of the Framework Agreement.

The total number of complaints relating to employment practices registered via formal mechanisms during the last three years is shown below: All complaints received during the year are addressed and resolved during that same year:

ENDESA in relation to reorganisations, transfers of workers between Group companies, etc. as well as with of the V ENDESA's collective agreement negotiation. In Portugal, working conditions are set through the employment contract.

Working conditions at ENDESA are regulated by collective bargaining agreements to improve employment regulations in the fields in which the Company operates. ENDESA guarantees the right

102-41

Within ENDESA's scope in Spain, it is worth highlighting that on 27 December 2018, the negotiating process of V ENDESA's Collective Agreement was dissolved and closed, which means that since 1 January 2019, there is no collective labour framework contractualising the conditions for all employees.

However, on 6 February 2019, the parties involved agreed to reopen the negotiation process in hopes that the Company may progress more effectively in reaching an agreement that adapts the labour regulations to the environment's new requirements.

402-1

Spanish employment legislation and ENDESA's employment regulations in Spain (Collective Framework Agreement IV and the Guarantees Framework Agreement for ENDESA SA and its electricity subsidiaries in Spain, Voluntary Suspension Agreement) establish the criteria that should be adhered to in the event of company reorganization and corporate restructuring (Chapter III of the Guarantees Framework Agree-

		Spain and Portugal	
Total number of complaints relating to labour practices logged by formal complaint procedures during the reporting period	(u.)	2015	7,900
		2016	7,900
		2017	7,700
		2018	7,700
Of the complaints identified, number of complaints addressed during the reporting period	(u.)	2015	7,900
		2016	7,900
		2017	7,700
		2018	7,700
Of the complaints identified, number of complaints resolved during the reporting period	(u.)	2015	7,900
		2016	7,900
		2017	7,700
		2018	7,700

With respect to the collective bargaining procedures, in 2018, in ENDESA they were performed strictly complying with Spanish legislation and that of

to freedom of association for its employees and for all its contractors, and suppliers.

ENDESA Employees

Spain	Employees	%	Portugal	Employees	%
Personnel subject to agreement	8,915	91.69	Personnel subject to agreement	4	10
Personnel outside of agreement	808	8.31	Personnel outside of agreement	36	90
Spain Total	9,723	100	Total Portugal	40	100

ment), taking into account that the Social Representation will be notified at least 30 days in advance of the date on which restructuring of the company and corporate reorganisation will enter into effect.

The most important actions regarding collective bargaining in 2018 were as follows:

- > Negotiation of V ENDESA's Collective Agreement V, although that process is being finalised without an agreement.
- > Negotiation regarding new organization in the Hydraulic Production Units area.

- > Consultation period regarding new operating schedules for Thermal Generation.
- > Information about the announcement of the request to close the facilities in Compostilla, Andorra and Group 1 and 2 of Alcudia.

Spain has formed part of the ILO since it was established in 1,919. ENDESA's conventional legislation complies with the Agreements in force ratified by Spain.

At ENDESA, there were four collective agreements in force at the end of 2018, which affected 8,915 people and cover 91.69% of the workforce. Regarding contractor workers, 99.7% of ENDESA's

contract workers were covered by a collective agreement.

Within ENDESA's scope in Spain, it is worth highlighting that on 27 December 2018, the negotiating process of V ENDESA's Collective Agreement was dissolved and closed, which means that since 1 January 2019, there is no collective labour framework contractualising the conditions for all employees.

However, on 6 February 2019, the parties involved agreed to reopen the negotiation process in hopes that the Company may progress more effectively in reaching an agreement that adapts the labour regulations to the environment's new requirements.





6. Workplace environment

During 2018, the specific actions identified at the root of the previous climate survey from 2016 were continued. These actions that were carried out throughout 2017 have had the goal of improving employees' motivation and commitment to the Company. With the objective of learning the degree of satisfaction among employees in the heart of the Company, in November 2018, a new internal survey was begun. As occurred after the previous climate survey, throughout 2019, new climate action plans will be developed in order to respond to concerns detected among employees. These action plans will have periodic monitoring to ensure compliance with planning and planned objectives.

As an example of some of the actions included in the action plans from the previous survey, the communication campaign stands out, which was completed at the beginning of 2018, regarding all of the conciliation measures that ENDESA makes available to its employees. In part, thanks to its promotion, the number of employees who made use of

one of the conciliation measures went from 2,372 in 2017 to 2,742 people in 2018.

Another outstanding action that benefited employees during 2018 has been the continued 2018-2020 Mobility Plan. The strong drive given by the Company to promotion of e-mobility is an unequivocal sign of its commitment to a low-carbon economy that seeks to contribute to the development of the e-mobility market. ENDESA's goal is to continue counting on employees to be ambassadors of a new way to get around and to achieve 10% of the workforce driving an electric car by 2020.

ENDESA is aware of the cultural shift resulting from the digital transformation in which society currently lives and the resulting change of paradigm that this has generated and has continued throughout 2018 to promote initiatives that are favourable to a flexible job that facilitates the personal, family and professional balance of its employees. This promotion is reflected in the increase in people joining the 'Work Outside of the Office' programme. Without a

doubt, this new focus in team management, focused on responsibility for the results, has helped to establish a solid and coherent basis for a new model at ENDESA. In 2018, 1,757 employees (861 women and 896 men) joined this initiative.

Another initiative that has assisted climate improvement is the *Smart Workplace* project, that has the objective of making a new environment available to the entire team carry out their duties, which allows them to be more productive. It involves revolutionising several basic approaches in the work method of a business unit: the physical spaces, technology, processes and People and Organisation policies. Harmoniously integrating these aspects of daily work, we want to achieve teams that are more creative, innovative and streamlined in projects development, with which we hope, of course, to improve performance and results for the business line as well as greater motivation and commitment on the part of employees. It has been initiated with the workforce of ENDESA X.



7. Responsible people management at ENDESA

- 103-1 Management Approach - Diversity and Equal Opportunities
- 103-2 Management Approach - Diversity and Equal Opportunities
- 103-3 Management Approach - Diversity and Equal Opportunities
- 103-1 Management Approach - Employment
- 103-2 Management Approach - Employment
- 103-3 Management Approach - Employment
- 103-1 Management Approach - No Discrimination
- 103-2 Management Approach - No Discrimination
- 103-3 Management Approach - No Discrimination

E NDESA, in its focus on responsible people management, annually holds various activities in each of these areas:

- > Diversity Managing and equal opportunities.

- > Conciliation and flexibility.
- > Integration of disabled persons and people at risk of social exclusion.
- > Promotion of volunteering.



7.1. ENDESA's commitment to diversity

- 103-1 Management Approach - No Discrimination
- 103-2 Management Approach No Discrimination
- 103-3 Management Approach - No Discrimination
- 103-1 Management Approach - Diversity and Equal Opportunities
- 103-2 Management Approach - Diversity and Equal Opportunities
- 103-3 Management Approach - Diversity and Equal Opportunities

ENDESA believes that diversity among its employees is an enriching element for the Company. The progressive increase in women on the workforce, in-

clusion of people of other nationalities as well as the disabled are samples of our respect for the different dimensions composing our Diversity Policy. Regard-

ing age, younger people have been progressively introduced, which enables having a workforce that combines seniority with gradual renewal.



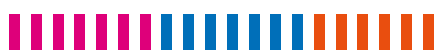
7.1.1. Diversity and Inclusion Policy

Within the framework of its Diversity and Inclusion Policy and the company's Human Rights Policy, ENDESA rejects all forms of discrimination and is committed to guarantee and promote diversity, inclusion and equal opportunities. ENDESA does everything possible to promote and uphold a climate of respect towards dignity and

individuality for people, and supervise the highest standards of confidentiality with respect to any type of information related to the private life of employees that it may come to know. Therefore, also in compliance with the values and principles included in the ENDESA's Ethics Code and as part of

it, the Company adopts the following main principles:

- > No discrimination.
- > Equal opportunities and of dignity for all forms of diversity.
- > Inclusion.
- > Conciliation of personal, family and professional life.





Based on the above principles, ENDESA is committed to implement specific actions to promote non-discrimination and inclusion in the following areas of diversity, defining the following action plan:

Gender	Nationality	Disability	Age
<ul style="list-style-type: none"> > Gender equality in internal and external selection processes > Agreements with technical universities. > Parental programme. 	<ul style="list-style-type: none"> > Tutoring programme for expatriates 	<ul style="list-style-type: none"> > Identification of an internal reference (focal point). 	<ul style="list-style-type: none"> > Tutoring programme for new hires. > Transfer of knowledge between seniors and juniors
Transversal			
<ul style="list-style-type: none"> > Training courses and/or specific workshops about behaviour and values related to diversity and the inclusion > Inclusion of diversity elements in the behaviour model adapted for the performance evaluation process. 			

Gender

In order to recognize, respect and manage the differences between men and women, guaranteeing talent development and ensuring equal opportunities and treatment, the following actions were taken:

- > In both the internal as well as external selection processes, ENDESA guaranteed that, in the initial phase of the process, both sexes were equally represented in the total work force evaluated. Likewise, ENDESA always submits a woman in the final phase of the processes when they have the *expertise* and/or training required among the women's work force that may be recruited.
- > The company established collaboration with universities, institutes and colleges oriented toward identification and implementation of programmes to promote participation and inclusion of female students in technical studies.

- > ENDESA continued with parenting programmes aimed at balancing the needs people have as parents and their aspirations of professional growth.

Regarding the gender dimension, activities in accord with the courses of action were generated. The following workshops were held:

- > *Future Brunch*: Seminar directed at students on company practices with the objective of creating a space for technological innovation and inspiration and to encourage them to maintain interest in technology and the technical vocations.
- > Workshop on unconscious bias: directed at men and women from the Company with the objective of learning to identify and reduce unconscious bias as well as create the most fair and diverse work environments.
- > Educational workshops directed at fathers and mothers from the Company. The workshops took place at the Barcelona, Zaragoza and Seville

branches. They were given by experts in education who offered information and keys to encourage their children's talents and obtain a new viewpoint about what is understood by 'poor behaviours'.

Age

In order to recognize, respect and manage the differences between generations, ensuring integration, motivation and transfer of knowledge, the following actions were taken:

- > A tutoring programme was put into effect to support employees in the early stages of transition (for example, hiring). It had a variable duration according to the needs of each specific situation.
 - > For the employees' development, the experience of the experts (*senior*) was drawn on wherever possible, so that they could act as internal trainers.
- In line with collaboration that ENDESA carries out throughout the year with the Generation Observatory to promote intergenerational diversity management, a workshop was held at the Zaragoza branch, intended to eliminate labels and identify the value that each generation provides.

Further, a participatory game was held in Madrid in which teams were formed, guaranteeing diversity of their members, with the objective of encouraging intergenerational teamwork.

Nationality

To manage the differences between people from different nationalities and to promote their integration, there is a tutoring programme for expatriates by which a tutor from the destination

country is assigned to them to help and support them during their expatriation period.



Disability

In order to recognize, respect and manage the different capabilities of people, harnessing each one's potential, the company has identified a reference person for all subjects relating to disability. This person supported the *Business Partners of People and Organisation*, the corresponding Health and Safety units, managers and employees to handle any question relating to their application.

In collaboration with the Adecco Foundation, a consciousness raising seminar was held, given by Pablo Pineda, the first European university graduate with Down Syndrome, which dealt with diverse talent without labels. Also, inclusive cookery workshops were held with the objective of helping beneficiaries to develop basic skills to provide the necessary autonomy and independence to hold an unprotected job position. The workshops were participated in by 27 volunteers and 27 recipients.



Transversal dimension

In 2018, workshops and/or specific training courses relating to behaviours and values of diversity and inclusion, especially for the professional family of People and Organisation, new hires and new managers, were defined.

Diversity elements and inclusion in the Company's behaviour model that will be adapted for the performance evaluation process were included.

406-1

In 2018, there have been no incidents of discrimination in ENDESA, a fact the Company regularly reports to the Workers' Representative.



7.1.2. Promotion of Gender Equality

ENDESA promotes gender equality in all areas of the Company, especially in the positions of responsibility and personnel hiring, both objectives included in ENDESA's 2019-2021 Sustainability Plan.

Thus, the hiring of women figure reached 32.06% in 2018.

Respecting positions of responsibility, the percentage of responsible positions (executives) held by women in



remained at 17.5%.

Application of the policy

Within the framework of the Diversity and Inclusion Policy, ENDESA has defined a gender action plan with two principal objectives:

- > To increase the presence of women in the company
- > To increase the presence of women in responsible positions.

These objectives are embodied in the following courses of action:

Increasing the percentage of women in selection processes

Promoting gender equality in both internal and external selection processes, in the *short-list phase*, in other words, when defining the pool of eligible candidates for interviews aimed at selecting final candidates.

Regarding the increase in the percentage of women in the selection process-

es, since 2017 ENDESA monitors the evolution of this data through a quarterly reporting carried out with regard to the Diversity and Inclusion Policy. In 2018, selection processes relating to students in internships have also been included, in order to guarantee equal opportunities in all of the company's processes.

To promote participation and inclusion of female students, especially in technical or STEM studies

Therefore, programmes and collaboration with colleges and institutes have been set up.

Regarding the fostering of technological vocations among students, ENDESA has collaborated for another year in the development of the educational programme *Oriente-T* along with the *Junior Achievement Foundation* and other companies.

Aimed at High School students (14 to 16 years of age) and Secondary Education teachers, the initiative was intended to create a reference space for professional guidance through a series of events that combined presentations with inspiring personal and professional stories from company volunteers and practical workshops. The objective of this programme was to make young people aware of the employability opportunities in *STEM* careers and to foster the role of women's leadership in this area. Additionally, it was intended to provide the teaching community with educational materials so that they can work at their educational centres and thus promote the multiplier effect of the initiative.

Thanks to ENDESA's participation, 762 students and 92 teachers have participated in the educational phases of High School in the cities of Madrid, La Coruña, Barcelona and Seville. An open and collaborative career guidance channel has been created with over 30 inspir-





ing videos by professionals for use at educational centres throughout Spain; and after the impact study performed in 2017 by the *Junior Achievement* Foundation, it was concluded that the *Oriente-T* programme fosters *STEM* studies in women and that the number of women who wished to study this type of career increased by 10% after participating in the programme.

Along this line, ENDESA is committed to mitigate the gap between men and women who work in the technology industry and in technical careers and developed the *Girls in ICT* initiative in its corporate headquarters in Madrid. In the seminar, there were 55 girls between the ages of 14 and 16 years who participated and the objective was to make the young people aware of and expose them to the different professions in the digital sphere and the career opportunities that technical studies offer.

Encourage the development and incorporation of women at management levels within the company

For this purpose, different programmes have been held:

In 2018, the programme *Women Mentoring* was completed. It is an initiative aimed at ENDESA's women managers, the objective of which is to promote their development and incorporation into the senior levels of responsibility within the company. The main characteristic of this *mentoring* programme is that the mentors for these women are from the organization's senior management, thus contributing to creating an internal network of mentors and to streamline potential cross mobility thanks to a greater transversal knowledge of the company. Along this line, in 2018, the project *Take the Lead* was carried out, a development programme aimed at women in mid-

dle management programme or who have potential. The objective of the programme is to improve leadership skills, overcome unconscious bias, limiting beliefs and to empower them to facilitate access to positions of greater responsibility.

Further, ENDESA holds the succession plan design exercise annually for those positions with strategic responsibility in the organization. Among the criteria established that must be met for identification of possible successors is gender diversity. This means that at least one of the proposed successors for each position must be a woman.

Developing parenting programmes aimed at balancing the needs people have as parents and their aspirations of professional growth.

These consist of a series of structured interviews between employees, their managers and *Business Partners*, who are professionals from People and Organisation who work strictly with the business line to identify their needs and address them, optimising the employees' professional development, well-being and satisfaction before and after the maternity and paternity experience to increase their value, both for the worker as well as the Company.

The main objectives pursued by the initiative are as follows: (1) Optimal management for the maternity/paternity period that facilitates balancing the parenting sphere and the personal professional growth aspirations of the individuals; (2) To introduce new maternity/paternity culture that values the acquisition of new skills instead of focusing attention on the absence from work; (3) To ensure that the person participates and is valued within the organizational context during the maternity/paternity period and the resulting re inclusion

into the company; and (4) To create a work environment that is characterized by a climate of reciprocal trust between manager and the worker with the intention of sharing and caring for the new family dimension, enabling people to face parenthood with calmness and to renew their commitment to the professional field.

As a supplement to this programme, ENDESA has made the *online* educational platform '*Managing Children*' available to its employees, in which over 40 experts in education collaborate. The objective of the initiative is to support mothers and fathers in the work of educating their children.



