Seeding Energies
Sustainability Report
2017

endesa

GETTING TO KNOW ENDESA pg. 12

ECONOMIC DATA

EBITDA (millions of euros)
3,542

Socially responsible investment
12.10%

Installed capacity
23,678 MW

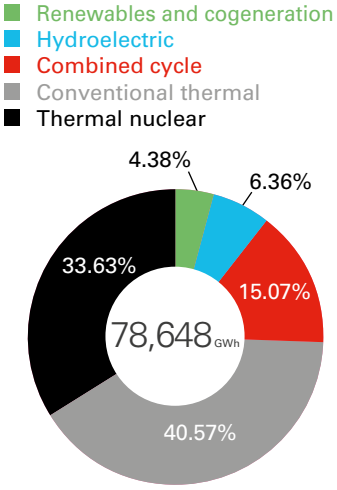
Electricity production
78.648 GWh

Length of distribution network lines
317,782 km

Number of customers
10,848 (thousand)

ENVIRONMENTAL DATA

ENDESA production mix



CO_2 Free
Emission-free production
44%

Water returned to the environment
99%

Biodiversity projects
25

Re-used water
0.023%

LETTERS FROM THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER pg. 4

OUR PERFORMANCE
Low-carbon business model
Digitalisation
Customer orientation
Innovation
Responsible relationship with the communities
Our people and their value
Environmental Sustainability
Sustainable supply chain
pg. 96

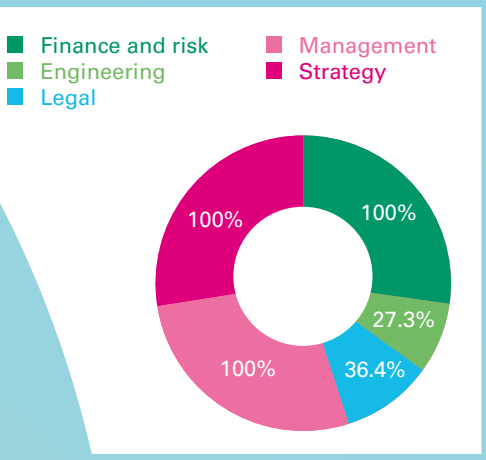
APPENDICES pg. 298

Seeding

CORPORATE GOVERNANCE DATA

The ENDESA Board of Directors

Members of the Board of Directors by expertise

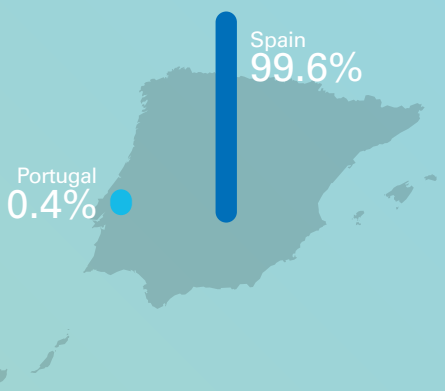


SOCIAL DATA

Employees

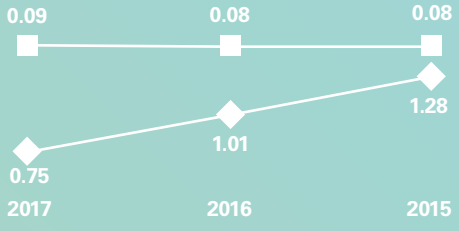
Total	Men	Women
9,706	76.84%	23.16%

Employees by geographic area



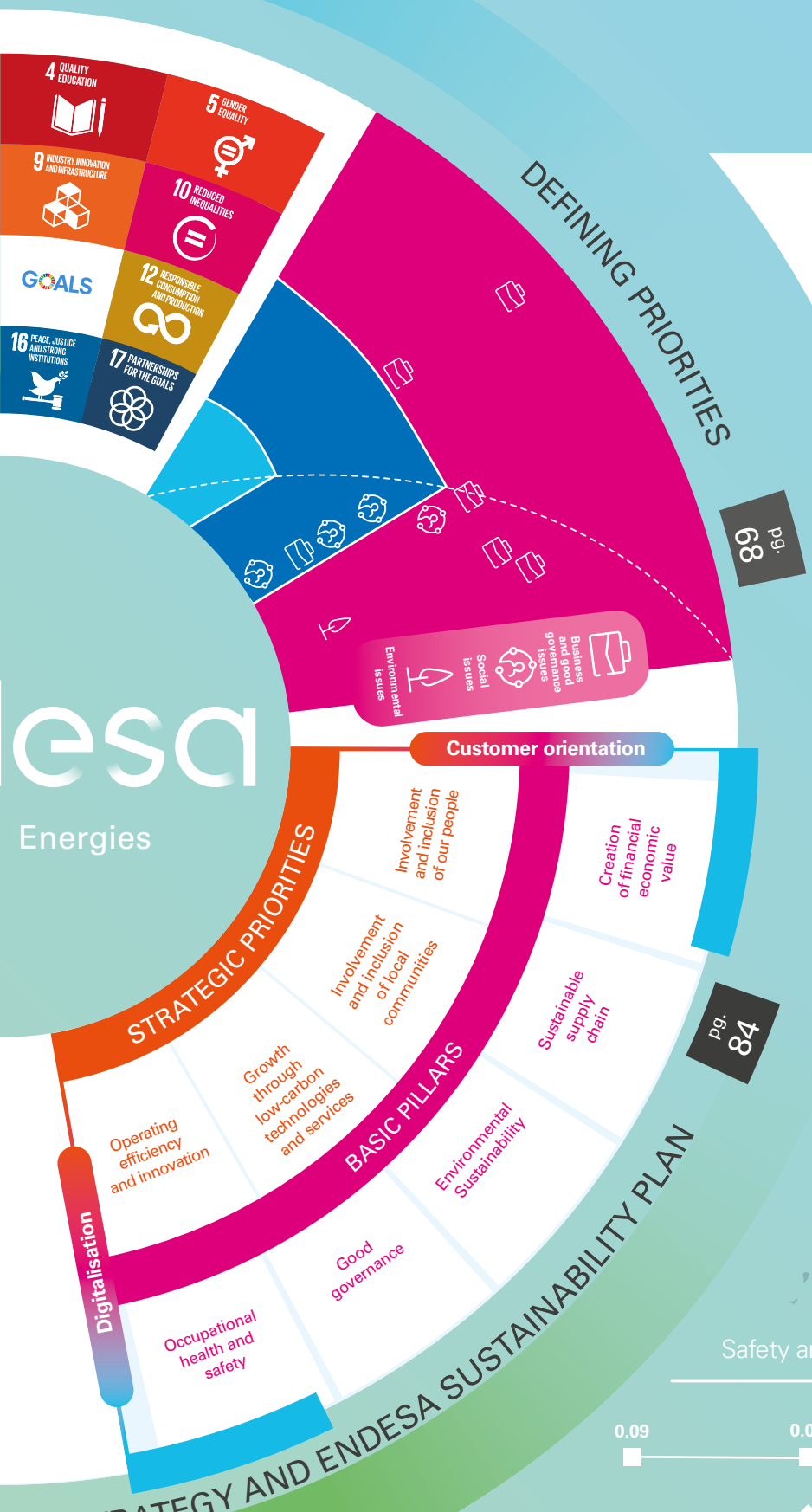
Safety and health of employees and contractors

Accident indices



0.09%
Severity index

0.75%
Frequency index



Letter from the Chairman

102-14

Once again this year, I am pleased to present the ENDESA Sustainability Report. This is the seventeenth report that the company has published, in strict compliance with our commitment to transparency in the areas of economic, social, environmental and ethical responsibility.

At ENDESA, we realised some time ago that in order to ensure maximum medium and long-term profitability for our shareholders, it is essential to integrate those social, environmental and ethical aspects into our business strategy in such a way that they become the basis upon which we carry out our activities. Two relevant events that took place in Spain last year have, once again, reinforced this vision and ENDESA's firm commitment to sustainability. In the month of August, the

National Companies and Human Rights Plan was approved, which transfers the framework of the United Nations Guiding Principles for Companies and Human Rights to Spain, providing clarity on the role that the State and companies must play in protecting, respecting and potentially remedying these Rights. In November, the Spanish Royal Decree-Law was approved, which transposes the European Directive on non-financial information and diversity to Spain, imposing the legal obligation that companies of a certain profile include non-financial information and diversity figures in their management reports.

As such, in 2017 a Human Rights due diligence process was completed, which continued the Human rights policy that the company's Board of Directors put in place in 2013, confirming that ENDESA is maintaining a position of leadership in this field. Furthermore, in 2017, the company has published the non-financial information and diversity statement for the first time, including it in the appendix to its Management Report, thereby maintaining the same procedures for approving, submitting and publishing this Report.

Additionally, ENDESA has reiterated its commitment to the main national and international sustainability initiatives, and has renewed its commitment to the ten United Nations Global Compact principles, an initiative in which it has always been extensively involved both globally and locally as a member of the Executive Committee of the Spanish Network of the Global Compact. Moreover, in 2017, it continued its efforts to achieve the commitments taken on in terms of Sustainable Development Goals, particularly the following:

- **SDG 13. Climate action:** ENDESA has taken on the commitment of attaining 100% decarbonisation of its energy mix by 2050, setting interim goals for 2030 and 2040. Noteworthy in 2017 is the award of 879 MW in the renewable energy auctions carried out in Spain, and the fact that 44% of ENDESA's electricity production was free of CO_2.
- **SDG 9. Industry, innovation and infrastructure:** ENDESA has undertaken to invest 1.4 billion euros to fulfil an essential role in the construction of the future of energy via digitalisation and new value-added products and services (e-solutions). In 2017, ENDESA invested 300 million euros in this area.

- **SDG 7. Accessible and non-polluting energy:** ENDESA has taken on the commitment to ensure that all of its vulnerable customers in Spain have access to electricity. Throughout 2017, the company signed 229 agreements with Public Administrations to prevent vulnerable customers from having their electricity supply cut off. Now, these agreements are being reviewed in order to adapt them to Royal Decree 897/2017, which regulates the figure of the vulnerable consumer, the rates subsidy and other measures for protecting domestic electricity consumers.
- **SDG 5. Quality education:** ENDESA contributes to this goal by supporting education, with the aim of reaching 164,000 beneficiaries of its programmes in this area. Since this goal was established in 2015, there have been over 68,000 beneficiaries.
- **SDG 8. Decent work and economic growth:** ENDESA contributes a total of 241,000 beneficiaries of its social-economic development programmes and, since 2015, has reached over 194,000 beneficiaries.

ENDESA has included all of these objectives in its 2018-2020 Sustainability Plan and, what is more, it has included them in its business vision, thereby demonstrating its endeavour to develop a sustainable business model that seeks to create shared value and that generates maximum returns for shareholders, as well as promoting a positive impact on the social environments in which it operates.

ENDESA is intent on playing a fundamental role in transforming the current energy model to a sustainable model, based on the electrification of demand, with electricity generated from renewable and non-polluting sources, and in which the consumer plays a leading role. In this sustainable and inclusive model, ENDESA works to maintain a leadership position. All of those who make up the company are aware of the relevance of the final objective, of the importance of attaining it and of the need to manage the transition to that new model in a responsible manner.

The people who work at ENDESA are a key element to ensuring the company's leadership. As such, I am pleased to know that we have exceptional and committed human assets that are able to overcome the significant challenges that we face. Our company is aware of the value of this team and, therefore, their professional development, reconciliation, diversity and health and safety is our top priority.

The safety of both our own staff and the companies with which we work is our number one goal. As a result, we constantly and relentlessly strive to reduce the accident rate. Thus, maintaining a decidedly downward trend in frequency rates has been achieved, reaching very low levels in recent years. Despite this, when looking back on our results, we must remember with great sadness the fatal accident of an ENDESA employee, Mr Luis Polo, which took place in December 2017, due to an unfortunate event that has only made our conviction to exercise maximum diligence stronger in order to prevent any type of accident.

Finally, I would like to point out that we are facing a future filled with exciting challenges, and we have excellent human assets to achieve the best possible results.

Borja Prado Eulate
Chairman of ENDESA

Letter from the CEO

102-14

For many years now, ENDESA has understood the need to integrate the principles of sustainability into the development of all its activities and businesses.

This is not simply a statement of intent. It is a reality. As is clearly reflected in the actions of the company - a large part of which is expressed in this Sustainability Report, which I have the honour to present - the sustainable development goals and criteria are incorporated into our projects from their very conception and design phase. We also seek to ensure that the principles of sustainability have a natural place in all our initiatives.

Our Strategic Plan, the latest version of which, for 2018-2020, we presented publicly in November 2017, expressly includes sustainability as one of its

three core disciplines. Among its top priorities, the Plan also encompasses contributing to fulfilling the three United Nations Sustainable Development Goals (SDG), which are more closely related to the company's activities: SDG 7 on access to energy, SDG 9 on innovation and, of course, SDG 13 on the fight against climate change.

I say 'of course' not only because of the unquestionable relevance of the struggle against climate change for all of us, but also because the full decarbonisation of the Spanish energy system, in line with the COP21 Paris agreements, is also one of the focal points of the Strategic Plan that I mentioned above.

ENDESA has proposed that its electricity generation mix be fully free of CO_2 by the year 2050, as well as undertaking to achieve all of the very challenging goals to reduce emissions by the years 2030 and 2040. To this effect, as is outlined in the Plan itself, all of our investments in new generation capacity focus on and will continue to be focused exclusively on renewable technologies, we are decisively promoting e-mobility, and we are fostering the increasing electrification of the final energy demand by replacing consumption of polluting fuels, etc..

On the other hand, the rest of our Plan's strategic objectives are also very closely related to sustainability. This is undoubtedly true of the great effort planned to give a real boost to the digitalisation of the company, both in terms of its external and its internal activities. The same can be said of modernisation and automation of the networks, in order to turn them into smart grids and facilitate the full integration of renewable energies and distributed generation. Following the same outlook, a new business line is being created that will focus on solutions for new products and services with added value for our customers. Nor can we forget our commitment to operational efficiency to ensure a rational and optimised use of all of our resources.

Hence, the three vertical strategies of our Plan (decarbonisation, smart grids and focusing on the customer) and its three core disciplines (digitalisation, efficiency and, most of all, sustainability) are fully in line with the company's desire to integrate the principles of sustainable development into our activities and businesses.

This endeavour, this commitment, is not a new concept for us, as proven by our

track record over the last few years. The year 2017 was no exception to this. As will become evident from the pages that follow, the company has managed to make significant progress in its decision to contribute to the establishment of a new, fully sustainable energy model.

I would like to highlight the following as examples, which are in no way comprehensive:

- In 2017, ENDESA managed to reduce its absolute CO_2 emissions of by 32% compared to 2005 and 44% of its electricity production was free of CO_2, in spite of the negative impact of the scarce availability of water during the year. Furthermore, 879 MW of renewable power was awarded in the auctions of these energies called by the Ministry of Energy, and already in 2018 we have acquired 132 MW in wind farms.
- In distribution, we continued to roll out our smart meters, reaching 11.2 million meters installed by the end of the year, i.e. 93% of the total number.
- The company invested around 300 million euros in its digital transformation, notably the extension, modernisation and digitalisation of its electrical networks.
- It created a new e-solutions business line to sell value-added products and services that meet the new energy needs of our customers through e-mobility proposals, public street lighting, digital solutions for managing electricity consumption in homes, etc.
- It remained the leader in domestic customer satisfaction for the eighth year in a row, with a rating of 7.03, with a 2% lead over its competitors.
- ENDESA continued to apply its shared value creation focus when carry out its activities, bringing together the company's interests and the priorities and needs of the local communities where it operates. To this end, it invested over 14 million euros on the execution of 166 sustainability projects that benefited over 950,000 people.
- It continued its endeavour to nurture the development of the people who work at the company, promoting professional development, meritocracy, a work-life balance, and diversity. In particular, it continued to increase the percentage of women on its staff, reaching 23% in 2017 and 44% of all new hires in 2017 are women.