Voluntary Commitments with Management

Within the framework of the voluntary commitments that ENDESA has acquired with the Ministry of Health, Social Services and Equality, (hereinafter, the Ministry), the following are worth noting:

1. Gender Equality Seal.
2. "More Women, Better Companies" initiative.
3. "For a Gender-Based Violence-Free Society" initiative

The Company's Hallmark of Equality

As a result of ENDESA's commitment to equality, the Ministry awarded ENDESA the 'Gender Equality Seal' in 2010.

In 2017, ENDESA obtained renewal of the Equality Seal award from the Ministry for a period of three more years. The pertinent reports are submitted annually in order to maintain that award, which has been renewed in 2018.

Thus, ENDESA forms part of the Network of Companies that holds this award and has been actively involved in the various initiatives promoted by this Network.

'More Women, Better Companies' initiative.

In line with ENDESA's impetus and desire to advance in the field of gender diversity, in 2014 ENDESA signed an agreement with the Ministry with the aim of promoting and increasing the presence of women in posts of responsibility. It contains quantitative objectives as well as qualitative commitments that affect selection processes, promotion of work-life conciliation, communication and sensitivity.

It highlights that the quantitative aim to increase the participation of women in junior and senior management positions and in management committees to reach 20% in 2018 and exceeded it by achieving 23%.

'For a Gender-Based Violence-Free Society' initiative

Within the framework of the collaboration agreement signed with the Ministry in 2012, ENDESA collaborates annually in advertising sensitivity and gender-based violence prevention campaigns launched by the Ministry.

The 25 November campaign 'International Day for the Elimination of Violence against Women' stands out, with the objective of raising awareness among people and above all, the male public, regarding the importance of speaking out against gender-based violence and not allowing day-to-day situations or attitudes that promote it.

Likewise, ENDESA participates each year in the 'There is a Way Out of Gender-Based Violence' race held in Madrid.

Gender-Based Violence

Additionally, ENDESA, along with the Integra Foundation, continues the corporate volunteering programme 'Promoting Talent' aimed at improving employability of women victims of gender-based violence and other groups, giving them the tools necessary for their incorporation into professional life through workshops held by ENDESA volunteers. In addition to the social impact that this project has for integration of women who have suffered from gender-based violence, that allows them to leave the abuser and live in freedom with their children, it also increases sensitivity about this social blight.

In 2018, ENDESA continued the corporate volunteering programme 'Changing Lives', aimed at women victims of gender-based violence, in collaboration with the Integra Foundation and the ENDESA Foundation. The objective of the project is to improve the employability of women victims of gender-based violence and of other groups, giving them the tools needed to incorporate them into professional life, through workshops given by ENDESA volunteers. As a result, 54 women have participated in the project and 24 have been hired. During the 'International Day for the Elimination of Violence against Women', ENDESA contributed to the Integra Foundation's awareness campaign.

Along this line, on 8 March, 'The International Day of the Woman', a 'Job School' was held at the Madrid offices to encourage the introduction of women with special challenges (women victims of gender-based violence, single mothers, women over 45 years of age, women at risk of exclusion, etc.) into the job market.

Finally, recall that ENDESA's Equality Plan, incorporated into its Framework Collective Agreement, includes special measures for protection of victims of gender-based violence.

Equality plan from the Agreement

On the other hand, ENDESA provides an Equality Plan that contains Human Resource policies that promote the implementation of actions necessary to facilitate the incorporation of women in decision-making posts and with greater responsibility. The Plan guarantees the effective application of the equal pay principle and for a job with an equal value and, in particular, the non-existence of pay differences due to gender.

The Plan also includes the possibility of adapting the working day through flexible working hours, temporary change of working hours, reduced working hours and leaves of absence to care for family members. It also contains specific measures for the protection of pregnancy and motherhood, and special measures to protect victims of gender-based violence. As an aid in the care of children for both fathers and mothers, the Plan provides agreements with nurseries and raises awareness on equality through information and communication.

Thus, in Spain all measures contained in the Equity Plan are undergoing constant development. The assessment and monitoring of these measures is carried out jointly by the Company's management and Social Representation, through the joint Equal Opportunities Commission provided for in the collective agreement.





7.1.3. Promotion of other dimensions of diversity (age, nationality and disability)

Age

In order to manage generational diversity, ensuring integration, motivation and transfer of knowledge, ENDESA has launched the following initiatives:

1. Tutoring programme for new hires.
2. Knowledge Transfer Initiatives.

The tutoring programmes have the purpose of supporting employees in their initial transition periods, especially after being hired by the Company.

Knowledge Transfer Initiatives include *mentoring* programmes as well as internal training actions in which the trainers are expert senior or junior personnel.

ENDESA is part of the Generation and Talent Observatory promoted by the 50Plus Association whose principal objective is to promote the management of generational diversity among the organizations and to extract indicators that support conclusions and projections in terms of profitability and competitiveness and thus be able to demonstrate the cause and effect relationships that the policies have in regard to age and talent.

Throughout 2018, ENDESA has participated with business managers belonging to different generations in the various intergenerational Leadership Forums of the Observatory that were held in Madrid and Barcelona. Likewise, ENDESA collaborated in the first intergenerational Health and Well-Being Forum, in which employees participated, especially from the

Occupational Risk Prevention and People and Organisation areas. The objective of this new forum is to determine what the self-perception is of each generation of workers and to identify programmes for its promotion.

Nationality

To manage the differences between people from different nationalities and to promote their integration, there is a tutoring programme for expatriates by which a tutor from the destination country is assigned to them that helps and supports them during their expatriation period.

Disability

In order to offer a better service and counselling to employees, in 2018, it held training directed toward employees from People and Organisation with the objective of broadening knowledge about disability and awareness about the importance of their labour inclusion.

To that end, in collaboration with Foundations that specialize in labour inclusion of the disabled, ENDESA has developed projects to provide support for both employees as well as family members.

In 2018, the Family Plan, developed by the Adecco Foundation, has continued. Through this plan, 74 family

members of employees with a disability have received various types of aid in the form of personalised advice and therapy. For the first time this year, the Adecco Foundation has offered beneficiaries of the ENDESA Family Plan the opportunity to continue their personal and social development in a relaxed environment, through a summer camp. The camp lasts for one week and 16 children of employees with disabilities participated.

Along this line, with the objective of supporting employees in this sphere, in collaboration with the Randstad Foundation, a specialised confidential consulting service was opened to provide information and counselling to employees who are interested in better understanding its implications.

405-1

The company has provided support service to 76 disabled employees who we have on our staff this year.

Disabled persons hired

2016	78
2017	80
2018	76

Diversity and Inclusion Days

During the month of November, ENDESA held the *Diversity and Inclusion Days* with the objective of reinforcing its commitment to equal opportunities within the Company. For this reason, a total of 10 activities were held, distributed among the Madrid, Barcelona, Seville, and Zaragoza branches, with a

total participation of over 300 people. The activities were framed within the dimensions of the Diversity and Inclusion

Policy with the objective of placing value on the actions carried out throughout the year in these spheres

as well as giving visibility to diversity and awareness regarding the need for their inclusion.



7.2. Conciliation of professional, personal and family life

In 2018, 2,742 employees took advantage of a course of action aimed at conciliation between professional, personal and family life at ENDESA.

401-3

Employees benefiting from some course of action aimed at conciliation of professional, personal and family life in 2018

Men	1,492
Women	1,250

ENDESA has continued to promote different courses of action to reinforce a flexible working environment and seeks to enable its employees to strike a balance between their personal, family and professional lives.

The measures that the Company is taking to facilitate conciliation of working and personal life are composed of five large groups: quality on the job (open-ended contract, pension plans, health and well-being, support to expatriates, etc.), temporary and spatial flexibility (shift reductions, leave of absence, paid leave, etc.), family support (leave of absence, leave and hourly flexibility to care for family members, assistance for adult dependants, etc.), professional development (professional / technical skills training in languages, volunteer programmes, coaching, etc.) and equal

opportunities (professional assistance for gender-based violence, medical advice, etc.).

In 2018 ENDESA continued offering measures to their people that enable adaptation of the workday to their needs through hourly flexibility, temporary change of working hours, reduced shifts, leave to care for family members, leave of absence and compensation leave, uncompensated leave of absence and tele-commuting. Among these measures that ENDESA has continued promoting in 2018, such as the above, is the 'Work Outside of the Office' project. This innovative work mode based on trust allows the employee greater flexibility and autonomy in selecting spaces, times and forms of work.

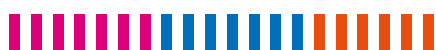
On the other hand, the 'No-School Days' and camp programmes continue offering a recreational alternative to the children of employees with the purpose of providing them with solutions during vacation days or periods in which the employees have to work and need to conciliate their professional, personal and family lives.

At the Barcelona, Madrid and Seville branches, it has continued offering the service of nursing rooms for women who have been mothers. Thus, women who work at these branches have been able to enjoy these facilities, which are an intimate and private

space where they can express mother's milk after returning from maternity leave.

As a company that is firmly committed to the health of its employees, ENDESA has promoted the Entrénate [Get Fit] Programme since 2011. This programme promotes sports as a way to avoid illnesses, above all, of a cardiovascular nature. At the end of 2018, over 4,250 employees embraced this programme. Over half of the workforce embraced this plan through which the employee receives a subsidy from the company up to a maximum of 25 euros per month.

ENDESA makes a specific Offers Channel available to all of its personnel. Through the corporate intranet, a large variety of products and services are included at competitive prices, on this channel. These range from entertainment offers (cinema, theatre and events), restaurants, car rental, fuel, home furnishings, technological products, supermarket shopping as well as other things linked to personal well-being. Likewise, there is a section about training that covers a series of learning programmes in various disciplines, such as languages. To that effect, there are courses both in Spain as well as abroad directed toward adults or for children of employees. Finally, it should be emphasized that this Offers Channel is also open





to solidarity, since there is a section by which it is possible to make donations to different social entities dedicated to the improvement of living conditions for the needy.

In 2018, ENDESA set in motion the "To Do Room" for its employees at the Madrid branch that, with an uninterrupted schedule and by means of *online* payment, this space brings together the services available to its people in order to facilitate their use. Specifically: clothing alterations and shoe repair, dry cleaning, laundry, financial advising, auto repair, *tablets* and computers. Further, there is an app that allows people to share a private vehicle in their commutes to and from the office, *e-carsharing* service, with an electric vehicles fleet for professional use, car cleaning and repair, yoga, pilates and fitness classes, a nutritionist and travel agency.

401-3

Levels of employees returning to work and retention after maternity or paternity leave, by gender

Employees taking paternity leave	235
Employees taking maternity leave	102
Employees returning to work following paternity leave	215
Employees returning to work following maternity leave	77
Employees returning to work following paternity leave still working 12 months after their return	175
Employees returning to work following maternity leave still working 12 months after their return	76



7.3. Commitment to people with different capabilities

For the purpose of collaborating in the integration of people with disabilities, in 2018, collaboration with the Adecco, Randstad, Prevent, Universia and Integra Foundations continued. In collaboration with these entities, various initiatives were rolled out, including:

- > Volunteer training actions targeting people at risk of social exclusion among which are disabled people, victims of gender-based violence and long-term unemployed.
- > In collaboration with the Prevent Foundation, the scholarship programme for University Training and High Degree Cycles aimed at disabled students, with the objective of promoting equal opportunities in higher education and contributing to training qualified professionals for their introduction into the workforce.
- > Together with the Universia Foundation, it was part of the Decision-making

Committee that awards scholarships to students with disabilities. These scholarships are financed in part thanks to the donation made by ENDESA.

- > Collaboration in the Adecco Foundations' communication campaign in support of the 3 December 'International Day of Disabled Persons'.
- > The *People Business Partner* project, from ENDESA's People and Organisation unit, gives support in order to provide approachability, to advise and assist employees on these matters. In 2018, training was held with the objective of broadening knowledge and awareness about the importance of their inclusion in the workforce.

As alternative measures, ENDESA has committed to indirect hiring initiatives through the purchase of goods and services from special employment centre services.



7.4. Corporate volunteering

ENDESA supports corporate volunteering among its employees, committed to the development of the communities in which it operates. This acts as a catalyst for the other initiatives which increase proximity and the involvement of the company with its stakeholders and provides development and commitment to the participants. Further, it contributes to the development of its personnel in activities that combine the interests of the Company and of its stakeholders such as to streamline access to energy

for groups in a vulnerable situation, to provide employability, improve the environment, etc.

As a result of this firm commitment, ENDESA has supported Voluntare, the international network for the promotion of corporate volunteering, since its beginning in 2011, a result of the alliance between companies, academic entities and the third sector, to promote the expansion and professional development of corporate volunteering. Currently, this network is com-

posed of 40 companies and 39 social organisations.



Within this framework, Voluntare promotes finding, generation and exchange of knowledge through revitalisation of workgroups, identification and dissemination of good practices, organisation and participation in benchmark events as well as seminars. Along these lines, during 2018, ENDESA participated in the 'Corporate volunteering in the Age of Technology' workgroup at the Employability Desk of the 2nd International Corporate Volunteering Convention held in July in Madrid and at the round table about 'Volunteering Promoted by the Company' of the 1st Week of Social Responsibility in Madrid in November.

In 2018, 18 volunteering projects have been performed with the participation of 463 volunteers during work hours and 225 outside of work hours. This makes a total of 688 volunteers, of which, 188 collaborated in both types. In all, 4,041 hours were spent by volunteers collaborating during work hours and 3,000 hours by volunteers who collaborate in their free time. As a result of these activities, in 2018, more than 8,400 people have benefited.

This year, ENDESA continued the following initiatives in Spain:

> **Energy volunteering:** A social project in the energy field, driven by ENDESA and the ENDESA Foundation through which employees have the possibility of carrying out solidarity action as volunteers, helping households that are in a situation of energy poverty. In this type of volunteering, in addition to the active personnel, company personnel

who took early retirement likewise participated. In the 2018 edition, the Spanish Red Cross (CRE) collaborated as the principal NGO and coordinator for all of the territories where the ECODES programme was carried out, in the diagnostic tool and results measurement. The CRE selected the families and a group of professional installers made the improvements to the homes. In the 2018 edition, the scope has been broadened to 14 cities: Zaragoza, Huesca, Barcelona, Tarragona, Lérida, Gerona, Seville, Málaga, Badajoz, Alcadia, As Pontes, Puerto del Rosario (Fuerteventura), Candelaria (Tenerife) and Lanzarote, with a total of 309 volunteers (188 from ENDESA and 121 from the CRE), and over 2,400 families were benefited, which translates into almost 5,000 beneficiaries. Also in this edition, several levels of intervention have been introduced so that volunteers may indicate the type that best suits their availability: Volunteer Trainer, Tele-Volunteer and Volunteer in Person. Thus, training workshops have been offered to families, to whom a micro-efficiency kit has been given, telephone advising has been given and homes have been visited and some improvement made to installations. Additionally, work has been provided to 14 installers.

> **Energy Programme for the future:** The aim of this programme is improving the employability of youths at risk of social exclusion in the energy sector through training volunteering, aligned with labour needs close to the business world. Depending on the professional profile, volunteers hold workshops to provide a professional perspective that supports and motivates training of students. Among the themes re-

quested are basic concepts of the electrical system, safety measures and protective equipment, maintenance of facilities and types of electrical contracts. This volunteering activity seeks to promote the development of the employees' skills, such as innovation, team work, leadership and communication. The 2018 edition was held in As Pontes (A Coruña) with the participation of 4 volunteer employees which benefited 120 students.

> **Coach project:** In collaboration with the Exit Foundation, this corporate volunteering programme aims to improve the employability of youths at risk of social exclusion, dealing with their self-esteem, motivation and professional guidance, using coaching or mentoring techniques. For young people, it is a great experience to discover the business world, and this acts as a stimulus for them to continue studying. After going through the program, 82% of the young people approved of the course and 75% continue to be trained. In 2018, ENDESA participated in the editions in Madrid, Palma de Mallorca, Seville, Zaragoza and for the first time, Valencia, benefiting 21 young people with the support of 21 volunteers.



> **Project Job:** In collaboration with the Exit Foundation, this corporate volunteering programme has the objective of training young people for their entry into the job market, providing them with the necessary tools and





supporting them to achieve their professional goals. After going through the programme, 50% of the young people found work and 38% returned to study and of these, 15% are studying and working at the same time. In 2018, ENDESA participated in the Barcelona edition with a volunteer who had assisted one of the young participants to learn to position his candidacy in the selection process.