These and other actions confirmed ENDESA in 2017 as a benchmark company for investors who are not only concerned about short-term financial returns, but also about the strategy and performance of the companies on the long term and their responsible management of the business. This is evidenced by the fact that over 40.5% of the company's free float is in the hands of socially responsible investors. Additionally, in 2017, ENDESA managed to be included for the first time in the prestigious FTSE4Good Index, on top of its already established presence in the other indices (Dow Jones Sustainability Index, Euronext Vigeo, STOXX Global ESG Leaders and Carbon Disclosure Project). It has improved its performance over the last year in several of these.

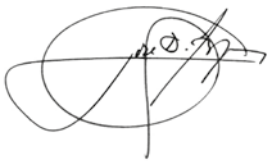
In short, all of these steps forward make us look to the future with optimism and with the certainty that ENDESA will continue to play a decisive role in transforming the Spanish energy sector and that it will continue to be a benchmark for business in the area of sustainability.

Finally, I cannot end this introduction without expressing my most sincere condolences to the family, friends and colleagues of Mr Luis Polo Polo, the company employee who sadly passed away as a result of an occupational accident in December 2017, a feeling which I am sure is echoed by all those who work at ENDESA.

The continuing safety of all of those who work for the company, both in terms of our own staff and that of companies with which we collaborate, is an essential pillar at ENDESA and, certainly, of the Enel Group to which we belong. As such, this event requires us, more than ever, to redouble our efforts to achieve our top priority, zero accidents, by raising awareness and promoting knowledge of safety procedures and standards, their systematic application at all times and the meticulous analysis of any risk or incident.

The continuous improvement of the company's accident frequency index, which has been reduced in recent years, reaching 0.75 in 2017, is a clear sign of the priority that the company gives to this issue; however, in no way does this serve, nor will it serve, to compensate for the loss of a colleague.

As a company firmly committed to sustainability, the goal of achieving zero accidents will always be our primary concern.



José D. Bogas Gálvez
CEO of ENDESA

01

Getting to know ENDESA

1. Who we are

102-1

1.1. ENDESA in figures

102-7 EU1 EU2 EU3

	2015	2016	**2017**
GROSS INCOME FROM OPERATIONS (EBITDA) (millions of euros)	3,039	3,432	3,542
PROFITS AFTER MINOR TAXES (millions of euros)	1,086	1,411	1,463
SHARE CAPITAL (millions of euros)	1,271	1,271	1,271
NON-CURRENT FINANCIAL DEBT (MILLIONS OF EUROS)	4,680	4,223	4,414
FINAL WORKFORCE.			
Spain and Portugal	**10,000**	**9,694**	**9,706**
GROSS INSTALLED CAPACITY (MW)			
Spain and Portugal	**22,164**	**23,691**	**23,678**
Hydroelectric	4,765	4,765	4,752
Conventional power stations[1]	8,278	8,130	8,130
Nuclear power stations[1]	3,443	3,443	3,443
Combined Cycle	5,678	5,678	5,678
Renewables and Cogeneration	—	1,675	1,675
ELECTRICITY GENERATION (GWh)			
Spain and Portugal[2]	**73,061**	**69,831**	**78,648**
Hydroelectric	7,176	7,173	5,004
Conventional power stations[1]	32,634	28,100	31,906
Nuclear power stations[1]	25,756	25,921	26,448
Combined Cycle	7,495	7,425	11,849
Renewables and Cogeneration	—	1,212(5)	3,441
SALES OF ELECTRICITY TO END USERS (GWh)			
Spain and Portugal	**92,899**	**93,490**	**96,513**
Regulated market	14,934	13,815	12,919
Deregulated market[3]	77,965	79,675	83,594
NUMBER OF ELECTRICITY CUSTOMERS[6] (thousands)			
Spain and Portugal	**11,112**	**11,016**	**10,848**
Regulated market[4]	6,029	5,593	5,255
Deregulated market[3]	5,083	5,423	5,593
ENERGY DISTRIBUTED[2] (GWh)			
Spain and Portugal	**114,190**	**115,602**	**117,961**

[1] Figures consolidated by ENDESA.
[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 the takeover of Enel Green Power España by ENDESA, 27 July 2016.
[6] Supply points.

1.2. Main activities

102-1 102-2

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 supplies electricity and gas in other European markets, and other value-added products and services (VAPS) 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

102-2 102-4 102-6

ENDESA generates, distributes and sells electricity mainly in Spain and Portugal and, to a lesser extent, supplies electricity and gas to other European markets, in particular Germany, France, Belgium, France and the Netherlands, from its platform in Spain and Portugal.

ENDESA does not sell any products or services that are prohibited in certain markets, are the subject of discussion between stakeholders or constitute a topic of public debate.

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

1.3.1. Market in Spain

> **Generation:** ENDESA carries out its electricity generation activities in the mainland system and in Non-Mainland Territories (TNP), which include the Balearic and Canary Islands and the self-governing cities of Ceuta and Melilla.
  - Conventional electricity 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 the price is regulated. Generation with renewable energies in the Non-Mainland Territories offers 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

102-2 102-5 102-45

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

For the organisation of its Business Lines, ENDESA works primarily through the following companies:

1.4.1. Power generation: ENDESA Generación

102-45 102-5

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 Nuclenor, S.A., which owns the Nuclear Plant at Santa María de Garoña (Burgos).

At 31 December 2017, ENDESA's installed capacity at ordinary regime facilities was 21,057 MW, of which 16,483 MW corresponded to the mainland electricity system and the remaining 4,574 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 1,675 MW.

Generation by ENDESA in Spain and Portugal reached a net total production of 78,631 GWh in the 2017 financial year.

1.4.2. Renewable energies: ENDESA Renovables

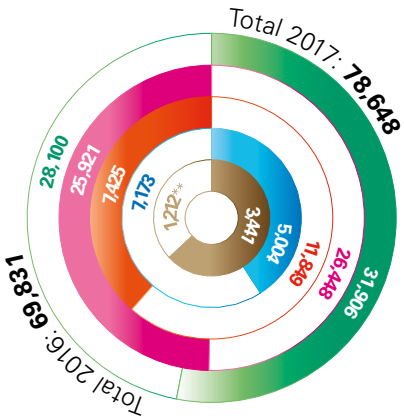
102-10

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.

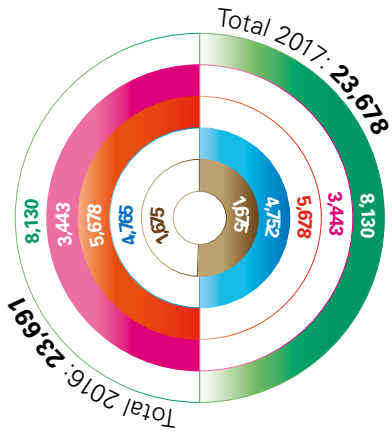
ENEL Green Power España, S.L.U. (EGPE) is a company devoted, directly or through subsidiaries, to the production of electrical power generated within Spanish territory from renewable sources, and currently has [91] wind, hydro and solar facilities, with a total installed capacity at 31 December 2017 of 1,675 MW and a production of 3,441 GWh in the 2017 financial year.

As a result of the capacity auctions held on 17 May 2017 and 26 July 2017, ENDESA, through ENEL Green Power España, S.L.U. (EGPE) was awarded wind capacity of 540 MW and photovoltaic capacity of 339 MW.

ENDESA's production of electrical power* (GWh)



Gross installed capacity (MW)



Conventional thermal · Thermal nuclear · Combined cycle · Hydroelectric · Renewables and cogeneration

* At power plant bus bars.
** Data since the date of the takeover of Enel Green Power España by ENDESA, 27 July 2016.

1.4.3. Power distribution: ENDESA Red

102-45 102-5

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 2017, ENDESA distributes electricity in 27 Spanish provinces in ten autonomous communities (Andalusia, Aragon, Balearic Islands, Canary Islands, Castile and León, Catalonia, the Valencian Community, Extremadura, Galicia and Navarre) covering a total area of 195,279 km^2 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 power plant bus bars, reached 117,961 GWh during the 2017 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 47.4 6% 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.

1.4.4. Marketing of energy: ENDESA Energía

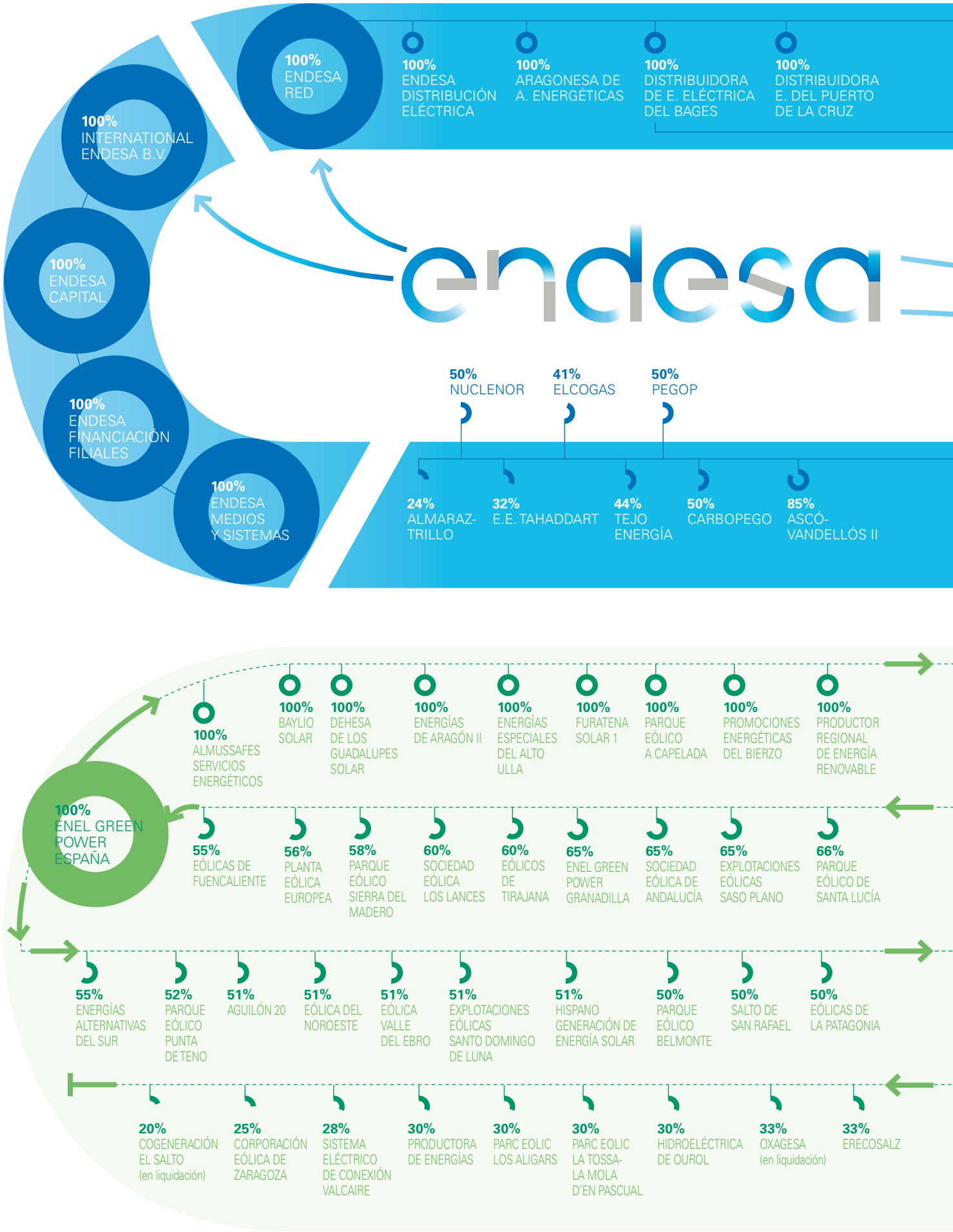
102-45 102-5

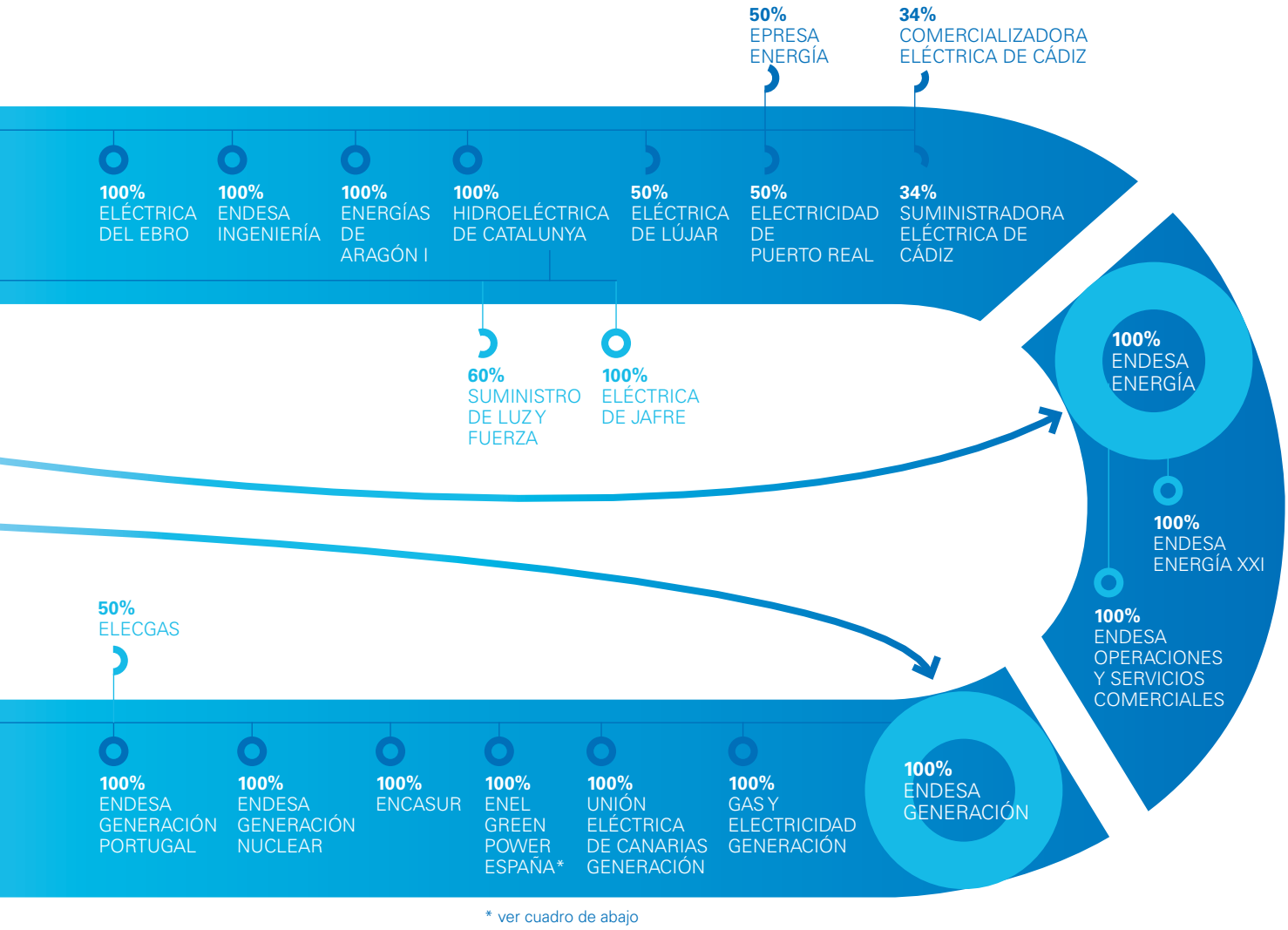
Its main business is the supply of energy and value-added products and services (VAPS) to customers wishing to exercise their right to choose their supplier and take up the service on the deregulated market.

ENDESA Energía, S.A.U. 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 of Germany, Belgium, France, the Netherlands and Portugal.

In 2017, ENDESA provided 96,513 GWh to 10.8 million supply points in the electricity market. ENDESA supplied total gas of 79,834 GWh in 2017, and at 31 December 2017, its customer portfolio in the conventional natural gas market was made up of 1.6 million supply points.

There follows a corporate map of ENDESA showing the situation of its main investees at 31 December 2017 *(see following double page)*:


100% ENDESA RED
100% ENDESA DISTRIBUCIÓN ELÉCTRICA
100% ARAGONESA DE A. ENERGÉTICAS
100% DISTRIBUIDORA DE E. ELÉCTRICA DEL BAGES
100% DISTRIBUIDORA E. DEL PUERTO DE LA CRUZ
100% INTERNATIONAL ENDESA B.V.
100% ENDESA CAPITAL
100% ENDESA FINANCIACIÓN FILIALES
100% ENDESA MEDIOS Y SISTEMAS
endesa
50% NUCLENOR
41% ELCOGAS
50% PEGOP
24% ALMARAZ-TRILLO
32% E.E. TAHADDART
44% TEJO ENERGÍA
50% CARBOPEGO
85% ASCÓ-VANDELLÓS II
100% ENEL GREEN POWER ESPAÑA
100% ALMUSSAFES SERVICIOS ENERGÉTICOS
100% BAYLIO SOLAR
100% DEHESA DE LOS GUADALUPES SOLAR
100% ENERGÍAS DE ARAGÓN II
100% ENERGÍAS ESPECIALES DEL ALTO ULLA
100% FURATENA SOLAR 1
100% PARQUE EÓLICO A CAPELADA
100% PROMOCIONES ENERGÉTICAS DEL BIERZO
100% PRODUCTOR REGIONAL DE ENERGÍA RENOVABLE
55% EÓLICAS DE FUENCALIENTE
56% PLANTA EÓLICA EUROPEA
58% PARQUE EÓLICO SIERRA DEL MADERO
60% SOCIEDAD EÓLICA LOS LANCES
60% EÓLICOS DE TIRAJANA
65% ENEL GREEN POWER GRANADILLA
65% SOCIEDAD EÓLICA DE ANDALUCÍA
65% EXPLOTACIONES EÓLICAS SASO PLANO
66% PARQUE EÓLICO DE SANTA LUCÍA
55% ENERGÍAS ALTERNATIVAS DEL SUR
52% PARQUE EÓLICO PUNTA DE TENO
51% AGUILÓN 20
51% EÓLICA DEL NOROESTE
51% EÓLICA VALLE DEL EBRO
51% EXPLOTACIONES EÓLICAS SANTO DOMINGO DE LUNA
51% HISPANO GENERACIÓN DE ENERGÍA SOLAR
50% PARQUE EÓLICO BELMONTE
50% SALTO DE SAN RAFAEL
50% EÓLICAS DE LA PATAGONIA
20% COGENERACIÓN EL SALTO (en liquidación)
25% CORPORACIÓN EÓLICA DE ZARAGOZA
28% SISTEMA ELÉCTRICO DE CONEXIÓN VALCAIRE
30% PRODUCTORA DE ENERGÍAS
30% PARC EOLIC LOS ALIGARS
30% PARC EOLIC LA TOSSA-LA MOLA D'EN PASCUAL
30% HIDROELÉCTRICA DE OUROL
33% OXAGESA (en liquidación)
33% ERECOSALZ



* ver cuadro de abajo

100% PRODUCTOR REGIONAL DE ENERGÍAS RENOVABLES III
100% SEGUIDORES SOLARES PLANTA 2
96% SISTEMAS ENERGÉTICOS MAÑÓN ORTIGUERA
90% EXPLOTACIONES EÓLICAS SIERRA COSTERA
90% EXPLOTACIONES EÓLICAS SIERRA LA VIRGEN
90% PARAVENTO
90% PARQUE EÓLICO FINCA DE MOGÁN
82% PARQUE EÓLICO DE SAN ANDRÉS
80% ENERGÍAS ESPECIALES DE PEÑA ARMADA

67% ENERGÍAS DE GRAUS
67% VIRULEIROS
70% EXPLOTACIONES EÓLICAS DE ESCUCHA
74% EXPLOTACIONES EÓLICAS EL PUERTO
75% PARQUE EÓLICO DE BARBANZA
76% PARQUE EÓLICO MONTES DE LAS NAVAS
77% ENERGÍAS ESPECIALES DE CAREÓN
80% PARQUE EÓLICO CARRETERA DE ARINAGA
80% EÓLICAS DE AGAETE

50% ENERGÍAS ESPECIALES DEL BIERZO
50% SOCIEDAD EÓLICA EL PUNTAL
50% EÓLICAS DE TENERIFE
50% C. EÓLICO MARINO CABO DE TRAFALGAR (en liquidación)
45% SANTO ROSTRO COGENERACIÓN (en liquidación)
45% TERMOTEC ENERGÍA (en liquidación)
40% UFEFYS (en liquidación)
40% BOIRO ENERGÍA
40% DEPURACIÓN DESTILACION RECICLAJE
40% EÓLICAS DE FUERTEVENTURA

33% PROYECTOS UNIVERSITARIOS DE ENERGÍAS RENOVABLES
33% CENTRAL HIDRÁULICA GÜEJAR-SIERRA
33% TOLEDO PV
36% SOTAVENTO GALICIA
37% MINICENTRALES DEL CANAL IMPERIAL-GALLUR
38% COMPAÑÍA EÓLICA TIERRAS ALTAS
40% EÓLICAS DE LANZAROTE
40% YEDESA COGENERACIÓN (en liquidación)
40% EÓLICA DEL PRINCIPADO

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 2017 have an installed power at ordinary regime of 1,483 MW distributed via its share in Tejo Energy (628MW) and Elecgas (855 MW).

ENDESA has a 43.75% stake in Tejo Energy, the company owning the coal power plant, and 50% in Elecgas, the 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 4,188 GWh and 3,643 GWh respectively (3,654 GWh corresponding to ENDESA's share), representing 15.8% 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 2017 ENDESA received 12.6 million euros in dividends from all the companies shared.

The deregulation process continued to progress in Portugal during 2017 in the Large Customer (Medium Voltage) and Company (Special Low Voltage) segments. The power supplied in the deregulated market reached 92% of Portugal's total consumption.

ENDESA continues to be the second largest operator in the Portuguese deregulated electricity market, with a share of 16.2%. By the end of the year, ENDESA had supplied 7.6 TWh to more than 205,000 supply points.

Besides this strong position in the marketing of electricity, in the Portuguese gas market ENDESA supplied 4.8 TWh to end consumers, 30% more than in 2016. In addition, ENDESA continued with its commitment to the marketing of Value-Added Products and Services.

During 2017, ENDESA served almost 205,000 supply points in Portugal, distributed as follows: more than 6,000 Medium Voltage points, more than 4,000 Special Low Voltage points and more than 194,000 Normal Low Voltage points. The electricity supplied in 2017 reached a total value of almost 7.6 GWh. With regard to gas, almost 4.8 GWh were supplied, and more than 42,000 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 384 MW combined cycle power plant located to the north of the town of Asilah, near the river Tahaddart. In 2017, the plant's production totalled 2,626 GWh (840 GWh corresponding to ENDESA's 32% stake).

In 2017, Energie Electrique de Tahaddart distributed the dividend for the 2016 income, of which ENDESA received 6.4 million euros.

In **France**, ENDESA supplied over 18,260 GWh of gas during 2017, 25.4% more than in the previous year. At the close of the year, it had almost 3,000 active gas supply points.

In **Germany**, ENDESA supplied over 2,338 GWh of electricity and over 70 GWh of gas, with a total of more than 600 active supply points.

In **the Netherlands**, the Company supplied over 1,063 GWh of electricity and over 1,400 GWh of gas, with more than 200 active supply points for electricity and more than 100 for gas at the close of the year.

Finally, **Andorra**, ENDESA supplied almost 233 GWh of electrical power in 2017.

1.4.5. e-Solutions

With its new e-Solutions business line, ENDESA has taken a new step forward to lead the transformation of the energy sector, always placing the customer at the centre of its strategy. e-Solutions strengthens ENDESA's positioning as a supplier of energy-related services, taking advantage of the opportunities provided by the new energy context by offering innovative solutions and business models to customers.

e-Solutions aims to satisfy customers' needs through four lines of products and services: e-Home, e-Industries, e-City and e-Mobility:

- e-Home includes products and services relating to maintenance, repair, insurance, energy-efficient equipment and the connected home, marketed to domestic customers and small businesses.
- e-Industries covers all products and services relating to monitoring, auditing, consulting and energy infrastructure for industrial and commercial customers.
- The products and services of the Public Administration are incorporated in the e-City product line, which includes public lighting services.
- e-Mobility promotes e-mobility through recharge solutions for residential, industrial and commercial customers alike, as well as the development of the network of public-access recharging infrastructures.

1.4.6. Acquisition of systems and telecommunications (ICT) business

102-10

On 29 December 2016 ENDESA, S.A., through its wholly owned subsidiary ENDESA Medios y Sistemas, S.L.U., formalised the acquisition from ENEL Iberia, S.L. of the systems and telecommunications (ICT) business relating to ENDESA's scope of activity. The effective date of the transaction was 1 January 2017. The operation entailed a reorganisation of ENDESA's ICT support activities to make them more flexible in order to adapt to ENDESA's corporate scope, by simplifying internal and administrative management procedures.

2. Commitment to a sustainable energy model

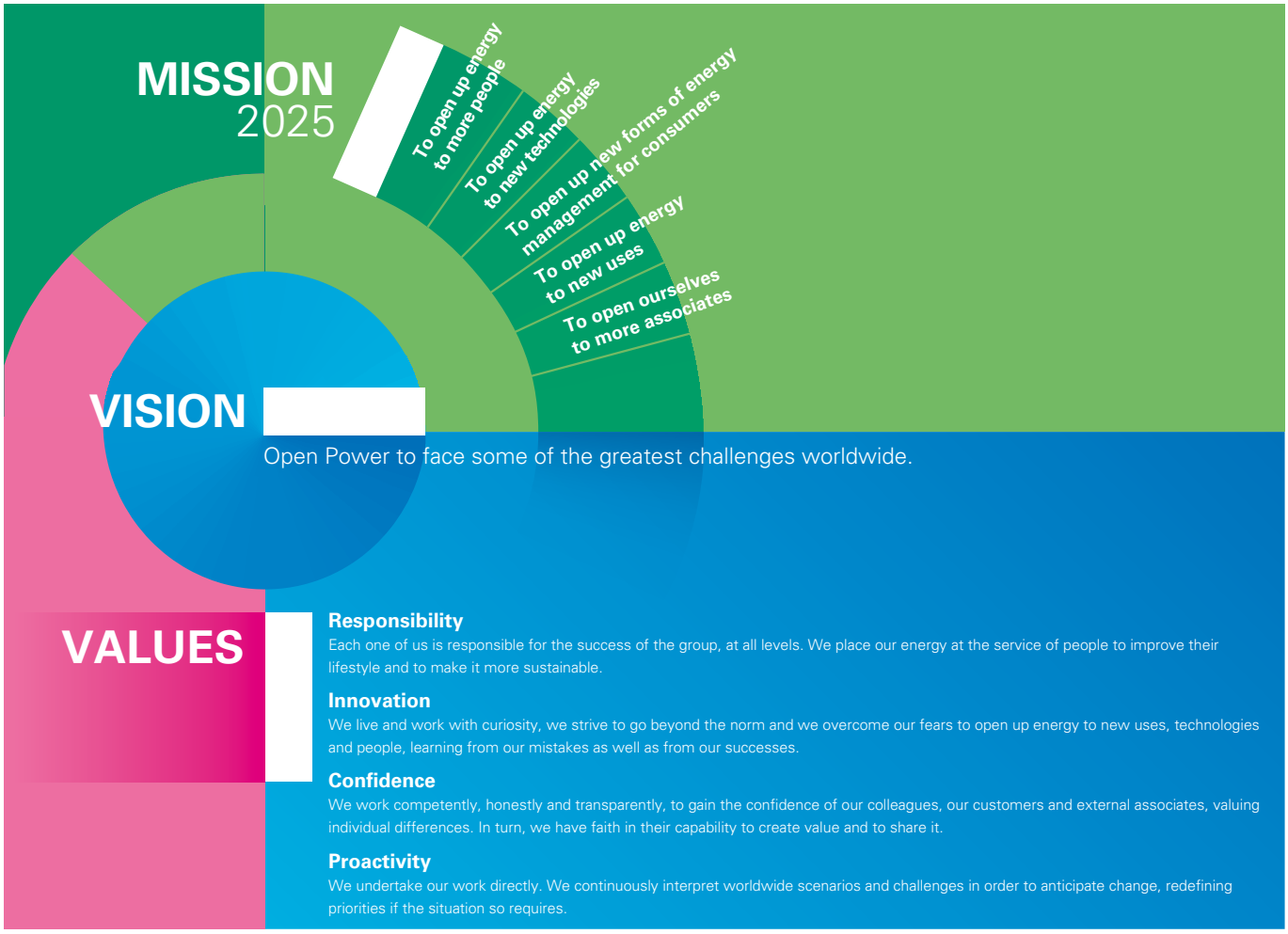
2.1. The Open Power strategic statement

ENDESA, like all companies belonging to the Enel Group, has always been at the forefront of development in the energy sector, bringing safe, affordable power to millions of persons all over the world.

Aware of the profound change currently being experienced by industry, the Group is immersed in a new, more open, participative and digital era of energy. 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.



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 sustainable development programme 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 statement.

Therefore, in 2015 ENDESA implemented its Sustainability policy to incorporate the *'Open Power'* strategic statement and to establish the foundations for successfully overcoming the energy challenges that face modern society.

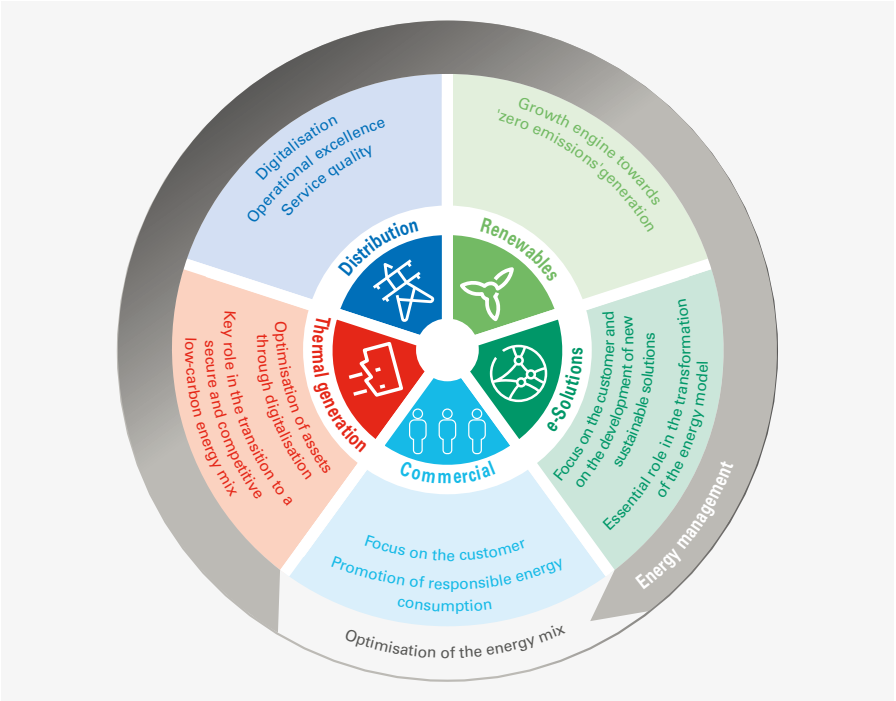
The future commitments set down in this policy are the guidelines and foundations for ENDESA's performance in the management of its business activity. Compliance with this policy is expressly promoted by the Company's management; it concerns employees, contractors and vendors, and is presented for assessment 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 based on ENDESA's different Sustainability Plans.