- > **Sabes + si compartes lo que sabes (You know more if you share what you know) project:** In collaboration with the Randstad Foundation, this corporate volunteering programme offers employees the possibility of improving social and occupational integration of people at risk of exclusion (people with different capabilities, immigrants facing difficulties with integrating into the job market, women and men over the age of 45 years, women victims of gender-based violence, single-parent families, etc.) in the active job search process. The skills, knowledge and experience of ENDESA's employees are enhanced through a training programme in which the volunteer is the trainer. In the 2018 edition, 13 volunteers participated in Barcelona, Las Palmas de Gran Canaria, Madrid and Seville, holding 35 workshops and training 206 people.
- > **Speaking without frontiers:** In collaboration with the Universia Foundation, this corporate volunteering programme seeks to improve conversational fluency in English, Italian or Portuguese, to prepare level certification tests and expand corporate vocabulary for disabled university students. ENDESA's volunteer employees have telephone/*online* conversations every 15 days with these students. In the 2018 edition, 2 volunteers Las Palmas de Gran Canaria

and Madrid participated in tandem in training 2 other students.

- > **Energy efficiency workshop:** For the first time in 2018, in collaboration with the Prevent Foundation, this corporate volunteering initiative was put into motion, aimed at people in vulnerable situations and/or with special education needs so that they may learn to understand an electric bill and use it to advantage to improve consumption habits in their home and know the possibilities of the rates subsidy. In this first pilot edition in Madrid, one volunteer has participated who gave a workshop attended by nine people in a vulnerable situation.
- > **Job school:** For the first time in 2018, in collaboration with the Adecco Foundation, a corporate volunteering initiative was put into motion aimed at women with special challenges seeking employment (victims of gender-based violence, single mothers, women over 45 years of age, at risk of social exclusion, etc.). In Madrid, a workshop on the labour market situation, job search, CV and the selection process, was developed, given by two volunteers and attended by 20 women.
- > **Inclusive cookery workshop:** For the first time in 2018, in collaboration with the Adecco Foundation, this corporate volunteering initiative was put into motion, framed in its volunteering model by autonomy and independence based on actions designed to assist intellectually disabled people to acquire basic skills. Thus, the basic skills work to help them achieve the autonomy and independence that they need to hold an unprotected job position. To that end, within the employment scope, cookery practice is a tool toward developing personal autonomy with which to improve the professional profile and therefore, oc-

cupational success. In this first pilot edition in Barcelona and Madrid, 27 volunteers and 27 people with intellectual disability participated.

- > **Promoting talent:** In collaboration with the Integra Foundation, this corporate volunteering programme is aimed at improving the employability of women victims of gender-based violence, providing them with the tools necessary for their introduction into professional life through workshops from the Strengthening School (preparation for the job interview, CV, pre-employment skills, financial and legal skills) that are given by ENDESA volunteers in Madrid. This has succeeded in strengthening women, boosting their self-esteem and security when coping with job interviews. In the 2018 edition, 17 volunteers participated in the ENDESA School aimed at 13 women victims of gender-based violence and 5 other volunteers conducted workshops for another 37 people at risk of exclusion.
- > **Orienta-T:** In collaboration with the Junior Achievement Foundation and within the Orienta-T programme, which has the objective of offering a useful and dynamic professional guidance tool for teachers to promote thinking about the future in their students, it has, for the first time in 2018, included corporate volunteering activities at the educational centres. The volunteers energise the 'skill pills' sessions with junior high/high school students in which they further on some of the skills highlighted in previously viewed inspirational presentations. In the 2018 edition, 12 volunteers participated from A Coruña, Barcelona and Madrid and conducted 10 workshops attended by 283 students.
- > **Companies Solidarity Day:** Organised by International NGO Coopera-

tion, the Companies Solidarity Day is a conference that promotes corporate volunteering by putting companies and their employees in contact with non-profit entities dedicated to helping the needy. In 2018, ENDESA participated in the Madrid, Seville and Zaragoza editions with 23 volunteers who assisted 298 people.

> **Changing lives:** In collaboration with the Integra Foundation and the ENDESA Foundation, this corporate volunteering programme has the objective of improving the employability of people at risk of exclusion, providing the tools necessary for their incorporation into professional life through Strengthening School workshops

conducted by ENDESA volunteers in Barcelona and Seville. In the 2018 editions, 41 volunteers participated by conducting workshops for 253 people at risk of exclusion.

> **Mentoring programme for young entrepreneurs (LED Skills):** In collaboration with Youth Business Spain and the ENDESA Foundation, this corporate volunteering programme has the objective of promoting enterprise and self-employment among young people from 18 to 35 years of age with few resources who have a business idea, but do not have the resources necessary to put it into operation. The role of the volunteer is to help the entrepreneur to identify the

objectives and strategies necessary to consolidate their business, plan activities and measure the results. It entails monitoring the young person throughout the entire process. In the 2018 edition, 36 volunteers participated in the cities of As Pontes, Barcelona, Córdoba, Gerona, Madrid, Málaga, Seville and Zaragoza, who carried out 44 mentoring processes.

Finally, ENDESA continued providing support to various solidarity races such as 'Atades for a New School' and Companies Race in Zaragoza and 'There Is a Way Out' in Madrid as well as food and toy collection campaigns held in the Company's different territories.





Sustainable supply chain



2,746

millions of € in purchases of materials and services

5,210

suppliers that provided services to ENDESA

919

suppliers rated in the last four years

100

% of the contractors in Spain and Portugal who have received Occupational Health and Safety Training

Compliance with ESP 2018-2020				
Basic Pillar	Course of Action	2018 Goal	Result 2018	Key actions
 Supply chain	Purchases made from rated suppliers (% purchase volume)	70%	80%	<ul style="list-style-type: none"> > Introduction of a new human rights assessment criterion in supplier ratings. > Second year incorporating sustainability rating requirements which include an evaluation of human rights, environmental, and occupational health and safety elements.
	% of the ratings performed on suppliers where human rights aspects are verified	80%	80%	
	% of the ratings performed on suppliers where environmental aspects are verified	80%	80%	
	% of the ratings performed on suppliers where occupational health and safety aspects are verified	80%	80%	
	Assessment of suppliers' performance (% of purchase volume)	60%	60%	
	Contractors assessed regarding social, ethical and environmental aspects	15%	17%	





1. Responsible management of the supply chain

102-9

1.1. 2018 results

In 2018, ENDESA worked with 5,210 suppliers. That number included suppliers subject to delegated procurement. The value of the purchases from suppliers has considerably increased, 68% compared to 2017, reaching 2.746 billion euros.

EU17

Likewise, the number of days worked by contractors or subcontractors involved in construction, operation and maintenance activities in 2018 was 4,401,034, which represents a 16.26% increase compared to 2017, which is due to the fact that this year, information was avail-

able on new business lines which until now had not reported their hours.

403-9 102-8

The total number of hours worked by contractors in 2018 was 35,208,274.



1.2. Commitment to local suppliers

102-9 204-1

ENDESA's activity in the countries and territories where it operates is aimed at creating value for local suppliers. In line with our commitment to them, 84.07% of the budget use (2,230 million euros) has been allocated to these suppliers,

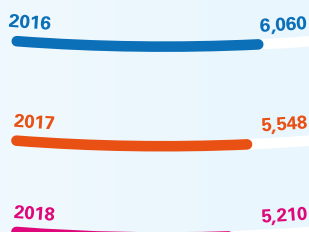
understood as those incorporated in Spain and Portugal. In 2018, the contracts for amounts over one million euros that were awarded to local suppliers reached 1,974 million.

Specific contractual clauses are considered in the contracts related to the

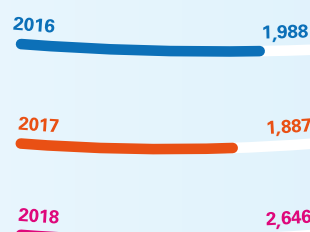
maintenance services for our Production Centres, whereby the Contractor promises, in addition to the transfer personnel that is strictly necessary and in accordance with the required specializations, to hire technicians and workers from the local area, in conformity with

NUMBER OF ENDESA SUPPLIERS IN SPAIN AND PORTUGAL

Number of suppliers



Value of purchases from suppliers (millions of)

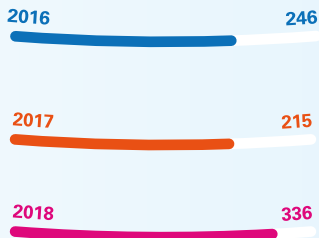


Value of purchases from the main ENDESA suppliers in 2018

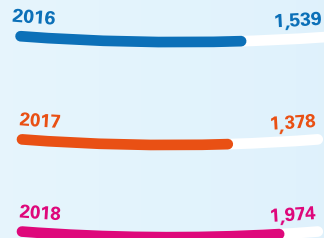


PURCHASES FROM LOCAL SUPPLIERS* WITH CONTRACTS OVER 1 MILLION EUROS

Number of suppliers



Value of purchases from local suppliers with contracts over 1 million euros (millions of euros)



% of the total purchases from local suppliers with contracts over 1 million euros



* Local suppliers are suppliers of materials, products and services located in the same geographic market where the organisation acts, i.e., no international payment is made to the supplier.

NUMBERS OF FOREIGN SUPPLIERS IN EACH COUNTRY

Number of suppliers



Value of the purchases from foreign based suppliers with contracts over one million euros (millions of euros)



% of purchases from foreign producers with contracts over one million euros of the total purchases



the current laws and provisions of the competent authorities.

With the purpose of generating value to local suppliers in those countries where ENDESA operates, the percentage of purchases with contracts over one million euros made to foreign suppliers was 15% in 2018.

1.3. The integrated purchasing process at ENDESA

[103-1 Management approach- procurement practices](#)

[103-2 Management approach - procurement practices](#)

[103-3 Management approach - procurement practices](#) [102-9](#)

In order to promote responsible management in the supply chain, ENDESA has an integrated procurement process, which requires suppliers to be rated ac-

ording to sustainability criteria (environmental, social, ethical, integrity, human rights) in addition to technical and economic criteria, prior to the tender pro-





The integrated purchasing process at ENDESA



cess and contract formalisation. Finally, once the service has been provided, its

compliance and performance level shall be assessed in said provision.



1.4. Sustainability requirements in contracts

- 103-1 Management approach - child labour
- 103-2 Management approach - child labour
- 103-3 Management approach - child labour
- 408-1 103-1 Management approach - forced or compulsory labour
- 103-2 Management approach - forced or compulsory labour
- 103-3 Management approach - forced or compulsory labour
- 103-1 Management approach - supplier social assessment
- 103-2 Management approach - supplier social assessment
- 103-3 Management approach - supplier social assessment
- 414-1 103-1 Management approach - supplier environmental assessment
- 103-2 Management approach - supplier environmental assessment
- 103-3 Management approach - supplier environmental assessment
- 308-1
- 408-1
- 409-1
- 412-3

ENDESA foresees specific contractual clauses on the protection of human rights in all contracts, according to the Sixth Edition of the Enel Group Global

General Conditions of Contract (GCC), which apply to 100% of contracts. With said contractual clauses, the company requires its contractors/suppliers and

subcontractors to respect and protect internationally recognized human rights, as well as respect for ethical and social obligations in terms of: women and

child labour protection, equal treatment, prohibition against discrimination, freedom to join a union, association and representation, forced labour, health, safety and environmental protection, health conditions, as well as regulatory, compensation, contribution, insurance and tax conditions. Furthermore, suppliers must promise to adopt and implement the ten principles of the Global Compact and ensure that they are satisfied in the performance of all of their activities, whether they are carried out by their employees or their subcontractors. Furthermore, suppliers must promise

to comply with the principles contained in ENDESA's Code of Ethics, or in any case, abide by principles equivalent to those of ENDESA when managing their business.

Furthermore, they must apply the conventions of the International Labour Organization (ILO) or the current legislation in the country where the activities are to be performed, if they are more restrictive.

In this context, ENDESA reserves the right to conduct any control and monitoring activity intended to verify compliance with the previous obligations

by both the contractor and by the subcontractors or people designated by them to perform the Contract, and to immediately terminate the contract in case of proven violations of the aforementioned obligations (particularly with regard to violations of the principles of the Global Compact and any form of violation, including indirectly, of human rights).



2. Supplier rating

414-1 409-1 412-1 412-3

ENDESA has established a supplier rating system that allows for careful selection and evaluation of companies that wish to participate in the acquisition procedures through the evaluation of technical, economic/financial, legal, environmental, safety, human rights and ethics requirements, as well as honourability requirements, in order to ensure an adequate level of quality and reliability when contracts are awarded in the energy sector.

The rating process functions through the use of groups of goods (GG): each supplier is rated in relation to one or more specific GGs; the rating is only assigned to the supplier when it complies with all of the requirements defined for each GG. These requirements vary according to the specific impacts and implications

associated with each group: for example, for a group of environmental products, in general, ISO 14001 certification is required, while for a GG related to 'building works', an OHSAS 18001 management system is needed. In 2018, ENDESA, as part of the Enel Group, benefited from a global in-depth analysis of the tree of product groups (GG), involving Global Procurement, business units (H&S, Environmental Manager, Sustainability) through a map of activities included in each GG, and assigning a level of risk for each subject area (safety, environment, human rights, cost, non-replaceable supplier, etc.). After the previously mentioned risk assessment, each GG will be grouped into different families according to the assessed risk reported.

Within the Rated Groups, some were identified as 'High Risk' based on the pre-established criteria.

The Rating System, which is governed by an internal procedure, was created according to both local laws and regulations, and those of the EU.

The rating process requires submitting a series of documents (self-certification regarding the possession of general requirements, financial statements, certifications, etc.) and, among other things, adherence to the principles noted in the Code of Ethics, the Zero Tolerance for Corruption Plan, the Human Rights Policy, and the Global Compact, specifically in reference to the absence of conflicts of interest (including potential conflicts). The contractors already included in ENDESA's Register of Rated Suppliers






are constantly monitored, also using external databases, in reference to events related to the company itself, and its main representatives.

The rating system represents:

- > A guarantee for ENDESA, since it is an updated list of topics with proven reliability (legal, economic-financial, technical-organisational, ethics, and safety) which provide a basis for it.
- > The possibility, in accordance with the current legislation on the subject matter, that the suppliers will be consulted in procurement tenders issued by companies in the Group.

At the end of 2018, the Supplier Rating System was implemented in 194 purchase families, 134 Global families (international rating) and 60 local families in ENDESA. 

Sustainability

ENDESA's goal is to select the best contractors in terms of health and safety, the environment, and human rights. To that end, in September 2016, the group's Global Purchasing department adopted a 'Global Assessment Model for Sustainability Requirements', identifying the sustainability risk factors in the supply chain by mapping the risk level of the various Groups of Goods. This defined a precise operating model which will be applied globally to assess whether or not contractors of works, services and supplies who wish to qualify for registration or renew their qualification meet the sustainability requirements. This Operating Note provides for various categories of control, including H&S, Environment, and Human Rights. All of these topics refer to quality standards such as, for example, having OHSAS 18001 or ISO 14001 certification.

Therefore, as part of the rating process, in order to access the ENDESA Supplier Register, the supplier must undergo a specific, mandatory evaluation on environmental, health and safety, and human rights requirements. These evaluations are in addition to the usual economic, financial, legal, and technical checks. In practice, the Supplier is asked to fill out various questionnaires and send the appropriate supporting documentation to evaluate, for example, the supplier management system and accident rates, effective fulfilment of its policies for issues related to respect for human rights (for example, inclusion and diversity, worker protection and privacy, verification of its supply chain, forced labour/child labour), as well as respect for environmental sustainability and occupational health and safety issues. In the event of activities that are deemed to be high-risk for safety or the environment, an on-site audit is planned to check these aspects.

Only with an overall positive judgement will the supplier be registered in the Supplier Register (or stay there, if it has been previously rated) and be able to be considered to participate in the Group's purchasing procedures.

The evaluation is mandatory for both new suppliers that qualify and for those who have already been rated.

If, on the other hand, there is a negative judgement, the request for qualification will be denied and the Contractor may not be consulted with the Group's offers.

The evaluation of the individual sustainability requirements previously described - human rights, health and safety, and the environment - contributes to a general evaluation of whether or not to accept that company into ENDESA's rating system.

In the event that non-acceptance is recognised to be the result, for example, of a negative environmental judgement, the supplier can present a new request for qualification at a subsequent date, entering the updated data and evidence for the Improvement Plan adopted.

Also in the collective incentives system, the objectives linked to sustainability issues are generally foreseen both for managers and for employees.

Sustainability aspects, which have always been important to ENDESA, have allowed it to select the best partners. Without a doubt, this has a positive impact on contractual performance (efficiency of contract times and related performances), and positive economic effects. Furthermore, ENDESA's 'sustainable' attitude gives customers, users, and investors more faith, making them increasingly confident in considering ENDESA as a Supplier and/or in investing in the Group.

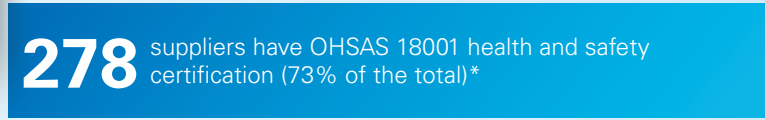
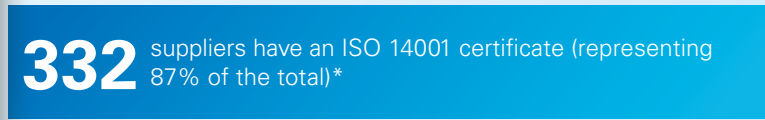
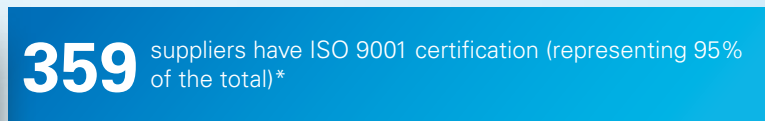
In 2017, a Library began to be established, cataloguing some 'K' techniques of sustainability that can be used during the bidding phase by the Purchasing Units.

Periodically, and in particular during the last two years, meetings have been organized with the Contractors about sustainability issues.

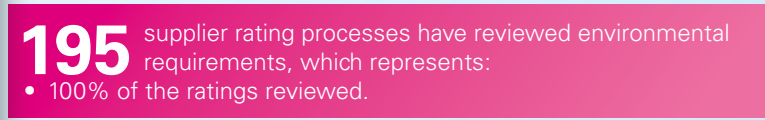
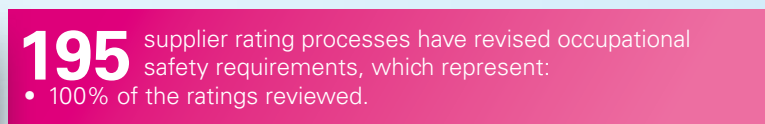
Furthermore, articles are periodically published on the Global Purchasing website, emphasizing ENDESA's commitment to sustainability issues.

As part of the group's sustainability plan, ENDESA includes specific objectives in the supply chain on an annual basis. For example: 'Integration, strengthening, and standardisation of environmental, safety, and human rights issues in supplier rating and vendor rating processes', 'Promotion of disclosure activities with suppliers', 'Project development in line with the principles of the Circular Econ-

GROWTH OF THE SUPPLIER RATING SYSTEM



* Suppliers characterised as ENDESAService Points are excluded from monitoring.



No supplier has been identified to have a negative social impact.

omy', in order to approach 'Zero waste' and subsequently extend this to business activities.

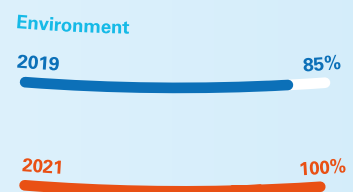
In order to promote ongoing improvement in the responsible management of the supply chain, ENDESA has revised and improved the sustainability require-

ments established in the supplier rating process. Hence, we have updated the occupational safety, environmental and integrity requirements, in addition to the introduction of a new Human Rights requirement.

In this new context, ENDESA has set the following goals in its ENDESA 2018-2020 Sustainability Plan relating to the verification of sustainability criteria in the supplier rating system in accordance with the new system:

OBJECTIVES OF THE SUPPLIER RATING SYSTEM

% of the ratings performed on suppliers where the following aspects are verified:



Note: Objectives established according to the new ENEL Group system to verify sustainability aspects in the supplier rating process.





3. Supplier selection

414-1 409-1 412-1

In addition to the information noted above regarding the supplier rating process, ENDESA, aware of how important it is to extend its commitment to sustainability to the supply chain, began to apply sustainability criteria in the bidding for products and services throughout 2018. A catalogue of social, environ-

mental, and ethics indicators has been developed. For each bid, suppliers are selected that are best suited to the nature of the product or service tendered. The performance of the potential suppliers in relation to these indicators is taken into account and assessed, along with the economic and technical offer.

This methodology has already been used in 19 tender processes throughout 2018, including the two with the highest volume, and will continue to be applied systematically in all new bids as of 2019.



4. Integrity and fight against corruption

103-1 Supplier social assessment 103-2 Supplier social assessment 103-3 Supplier social assessment 414-2

ENDESA adheres to the Global Compact and, in accordance with the tenth principle, strives to continue its commitment to combat corruption in all its forms. Therefore, it prohibits the use of any intention, offer or request for unlawful payment, whether monetary or of any other kind, in order to obtain an advantage in relations with interested parties, and this prohibition extends to all of its employees. The Contractor states it recognises the commitments assumed by ENDESA and promises not to make use of any illegal offer or request for payments while performing the contract in the interest of ENDESA and/or to the benefit of its employees.

If any of these obligations are not fulfilled, the company reserves the right to

rescind the contract and request compensation from the contractor.

Provisions have also been made for contractual commitments for contractors/suppliers and subcontractors of ENDESA to implement actions to combat any form of corruption and extortion, and to implement preventive actions to safeguard the environment, encouraging initiatives that promote greater environmental responsibility, and the development and dissemination of environmentally-friendly technologies.

In 2006, ENDESA's Board of Directors approved a decision which described the anti-corruption measures: the Zero Tolerance for Corruption Plan developed with the collaboration and oversight of Transparency International. This Plan is in addition to the Code of Ethics and

the Organisational Model, and has been transformed into an in-depth analysis on the issue of 'corruption' which is aimed at investigating and promoting actions in the social sector, as well as at justifying ENDESA's adherence to the Global Compact and the PACI (Pact Against Corruption Initiative).

In particular, in compliance with the tenth principle of the United Nations Global Compact, whereby 'companies are committed to combating corruption in all its forms', ENDESA intends to continue its commitment to combat corruption in all of its forms, whether direct or indirect, applying the principles defined in its Anti-corruption Management System, based on the following pillars: the Zero Tolerance for Corruption Plan, the Code of Ethics, the criminal risk preven-

tion models implemented in accordance with the applicable legislation on liability, the Global Compliance Programme, as well as the reputational risks associated with companies' criminal liability. ENDESA strengthened the controls related to compliance with supplier integrity requirements, in groups of items and contracts that are most sensitive to this aspect.

In this regard, on 26/10/2016, organisational procedure number 209, 'verifica-

tion of honourability requirements', was approved.

The company's operational guidelines are designed to strengthen the existing control system in the supply chain through a more effective action against corruption, and in particular regarding the following topics:

- > Establishing specific criteria to verify the legal requirement and honourability documents, homogeneous and applicable to the procurement pro-

cess (from rating phase to award of each contract).

- > Identification of the verification operating methods, aimed at strengthening the available prevention tools designed to rationally, organically and decisively influence the opportunities for corruption and the factors that encourage dissemination.
- > Promotion of a widespread culture of respect for ethical standards.



5. Compliance with human rights

414-1 412-1 412-3

ENDESA considers each supplier to be potentially at risk from a human rights standpoint. For this reason, both during the qualification phase and the bidding phase, and in the contractual standards 'General contracting conditions of the Enel Group', the company is evaluated, selected, and monitored based on:

- > Voluntary adherence to the 10 Principles of the Global Compact, the implementation of Enel's Code of Ethics, the Organisational Model, the Zero Tolerance for Corruption Plan, and the Human Rights Policy.
- > whether or not there have been crimes against individual parties, such as reduction of or maintaining slavery or servitude, child prostitution, the use of children in pornography, possession of child pornography, tourism initiatives to develop child prostitution, human trafficking, and the purchase or sale of slaves.

In 2018, 248 significant contractors were recorded, which exceeded the amount of 1.5 million euros (212 local and 36 foreign).

All of the contracts include human rights clauses relating to the Global Compact and Ethics Legislation (clauses 26 and 27) with the aim of obtaining a formal commitment from Partners and Suppliers to comply with the legal obligations related to the protection against child labour, the health and safety of children and women, and the conditions of safety, equal opportunity, prohibition of discrimination, abuse, and harassment, union rights and freedom of association and representation, forced labour, environmental protection and safety, hygienic health conditions, as well as compliance with the current legislation concerning salaries, pensions, and contributions to social security, insurance, taxes, etc., in relation to all workers em-

ployed for any purpose to perform the Contract. Furthermore, in all contracts stipulated as from the second half of 2016, the Honourability Clause provided for in the Organisational Procedure 'Verification of Honourability Requirements', has been inserted, which is aimed at obtaining a formal commitment from the partners and suppliers to respect the obligations assumed by ENDESA and by the companies directly or indirectly controlled by it, in the Code of Ethics, the Zero Tolerance for Corruption Plan (ZTC Plan), the Human Rights Policy, and to adhere to equivalent principles in conducting business and managing relations with third parties.

ENDESA consistently monitors the current and potential risks related to the long-term activity of its supply chain. For example, in 2016 it began an internal investigation to verify respect for Human Rights throughout the supply





Procurement contracts of materials and services that include Human Rights clauses

	Year	Spain and Portugal
Number of significant* contracts that include human rights clauses	2016	284
	2017	288
	2018	248
Percentage of significant* contracts that include human rights clauses	2016	100%
	2017	100%
	2018	100%

*Contracts of over one million euros are considered significant.

chain for suppliers of products that contain/use COBALT: It conducted in-depth analyses and interviews with the main suppliers, and introduced specific contractual clauses to mitigate the risk of child exploitation/forced labour in certain areas considered to be at risk.

Using this criterion, and based on the contractual clauses, 100% of operations underwent a human rights impact evaluation or review.

On the other hand, during 2017, a new specific evaluation criterion was introduced for Human Rights matters under the supplier rating processes. A coverage target of 80% was set for qualifications done in 2018, with a goal of 85% for 2019.

In order to measure the company's degree of maturity in relation to ethical

principles involving respect for Human Rights and the prohibition of child or forced labour, ENDESA is examining the company's performance, organisational quality and management in accordance with the guidelines issued by supranational bodies such as the United Nations Global Compact and the Children's Rights and Business Principles.

Based on the information and documents provided by the company, the following areas are analysed:

1. Certifications.
2. Procedures in progress.
3. Disclosure.
4. Inclusion and diversity.
5. Protection and privacy.
6. Freedom of association.
7. Child labour/forced labour.
8. Suppliers.

9. Impact on communities.

Within the process of evaluation of the Human Rights Requirements, after analysis of the documents, there may be a need to carry out a possible in-depth Audit, which may amount to:

- > Supplementation of documents: request for clarification on the documentation already submitted and/or request for other possible documents, telephone interviews, company meetings at headquarters, etc.
- > Company audit: visit to the company's facilities

Since the entry into effect of the sustainability requirements in April 2017, a total of 1,078 active rating processes (local and global, with a scope of application for Spain) have been analysed, using a questionnaire provided for this purpose in the rating circuit. With these figures, it has been possible to verify 80% of the rated suppliers, attaining, as mentioned above, the 80% established as a target. From the evaluation of the specific Human Rights questionnaires during the rating process no significant negative impacts or complaints have been detected, nor have any measures been adopted.



6. Environmental management

103-1 Management approach - Supplier environmental assessment

103-2 Management approach - Supplier environmental assessment

103-3 Management approach - Supplier environmental assessment 308-1 308-2

Per the Group's contractual rules, under the 'General Conditions of Contract (GCC)', there are clauses that require compliance with environmental legislation. For example, Art. 12.3 establishes that 'Additionally, the Contractor must have in-depth knowledge of the current legislation on health, occupational safety and the environment as well as about the activity to be performed, and the relative documentation that will be presented to ENDESA in compliance with the corporate regulations and legislation'. Furthermore, Article 24 (Environmental protection) of the GCC mentioned above establishes that 'The Contractor promises to adopt the appropriate measures to ensure compliance with their environmental obligations by virtue of the applicable legislation'.

To ensure compliance with the environmental requirements and consistently monitor the degree of compliance with its obligations, ENDESA reserves the right to monitor its contractors and rescind the contract if there are violations. Thanks to the Monitoring procedures, ENDESA has established an ongoing dialogue with its suppliers which, in case of criticisms or deficiencies, allows shared actions for improvement to be determined with the goal of collaborating, rather than imposing fines. In almost all cases, the company's performance has improved. Furthermore, in some purchasing procedures, an acknowledgement coefficient may be assigned using a 'K' technical sustainability fac-

tor, which offsets environmental aspects: for example, carbon footprint, and limiting the use of SF₆ gas.

Also in the context of the qualification process, ENDESA has introduced, for access to the Supplier Register, a specific, mandatory environmental requirements evaluation which is in addition to the usual economic/financial, legal and technical assessments, as well as those regarding safety, health, and human rights. Furthermore, thanks to the Supplier Rating System and the verification activities in the field, the supplier is also consistently monitored with regard to their compliance with environmental requirements.

The process used to evaluate the resources and potential environmental risks of an ENDESA contractor company is described in the specific operating note. In particular, an ENDESA contractor must fill out a Questionnaire indicating the environmental certifications and environmental management systems provided, as well as other information that is useful for the evaluation.

ENDESA assesses whether the contractor companies fulfil the environmental requirements requested, examining the organisational and management quality of the companies in terms of Environmental Responsibility, on the basis of various information and the documents sent by the company.

Specifically, ENDESA will verify that the company:

- > Has implemented an organisational and management model that com-

plies with the environmental requirements of the country in which it operates.

- > Performs training activities on environmental management.
- > Has a structure for the environmental management and implementation (an environmental management team).
- > Has procedures integrated into the quality management system itself relating to the training of personnel and the execution of standard environmental controls.
- > Keeps the log of environmental accidents, accident analysis procedures, corrective actions and the statistics for them updated.
- > Provides and updates the corporate Environmental Aspects Assessment document relating to its own activities in accordance with the environmental requirements of the country where it operates.

Environmental assessment criteria differ according to the product category. A risk level from 1 to 3 has been assigned to each group of goods. Groups with high environmental risks must have ISO 14001 or equivalent certification. Furthermore, for these categories of products, an audit in the field and at the Contractor's offices is scheduled.

After the document is analysed, an in-depth audit at the company's headquarters (office visit) and/or in the field may be deemed necessary. Environmental audits are conducted by specialised personnel from ENDESA or by third parties.





During both visits, the company will be evaluated on the main areas of attention in Environmental matters:

- > Organisational structure and management system.
- > Risk assessment.
- > Training management.
- > Monitoring of work equipment and machinery.
- > Emergency Plans.

ENDESA only provides a registered Supplier Rating in the Register of Rated

Companies to contractors who have also passed the evaluation related to Environmental Requirements.

During 2018, environmental evaluations were completed for a total of 1,078 supplier rating cases (local and global suppliers with a scope of application in Spain).

This signifies a level of compliance, in terms of rated suppliers, of 80% of the total number of supplier environmental

rating cases verified, reaching the 80% target set.

No environmental impacts have been detected in contractors' performance that have led to rating suspensions or the proposal of an improvements plan to be implemented to recover the status of rated supplier, although in two cases, environmental audits were conducted as a result of the questionnaire on that subject.



7. Occupational health and safety

414-1 414-2

ENDESA's goal is to minimize accidents at work, respecting the Environment and Human Rights. It has various tools to do so.

These include the Improvement Plans: whenever ENDESA observes any critical issue in a contractor's conduct, it defines a shared Improvement Plan, aimed at improving its management systems and performance, remedying deficiencies, to always remain in line with ENDESA's requirements.

Work-related accidents in recent years have considerably decreased thanks to the numerous initiatives undertaken by ENDESA, which are aimed at raising contractors' awareness about these issues. Numerous meetings have been held with contractors to exchange ideas about these issues and clearly communicate the company's focus to them.

Furthermore, the Group has adopted an Operating Instruction about repeated Violations of health and safety and purchasing processes, which specifically regulate the form in which accidents or incidents (near misses) are evaluated, and the limits on awarding new Contracts subsequent to such events.

In particular, by virtue of this operating instruction, ENDESA monitors the performance related to the safety of its contractors or employed personnel (for example, subcontractors) during the performance of the contract. This document regulates the minimum suspension period during which a contractor that has committed health and safety violations (both rated and not rated, or in the recording phase), cannot participate in bidding and, generally, in the award procedures.

More generally, whenever a critical event is detected (in Health and Safety for example), a serious violation, or if there is a fatal accident, ENDESA will evaluate the corrective actions to be taken with the contractor involved. Furthermore, the provisions of ENDESA's General Conditions of Contract and/or the existing contract, after a careful analysis of the specific case and the responsibilities of the Supplier (Qualification Commission) may provide for:

- > Suspension of rating, in the case of a rated Supplier.
- > Issuance of a Critical Note for a non-rated Supplier or one that is in the registration phase.

Additionally, within the supplier rating process, in the section evaluating the sustainability requirements in terms of safety, to be able to measure the overall

performance of the company in the last three years, the following four parameters are evaluated:

1. Frequency Rate (FR), average for the last three years: (Number of accidents/hours worked) per 1,000,000.
2. Average Severity Rate (SR) for the last three years (No. of days of absence due to accidents/hours worked) per 1,000.
3. Fatality Rate (FR) Number of fatal accidents attributed to the Supplier and its contractors (during the performance of a contract with the company) that occurred in the last three years.
4. CS-IVR. If available, the most recent value and development of the Safety Index Category of the Vendor Rating related to the Product Group rated.