Our future commitments

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, 103-2, 103-3 Evaluation of management focus – human rights | 103-1, 103-2, 103-3 Management focus – child labour | 103-1, 103-2, 103-3 Management focus – forced labour | 409-1 | 103-1, 103-2, 103-3 Management focus – 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 commitmen t to the Ten Principles of the Global Compact, the Guiding Principles on Business and Human Rights, and to the Seventeen Sustainable Development Goals.

	2000	2011	2015
	The Ten Principles of the Global Compact	The Guiding Principles on Business and Human Rights	The 17 Sustainable Development Goals
United Nations Initiatives	UN Global Compact – Apoyamos el Pacto Global	*Protect, Respect and Remedy*	
The Response	Integration of the Principles in the Code of Conduct and internal regulations Preparation of an internal mechanism to guarantee compliance with the Ten Principles	Development of the Human Rights Policy Conduct of the Human Rights Due Diligence and development of the action plan	The Enel Group's commitments and contributions by ENDESA Business and Sustainability strategy in line with the 2030 Agenda

2.4.1. The ten principles of the Global Compact

ENDESA was one of the first Spanish companies to adopt the Global Compact, doing so in 2002, incorporating its principles in its Corporate Integrity standards and Sustainability Policy and Strategy. ENDESA's corporate conduct in all the territories where it is present is totally in line with this commitment due to its extension to all areas of influence.

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 sustainable 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 Level of the United Nations Global Compact in 2017, 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 inform 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 2017, ENDESA maintained its commitment to the Global Compact. To this end, ENDESA has played an active role in the Global Compact Network Spain – to which its Executive Committee belongs – particularly concerning the promotion of the Sustainable Development Goals and the Guiding Principles on Business and Human Rights.

2.4.2. The Guiding Principles on Business and Human Rights

103-1, 103-2, 103-3 Evaluation of management focus – human rights

ENDESA has a permanent commitment to the respect and furtherance of Human Rights. This commitment is reflected in its corporate policies and its support for the United Nations' Guiding Principles on Business and Human Rights.

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 on the field of Human Rights.

Thus, subsequent to the passing of the Guiding Principles on Business and Human Rights, ENDESA decided to formally adapt its historic commitment to the respect and furtherance of Human Rights to these new Guiding Principles, integrating them into the management of corporate activity.

Consequently, in 2013 ENDESA's Board of Directors approved the Human Rights policy, thus continuing with the recommendations established by the Guiding Principles.

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. For more information about this process, see *section 6* of this chapter.

2.4.3. The Sustainable Development Goals

The corporate sector, being an agent for economic, social and environmental progress, has been identified as a key player for the attainment of the 17 United Nations Sustainable Development Goals, acknowledging that development will not be achieved without the active participation of the corporate sector.

ENDESA is firmly committed to the new United Nations Sustainable Development Agenda and acknowledges the historic opportunity represented by the new Sustainable Development Goals and the involvement of the private sector to overcome the main challenges facing society, from the struggle against climate change to the eradication of poverty, and economic and social progress.

Against this background, the ENEL Group has publicly undertaken to make a specific contribution to 4 of the 17 Sustainable Development Goals:

The Group's public commitments enel to the United Nations Sustainable Development Goals

13 CLIMATE ACTION	Struggle against climate change **< 350 gCO_2/kWh in 2020**
7 AFFORDABLE AND CLEAN ENERGY	Affordable and non-polluting access[1] **3 million people**
4 QUALITY EDUCATION	Quality education **800,000 people**
8 DECENT WORK AND ECONOMIC GROWTH	Decent work and economic growth **3 million people**

[1] Cumulative figure for the 2015-2020 period.

ENDESA embraces these commitments and adapts them to the context in which it operates. Thus, since its 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:

endesa's contribution to the United Nations Sustainable Development Goals

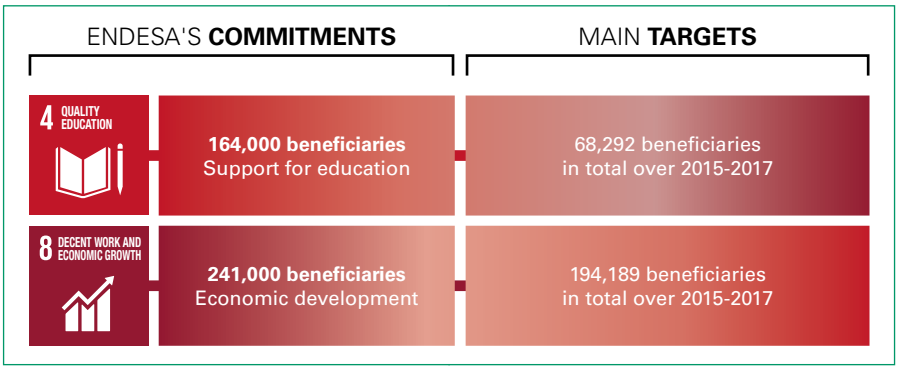
ENDESA'S **COMMITMENTS**	MAIN **ACHIEVEMENTS IN 2017**
13 CLIMATE ACTION: **100%** decarbonisation of the energy mix by 2050	Renewables: acquisition of 879 MW by auction and purchase of 132 MW in operation 44% CO_2-free production
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE: **~1,400 million €**[1] (+400€million) to lead the energy future through digitalisation and e-solutions	~300 € million invested in 2017 New 'e-solutions' business line
7 AFFORDABLE AND CLEAN ENERGY: Access to electricity for all vulnerable customers	~229 agreements signed with the Public Administration to avoid electricity supply disconnection for vulnerable customers[2]

[1] This commitment has been updated in accordance with the new 2018-2020 Strategic Plan and refers to the 2017-2020 period.
[2] Under review to adapt the agreements to the new Royal Decree 897/2017 of 6 October on vulnerable consumers, the rates subsidy and other measures to protect vulnerable domestic electricity consumers.

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.

However, although these are the priority SDGs for ENDESA and therefore those that it will focus on most strongly in the coming years, it will also concentrate on others of the 17 Goals. To this end, the ENDESA 2018-2020 Sustainability Plan sets out the roadmap for the next three years in order to contribute to the 2030 Agenda, aligning its sustainability strategy with this universal framework. For further information, see the chapter *'ENDESA's Sustainability Plan'*.

Finally, the chapter *'Our Performance'* details ENDESA's compliance and contribution throughout 2017 to each of the Sustainable Development Goals acted upon through its business activity.



2.5. Participation in sustainability forums and associations

102-13

ENDESA participates proactively in a number of forums and associations working to promote sustainable development. Participation in these types of organisations allows ENDESA to demonstrate its commitment to sustainability, 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 2017 are provided below:

Organisation	Type of association	ENDESA's position	ENDESA's participation in 2017
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	> 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	> Energy efficiency > Sustainable mobility > Socially Responsible Investment > Corporate biodiversity management > Integration of CR in the company
Forética	Multi-stakeholder association and national partner of WBCSD and CSR Europe	Development partner	> Climate change > Integrity, good governance and transparency > Circular economy
Transparency International España	Private not-for-profit entity, specialised in transparency	Member of the Businesses Working Group	> Transparency, corporate governance and compliance
unesa	Business association of the electricity sector	Member of the CSR Committee	> Management of CSR in the electricity sector
AEC	Private not-for-profit entity, specialised in quality	Member of the CSR Working Group	> CSR and business strategy

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 struggle 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's participation in 2017
CEOE	National business association	Member of the committee on industry, international relations, health and consumer affairs, economy and finance	> Participation in the various committees
Cámara de Comercio de España	National business association	Plenary Chamber members	> Participation in the management of the Chamber and in its various committees
UNESA	Business association of the electricity sector	Executive partners and members of the CSR Committee	> Participation in working documents, committees on the different energy areas, forums, meetings > Management of CSR in the electricity sector
sedigas	Association of the gas sector	Executive partners, presence on 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
Club 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 meetings, development of position papers on energy
IEE	Private not-for-profit and non-political association, mainly funded through annual contributions from businesses	Present directly and also through UNESA	> Participation in the various committees

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 Global Compact Network Spain, which aims to share good practices in the business sector on this issue and to design methodologies that help businesses – especially SMEs – to integrate human rights in their business strategies.

ENDESA has 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.

2.7. Participation in environmental forums and associations

Organisation	Type of association/ initiative	ENDESA's position	ENDESA's participation in 2017
unesa	Business association of the electricity sector	Member of the Environment and Environmental Policies Committee	> Management of the Environment and Climate Change
eurelectric powering people	Eurelectric	Member	> Participation in environment and climate change groups
	Spanish Environment Club (CEMA)	Associate	> Not-for-profit association for fostering, at the national level, the awareness, dissemination and development of an environmental culture compatible with sustainable progress and clean production
	Biodiversity Foundation	Signatory	> ENDESA is a signatory to the Biodiversity Compact led by the Biodiversity Foundation
AENOR	Spanish Association for Standardisation	Participant in committees	> Participation in committees on renewables, climate change, environmental management, energy efficiency
Grupo Español Crecimiento Verde	Association formed to further public-private collaboration and to move forward together in the environmental challenges currently posed	Founder Partner	> Circular Economy > Climate Change
Grupo Español Crecimiento Verde	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
#PORELCLIMA	Comunidad #PorElClima	Participant	> Network for action against climate change
-CO2 SUMANT ESFORÇOS	Voluntary agreements for the reduction of greenhouse gas emissions	Participant	> Audit of the activities of ENDESA Distribución in Catalonia
CDP	Carbon Disclosure Project	Participant	> Participation in the climate change, supply chain and water initiative
NAZCA Tracking Climate Action	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, subnational governments and investors.

(continued)

Organisation	Type of association/ initiative	ENDESA's position	ENDESA's participation in 2017
COP23 FIJI BONN 2017	COP23	Participant	> ENDESA attended the Conference of the Parties to the United Nations Framework Convention on Climate Change from 7 to 17 November 2016.
INNOVATE4 CLIMATE	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 (a relaunch of the Carbon Expo)
	Spanish Technological Platform for Energy Efficiency (PTE-EE)	Participant	> Management of energy efficiency
FutuRed	Platform for Electricity Networks of the Future (FUTURED)	Participant	> Management of networks

3. Good Governance Model

3.1. Governance and sustainability management system

102-18 | 102-19 | 102-20 | 102-21 | 102-26 | 102-27 | 102-28 | 102-29 | 102-30 | 102-31 | 102-32

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, including the following tasks:

- Reviewing the company's corporate social responsibility policy, ensuring that it is oriented toward the creation of value.
- Following-up on the corporate social responsibility strategy and practices and assessing their 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.

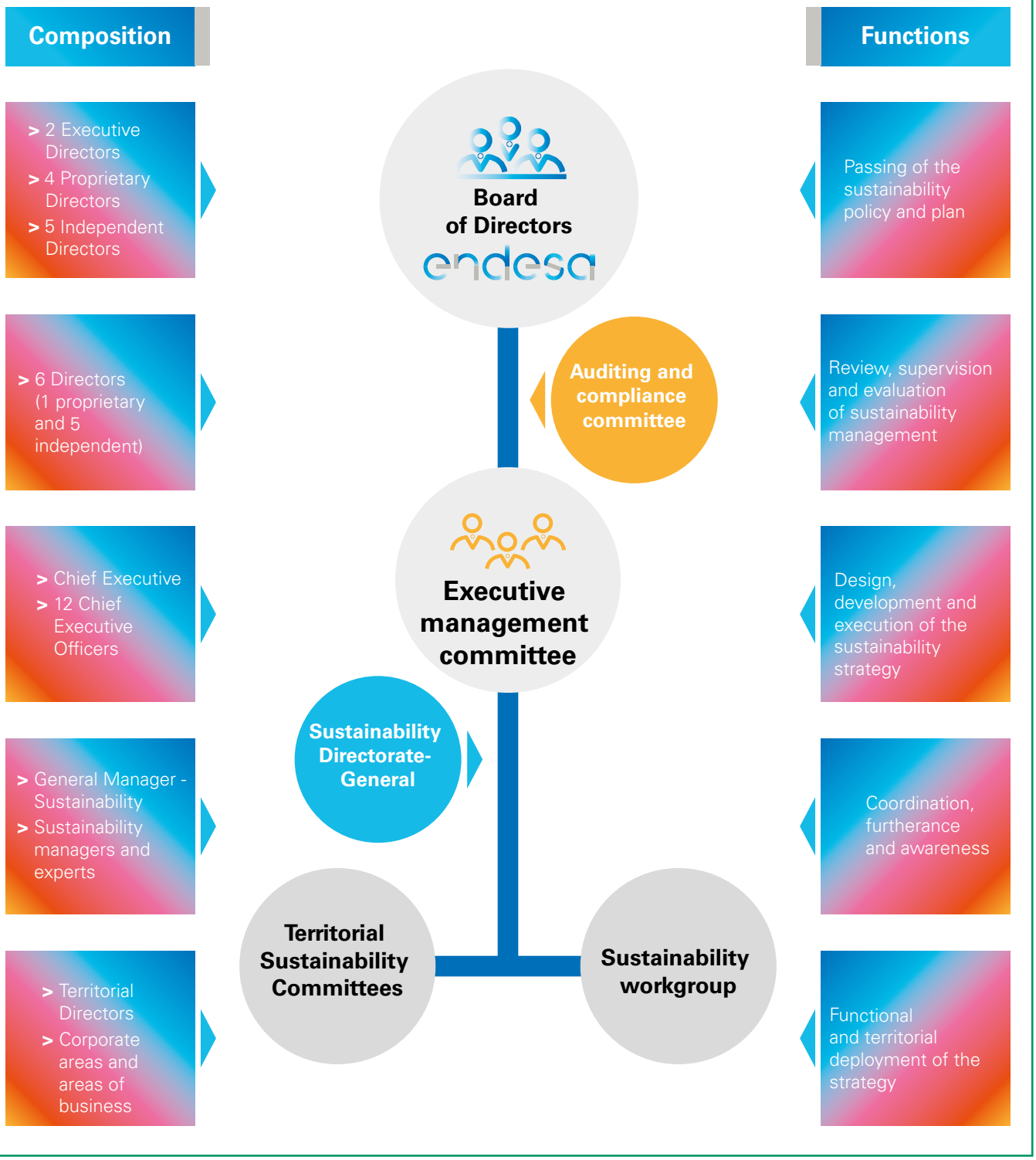
On the other hand,, the Executive Management Committee, composed of the CEO and ENDESA's General Managers – including the Sustainability Department – is the executive body in charge of developing and implementing ENDESA's sustainability strategy and ensuring the integration of the social, environmental 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, Corporate Affairs, Auditing, Relationship with Investors, Human Resources, Environment, Regulatory, Media, 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 lines of action established in the Sustainability Plan, providing a better setting for ENDESA's activity and mapping the objectives and commitments on 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.

Sustainability Management and Governance System Model



3.2. Participation of shareholders

On 26 April 2017, ENDESA held its Ordinary General Shareholders' Meeting, at which 85.62% of the share capital was represented.