The values obtained for each of the four indicators are compared to the specific thresholds predefined by ENDESA and, depending on the deviation of these values from the thresholds, the supplier receives a rating that allows it to continue or abandon the rating process. Each year, limit values are defined according to the country in which the company is applying for a rating, specific to the activity for which the rating is being sought.

Regarding assessment of the organisational and management quality in terms of Safety, ENDESA, on the basis of the data and documentation provided by the company, will verify that the company:

- > has implemented an organisational and management model that complies with the safety requirements of the country in which it operates;

- > has a workforce suitable for safely carrying out the activities for which it is ranked in accordance with the safety requirements of the country in which it operates;
- > performs safety training activities;
- > has a structure for the implementation and management of safety (a safety management team);
- > has procedures, integrated into the quality management system itself, relating to personnel training, Personal Protective Equipment management and the performance of standard controls;
- > continuously updates the accident log/consolidated record, accident analysis procedures/corrective measures, and accident statistics, as well as the document on assessment of risks relating to the activities themselves.

As part of the Safety Requirements assessment process, after analysis of the documents, a need may arise to carry out an eventual in-depth Audit that may be comprised of two parts: a visit to the company's premises (hereinafter referred to as a Headquarters Visit) and a visit to a work site (of ENDESA or of Third Parties, for Product Groups that require activities at the work site) where the company is carrying out activities at the time of the technical assessment (Work Site Visit).

During both visits, the company will be evaluated on the main areas of attention in occupational health and safety matters:

- > Analysis of accidents that have occurred.
- > Management System.
- > Risk assessment.
- > Operating procedures.
- > Organisational structure.
- > Training management.
- > Management of Personal Protective Equipment.
- > Monitoring of work equipment and machinery.
- > Monitoring and measurement in the field of Health and Safety and preventive planning.

Additionally, and as a supplement to the occupational health and safety sustainability requirements, during the second half of 2018, completion of the SHE 365 questionnaires on supplier safety were introduced as a mandatory requirement for rating at-risk activities, in which a more extensive analysis is done in relation to the company's standards regarding Safety and the Environment.

414-1

During 2018, occupational safety evaluations were completed for a total of 1,078 supplier rating files (local and global suppliers with scope of application in Spain).

This signifies a level of compliance, in terms of rated suppliers, of 80% of the total number of occupational safety rating cases verified, reaching the 80% target set.

It should be noted that, for safety reasons, there were no new rating suspensions during 2018.





8. Responsible management of the coal supply chain (BETTERCOAL)

ENDESA, as part of Enel, a founding member of Bettercoal, has played an active role from the start both in the process of defining the code, policies and governance systems for Bettercoal, as well as in the dissemination and acceptance of the initiative by main coal suppliers. In addition, it implemented the code at its own mining operations when also carrying out this activity and has passed Bettercoal's standards along to its own local coal suppliers, which, in principle, are excluded from Bettercoal's priority scope of operations which, although having a universal vocation, initially focuses on major coal exporters to Europe.

The Bettercoal Code has been developed with the support of an independent group, representing the different stakeholders and formed by experts from civil society, trade unions and the mining community. It has also undergone a global public consultation which also included meetings with stakeholder groups in South Africa, Colombia, Indonesia and Russia, all large coal producing countries.

The Code informs suppliers of the expectations of Bettercoal members, with regard to its practices in four key areas: management, ethical performance and transparency, human and labour rights and environmental performance, driving continuous improvement.

Throughout 2018, Bettercoal has continued to strengthen as the benchmark initiative in the field of responsible coal supply and ENDESA has supported the intense work carried out by its parent company, Enel, being present in various groups such as the Technical Advisory Committee, in charge of different tasks such as review of the Code and the report on compliance with the obligations of members (MIRO), and the Members Workgroup, responsible for implementing Bettercoal. In 2018, the main advances were:

- > The number of mining companies formally committed to Bettercoal through the signing of the letter of commitment once again increased, totalling 19.
- > More than 370 Mt of annual coal production covered by Bettercoal

- > Two country workgroups launched in Colombia and Russia.
- > A new Assurance System was finalised and launched, which includes the new Bettercoal Assurance Process.
- > The IMPROVE online platform was finalised, which allows members, suppliers and analysts to access all analysis information online
- > Six Site-Assessments conducted in Russia, Colombia, Indonesia, and South Africa.
- > Active monitoring of 13 Continuous Improvement Plans
- > Present in nine carbon-producing countries
- > The first public event for stakeholders in the Bettercoal coal supply chain was celebrated.
- > The indicators of the new phase 3 of MIRO have been approved by the Bettercoal board to be implemented in 2019.

Throughout 2019, Bettercoal will continue to improve the scope of its activity and will continue to help ENDESA ensure that the supply chain is managed responsibly and sustainably.







Occupational health and safety



0

Fatal accidents in 2018

6,728

Medical check-ups for ENDESA personnel

84,020

Occupational safety inspections in 2018

4.21

% reduction of the combined accident frequency index

Compliance with ENDESA Sustainability Plan 2018-2020

Occupational health and safety	Fatal accidents	0	0	<ul style="list-style-type: none"> > The occupational risk management system requires investigation of any accident or incident. > Accident analysis.
	Reduction of the combined accident rate index	1.04	0.72	
	Safety inspections in own and Contractors' facilities	68,971	84,020	<ul style="list-style-type: none"> > Safety inspections plan. > External and internal audits.
	Facilities assessed by the EcOS (Extra Checking On site) programme	12	34	
	Medical check-ups on employees	5,030	6,728	





1. ENDESA: a safe and healthy environment

103-1 Management approach - EUSS Occupational health and safety 103-2 Management approach - EUSS Occupational health and safety
103-3 Management approach - EUSS Occupational health and safety

ENDESA considers Occupational Safety and Health a priority objective and a fundamental value to be upheld at all times for all those who work for the Company, without distinction between own staff and its collaborating companies.

403-2 403-7 403-9

Integration of this objective into ENDESA's strategy is based on implementing Occupational Safety and Health policies in all companies forming the Group, the implementation of specific work plans and the application of a single and global work conduct observation system. ENDESA also performs annual initiatives within its long-term strategy to continuously improve the level of Occupational Safety and Health. The activities held in the 2018 fiscal year within the framework of this strategy have basically focused on specific action plans against the accident rate. Awareness campaigns on the subject of prevention have been implemented, specific office risk communication campaigns have been addressed and courses on safe driving in two- and four-wheel vehicles as well as work stress management have been conducted.

To guarantee that operations are safely performed, ENDESA has implemented a safety inspection plan which includes all Company levels. These inspections are partly performed by their own staff and partly through collaborators who have been previously trained in ENDE-

SA'S working procedures and in actions or behaviour which are not acceptable from an Occupational Health and Safety standpoint.

Within its long-term strategy, ENDESA develops different annual initiatives for continual improvement of the Level of Safety, Health and Well-Being.

Without entering into an exhaustive list of actions carried out, it is worth noting that for yet another year, as a result of proper integration of all of the entities and specific organisational units that compose our safety system, they are centred on basic pillars of preventive activity, among others: observation and control of the activity for proper identification and management of all risks (with special attention also on the psychosocial factors); detection of aspects of our activity or on our equipment/ facilities that may be improved; analysis of any incident, even if it does not result in personal injury; development, innovation and application of improvement in equipment, technology and job procedures; continuity in work already begun on the subject with our collaborating companies and of course, investing in training, participation and consulting with our workers as well as in awareness campaigns and awareness workshops.

The Board of Directors also takes part in the supervision and control of occupational health and safety management. In this way, the Board receives

a report in each monthly meeting with a summary of the most relevant occupational health and safety events arising, in order to perform constant monitoring. Likewise, the CEO of ENDESA conducts safety meetings on a regular basis to perform detailed monitoring of the accident rate indicators. Furthermore, with the aim of promoting occupational health and safety throughout the business, the objectives system to determine the variable remuneration of the General Managers and the CEO also incorporate indicators and objectives in this regard.

Occupational health and safety management system



403-1

ENDESA is OHSAS 18001 certified with workforce implementation of over 99%. This internationally accepted standard defines the requirements for the establishment, implementation and operation of an effective Occupational Health and Safety Management System. Further, it is compatible with management systems such as the ISO 9001 and ISO 14001, which will facilitate its integration with quality and environmental management systems.

The Occupational Health and Safety Management System allows ENDESA to identify and collaborate in health and safety risk control, reducing the accident rate, support control of compliance with the laws and improving performance in general, promoting a safe and healthy environment.

The annual review of ENDESA's Occupational Health and Safety Management System has the objective of ensuring the continual suitability, adequacy and efficacy of the system. This process guarantees that are included the Occupational Health and Safety (OHS) objectives; the opportunities for improvement

that can be observed, and the appropriateness of making changes both in the Occupational Health and Safety Management System as well as in our Prevention of Occupational Risk Policy.

403-8

Companies	With certification			Without certification		
	% of employees with OHSAS certification	No. of employees with OHSAS certification	% of employees compared to entire ENDESA staff	% of employees without OHSAS certification	% of employees without OHSAS certification	% of employees compared to entire ENDESA staff
Generation						
ENDESA Generación, S.A.	100	1,490	17.08			
Encasur, S.A.				100	17	0.19
Gas y Elec. Generación, S.A.		373	4.27			
UE Canarias Generación, S.A.U.		596	6.83			
Infrastructure and grids						
ENDESA Distr. Eléctrica, S.L.	100	2,769	31.73			
ENDESA Ingeniería, S.L.	199	87	0.99			
ENDESA Red, S.A.				100	42	0.48
Marketing						
ENDESA Energía, S.A.U.	100	965	11.906			
ENDESA Oper. y Serv. Com, S.L.	100	517	5.92			
Structure and services						
ENDESA, S.A.	100	1,368	15.68			
ENDESA Medios y Sistemas, S.L. and ENEL Iberia, S.R.L.	100	495	5.67			
ENDESA Foundation				100	7	0.08
Total with OHSAS certificates		8,660	99.24			
Total without OHSAS certificates					66	0.76



Identification of Hazards, Risk Assessment and Incident Investigation

403-2

Based on the procedures of our Management System (ENDESA Occupational Health and Safety Management System), hazards are identified, risks assessed and incidents investigated, both for our own employees as well as for contractors.

1. In order to identify hazards, the Joint Risk Prevention Service (SPM) requests the Organisational Units in which occupations that are being assessed to identify the risks according to ENDESA's applicable guideline(s) approved by the Commission for Participation in Preventive Activities Management Planning and Control. The hierarchical line, shop steward and the SPM, will analyse the above data, establishing the risks that may be eliminated in the facilities, not proceeding on to its assessment. The responsible

Organisational Unit, advised by the SPM, will establish the action plan to eliminate these risks, informing the prevention shop stewards of them. Where elimination of risks is feasible, they will be eliminated. Risks that cannot be eliminated will be assessed and later, necessary preventive measures will be taken (which act as risk control) through the appropriate actions. These measures are prioritised according to the following order:

1. Replacement of the hazard with something non-hazardous.





2. Engineering control (technical and organizational measures for risk control).
3. Signs/ warnings and/or administrative controls.
4. Personal protective equipment.

The above measures (controls), are performed by assigning responsibilities and establishing resources and deadlines for execution. Likewise, the efficacy of the various preventive measures implemented are tested.

2. Risk assessment is reviewed whenever any of the following situations occur:

- > Damage to the health of the workers has resulted and as a result of the investigation, its review is deemed appropriate.
- > Some of the risks included in the assessment have been eliminated.
- > When, as a result of the periodic working conditions controls, need for change in risk assessment is observed.
- > When it is foreseen that technological changes will take place in the organisation, in the activities, in work procedures and in working conditions.
- > By agreement of the Health and safety Committee.
- > Based on appropriate control and maintenance of the work equipment and machines.
- > Based on verification of the efficacy of the preventive measures.
- > When the periodic compliance assessment regarding the applicable occupational health and safety laws and regulations, so indicate it.

The review process will be the same as the one included for the initial assessment. Once the assessment is reviewed, if there is any change, the SPM will analyse the new training, information and health monitoring criteria which must be given to the worker or workers who occupy the position as well as if

there is a change in the job position involved.

Any worker who detects a possible risk relating to his/her own safety, to that of his/her colleagues and/or third parties, including with regard to machines and facilities, must communicate that fact.

Other communications systems such as electronic mail, fax, etc. may be used to communicate about risks, provided that the Organisational Unit receives the Risk Notification Claim (PCR Form).

The Organisational Unit in Charge of Execution shall prepare the Non-Compliance Report.

The Organisational Unit In Charge of Execution shall respond regarding the actions to be taken or dismissal (with an explanation of the reasons) within a period of 20 calendar days of receipt of the Risk Notification Claim to:

- > The worker or shop steward who filled out the Risk Notification Claim.
- > The Secretary of the Environmental Health and Safety Committee for the area of activity where the risk was detected and in his absence, the one pertaining to the worker, who shall send a copy to the members of that Committee.
- > SPM in order for it to act on such notifications that require his advising and/or support.

Whoever finally resolves the risk through the appropriate preventive/ corrective measures shall sign in the box 'Resolved by' and finally, the Organisational Unit that received the claim shall give its approval for such measures, signing in the 'Approved' box for the Organisational Unit, thus closing the Risk Notification Claim.

Once the Non-Compliance report has been completed with the actions taken for resolution of the risk notification claim, the Organisational Unit in Charge of Execution shall notify the following people regarding it within a period of

seven days through the Risk Notification Claim (PCR Form):

- > The worker or shop steward who filled out the Risk Notification Form.
- > The Secretary of the Environmental Health and Safety Committees for the area of activity where the risk was detected and in his absence, the one pertaining to the worker, who shall send a copy to the members of the affected Committee.
- > The SPM.

When a worker becomes aware of a situation involving serious and imminent risk to his/her safety or that of any interested parties, regardless of potential interruption of the activity or leaving the work place where necessary, he/she must immediately communicate it orally to his/her superior or in the absence of such, to the person in charge with the authority to decide and take the necessary measures.

The immediate superior or person in charge with the authority to decide and take measures shall go to the place as soon as possible, taking the measures deemed necessary to eliminate and/or control the serious and imminent risk situation.

The immediate superior who assumes responsibility shall decide on the time to restart work in the zone, once confirming that the serious and imminent risk has been eliminated and/or controlled.

The worker who verbally communicated the risk, whether directly or through the shop steward, must fill out the Risk Notification Claim (PCR Form) as soon as possible and give it to his/her immediate superior or responsible person authorised to decide and take measures, who shall sign that he/she received the Notification with the same systematic distribution of copies described above.

The person responsible for the Line who resolves the risk communicated, or in the absence of such, the person who

authorises resumption of the activity must report it in writing.

3. The person who detects an incident (including that of third parties) shall communicate the occurrence to the Organisational Unit through the hierarchy. Information that has not been recorded on the Incident Notification in order to guarantee the confidentiality of sensitive information shall be communicated orally to the Safety Delegates who request it.

All incidents shall be reported internally in the shortest possible time in order to ensure communication within a period not greater than 72 hours.

Serious or fatal accidents and relevant incidents shall be notified internally immediately through sms and/or email in order to ensure communication throughout the entire organisation (person in charge/ management of the organisational unit, human resources, safety service and shop floor representation) in compliance with the Safety Law regarding the authority of the safety delegates to visit the site where the injury to the workers' health occurred.

In addition to the media described, communication may also take place by telephone or any other means that is deemed effective for the situation.

Outside notifications shall be done in compliance with the legislation in force within the Unit's geographical scope of operation.

Likewise, it should also be noted that through the 'STOP WORK POLICY', ENDESA, as part of the ENEL Group, applies, the company reminds each employee who acts quickly and stops any activity that involves a risk to his/her own health and safety or that of other or that could cause environmental damage, understood as a deterioration of the quality of its components (air, soil, water, flora and fauna) or change of the archaeological or artistic heritage of a place. Likewise, this standard requires that each member of the organisation communicate quickly to his/her direct superior or to the company's representative with the highest classification present regarding any unsafe behaviour or any action or situation that could potentially cause an accident or environmental damage. This policy shall be applied without fear of the consequences; in other words, no blame or responsibility shall be attributed to employees and contractors who in good faith indicate a risky situation or stop work, even if that action were later revealed to be unnecessary.

For investigation of serious or fatal accidents, electrical accidents, accidents due to falling from a height and relevant incidents (including those of third parties) a committee shall be formed immediately, called by the Organisational Unit responsible for the facility affected.