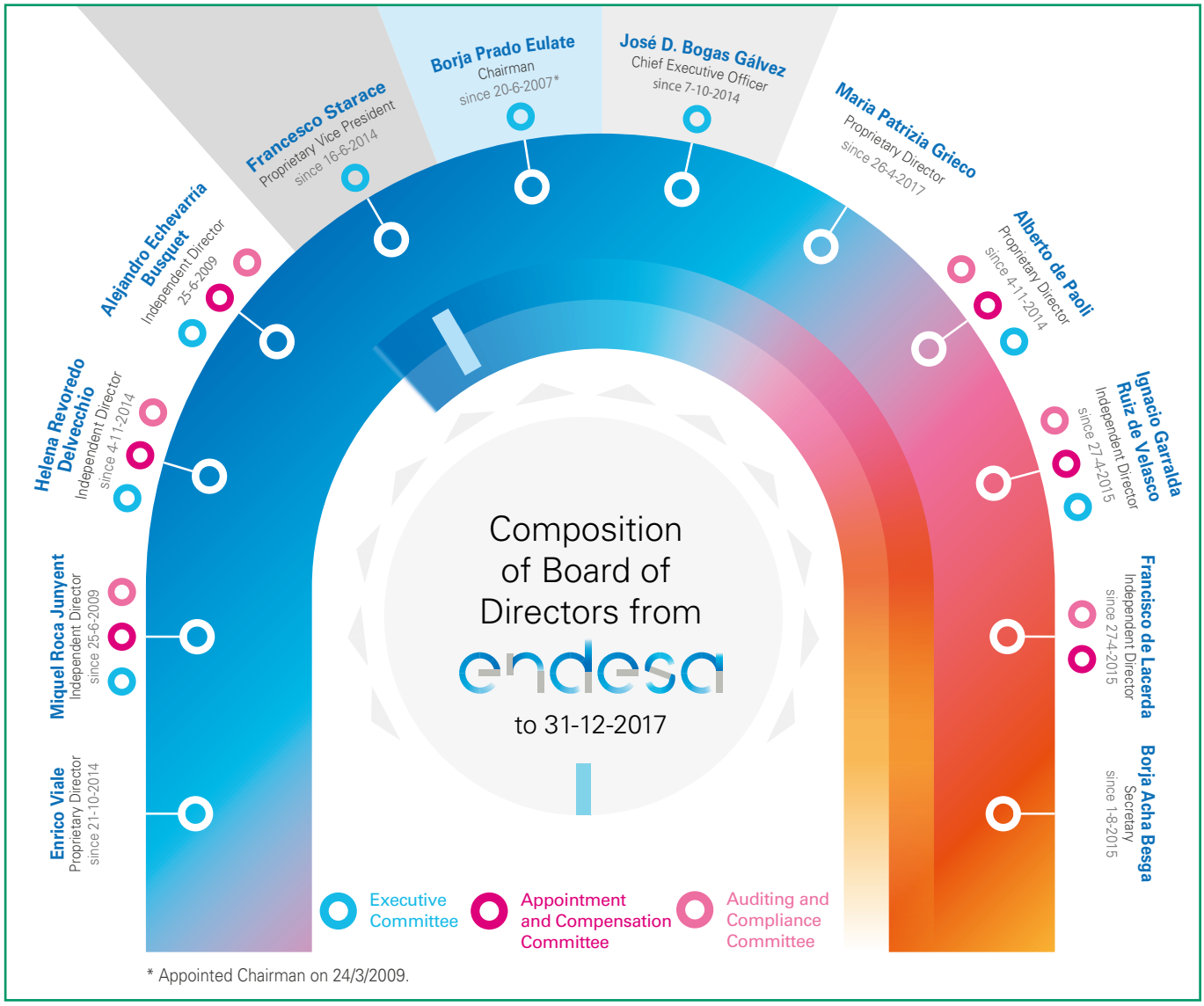
3.3. Leadership of the Board of Directors

102-33

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.

102-22 102-23



Composition of the ENDESA Board of Directors at 31-12-2017

405-1

Directors	Qualifications and skills					Diversity			
	Finance and Risks	Engineering	Legal	Management	Strategy	Years in position	Nationality	Gender	Age
Borja Prado Eulate	☐		☐	☐	☐	10	SPA	H	61
Francesco Starace	☐	☐		☐	☐	3	ITA	H	62
José Bogas Gálvez	☐	☐		☐	☐	3	SPA	H	62
Alberto De Paoli	☐			☐	☐	3	ITA	H	52
Miquel Roca Junyent	☐		☐	☐	☐	8	SPA	H	77
Alejandro Echevarría Busquet	☐			☐	☐	8	SPA	M	75
Maria Patrizia Grieco	☐		☐	☐	☐	1	ITA	M	65
Enrico Viale	☐	☐		☐	☐	3	ITA	H	60
Helena Revoredo Delvecchio	☐			☐	☐	3	ARG	M	70
Ignacio Garralda Ruiz de Velasco	☐		☐	☐	☐	2	SPA	M	66
Francisco de Lacerda	☐			☐	☐	2	PORT	M	57

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 selection policy for candidates to Directorships, 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 Committee 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 Corporate Enterprises 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 Chairman 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."

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 Chairman 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 2017, the Board met on 12 occasions. The Chairman attended all of these.

ENDESA Board of Directors: key data for 2017

Total number of directors	11
Non-executive directors	9
Independent directors	5
External proprietary directors	4
Board Meetings	12
Shares owned or controlled by members of the Board of Directors or by significant individual shareholders	52,665

3.4. Remuneration of Directors

The total remuneration received by ENDESA's directors in 2017 was 6,651 thousand euros.

The remuneration received by the directors is detailed below:

Thousands of euros

	2017								
	Salary	Fixed remuneration	Attendance fees	Short-term Variable Compensation	Long-term Variable Compensation	Indemnities	Other	Compensation Accrued in Other Companies	**Total Financial Year 2017**
Mr Borja Prado Eulate	1,132	188	18	783	1,023	0	40		**3,184**
Mr Francesco Starace	0	0	0	0	0	0	0		**0**
Mr José D. Bogas Gálvez	737	0	0	497	846	0	46		**2,126**
Mr Alejandro Echevarría Busquet	0	188	37	0	0	0	0		**225**
Mr Livio Gallo[1]	0	0	0	0	0	0	0		**0**
Mr Alberto de Paoli	0	0	0	0	0	0	0		**0**
Ms Helena Revoredo Delvecchio	0	188	37	0	0	0	0		**225**
Mr Miquel Roca Junyent	0	225	45	0	0	0	0		**270**
Mr Enrico Viale	0	0	0	0	0	0	0		**0**
Mr Ignacio Garralda Ruiz de Velasco	0	200	46	0	0	0	0		**246**
Mr Francisco de Lacerda	0	188	46	0	0	0	0		**234**
Ms Maria Patrizia Grieco[2]	0	128	13	0	0	0	0		**141**
Total	**1,869**	**1,305**	**242**	**1,280**	**1,869**	**0**	**86**		**6,651**

[1] Left in April 2017.
[2] Joined in April 2017.

3.5. Directors' Responsibilities and Duties

102-25

Article 28 of the Board of Directors' Regulations, approved on 18 December 2017, 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 the corporate 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 image of the assets, the financial position and earnings of the entity.

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 confidential information concerning the Company, 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, unless these concern matters of mere courtesy.

F) Carrying out activities on their own account or on in behalf of others that entail competition, either actual or potential, for the Company, or that in any other way places 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 inform the Board of Directors, via the Board Secretary, of any situation of conflict, direct or indirect, which they may have with the interests 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 means of a representative, 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 Commercial Code.
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 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 criteria of conduct 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.

4. Risk Management

4.1. Risk Management and Control Policy

103-1

The Risk Management and Control Policy, adopted 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 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 benchmark risk management practices, 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.** The purpose of risk identification is the maintenance of a prioritised, updated database of all the risks assumed by the corporation via coordinated, efficient participation at all levels of the Company.
- **Measurement.** The purpose of measuring parameters that allow for the aggregation and comparison of risks is to obtain an overall quantification of the exposure to assumed risk, including all of ENDESA's positions.
- **Control.** The purpose of risk control is to ensure that risks assumed by ENDESA are in line with the objectives ultimately set by the Board of Directors of ENDESA, S.A.
- **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.

In addition, faced with the increased interest in the management and control of risks to which companies are subjected,

and given the increasing complexity of their identification from an integral viewpoint, participation of the workforce at all levels is of great importance in this process. To this end, a 'risks box"' has been created, which the employees may use to contribute to the identification of market risks and to propose measures for their mitigation, thus supplementing 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 enabling 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.

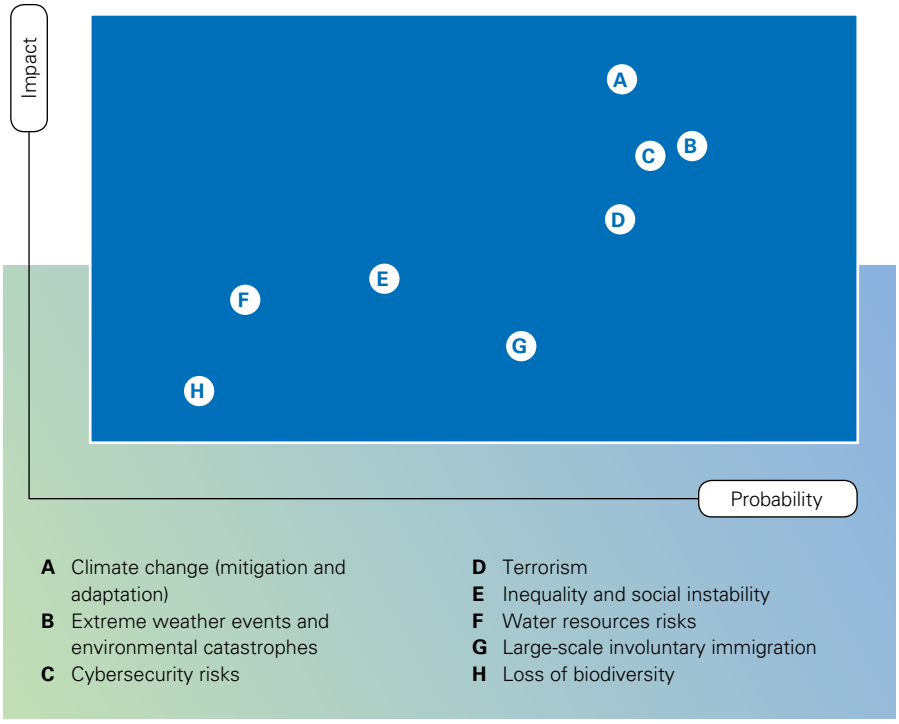
4.2. Main Sustainability risks

102-15

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 financial and non-financial risk (among others, operational, technological, legal, social, environmental, political and reputational) that 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 Auditing and Compliance Committee (ACC) of the Board of Directors.

During 2017, ENDESA updated the identification of emerging sustainability risks with medium- and long-term impact that relate to any of the aspects of sustainability. The goal is to be able to analyse the impact of these risks on business and to define the steps necessary for their control and prevention.

To this end, ENDESA has taken as a reference the identification of global risks drawn up by the World Economic Forum on the basis of a consultation involving almost 1,000 experts on the perception of global risks. 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.



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).	ENDESA has established a road map towards the decarbonisation of its energy mix by 2050 that sets intermediate objectives for the reduction of CO_2 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.
Extreme weather events and environmental catastrophes	Climate change is generating associated phenomena such as the increase in the occurrence and intensity of adverse weather events (floods, storms, etc.). Furthermore, a greater incidence of environmental catastrophes caused by nature itself (tsunamis, earthquakes, etc.), or by man (industrial discharges, atmospheric and/or radioactive pollution, etc.) is having a considerable impact on the business activity.	Incidents in distribution networks and power plants due to the occurrence of adverse weather events. Environmental sanctions arising from the potential triggering of environmental catastrophes in the operation of power plants or the distribution network (fire, radioactive emissions).	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. The Company is also conducting an assessment of the impacts of climate change on infrastructures, with the aim of establishing adaptation measures to minimise risks. 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.
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.
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 state security and law enforcement authorities.
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.
Inequality and social instability	Worldwide, we are seeing an increase in inequality which, in the case of Spain and Portugal, is being exacerbated by high levels of unemployment. 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.	Greater incidence of non-payment and loss of revenue due to the inability of growing sections of the population to pay their energy bills. Social instability and the strengthening of civil society are leading to more challenging of the Company's activities, which makes it necessary to increase the intensity of its communication with society and develop more participative models for relations with society.	ENDESA is developing various measures to facilitate access to energy for vulnerable communities. The Company is also implementing a methodology for the creation of shared value in the areas surrounding its local operations, with the aim of improving relations with stakeholders at local level.
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.	ENDESA has a biodiversity conservation programme that includes measures in the areas surrounding its generating plants. In addition, biodiversity conservation forms part of the environmental impact studies performed before the implementation of new industrial projects, as well as being included in the environmental management systems for existing assets.
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. Ethical conduct and Compliance

102-16

5.1. Code of Ethics and Zero Tolerance for Corruption Plan

103-1, 103-2, 103-3 Management focus - Anti-Corruption | 103-1, 103-2, 103-3 Management focus - Unfair Competition | 205-2 | 205-3
103-1, 103-2, 103-3 Management focus - Public Policy | 103-1, 103-2, 103-3 Management focus - Socio-economic 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

103-1, 103-2, 103-3 Management focus - Unfair Competition

ENDESA is firmly committed to compliance with ethical principles and regulations 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.
- Criteria for conduct 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, 90% 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 for Corruption Plan are available on the Company's website https://www.endesa.com/es/inversores/a201611-conductaeticapt.html

5.2. 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 purpose of this protocol 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 of this protocol 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

5.3. Anti-bribery policy

In 2017 the 'Policy on Compliance with Criminal and Anti-Corruption Legislation' was adopted, which, together with the policies already mentioned, constitute the 'Criminal and Anti-Corruption Legislation Compliance management system' of the ENDESA Group. This system is an integrated body of provisions that does not merely comply with the Spanish legal requirements in this area, but is sufficient to satisfy the expectations that are reasonably directed at organisations that operate with the highest levels of commitment in the advanced markets, as the ENDESA Group does.

ENDESA is aware that certain criminal acts identified under the generic name of 'bribery' constitute a phenomenon that, among other effects, raises serious moral, economic and political concerns, undermines good governance, hampers development, destroys confidence in institutions and interferes with the correct and efficient functioning of the markets. The Criminal Legislation Compliance System therefore pays particular attention to prevention, detection and adequate response to such absolutely prohibited behaviour, conveying the importance of the contribution of the entire organisation to the fight against any form of 'bribery'.

The main measures that are implemented on a permanent basis by ENDESA for the effective application of the Criminal Legislation Compliance System are as follows:

> **Risk assessment and control activities.** The identification of activities within whose context criminal acts may be committed is carried out and coordinated by the Supervisory Committee and the managers of processes within the organisation.

> **Supervisory activities:** Assessment of the Criminal Legislation Compliance System, action plans to remedy any shortcomings, response to breaches, and information and communication.

5.4. Criminal Risks Prevention and Anti-Corruption Model

Management focus - Anti-Corruption

ENDESA has a Criminal Risks Prevention and Anti-Corruption 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 law in 2010.

In 2017, the Criminal Risks Prevention and Anti-Bribery Model was certified for 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 (ACC) 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 - 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 - Human Resources and Organisation.

During 2017, the Supervisory Committee met on six occasions, and at said meetings, the main issues relating to the Criminal Risks Prevention Model were examined, including interventions by managers from other areas of the Company to inform the Committee of significant aspects falling 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, each year the Committee presents the Auditing and Compliance Committee (ACC) with a report on the execution of the programme, including details of the activities performed and the conclusions reached.

Among the activities performed in 2017, 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 original 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 personnel regarding ENDESA's current ethical reference framework for crime prevention compliance,
- development of new compliance programmes,
- integration of the Criminal Risks Prevention Model of Enel Green Power into the ENDESA Model,
- simultaneous obtaining of certificates attesting that the Criminal Compliance Management System conforms with standard UNE 19601:2017 and the Anti-Bribery Management System with standard UNE-ISO 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.

5.5. 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 current legislation, but also its active participation in initiatives to promote a greater integration of said culture into all spheres of corporate management.