Within a maximum period of one month (with the exception of duly justified causes and never longer than three months) the committee shall issue a report signed by all of its members, which shall be sent to the affected Organisational Unit, which shall notify the rest of its organisation and the Secretary of the pertinent Health and Safety Committee. In the case of non-serious accidents and irrelevant incidents, the investigation shall be carried out by the SPM (UPT's and/or UPM's where necessary) which shall issue a report within a maximum period of one month that will be sent to the shop stewards regarding prevention and to the person in charge of the Unit to which the facility belongs, who shall notify the rest of his/her Organisation.

Respecting notification of the type of incident and lessons learned, in cases where disclosure of any accident that occurred is deemed important, the Head of the Technical Safety Unit of the SPM shall carry out the appropriate management to introduce it on the Intranet, eliminating the personal data of the victim and other which could result in effective identification of the victim.

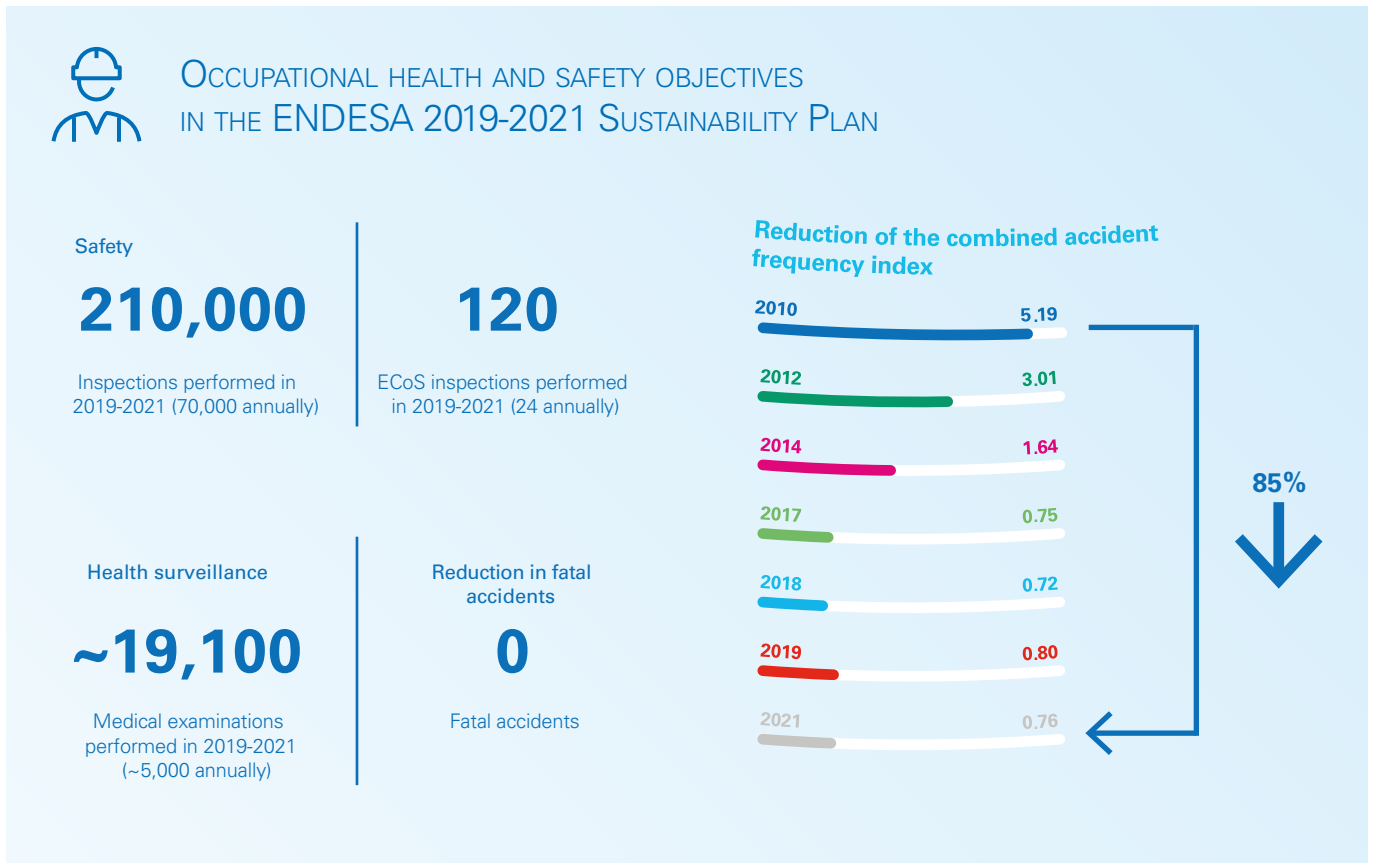
When a serious or fatal accident occurs, after it is investigated, the SPM will prepare the document called 'Lesson Learned', which shall be sent by email to all of the organisational units with a similar problem.





ENDESA Sustainability Plan 2019-2023 Goals

With the aim of continuing to promote Occupational Safety and Health, ENDESA has set the following objectives in its ENDESA 2019-2023 Sustainability Plan:



1.1. Common occupational health and safety management

403-3

Through the Delfos tool, designed by ENDESA, all Occupational Health and Safety processes, accident management, medical check-ups, safety inspections, risk assessment, preventive planning, etc. are addressed. An important part of Delfos is to consolidate information in a Business Warehouse, the source of all Occupational

Health and Safety information reporting, once supplied with monthly interfaces from the rest of the company management systems. All information sent is extracted homogeneously. The main objective of Delfos is to provide Group companies and businesses with an efficient OHS management tool, to collate information and to aid the development of a common culture

to handle OHS issues while taking local considerations into account.

The Delfos Mobile application enables the performance of on-site safety inspections while relaying all data (photos, texts, geographic coordinates, etc.) in real time to the Delfos system and all persons involved in the process.

99% of ENDESA’s workforce in Spain and Portugal work in centres under an OHSAS18001 certificate environment

1.2. Occupational health and safety, training and inspections

403-5

During 2018, ENDESA has given a total of 102,637 hours of occupational health and safety training to its own employees. 6,397 people have attended occupational safety and health training courses.

During 2018, 84,020 safety inspections have been performed in works and/or projects performed carried out by both the Company’s own and contractors’ employees, which had a significant im-

act on reducing the number of work-related accidents. Likewise, the number of Safety Walks performed in 2018 came to 219.

403-1 403-2

The Occupational Health and Safety management system indicates the need to investigate any accident or incident arising in the company. For the case of serious, fatal or relevant accidents (including electrical accidents or work at a height) an investigation com-

mittee must be formed which analyses them in detail and under a Root Cause Analysis methodology. Likewise, for any relevant accident, once the causes have been clarified and the occupational health and safety measures to be taken are implemented to avoid this type of accident from repeating, a Lessons Learned report will be prepared aimed at informing the rest of the organisation on the measures to avoid this type of accident.





1.3. Promoting a Culture of Occupational Health and Safety

For ENDESA, employee safety and well-being are of paramount importance.

This responsibility, although it starts with each employee, must not stay there, since it is a shared responsibility. We must all contribute to the conditions where our colleagues perform their work being as healthy and safe as possible.

The individual behaviour of each employee has an essential weight in this field to be more efficient at Group level in our fight against accident rate.

Using the leadership in our management as a basis in this matter, in addition to the usual health campaigns, 'safety walks', safety inspections and internal and external audits, we highlighted a series of basic principles, information, preventive recommendations and sensitivity videos relating to aspects that every 'citizen' of the company should know and respect. Knowing how to detect unsafe situations constitutes a key aspect of our culture and requires commitment and participation from everyone.

Our awareness strategy in Occupational Risk Prevention is based, therefore, on constant promoting of a health and safety culture throughout the year through 'trickle down' actions as well as performance of specific actions. Out of all of them and especially with regard to 2018, we describe some below according to their relevancy.

To draw conclusions from accidents so they do not happen again and to assist in working more safely. To that end, the project, 'NOT AGAIN', implemented within the field of Thermal Generation, good practices and lessons learned were disseminated through placement of 10,000 stickers with QR codes at specific points in the plants where there was some incident or serious accident.

Likewise, numerous workshops were held at ENDESA in different areas with the participation of representatives from all hierarchical levels to identify preventive and environmental needs as well as establishing action plans.

In harmony with the motto, 'SHARE YOUR SAFETY', an initiative has been put in place to promote knowl-

edge in prevention of occupational risks among employees, particularly focused on behaviour that promotes personal and surroundings safety. With this initiative, the company seeks to solidify knowledge already offered to employees, but to do so in the latest manner and within a digital environment. The actions begin with the launch of infographics with safety content of interest and by later mass mailing of 'safety games' in which employees participate in pairs. During the past fiscal year, within the framework of this initiative, two 'waves' were developed, the first focused on office risks and the second, on safe mobility. These programmes have helped towards considerably reducing the absenteeism rate due to disease and accidents in recent years, going from 3.23% in 2009 to 2.66% in 2018.

403-6

Likewise, a total of 6,728 medical examinations were performed on ENDESA's employees to improve their health and prevent risks.



1.4. Occupational health and safety committees

403-4

The Company has formal Health and Safety committees in which all Company workers are represented.

Within the ENDESA group in Spain, workers are consulted on, and involved in, OHS issues through their Occupa-

tional Risk Prevention Delegates in the following bodies:

- > The Commission for Participation in Preventive Activities Management Planning and Control.

- > Occupational Health and Safety Committees by Territory or Autonomous Community.
- > Occupational Health and Safety Committees by Province/ Area.
- > Occupational Health and Safety Committees for Unique Buildings.

- > Thermal Power Plant Occupational Health and Safety Committees.
- > Mining Occupational Health and Safety Committees.

The organisation, structure and operation of these bodies are detailed in ENDESA's Collective Framework Agreement IV.

Participation of the company and its workers through their union representatives in the planning, scheduling, organization and management control relating to improvement of working conditions and protection of the health and safety of the workers is a basic principle of the prevention policy in the company and should be considered as an important lever for improvement.

In our preventive action, consultation and participation of the unions is supported by a series of pillars that foster

it, such as the degree of maturity in prevention management (effective management procedures implemented for some time), confidence and credibility in the occupational health and safety policy and in the prevention techniques, prevention vision as a process in which the group of players from the company contribute their knowledge and experience as well as transparency and advance information.

In addition to our Occupational Health and Safety Policy, consultation and participation at ENDESA is regulated by Article 103 and in Chapter XVII of Framework Agreement IV. Likewise, at ENDESA, the workers' union representatives are consulted on the consultation process itself. Thus, a specific general procedure was achieved in our Occupa-

tional Health and Safety Management System (OHSAS).

In line with the above, Articles 103 and 117 of Framework Agreement IV regulate the Participation and Control Committee for management of the preventive activity, the highest agency for participation and consultation on these matters. Its regulations establish in its Article 3 that it is the forum for debating with unions when making decisions for planning and application of preventive measures that affect the Group companies.

Respecting regulation of the Health and Safety Committees (HSC) provided in the legal standards, these are regulated from Article 118 forward of our Framework Agreement.



1.5. Drop in accident rate

403-9 403-10

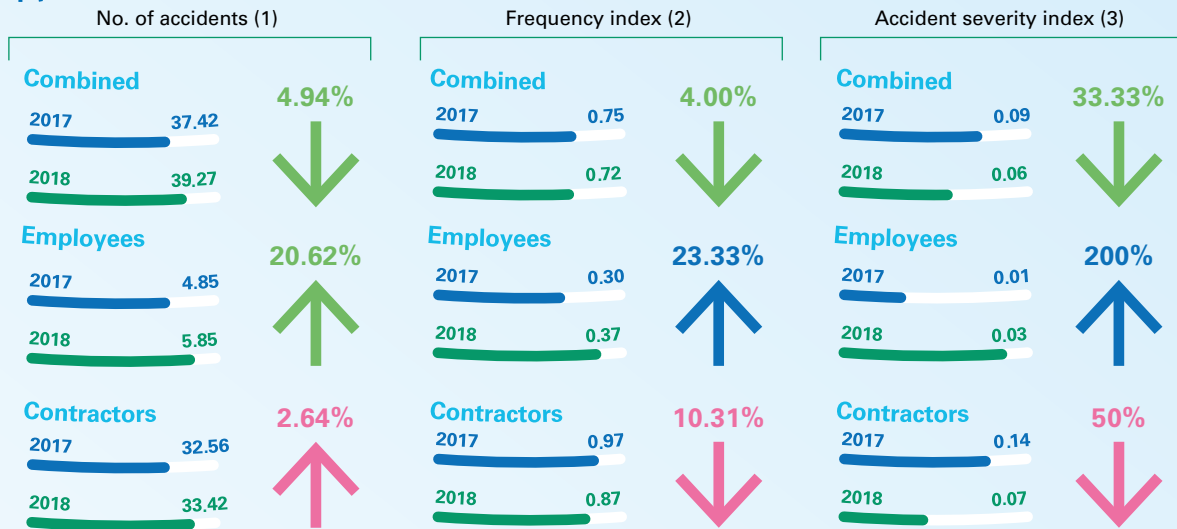
All of the work and effort carried out by ENDESA regarding occupational health and safety has led to a significant reduction in accidents in 2018 compared to previous years. In that respect, it is worth pointing out:

- > The 4.21% reduction in the combined frequency index (employees and contractors), with respect to 2017.
- > The 4.96% increase in the number of accidents of employees and contractors, with respect to 2017.
- > ENDESA celebrates NO fatal accidents in 2018.
- > The number of days lost by employees due to absence during the year has been reduced by 10.64%.





MAIN ACCIDENT RATE INDICATORS



(1) Includes fatal accidents.

(2) Total number of accidents, excluding those *in itinere*, respecting the total hours worked multiplied by 1,000,000.

(3) Total number of days lost by accident excluding *in itinere*, with respect to the total hours multiplied by 1,000.

The data do not consider Enel Energy Europe, nor ENDESA Foundation, nor the first seven months of the financial year of Enel Green Power España. Furthermore, they consider the investment percentage in ANAV (85.41%).

No. of work-related accidents

	2016		2017		2018	
	Men	Women	Men	Women	Men	Women
Spain	48.27	2	35.45	2	36.27	3
Own	3.85	1	4.85	0	4.85	1
Contractors	44.42	1	30.6	2	31.42	2

Frequency index

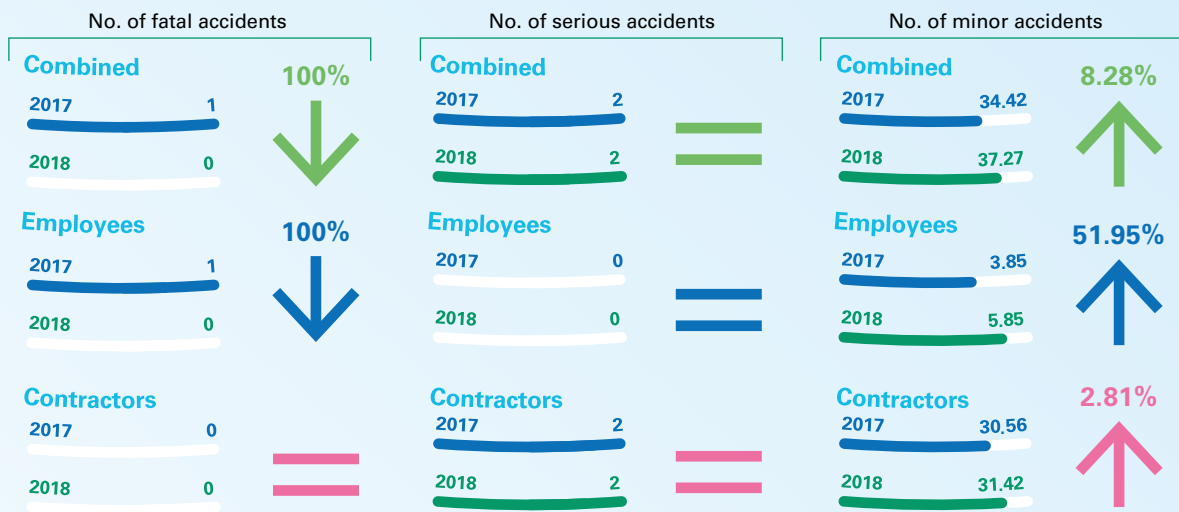
	2016		2017		2018	
	Men	Women	Men	Women	Men	Women
Spain	1.26	0.18	0.94	0.17	0.87	0.24
Own	0.31	0.27	0.40	0.00	0.40	0.27
Contractors	1.72	0.13	1.19	0.25	1.06	0.22

Severity index

	2016		2017		2018	
	Men	Women	Men	Women	Men	Women
Spain	0.06	0.01	0.12	0.01	0.07	0.01
Own	0.03	0.01	0.01	0.00	0.03	0.01
Contractors	0.13	0.00	0.17	0.02	0.09	0.01



CLASSIFICATION OF ACCIDENTS



(1) Includes accidents with leave between 2 and 30 days.

Number of fatal accidents

	2016		2017		2018	
	Men	Women	Men	Women	Men	Women
Spain	1	0	1	0	0	0
Own	0	0	1	0	0	0
Contractors	1	0	0	0	0	0

No. of serious accidents

	2016		2017		2018	
	Men	Women	Men	Women	Men	Women
Spain	3	0	2	0	2	0
Own	0	0	0	0	0	0
Contractors	3	0	2	0	2	0

No. of minor accidents

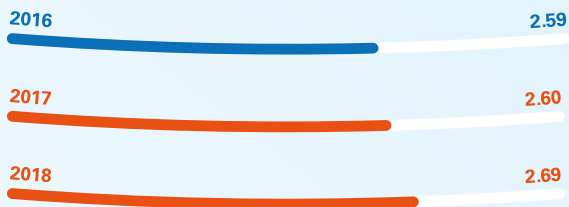
	2016		2017		2018	
	Men	Women	Men	Women	Men	Women
Spain	44.27	2	31.42	3	34.27	3
Own	3.85	1	3.85	0	4.85	1
Contractors	40.42	1	27.56	3	29.42	2



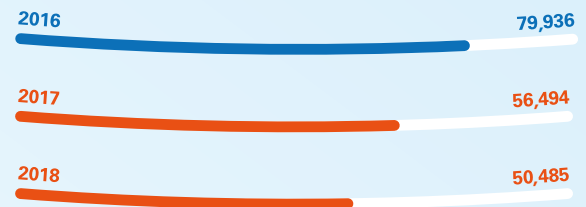


ABSENTEEISM AND DAYS LOST BY EMPLOYEES DUE TO ABSENCE

ENDESA employee absenteeism index (1) (T.A. (2))



Days lost by ENDESA employees due to absence throughout the year



(1) The days lost due to absence do not include holidays or public holidays, nor the authorised absences due to family reasons (maternity leave, paternity leave, etc.), nor training leave.

(2) Total number of working days lost due to absence during the year with respect to total days worked by the group of employees during the same period, multiplied by 200,000 (this factor corresponds to 50 working weeks, 40 hours each week per 100 workers). This absenteeism rate does not include joint operation entities which proportionally consolidate.

Death rate in 2018

Employees	0.00
Contractors	0.00

Serious accident rate, excluding deaths in 2018

Employees	0.00
Contractors	0.051



2. Spreading health and safety to partner companies

ENDESA conveys the following commitments with the aim of extending occupational health and safety among its partner companies:

- > Qualification of technical requirements in safety for risk-related activities.
- > Promoting certification according to OHSAS 18001 for these activities.
- > Extensive commitment to Occupational Health and Safety management and information in the General Conditions of Contract.

Therefore, contractors are examined before the contracting process (Vendor Rating classification) and during the contractual activity (evaluation of health and safety results), with the possible application of administrative and/or economic penalties in the case of non-compliance with safety regulations or of having undergone a significant incident.

The set of regulations in force since 2018 establishes, in general, the framework of action that the contractor must comply with prior to performing work and, in particular, the mandatory nature of preparing a Specific Occupational Health and Safety Plan for the work contracted, in which the protection equipment to be used must be specified. Likewise, follow-up and control actions should be performed on the work (monitoring). In addition, each accident is analysed in a committee made up by experts from the



OHS Service, by the unit where it has taken place and Procurements, establishing the corrective measures to avoid a similar situation from being repeated. Furthermore, the General Conditions of Contract require contracting companies to provide specific health and safety training for workers, based on the risks of the contracted activity.

Before starting the work activity, all employees are checked to verify that they have been trained and informed about occupational health and safety connected to the risks of the activity to be carried out. In addition, they must have the appropriate medical skills to do the job, and acknowledge receipt of the appropriate Personal Protection Equipment for the activity.

Here at ENDESA we consider that on-site controls are vital to verify that safety conditions are met and to monitor and correct any safety defects in execution. Hence, 84,020 inspections have been performed in Iberia on work and/or projects done by contractors that have significantly contributed to reducing accidents. In the past year, inspections



and audits have intensified, several innovation projects have been promoted and our attention has continued to be given to our action plans against accidents and health programmes.

In addition to the inspections performed on work on-site, the Company Management has performed 219 Safety Walks, where a Director of the business, together with the Joint Occupational Health and Safety Service for the territory, visit operational work or industrial facilities to check the safety conditions of the area in situ, checking the points observed and generating a report should any deficiencies be found. The corporate programmes include, in addition to the Safety Walks, the Accident Prevention Inspections that are a vital tool for the risk management of contractor personnel.

Special emphasis is given to training personnel exposed to risk of electric shock, those working at a height, those responsible for on-site occupational risk prevention as site foremen, OHS resource or Health and safety coordinator.





2.1. Risk activity control program

403-1

ENDESA executes a control plan over all risk activities where contractor companies intervene in order to guarantee that the work performed are done with the same safety and control levels as that performed by its own staff.

This objective is integrated in ENDESA's strategy through implementing specific work plans that seek to consolidate the leadership model based on involvement and example by the entire control chain, and by applying a single and global work behaviour system:

- > Inspection plan to analyse and monitor hazardous tasks in ENDESA's main Lines of Business. 84,020 inspections were performed in 2018 in the different businesses.

- > Extra Checking On Site 'ECoS' programme, whereby an expert team formed by co-workers from different companies visit production centres to inspect specific tasks, comparing and promoting the best practices observed in the rest of the organisation. In 2018, 34 ECoS were carried out.
- > SPP Programme (Safety Personalised Plan) for ENDESA Generation facilities, where major contractors are invited to visit the plant for bottom-up remarks on the Risk Prevention activities they all agree are the most important. The plan is monitored on a regular basis, and the information is stored in a corporate application.

ENDESA also carries out various annual initiatives in its long-term strategy of continuous improvement of Occupational Health and Safety. The activities performed in 2018 as part of said strategy have mainly focussed on specific action plans against accident rate, maintenance and creation of new alliances with partner companies, and on various action plans with contractor companies with high accident rate.



2.2. Contractor training

EU 18

In 2018, 100% of ENDESA's contractors and sub-contractors received occupational health and safety training to perform their activities.

100% of contractors in Spain and Portugal have received Occupational Health and Safety training

Contractors and subcontractors that have received occupational health and safety training

	2016	2017	2018
Spain and Portugal	18,500	16,235	19,886

Until 2012, the number of rated suppliers considered the number of ratings plus the audits carried out on suppliers not holding OHSAS 18001 certification from the purchase families requiring it. In 2013, the strategic Occupational Health and Safety families were included

in the rating system, where, in addition to the Occupational Health and Safety requirements, legal, economic-financial issues, quality and/or environmental management systems, etc. were evaluated.

Throughout 2018, inspections continued to be performed on companies from the sectors considered most hazardous, placing emphasis on maintenance activity.

Rated suppliers

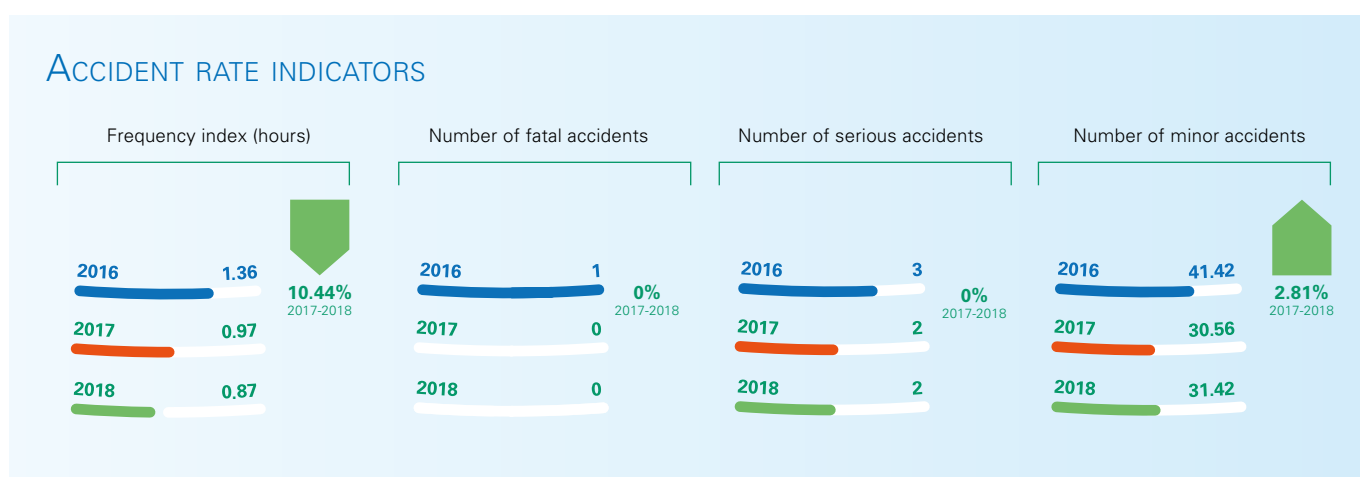
	2016	2017	2018
Spain and Portugal	774	649*	617

* Taking into account that a single supplier may be signed up for several contracts, the total number of contractors/subcontractors may be 963.



2.3. Results of a joint effort

403-9



ENDESA's performance in raising awareness of occupational health and safety among its employees and contractors has continued to pay off in recent years. There were no fatal accidents involving contractor personnel this year. The accident frequency rate of these employees in Spain and Portugal has gone from 0.97 in 2017 to 0.87 in 2018.

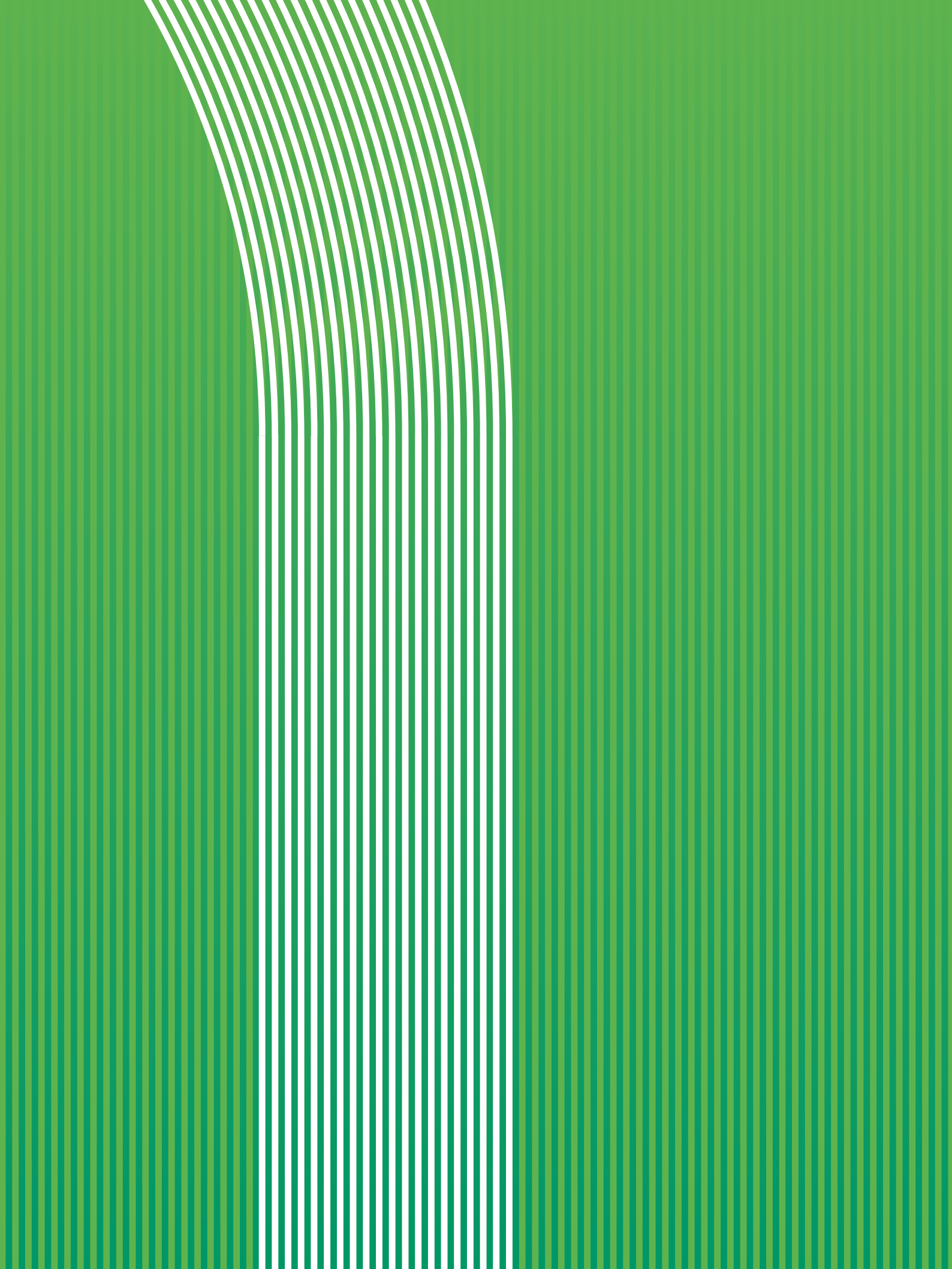
Serious accidents have remained the same, from 2 in 2017 to 2 in 2018. The total number of minor accidents with the contractor personnel in Spain and Portugal has increased by 2.81% compared to 2017, and stood at 31.42% in 2018.

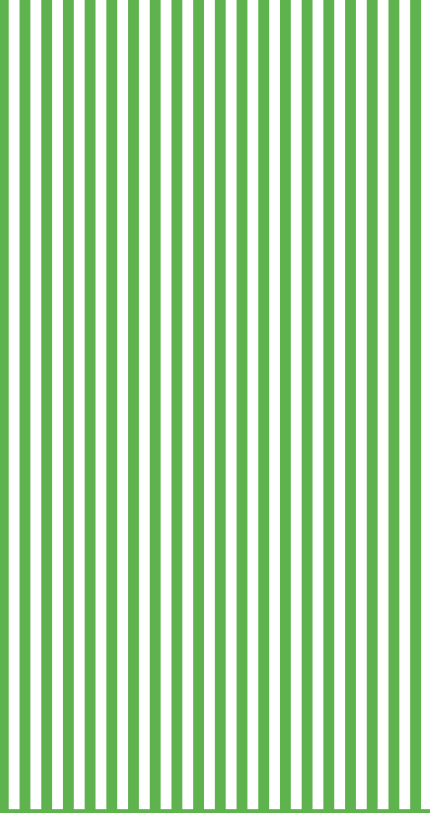
403-9

Death rate in 2018
0

Serious accident rate, excluding deaths in 2018
0.051







05

Appendices



Appendix I: ENDESA's commitment to information on sustainability

102-3 102-53

ENDESA's commitment to transparency can be seen in the public reports regularly furnished to its stakeholders through a number of reporting channels.

Via its corporate website: www.endesa.com, ENDESA reports its performance in terms of Sustainability and offers quarterly information to shareholders and the financial markets, which also have the ENDESA Shareholders' Office at their disposal. At the end of the business cycle each year, ENDESA also publishes its Sustainability Report, which reports the actions taken during the year and responds to stakeholders' expectations based on ENDESA's Sustainability Plan.

In addition, at the end of each year, ENDESA publishes other corporate reports, among which the following should be noted: The Activities Report, the Legal Documentation, and the Corporate Governance Report. Furthermore, the ENDESA Foundation annual report informs about the social commitment activities carried out.

Thus, ENDESA communicates with its stakeholders regarding its commitment to long-term value generation and sustainable management of its business.

If readers would like more information on Sustainability, they have the following channels at their disposal:

Website

<https://www.endesa.com>

Customer channels

Customer Service:

- > Deregulated market customers: 800 76 09 09/From outside Spain 0034-937 061 510.
- > VPSC Customers (Voluntary Price for Small Consumers): 800 76 03 33/From outside Spain 0034-937 061 509.
- > Companies: 800 76 02 66.
- > ENDESA Distribución: 902 509 600/From outside Spain +34 937 061 513.
- > ENDESA One: 900 905 085.
- > <https://www.endesaclientes.com/>
- > <http://www.endesaone.com/>
- > www.endesadistribucion.es

Shareholders and investors

Investor Relations Department:

Ribera del Loira, 60. 28042 Madrid.
Tel. + 34 91 213 1503
ir@endesa.es

Shareholder information office:

Ribera del Loira, 60. 28042 Madrid.
Tel. 900 666 900.
eoaccionista@endesa.es

Suppliers

<https://globalprocurement.enel.com>
C/ Ribera del Loira, 60. 28042 Madrid.
Telephone: +34 914 558 838
e-mail: admincontact.center@enelomni-channel.com
procurement.enel@enel.com

Employees and their representatives

Corporate Portal: Intranet. 100% of the workforce has access to the corporate intranet

Employees also have a multi-channel platform (online, telephone and chat) called 'On Line', which they can use to make queries, ask questions and handle procedures related to HR management. This initiative takes advantage of the latest technology and is part of the Company's Digital Transformation Plan, seeking to reduce response times and increase the degree of employee satisfaction.