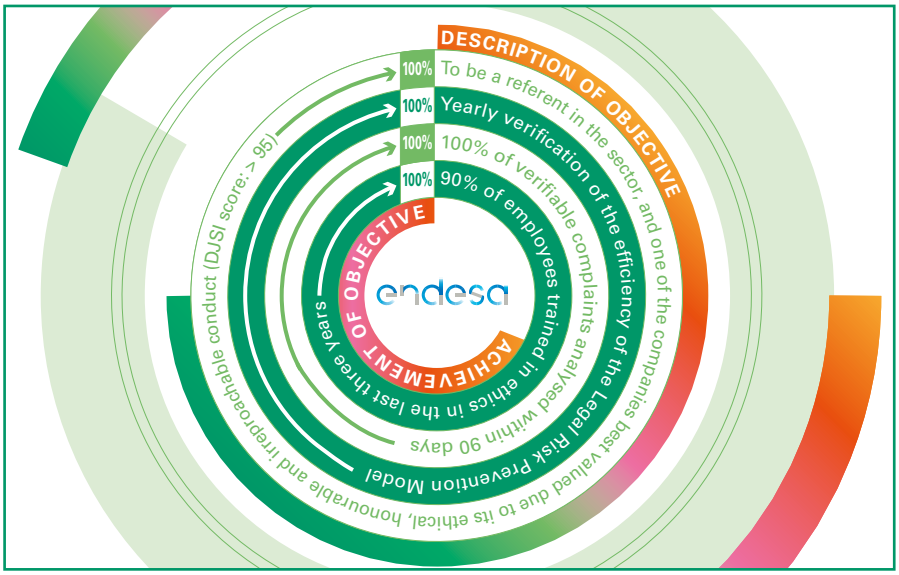
In this regard, and aware of the relevance and importance of participating in civil society initiatives, in 2017 ENDESA continued to take part in the Foretica Cluster for Transparency, Good Governance and Integrity. This Cluster was established as a platform of companies coordinated in Spain by Foretica for the purpose of acting as a corporate meeting-point in leadership, awareness, exchange and dialogue in this field. One of the most significant initiatives of 2017 was the preparation of the practical guide *'Advancing the agenda of transparency, good governance and integrity in unlisted companies'*, in which ENDESA took part by contributing good practices in the area of risk control and management, fiscal transparency, and its governance and sustainability management system.

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.

5.6. Achievement of objectives

Integrity and ethical conduct form one of the basic pillars of ENDESA's sustainability strategy. Therefore, ENDESA's 2017-2019 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 2018-2020 Sustainability Plan, ENDESA has updated these goals for the 2018-2020 period. For further information, see the chapter *'Sustainability Plan'*.



5.7. Ethics Channel

205-3 | 102-17 | 205-1 | 103-2

Management focus - Anti-Corruption

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, 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 units of the organisation. 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 2017, ENDESA received, either via the Ethics channel or via other means, a total of 10 claims. The investigation of nine of these reports was concluded during the same year. Among the claims received, one case of non-compliance with the Code of Ethics was proven, relating to conflicts of interest. Corrective measures were applied in that case. None of the claims received was related to cases of discrimination.

Claims received in 2017, by complainant	Customers	Employees	Suppliers	Shareholders	Community	Anonymous	Total
Iberia	0	0	1	0	0	9	**10**

Claims received in 2017 according to the interest group affected or potentially affected	Customers	Employees	Suppliers	Shareholders	Community	Anonymous	Total
Iberia	0	3	2	5	0	0	**10**

Status and conclusion of claims received	2014	2015	2016	2017
Closed	**17**	**8**	**10**	**9**
Non-compliance	5	2	2	1
Groundless	12	6	8	8
Open	**0**	**0**	**0**	**1**

Non-compliances by type	2014	2015	2016	2017
Conflicts of interest / Corruption	1	0	1	1
Fraud or theft from the Company / Improper use of resources	2	2	1	0
Other	2	0	0	0
Total	**5**	**2**	**2**	**1**

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

5.8. Sanctions received

206-1 307-1 416-2 417-2 417-3 418-1 EU25

The total number of litigations relating to environmental matters was 92, of which five related to monopolistic and anti-competitive practices. The total number of complaints relating to respect for privacy and leakage of personal data was two.

The total amount of fines imposed on environmental grounds was 65,151 €.

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

- Two distinct legal actions are ongoing against ENDESA Distribución Eléctrica, S.L.U. due to forest fires in Catalonia. These actions could give rise to an obligation to settle miscellaneous claims for damages of a combined value of approximately 24 million euros.
- On 11 May 2009, the Ministry for Energy, Tourism and Digital Agenda issued an order imposing four fines, to a combined value of 15 million euros, on ENDESA Generación, S.A.U. as the operator of the Ascó I Nuclear Power Plant, in connection with a radioactive particle leak at this plant in December 2007, on the basis that the company had committed four serious violations contrary to the Nuclear Energy Law 25/1964, of 29 April. On 1 December 2009, granting a motion by ENDESA, the Spanish High Court stayed execution of the decision under challenge. ENDESA paid into court a bank guarantee covering the value of the fine (15 million euros). At the date of preparation of these Consolidated Financial Statements, the appeal is suspended on the grounds of criminal prejudiciality by the Ruling of 6 April 2011, until the conclusion, by final ruling, of Inquiry 111/2011 carried out by the Court of First Instance and Preliminary Investigation No. 1 of Gandesa (Tarragona) into the circumstances. By an order of 13 June 2016, the suspension of the process is sustained until a final ruling is pronounced in the criminal proceedings. In addition, the Director General of Energy Policy and Mines imposed two fines of a combined value of 90 thousand euros for minor infringements relating to the same incidents. These fines were contested in administrative proceedings, and later in judicial review and with respect to which a) on the 15 thousand euros, appealed before the Central Judicial Review Court, a Judgement was handed down on 3 July 2012, dismissing the appeal and paying the penalty and b) the penalty of 75 thousand euros was appealed before the Madrid Superior Court of Justice, Judicial Review number 189/2010, and the procedure was suspended by the Order of 16 July 2012, due to the existing criminal proceedings, which continue in 2017. With regard to the criminal proceedings, the Court of Gandesa (Tarragona) issued an Order on 21 October 2015 granting a provisional stay of proceedings. The above Order was appealed by the prosecution and other claimants. By an Order dated 25 October 2016, the review appeals were partially accepted, revoking the stay of proceedings. An appeal was lodged with the Provincial Court by Asociación Nuclear Ascó Vandellós II, A.I.E. and the defence of those under investigation, continuing the criminal proceedings; for this reason, the judicial review procedures remain suspended. By an Order of 16 March 2017, the Provincial Court dismissed appeal 1119/2016 against the Order of October 2016 by the Court of Preliminary Investigation of Gandesa (Tarragona), stating that it deemed the appeal inadmissible because, for procedural reasons, it must not pronounce on the merits of the case, and that the investigating judge must first decide whether the preliminary investigation phase can be deemed to be completed, and either grant the opening of the criminal summary proceedings or dismiss the case.
- In 2013 the Court of First Instance No. 4 of Algeciras (Cádiz) accepted for processing the lawsuit filed by Obras y Construcciones Alcalá Sur, S.L. against ENDESA Distribución Eléctrica, S.L.U. seeking payment to Obras y Construcciones Alcalá Sur, S.L. of an indemnity of 61 million euros in damages for breach of an agreement signed on 16 January 2006 between the companies. Specifically, the lawsuit is over failure by ENDESA Distribución Eléctrica, S.L.U. to build a substation for the supply of power to the more than 450 residential units owned by the plaintiffs, which prevented the completed development from obtaining occupancy permits. ENDESA Distribución Eléctrica, S.L.U. considers that there is no basis for the claim, since there is

no contractual breach and no causal link between ENDESA Distribución Eléctrica, S.L.U.'s actions or omissions and the lack of available land to build the substation, or the delay in the construction of the substation and the delay in obtaining the first occupancy permit for the residences. The preliminary hearing was held on 29 March 2016, at which the trial was designated for two sessions to take place on 9 and 10 January 2017. The judgement was suspended on 9 January 2017 due to the failure to summon the expert witness of the opposing party and for non-compliance with the documents sent to Barrios Municipal Council and to the Ministry for Development, with the trial being re-scheduled for 16 February 2017. On 5 June 2017 a judgement was delivered dismissing the petition in its entirety. An appeal was filed by the opposing party.

- On 15 and 16 April 2014, notification of four resolutions from the Directorate General of Energy Policy and Mines, all dated 10 April 2014, were received. The resolutions brought infringement proceedings against ENDESA Generación, S.A.U. as owner or co-owner of the Almaraz Units I and II, Ascó I and Ascó II and Vandellós nuclear power plants for the alleged, continuous breach of the sole transitional provision of Law 25/1964, of 29 April, on Nuclear Power, with a penalty for a serious breach of 0.3 million euros up to 9 million euros for each case filed, specifically considering that the Adaptation Plan submitted was not the 'appropriate adaptation plan' referred to in the sole transitional provision of Law 25/1964, of 29 April, on Nuclear Power, since it did not take place within the time frame stipulated in this provision. On 25 September 2014, Ministerial Orders were issued concluding the disciplinary proceedings, each imposing a fine of 3 million euros. ENDESA Generation, S.A.U. lodged a joint appeal before the High Court against the four resolutions issued in the four proceedings. After requesting the temporary suspension of the fines, the High Court accepted the measure on 9 July 2015 after the 9 million euro guarantee was presented. The case was declared closed on 6 July 2016. On 13 September 2017, the High Court delivered a judgement accepting the claims of ENDESA Generación, S.A.U., and this was not appealed by the Ministry.
- On 17 July 2014, a resolution issued by the National Market and Competition Commission (NMCC) notified ENDESA Distribution Electrica, S.L.U. of the resolution of sanction proceedings imposing a fine of 1 million euros for alleged abuse of its dominant position entailing wrongful receipt of payment for execution of installations for extension of the grid, charging an unregulated price for the grid extension which, according to the NMCC's interpretation of the regulations, should be charged according to a scale. On the contrary, ENDESA Distribución Eléctrica, S.L.U. considers that it applied industry regulations correctly according to numerous judgements handed down which it presented during the process. ENDESA Distribución Eléctrica, S.L.U. appealed this ruling before the High Court on the grounds that it was contrary to the law, and requested temporary suspension of the fine. The High Court temporarily suspended the fine, and the proceedings are still ongoing.
- On 11 January 2016, a lawsuit was received in which the Andalusia regional government claimed an indemnity from ENDESA Distribución Eléctrica, S.L.U. related to damages arising from a fire which was allegedly started by a line located in Paraje Gatuna en Alhama de Almería, which caused the destruction of 3,259 hectares of public and private land considered a danger zone. 35 million euros were demanded for expenses related to fire extinguishing, environmental damages and losses of products arising from the fire. The counter-claim was presented on 5 February 2016. The preliminary hearing has been set for 6 March 2017. The trial has been scheduled for 9, 10, and 13 April 2018.

6. Respect for Human Rights

6.1. ENDESA's human rights policy

103-1 Assessment on Human Rights | 103-2 Assessment on Human Rights | 103-3 Assessment on Human Rights | 102-15

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 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 Human 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 society:

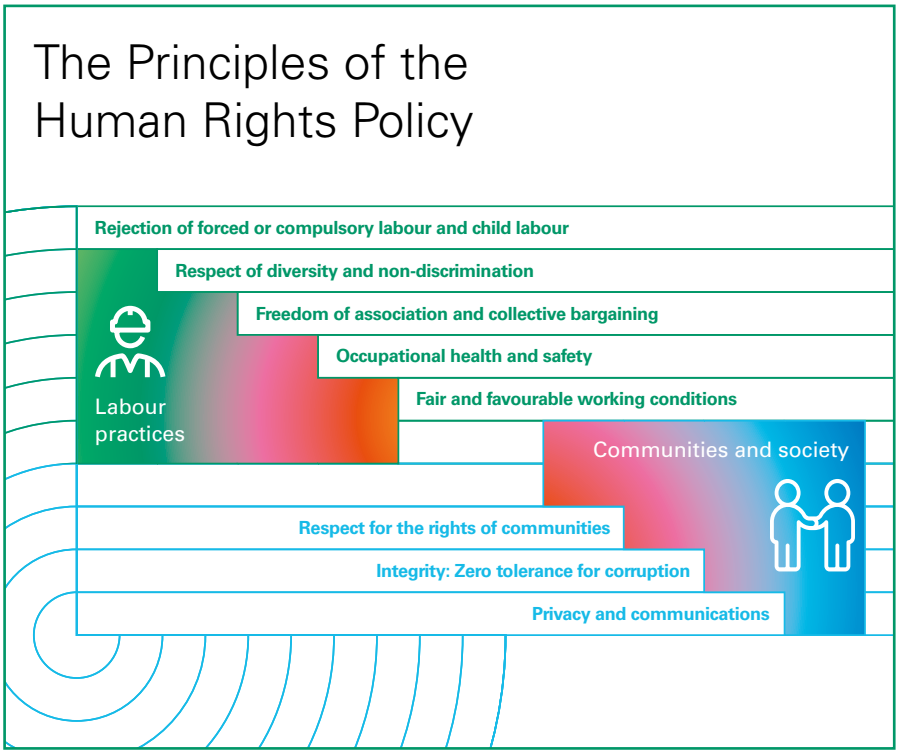
The policy can be found at www.endesa.com

6. 2. The due diligence process

102-15 | 412-1 | 421-3 | 412-3

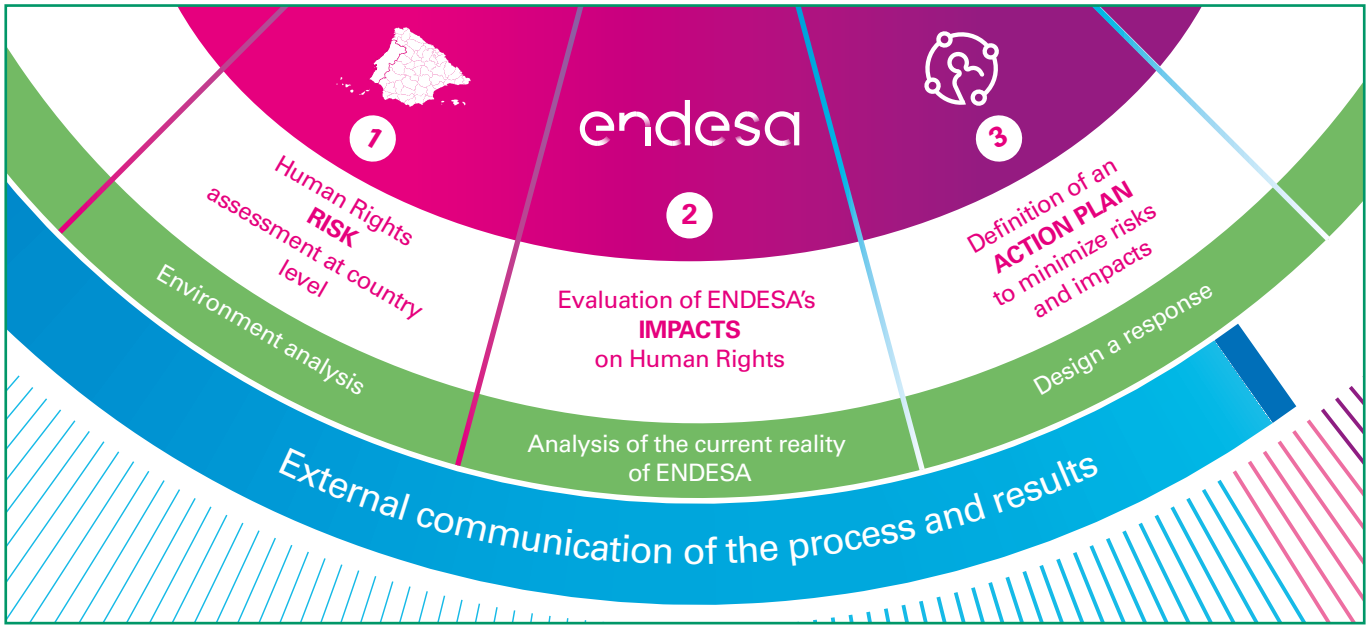
In order to apply the commitments contained in the Human Rights Policy, and following the recommendations of the Guiding Principles, ENDESA undertakes to implement appropriate due diligence processes to ensure that the policy is implemented and monitored, assessing the possible impacts and risks existing

The Principles of the Human Rights Policy



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 electricity generation, distribution and marketing activities, as well as supply chain management, 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.



6.2.1. Identification of the level of country risk

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 high 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.

6.2.2. 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 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 has a set of very robust mechanisms and management systems that allow 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:

	Aspects		Level of management and maturity in ENDESA	Mechanisms for risk management
Area: Labour practices	Freedom of association and collective bargaining		Robust	More than 90% of the workforce is covered by collective bargaining agreements entered into with the different trade union organisations. The functioning of these organisations and the right to trade union action is expressly set out in the collective bargaining agreements. In addition, these agreements are in line with the International Labour Organisation (ILO) conventions in force that have been ratified by Spain.
	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. At the present time, the youngest employee is aged 22 years. 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 entered into 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 2017 in accordance with the UNE 19601:2017 standard. Finally, 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 customers. The main mechanisms for the management of both aspects are detailed below:

	Aspects	Mechanisms for risk management
Supply chain	Management of suppliers and contractors	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. 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.
	Fuel procurement	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 counter parties 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. Moreover, in recent years there has been a high degree of pressure exerted by civil society 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. ENEL, as a member of the ENDESA Group, is part of the Bettercoal initiative. Organised by a group of European electricity companies, this initiative 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.
Responsible relationships with customers	Privacy and communications	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. 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.
	Access to energy for vulnerable customers	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. 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. 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, with 229 agreements signed in 2017. In addition, the Company is implementing various initiatives to promote energy efficiency and savings on electricity bills for groups of this type.

6.3. 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: strengthening and disseminating ENDESA's commitment to human rights; promoting, among employees, the integration of human rights into the business activity; strengthening relationships with

local communities; and extending the commitment and control to the entire value chain.

In order to respond to these four areas of action, an action plan has been defined containing 27 actions that will be implemented throughout 2018 and monitored by the Board of Directors of ENDESA, S.A. via the Auditing and Compliance Committee. This action plan represents one of the main measures that the Company will implement in 2018 to continue moving forward with the integration of sustainability into the Company's strategy and everyday activities.

Some of the most significant actions are detailed below:

Area for improvement	Main actions
Strengthen and disseminate ENDESA's commitment to human rights, both to employees and to external stakeholders.	> Incorporation of the human rights policy into the body of internal policies and development of an organisational procedure for the management of due diligence processes. > External dissemination of ENDESA's commitment to human rights and the measures that are being implemented.
Promote, among employees, the integration of human rights into ENDESA's business activity.	> Training on human rights for ENDESA's workforce. > Impetus for diversity and inclusion programmes, and inclusion and promotion of the improvement of diversity ratios. > Improvement of safety rates (frequency, seriousness and fatal accidents).
Strengthening relationships with local communities.	> Continuation of the implementation of mechanisms and actions for the management of relationships with communities in the electricity generation and distribution activities.
Extending the commitment and control to the entire value chain.	> Roll-out of the human rights auditing methodology to suppliers. > Continuation of the extension of the human rights assessment criteria to asset purchasing processes.

6.4. 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 sustainability mailbox through which any interest group can make contact with the Company.

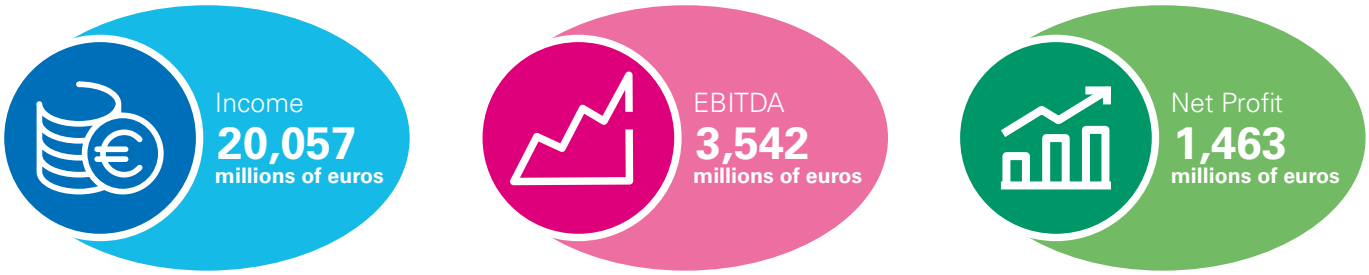
In all cases where, based on a report of this type, it is determined that there has been a breach of the principles reflected in this Policy, the corresponding procedure provided for in the Code of Ethics will be applied. ENDESA is also committed to developing appropriate remediation mechanisms, without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

6.5. Cases of discrimination and corrective actions undertaken

In 2017 there were two complaints relating to human rights (*'mobbing'*, or corporate climate and human resources management), but both were closed as they were judged to be unfounded.

7. ENDESA's economic performance

7.1. Principal economic indicators



7.1.1. Profits generated

ENDESA obtained a net profit of 1,463 million euros during 2017, representing a 3.7% increase over the 1,411 million euros obtained in 2016.

The distribution of net profit between ENDESA's businesses and their variations with respect to the same period of the previous year are shown below:

Millions of Euros

	Net Profit			
	2017	2016	% Var.	% Cont. to Total
Generation and Marketing[1]	263	751	(65.0)	**18.0**
Distribution	1,048	771	35.9	**71.6**
Structure and Other[2]	152	(111)	(236.9)	**10.4**
Total	**1,463**	**1,411**	**3.7**	**100.0**

[1] In the financial years 2017 and 2016, this includes the net profit generated by ENEL Green Power España, S.L.U. (EGPE) for an amount of 51 million euros and 38 million euros, respectively.
[2] Structure, Services and Adjustments.

7.1.2. Income, EBITDA and operating profit

In 2017, income totalled euros 20,057 million, up by euros 1,078 million (+5.7%) compared with 2016. Of this amount, 19,556 million euros correspond to sales (+6.8%) and 501 million euros to revenues from other operations (-24.8%).

ENDESA's contribution margin for 2017 was 5,488 million euros, down by 164 million euros compared with 2016 (-2.9%). Gross operating profit (EBITDA) in this financial year was 3,542 million euros (+3.2%), while operating profit (EBIT) increased by 66 million euros (+3.4%) compared with 2016, totalling 2,031 million euros.

	Results 2017							
	Income		Contribution margin		EBITDA		EBIT	
	Mill. euros	% var. 2016	Mill. euros	% var. 2016	Mill. euros	% var. 2015	Mill. euros	% var. 2015
Spain and Portugal	20,057	+5.7	5,488	-2.9	3,542	+3.2	2,031	+3.4

7.1.3. Investments

In the financial year 2017, gross investment by ENDESA totalled 1,175 million euros (1,221 million euros in 2016), of which 978 million euros related to tangible investments, 133 million euros to investments in intangible assets, and 64 million euros to financial investments, as detailed below:

Millions of Euros

	Investments[1]		
	2017[2]	2016[3]	% Var.
Generation and Marketing	358	388	(7.7)
Distribution	610	595	2.5
Other	10	2	400.0
TOTAL TANGIBLE	**978**	**985**	**(0.7)**
Generation and Marketing	48	57	(15.8)
Distribution	47	55	(14.5)
Other	38	31	22.6
TOTAL INTANGIBLE ASSETS	**133**	**143**	**(7.0)**
FINANCIAL	**64**	**93**	**(31.2)**
TOTAL GROSS INVESTMENTS	**1,175**	**1,221**	**(3.8)**
TOTAL NET INVESTMENTS[4]	**982**	**1,028**	**(4.5)**

[1] Does not include the business combinations carried out during the financial year.
[2] Includes gross investments made by Enel Green Power España, S.L.U. (EGPE) amounting to 24 million euros.
[3] Includes gross investments made by Enel Green Power España, S.L.U. (EGPE) from the date of its takeover, 27 July 2016, for an amount of 14 million euros.
[4] Gross investments = Net investments - Capital grants and transferred facilities.

Gross generation investments in 2017 related largely to plants that were already operating at 31 December 2016, including investments in the Litoral coal plants in the amount of 39 million euros and in the As Pontes coal plant in the amount of 34 million euros in connection with the Industrial Emissions Directive (IED), which extended their useful lives. Also included are the investments relating to the renewal of major components in the renewable technology assets.

Gross marketing investments related mainly to the development of activities

related to added-value products and services.

Gross investment in distribution are related to network extensions and expenditure aimed at optimising the functioning and quality of the network to boost efficiency and quality of service. These also included investment for the widespread installation of remote management smart meters and their operating systems.

ENDESA, through the company ENEL Green Power España, S.L.U. (EGPE), was awarded capacity of 540 MW wind power and 339 MW photovoltaic power in the auctions conducted by the Ministry of Energy, Tourism and Digital Agenda on 17 May 2017 and 26 July 2017, respectively, and plans to invest approximately 870 million euros in the construction of the awarded capacity, of which 7 million euros have already been invested at 31 December 2017.

7.2. Generation of wealth in 2017

201-1 | 102-7 | 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)	
	2016	2017
Direct Economic Value Generated	18,906	20,049
Economic Value Distributed	17,587	18,793
Dividends	1,411	1,463
Operating costs and other expenses	14,430	15,690
Personnel expenses	1,128	917
Taxes and duties*	404	557
Investment in social development	8.7	11.3
Finance expenses	214	166
Economic value retained	1,319	1,256

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

The balance of capital grants at 31 December 2017 amounted to 315 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, undersigned with 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.

7.3. Fiscal transparency

7.3.1. 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, 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.

In addition, and in compliance with the provisions of Law 31/2014 of 3 December 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.

7.3.2. 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 be shown, although separately.

In 2017, ENDESA's total tax contribution amounted to 4,192 million euros, of which 1,752 million euros corresponded to amounts paid by the Group and 2,439 million to amounts collected as a consequence of ENDESA's business activity.

ENDESA's total contribution 2017

Millions of Euros		Amounts paid	Amounts collected
I.	**TAXES PAID IN THE FISCAL GROUP:**		
	Taxes on Profits	**375**	**—**
	Corporate Income Tax[1]	375	—
	Subtotal, taxes paid in the Fiscal Group	**375**	**0**
II.	**TAXES PAID TO THE TREASURY:**		
	Taxes on Profits	**29**	**69**
	Corporate Income Tax	—	—
	Tax on Commercial and Professional Activities	27	—
	Other deductions	2	69
	Taxes on Property	**66**	**0**
	Real Estate tax (municipal)	65	
	Other[2]	1	
	Employment-associated Taxes	**124**	**231**
	Payments made to Social Security[3]	124	19
	Work performance deductions	—	212
	Taxes on Products and Services	**197**	**1,270**
	VAT paid[4]	0	1,270
	Tax on occupation of public thoroughfares (municipal)	162	—
	Other charges in the public domain[5]	35	—
	Environmental Taxes	**952**	**556**
	Electricity Production Value Tax	354	—
	Nuclear fuel tax	135	—
	Hydraulic Dues	29	—
	Nuclear Service Taxes	182	—
	Environmental Taxes (regional)	44	—
	Tax on Electricity	—	497
	Tax on Hydrocarbons	31	57
	Coal Tax	165	2
	Other	12	—
	Subtotal taxes paid in Spain[6]	**1,368**	**2,126**
	Taxes paid outside Spain[7]	**10**	**313**
	Subtotal taxes paid in all countries	**1,378**	**2,439**
	TOTAL TAX CONTRIBUTION	**1,752**	**2,439**
III.	**OTHER REGULATORY PAYMENTS[8]:**		
	Rates Subsidy	**77**	
	Energy Efficiency	**29**	
	Other	**5**	
	Subtotal other regulatory payments	**111**	**0**
	TOTAL PAYMENTS TO PUBLIC AUTHORITIES	**1,863**	**2,439**

[1] As the requirements foreseen in Chapter VI of Item VII of Law 27/2014 of 27 November, concerning Company taxes are 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, which, 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 concept 'Other charges in the public domain' includes amounts mainly related to the granting and regulation of dams, public rates and others.

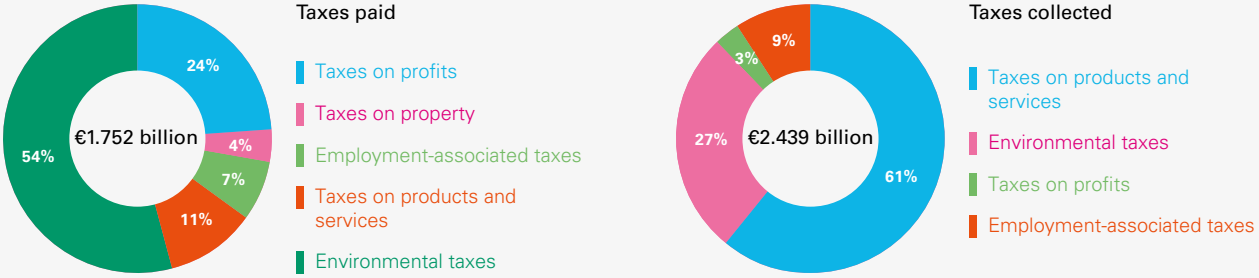
[6] Where applicable, each tax concept includes amounts paid by way of outlay resulting from inspection proceedings and voluntary regularisations.

[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.

Breakdown of total tax contributions



Breakdown of total tax payments by geographical area

As is logical, Spain is the jurisdiction where ENDESA has paid most taxes; these represent over 92 percent of the total of taxes paid and collected by ENDESA during the 2017 financial year.

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

Millions of Euros

Country	Spain	Portugal	Other[1]	Total
Taxes paid	1,742	0	10	**1,752**
Taxes collected	2,126	130	183	**2,439**
Total Tax Contribution	**3,868**	**130**	**193**	**4,192**
TTC Percentage of total	**92.29%**	**3.10%**	**4.61%**	**100.00%**

Other regulatory payments	Spain	Portugal	Other[1]	Total
Rates Subsidy	72	5	5	**82**
Energy efficiency	29	0	0	**29**
Total other payments made to Public Authorities	**101**	**5**	**5**	**111**
Total payments made to Public Authorities	**3,969**	**135**	**198**	**4,302**

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

7.3.3. 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.

For all of these reasons, their inclusion in the Sustainability Report is not justified

either by the significance of the activities performed by the Company in these geographical areas or by 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 a 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., a Dutch company established in 1993, which captures funds for the ENDESA Group via the Euro Medium Term Note (EMTN) and Euro Commercial Paper Programme (ECP) debt issuance. The company's activity has diminished significantly over the last years, and since 2005 ENDESA's listed debt issuance is performed from ENDESA Capital, S.A., an entity residing in Spain. The average level of debt in 2017 was 1,222 million euros, and it is expected to maintain an average balance of 1,202 million euros in 2018.

7.4. Creation of value for shareholders

ENDESA, the Spanish listed company that provides the best information to its shareholders

ENDESA achieved the highest score in theReporta 2017 report, a study conducted by Deva Comunicación since 2010 as a barometer of the quality of the information that Spanish listed companies make available to their shareholders and stakeholders following the holding of the annual Ordinary General Shareholders' Meeting.

The Reporta report assesses the efforts made by the companies to provide information over and above mere compliance with the legal obligations. According to the results of the study, ENDESA complies with the four principles analysed: transparency, commitment, relevance and accessibility.

The methodology of the Reporta report is verified with the users of the information (investors, analysts and media) and is updated each year to reflect the latest trends and international best practices in business reporting.

7.4.1. ENDESA's share performance

2017 was very favourable for the main western stock markets due to the improvement in macroeconomic conditions, the growth of corporate profits and increased investment by businesses. A number of indices reached all-time highs, and these rises were led mainly by technology, energy and airline companies.

Against this economic backdrop, the Spanish IBEX-35 index started 2017 with gains for the first time in three years, recording a rally of 7.4%. Despite this good result, the Spanish stock market showed the most modest increase among the European markets, mainly due to investors' concerns about the political instability that was unleashed in Catalonia in the second half of the year.