Websites of ENDESA's trade unions:

- > <http://ugtendesa.es/portada>
- > <https://www.ccooendesa.com>
- > www.asie-sindical.com/

Service to the general public

Sustainability:

sostenibilidad@endesa.es

Ethics Channel:

<https://www.endesa.com/es/inversores/a201611-conducta-etica.html>

<https://secure.ethicspoint.eu/domain/media/es/gui/102504/index.html>

102-53

For service to all stakeholders regarding Sustainability-related topics and issues related to the content of ENDESA's Sustainability Report, the contact person is:

Ms María Malaxechevarría Grande
ENDESA General Manager - Sustainability

Ribera del Loira, 60
28042 Madrid (Spain)

email: sostenibilidad@endesa.es

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ENDESA Head Office

Ribera del Loira, 60
28042 Madrid (Spain)





Appendix II. Independent review report

102-56



Ernst & Young, S.L.
C/ Raimundo Fernández Villaverde, 65
28003 Madrid

Tel: 902 365 456
Fax: 915 727 300
ey.com

INDEPENDENT REVIEW REPORT 2018 ENDESA, S.A. SUSTAINABILITY REPORT

To the management of Endesa, S.A.

Scope of work

As commissioned by the Management of Endesa, S.A. (hereinafter, Endesa), we have completed our review of the sustainability information contained in the "Sustainability Report 2018" of Endesa (hereinafter, the report) and in the GRI Content Index included as Annex III. This report was prepared in accordance with the conditions contained in:

- GRI Sustainability Reporting Standards (GRI standards) and its sector supplement 'Electric Utilities Sector Supplement'.
- The principles contained in Standard AA1000 AP (2018) issued by Accountability (Institute of Social and Ethical Accountability).

The limits set by Endesa for the preparation of this report are defined in section 8 ("Coverage of the report") of chapter 1, "Getting to Know Endesa" of the attached report.

The preparation of the attached report and its contents are the responsibility of the Management of Endesa, which is also responsible for defining, adapting and maintaining those internal management and monitoring systems whereby the information is obtained. It is our responsibility to issue an independent report based on the procedures applied in our review.

Criteria

We have performed our review in accordance with:

- The Guide to Activities for review of Corporate Responsibility reports issued by the Spanish Institute of Chartered Accountants (ICJCE).
- Standard ISAE 3000 (revised) Assurance Engagements Other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC), with a level of limited assurance.
- Standard AA1000 AS (2008) of AccountAbility, under a moderate level of assurance at type 2.

Procedures performed

Our review consisted of the preparation of questions for the Sustainability Directorate and the various Business Units that participated in the preparation of the attached report and in the application of certain analytical procedures and review tests on a sample basis as described below:

- Interviews with personnel responsible for the preparation of sustainability information in order to obtain an appreciation of how sustainability objectives and policies are evaluated, placed in practice and integrated into Endesa's strategy.
- Analysis of the processes for collecting and validating the sustainability information contained in the attached report.
- Confirmation of the processes whereby Endesa determines what its material aspects are, as well as the participation of stakeholders in them.
- Review of the suitability of the structure and contents of the sustainability information in accordance with the Guide for the preparations of GRI Global Reporting Initiative Standard Sustainability Notes and their sectoral supplement "Electrical Utilities Sector Supplement" for the preparation of reports in accordance with the essential compliance option and the principles of Standard AA1000 AP (2018).
- Confirmation through review testing based on sample selections of the quantitative information of the indicators included in the GRI Content Index included as Annex III and its satisfactory compilation based on the data provided by the informational sources. The review tests have been defined for the purposes of providing the indicated level of assurance.
- Unlike the financial information in the report, which was audited by an independent third party.

These procedures have been applied to the sustainability information contained in the attached report and in the GRI Content Index included as Annex III, with the extent and scope indicated above.



The scope of our review is substantially less than that of reasonable security. Therefore, the security assigned is also lower.

This report is not in any way to be considered an audit report.

Independence and quality control

We have complied with the requirements of independence and other ethical requirements of the Code of Ethics for Accounting Professionals issued by the International Ethics Standards Board for Accountants (IESBA).

Our company applies International Standard on Quality Control 1 (ISQC 1), and therefore maintains a global quality control system that includes documented policies and procedures for compliance with ethical requirements, professional standards and legal provisions, and applicable regulations.

This assignment has been performed by a team of specialists in sustainability with extensive experience in the review of this sort of information.

Conclusions

As a result of our review, no aspect was discovered that would lead us to assume that the sustainability information contained in the Report has not been prepared in all its significant aspects in accordance with the Guide for the preparation of GRI Standards Sustainability Notes and its sectoral supplement "Electric Utilities Sector Supplement", including reliability of data, suitability of the information presented and the absence of significant deviations and omissions.

Regarding the application by Endesa of AccountAbility Principles Standard AA 1000 AP (2018), no aspect was discovered that would indicate to us that Endesa has not applied the principles of inclusivity, relevance, responsiveness and impact as outlined in the chapter "Defining Priorities" in the attached Report.

Recommendations

We have presented our recommendations to the Management of Endesa regarding areas for improvement in regard to the application of the principles of Standard AA 1000 AP (2018); the most significant recommendations refer to:

- **Inclusivity:** Endesa identifies and classifies stakeholder at the national and local level. Each stakeholder is also segmented to optimize identification of dialogue channels. We recommend the continuation of regular internal and external discussions with the more relevant stakeholders to broaden the analysis and guarantee its inclusion in Endesa's sustainability strategy, as well as including specific dialogues on human rights for certain stakeholders.
- **Materiality:** Endesa has undertaken a process of identifying and evaluating material issues that are relevant for its stakeholders, which are among the priorities of the company and comply with the structure of the attached report; we recommend that they continue to consult with these stakeholders that are among the priorities of the company on a regular basis, focusing the report on these in the more material aspects of Endesa's Sustainability Strategy.
- **Responsiveness:** Endesa has various channels of communication at its disposal for each of its stakeholders. We recommend that it make use of regular discussions with these stakeholders to evaluate the effectiveness of the channels and their influence on the capacity for respect of the company in order to improve corporate communication.
- **Impact:** Endesa 2019-2020 Strategic Plan supports company's strategic pillars and directions for the medium- to long-term growth. We recommend that a more in-depth measurement and analysis of the long-term value be performed in line with the company's distinguishing operational approach to value creation. A process for assessment and management of impacts, both direct and indirect, in different areas of influence should be developed. Moreover, we recommend to continue focusing local level action plans on mitigation of negative impacts.

This report has been prepared exclusively in the interest of Endesa, in accordance with the terms of our letter of assignment.

ERNST & YOUNG, S.L.



(Signature on the original in Spanish)

Alberto Castilla Vida
Partner
Madrid, March 5, 2019





Appendix III. GRI content index

GRI

102-55



The service was performed in the spanish version of the report

GRI Content Index

For the Content Index Service, GRI Services has confirmed that the GRI content index in the report is clear and that the references to each type of content included match the indicated sections of the report.

GRI Standard	Disclosure	Page number(s) and/or URL(s)	Omission		
			Part Omitted	Reason	Explanation
GRI 101: Foundation 2016					
General Disclosures					
GRI 102: General Disclosures 2016	Organizational profile				
	102-1 Name of the organization	Ch. Getting to know ENDESA: 1.2. Main activities, p. 15			
	102-2 Activities, brands, products, and services	Ch. Getting to know ENDESA: 1.2. Main activities, p. 15; 1.4. Organisational structure, p. 16-21			
	102-3 Location of headquarters	Appendix 1, p. 321			
	102-4 Location of operations	Ch. Getting to know ENDESA: 1.3. Main markets, p. 15-16			
	102-5 Ownership and legal form	Ch. Getting to know ENDESA: 1.4. Organisational structure, p. 16-21			
	102-6 Markets served	Ch. Getting to know ENDESA: 1.3. Main markets, p. 15-16			
	102-7 Scale of the organization	Ch. Getting to know ENDESA: 1.1. ENDESA in figures, p. 14; 6.4.1. ENDESA's share performance, p. 50-51			
	102-8 Information on employees and other workers	Ch. Our People: 1. ENDESA's workforce, p. 254-256; 4. Attracting and retaining talent, p. 265-266			
	102-9 Supply chain	Ch. Supply chain: 1. Responsible management of the supply chain, p. 288-290			
	102-10 Significant changes to the organization and its supply chain	Ch. Getting to know ENDESA: 1.4.2. Renewable energies, p. 17-18; 1.4.3. Power distribution: ENDESA Red, p. 18; 1.4.4. Marketing of energy: ENDESA Energía, S.A.U. and ENDESA X, S.A.U. p. 18			
	102-11 Precautionary Principle or approach	Ch. Environmental sustainability: 1.2. Environmental objectives, p. 184-185			
	102-12 External initiatives	Ch. Getting to know ENDESA: 2.4. Commitment to the United Nations Agenda, p. 24-27			
102-13 Membership of associations	Ch. Getting to know ENDESA: 2.5. Participation in sustainability forums and associations, p. 28-29				
Strategy					
102-14 Statement from senior decision-maker	Letters from the Chairman and Chief Executive Officer, p. 4-10				

GRI Standard	Disclosure	Page number(s) and/or URL(s)	Omission		
			Part Omitted	Reason	Explanation
GRI 102: General Disclosures 2016	102-15 Key impacts, risks and opportunities	Ch. Defining Priorities: 3.2. Materiality study results, p. 67-69/Ch. Getting to know ENDESA: 5.2. The due diligence process, p. 39-42/Ch. ENDESA's Sustainability Plan: 2. ENDESA's new 2019-2021 Sustainability Plan, p. 80-84			
	Ethics and integrity				
	102-16 Values, principles, standards, and norms of behaviour	Ch. Good governance and ethical conduct: 2. Ethical conduct and compliance, p. 95-96			
	102-17 Mechanisms for advice and concerns about ethics	Ch. Good governance and ethical conduct: 2.6. Ethics channel, p. 97-98			
	Governance				
	102-18 Governance structure	Ch. Getting to know ENDESA: 3. Governance and sustainability management system, p. 32-33			
	102-19 Delegating authority	Ch. Getting to know ENDESA: 3. Governance and sustainability management system, p. 32-33			
	102-20 Executive-level responsibility for economic, environmental, and social topics	Ch. Getting to know ENDESA: 3. Governance and sustainability management system, p. 32-33			
	102-21 Consulting stakeholders on economic, environmental, and social topics	Ch. Getting to know ENDESA: 3. Governance and sustainability management system, p. 32-33			
	102-22 Composition of highest governance body and its committees	Ch. Good governance and ethical conduct: 1.1. Leadership of the Board of Directors, p. 90			
	102-23 Chair of the highest governance body	Ch. Good governance and ethical conduct: 1.1. Leadership of the Board of Directors, p. 90-91			
	102-24 Nominating and selecting the highest governance body	Ch. Good governance and ethical conduct: 1.1. Leadership of the Board of Directors, p. 91-92			
	102-25 Conflicts of interest	Ch. Good governance and ethical conduct: 1.3. Directors' responsibilities and duties, p. 93			
	102-26 Role of highest governance body in setting purpose, values, and strategy	Ch. Getting to know ENDESA: 3. Governance and sustainability management system, p. 32-33			
	102-27 Collective knowledge of highest governance body	Ch. Getting to know ENDESA: 3. Governance and sustainability management system, p. 32-33			
	102-29 Identifying and managing economic, environmental, and social impacts	Ch. Getting to know ENDESA: 3. Governance and sustainability management system, p. 32-33			
	102-30 Effectiveness of risk management processes	Ch. Getting to know ENDESA: 3. Governance and sustainability management system, p. 32-33			
	102-32 Highest governance body's role in sustainability reporting	Ch. Getting to know ENDESA: 3. Governance and sustainability management system, p. 32-33			
	102-36 Process for determining remuneration	Ch. Our People: 4.3. Remuneration policy, p. 267-268			
	Stakeholder engagement				
102-40 List of stakeholder groups	Ch. Defining Priorities: 2.1. Identification of the stakeholders, p. 61-63				
102-41 Collective bargaining agreements	Ch. Our People: 5. Social dialogue, p. 272-273				
102-42 Identifying and selecting stakeholders	Ch. Defining Priorities: 2.1. Identification of the stakeholders, p. 61-63/2.3. Prioritisation of stakeholders, p. 65				





GRI Standard	Disclosure	Page number(s) and/or URL(s)	Omission			
			Part Omitted	Reason	Explanation	
GRI 102: General Disclosures 2016	102-43 Approach to stakeholder engagement	Ch. Defining Priorities: 2.2. ENDESA's communication channels with its stakeholders, p. 64-65/Ch. Getting to know ENDESA: 6.4.5. Transparency and close relations with shareholders and investors, p. 53; 6.4.6. Investor Relations Department, p. 53; 6.4.7. ENDESA's shareholder's office, p. 54/Ch. Customer orientation: 6. Customer satisfaction, p. 158-159				
	102-44 Key topics and concerns raised	Ch. Defining Priorities: 3.2.3. Priority issues for each stakeholder group, p. 70-72				
	Reporting practice					
	102-45 Entities included in the consolidated financial statements	Ch. Getting to know ENDESA: 1.4. Organisational structure, p. 16-20				
	102-46 Defining report content and topic boundaries	Ch. Defining Priorities: 1. Identification process for priority issues, p. 60/3.1. Materiality study, p. 66-67				
	102-47 List of material topics	Ch. Defining Priorities: 3.1. Materiality study, p. 66-67/3.2. Materiality study results, p. 67-69				
	102-48 Restatements of information	There is not restatements of information in 2018 sustainability report				
	102-49 Changes in reporting	There are no significant changes				
	102-50 Reporting period	Ch. Getting to know ENDESA: 7. Report profile, p. 56				
	102-51 Date of most recent report	Ch. Getting to know ENDESA: 7. Report profile, p. 56				
	102-52 Reporting cycle	Ch. Getting to know ENDESA: 7. Report profile, p. 56				
	102-53 Contact point for questions regarding the report	Appendix I, p. 320-321				
	102-54 Claims of reporting in accordance with the GRI Standards	Ch. Getting to know ENDESA: 7. Report Profile, p. 56				
102-55 GRI content index	Appendix III, p. 324-					
102-56 External assurance	Ch. Getting to know ENDESA: 7. Report profile, p. 56/Appendix II, p. 322-323					
Material Topics						
GRI 200 Economic Standard Series						
Economic Performance						
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Getting to know ENDESA: 6.4.2. Dividend, p. 52				
	103-2 The management approach and its components	Ch. Getting to know ENDESA: 6.4.2. Dividend, p. 52				
	103-3 Evaluation of the management approach	Ch. Getting to know ENDESA: 6.4.2. Dividend, p. 52				
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	Ch. Getting to know ENDESA: 6.2. Generation of wealth in 2018, p. 46				
	201-3 Defined benefit plan obligations and other retirement plans	Ch. Our People: 4.4. Pensions, p. 270-271				
	201-4 Financial assistance received from government	Ch. Getting to know ENDESA: 6.2. Generation of wealth in 2018, p. 46				
Market Presence						
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Our People: 4.3. Remuneration policy, p. 267-268; 4.2. Personnel selection, p. 266-267				

GRI Standard	Disclosure	Page number(s) and/or URL(s)	Omission		
			Part Omitted	Reason	Explanation
GRI 103: Management Approach 2016	103-2 The management approach and its components	Ch. Our People: 4.3. Remuneration policy, p. 267-268; 4.2. Personnel selection, p. 266-267			
	103-3 Evaluation of the management approach	Ch. Our People: 4.3. Remuneration policy, p. 267-268; 4.2. Personnel selection, p. 266-267			
GRI 202: Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	Ch. Our People: 4.3. Remuneration policy, p. 270			
	202-2 Proportion of senior management hired from the local community	Ch. Our People: 4.2. Personnel selection, p. 267			
Indirect Economic Impacts					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Relationship with the communities: 1. ENDESA's commitment to the communities, p. 224-225			
	103-2 The management approach and its components	Ch. Relationship with the communities: 1. ENDESA's commitment to the communities, p. 224-225			
	103-3 Evaluation of the management approach	Ch. Relationship with the communities: 1. ENDESA's commitment to the communities, p. 224-225			
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	Ch. Relationship with the communities: 4. Quantification of ENDESA's social investment in the community, p. 233-235			
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