Among the European stock markets, a notable performer was the Italian market, with a 13.6% climb in its FTSE MIB index, supported by the improvement of the country's financial sector. The German market was close behind, with a 12.5% increase in the DAX index, followed by the French, with a 9.3% climb in the CAC 40. More in line with the Spanish stock market, the British Footsie 100 index rose by 7.6%, while the pan-European Eurostoxx 50 recorded a slightly smaller increase of 6.5%. US indices, at historic highs, ended the year with increases of between 20% and 30%.

In Spain, the IBEX-35 began 2017 with an upward trend that was reflected in May in the maximum for the year of 11.135 points, a level that involved an increase of more than 19%. From that figure, the index began a slow fall, affected by the events that were taking place in Catalonian politics. Indeed, the holding of the independence referendum in Catalonia on 1 October resulted in the IBEX-35 suffering the worst session in its history. It closed with an intraday loss of 12% and lost the resistance level of 10,000 points.

The last two months of the year were marked by the events following the unilateral declaration of independence and the application of Article 155, causing numerous ups and downs in the IBEX-35. Despite this, the index succeeded in recovering some ground in the final stretch and closed 2017 at 10,044 points, representing an increase of 7.4% for the year. By sector, the best performance was seen among companies linked to infrastructures, tourism and raw materials, while the worst values were shown by two companies in the engineering sector that were affected by various profit warnings during the course of the year.

The general trend of the European electricity sector, as reflected in the 'Dow Jones Eurostoxx Utilities' index, was very positive, buoyed up by improved financial conditions for companies and by expectations of concentration movements in the sector.

The Eurostoxx Utilities ended the year with an increase of 15.7%, positively influenced by the good performance of the German companies, which regained ground after the corporate restructuring process undergone in the previous year. In general, the French and Italian electricity companies also showed quite a positive performance, but the Iberian companies remained more sluggish. Within this group, ENDESA ended the year in last position, with a total fall of 11.3% over the year.

Like the IBEX-35, ENDESA securities began the year with a very positive pace. It reached a new all-time closing high of 22.76 euros per share on 8 May. However, the presentation of results for the first quarter, which took place on that same day, confirmed the difficult market conditions in which ENDESA's business was conducted during 2017, a year marked by persistent drought, scarcity of wind power and rising fuel prices, and investors began to unwind positions.

From summer onwards, this complicated operating scenario was compounded by speculation regarding a very negative outcome from the next review of the regulated businesses in readiness for the second regulatory period that will begin in 2020. Investors took it for granted that this review would especially affect ENDESA, focused exclusively on the Iberian market with approximately 70% of its business being regulated.

Finally, and despite the good welcome given to the new 2018-2020 Strategic Plan presented on 22 November, ENDESA's high level of exposure to Catalonia affected the share during the final months of the year, causing it to close 2017 at 17.855 euros, its lowest price for the year, with a 11.3% fall over the period.

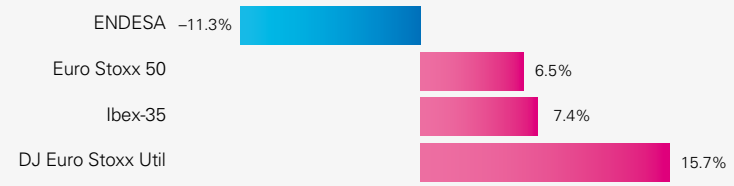
This negative stock-market yield was partially offset by the ordinary dividend of 1.333 euros per share distributed by the Company against the 2016 results, which provided a profitability per dividend of 6.6%. All told, the total yield for shareholders, calculated as the sum of the stock-market yield and the profitability per dividend, was -4.7% in 2017.

Main statistical data for ENDESA's share in 2017

Continuous market	Maximum	Minimum	Average	Close	% Total Revaluation	% Total Profitability	Volume of shares traded
ENDESA (euros/share)	22.760	17.855	20.234	17.855	-11.3%	-4.7%	536,793,866

Source: *Madrid Stock Exchange.*

Evolution of ENDESA on the Madrid Exchange and comparison with the major benchmark indices Year 2017



At the close of the year, ENDESA's market capitalisation was 18,904 million euros, earning it 11th place among the most highly capitalised companies in the Ibex-35.

7.4.2. Dividend

102-10 | 103-1, 103-2, 103-3 Management focus - Economic Performance

In line with the Dividends Policy approved by ENDESA's Board of Directors on 22 November 2016 for the 2016-2019 period, ENDESA's General Shareholders' Meeting held on 26 April 2017 approved the distribution of a total ordinary dividend charged against the closing profits for 2015, at a gross amount of 1.333 euros per share, a figure equalling 1,411 million euros. This dividend was paid to the shareholders in two cash payments made on 2 January 2017 for 0.7 euros gross per share (741 million euros in total) and on 3 July 2017 for 0.633 euros per share (670 million euros).

Looking ahead to the next few years, the Dividends Policy for the 2017-2020 period approved by the Company's Board of Directors at its meeting held on 21 November 2017 establishes that the ordinary dividend per share to be distributed charged to those years will be equal to 100% of the ordinary net income attributed to the Parent Company in the consolidated financial statements of the Group headed by the company, with a minimum equal to 1.32 euros gross per share for the financial year 2017 and a minimum equal to 1.33 euros gross per share for the financial year 2018.

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 to be determined in each case and which shall be subject to appropriate notification.

With regard to the ordinary dividends to be paid for with the income of the 2017 financial year, the Board of Directors of ENDESA, S.A., at the same meeting held on 21 November 2017, agreed to distribute to the shareholders an interim dividend for the gross amount of 0.70 euros per share.

Payment of this dividend, which entailed an outlay of approximately 741 million euros, was made on 2 January 2018.

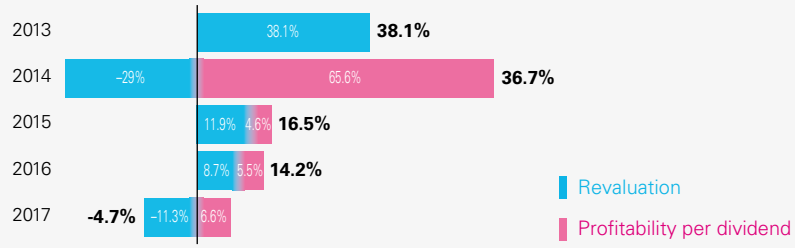
7.4.3. Profitability

The total profitability for ENDESA's shareholders was –4.7% in 2017, since the profitability provided by the dividends of 6.6% paid during the year were not sufficient to offset the stock-market loss of 11.3% registered per share.

Over the last five years, the average total profitability for ENDESA's shareholders has been 20.2%.

Over the last 5 years, the average total profitability for ENDESA's shareholders has been 20.2%.

Development of total profitability per ENDESA shareholder 2013-2017



7.4.4. IBEX35

Since its return to the Ibex-35 in November 2014, ENDESA is weighted in this index with a coefficient of 40% of the capital, since its free-float is 29.9%, in the tranche between 20% and 30%.

Taking this weighting into account, ENDESA's share ended 2017 in 18th place in the Ibex 35 by capitalisation level adjusted for free-float.

7.4.5. Transparency and close relations with shareholders and investors

102-43

ENDESA maintains a constant relationship with its shareholders, private and institutional investors, as well as 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 voting advisers'. 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 that govern this policy are transparency, immediacy, constant information, equal treatment, affinity with social interest and compliance with regulations.

The Auditing and Compliance Committee is the body responsible for supervising the communications strategy and relations with shareholders and investors, including small and medium-size shareholders. In compliance with this policy, on 18 December the Auditing and Compliance Committee presented the Board of Directors with the 2017 report on Supervision of Communications Strategy and Relations with Shareholders, Investors and Other Stakeholders.

The conclusions of this report highlighted that ENDESA's communication channels are appropriate and that communications with shareholders, investors and other stakeholders are performed correctly, in compliance with current reg-

ulations and with the general principles of ENDESA's Policy, and according to the best practices of corporate governance.

In this regard, it should be noted that ENDESA achieved the highest score in the Reporta 2017 report, which analyses the quality of the information that Spanish listed companies make available to their shareholders and stakeholders following the holding of the annual Ordinary General Shareholders' Meeting.

The Reporta report, which in this edition analysed a total of 118 companies, assesses the efforts made by the companies to provide information over and above mere compliance with the legal obligations. According to the results of the study, ENDESA complies with the four principles analysed: transparency, commitment, relevance and accessibility. The economic, financial and operating information, as well as that relating to environmental, social and corporate governance aspects, is complete and makes it possible to understand the company's performance and its future prospects'.

In addition, the information that ENDESA provides to its stakeholders ''covers all aspects of the economic, social and environmental impacts arising from the company's activities' and 'is presented clearly and in an accessible manner for the different audiences to whom it is addressed'.

7.4.6. Investor Relations Department

102-43

Among the activities carried out by the Investor Relations Department in 2017, of particular note are the execution of public presentations to analysts and investors on the quarterly results of the Company and the updating of its strategic plan.

In this regard, onn 22 November 2017, ENDESA presented to the market an update of its strategic plan for the 2018-2020 period.

During 2017 ENDESA carried out three Non Deal Roadshows. The first, in Europe and the United States, took place in March, following the presentation of the results for 2016. The second took place in the United States in September, while the third, in Europe and the United States, took place in November following the presentation of the 2018-2020 Strategic Plan update, with the aim of providing in-depth information about the update of this plan to the Company's principal investors. For these two Roadshows, ENDESA visited a total of 16 cities, where it met with 125 investors.

ENDESA also took part in five Reverse Roadshows, meeting with 59 investors in Madrid.

ENDESA's Investor Relations Department also participated in a total of eight international conferences on the sector, where it was able to meet with 72 investors.

It should also be noted that as part of its daily activity, the Investor Relations Department attended to a total of 882 queries from analysts, investors and rating agencies by telephone, e-mail or face-to-face.

Finally, on 26 April 2017, at its headquarters in Madrid, ENDESA held its Ordinary General Shareholders' Meeting, at which all the items on the agenda were approved, a quorum of 85.627% of the share capital being present.

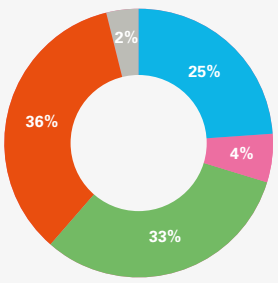
7.4.7. ENDESA's Shareholder's Office

102-43

During 2017, ENDESA's Shareholder's Office attended to 1,750 telephone calls and received 47 visits, and 1,046 documentation deliveries were performed.

One of the most significant channels that the Company makes available to its private shareholders is the "Information for Shareholders and Investors" channel included on its corporate website (www.endesa.com).

2,843 requests from shareholders were handled by the Shareholder's Office



Type of information requested of the ENDESA Shareholder Information Office in 2017

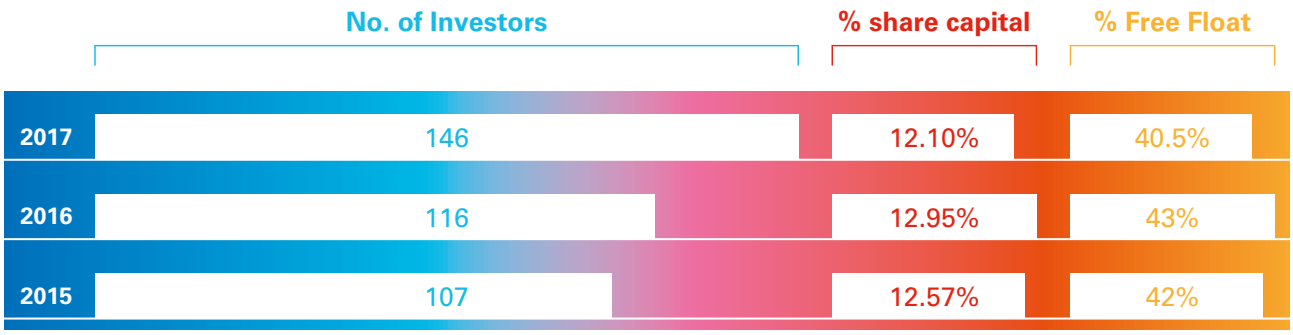
- Dividends
- ENDESA Information
- General Meetings
- Financial Economic Information
- Listing

7.5. 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 third year running, in 2017 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 12.10% of ENDESA's capital stock and 40.5% 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.

Presence of Socially Responsible Investors in the ENDESA Shareholder Base



7.5.1. 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 go more deeply into that genuine, firm commitment by precisely identifying areas for improvement regarding the integration of sustainability into the management of the Company.

In 2017, ENDESA succeeded for the first time in being included in the prestigious FTSE4Good indices. This represents a historic milestone and a recognition of the Company's commitment to progressing towards a more sustainable and responsible energy model. This index places special emphasis on the company's transparency and assesses only public information provided by the company in relation to 14 criteria, such as: climate change, management of water resources, biodiversity, labour standards, human rights, occupational health and safety, risk management and corporate governance, among others. It should also be noted that a high level of excellence is demanded with regard to the promotion of transparency in the management and operation of nuclear assets. The inclusion in this index for the first time therefore confirms ENDESA's commitment to complying with the highest standards of transparency with regard to the most rigorous respect for the environment and public safety in the operation of its nuclear power plants.

ENDESA maintained its presence in the other indices in which it had featured in

previous years, even improving its performance in some of them, such as the CDP, where the Company was included in the A list, whose *'utilities'* category features only 10 companies at global level. There follows a summary of the six sustainability indices in which ENDESA is present:

Family	Main indices	Selection Criteria	Assessment Criteria	Score	Periodicity	Year of inclusion
Dow Jones Sustainability Indices In Collaboration with RobecoSAM	DJSI World	10% companies of the 'electric utilities' sector with best performance	Environmental, social and economic performance, following 24 criteria and 600+ indicators	**84** 7th position in sector	Annual	Since 2001
FTSE4Good	FTSE4Good Index	Companies with a score over 3.5/5	Environmental, social and economic performance, following 14 criteria	**4.8/5**	Six-monthly	Since 2017
NYSE EURONEXT vigeo	Euronext VIGEO World 120 Euronext VIGEO Europe 120 Euronext VIGEO Eurozone 120	120 companies with best performance	Environmental, social and economic performance, following 38 criteria and +300 indicators	**62** 2nd position in sector	Six-monthly	Since 2012 (Europe and Eurozone) and 2014 (World)
STOXX	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+** Environmental: 55 Social: 99.7 Governance: 91 Leader in Social P.	Annual	Since 2016
CDP DRIVING SUSTAINABLE ECONOMIES	CDP Leadership Index CDP Water Index	All companies presenting information on their strategy and performance in climate change matters	Strategy and transparency in matters concerning the fight against climate change and water (CDP water)	**A-** (climate) **A** (water) **A** List	Annual	Since 2006 (climate) and 2010 (water)
ECPI	ECPI World ESG ECPI Euro ESG ECPI Global Carbon	Companies with best performance on sustainability (better than E–) In the case of the Global Carbon Equity Index, they must also have the best strategy for the fight against climate change	Environmental, social and economic performance. Special analysis of matters concerning the fight against climate change	Included	Annual	Since 2017

8. About this report

102-50 102-51 102-52 102-53 102-54 102-56

The 2017 Sustainability Report is the seventeenth published by the Company since the publication of Sustainability Reports commenced in 2001; it has continued on a yearly basis since then. ENDESA has prepared its Sustainability Report in accordance with the Essential option of the Global Reporting Initiative (GRI) standards. The Index of GRI content may be found in Appendix III.

With this 2017 Sustainability Report, ENDESA hopes to provide a transparent, global view of the Company's performance in the field of Sustainability, in accordance with its Sustainability Policy and its 2017-2019 Sustainability Plan, which has already been updated to the 2018-2020 Plan.

The Sustainability Report is published alongside other annual Company reports, such as Legal Documentation and the Corporate Governance Report; likewise, 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.

9. Coverage of the report

102-10

ENDESA maintains a constantly-updated corporate register featuring the entirety of its interests, of whatever nature, direct or indirect, as well as details of any entity over which it has the ability 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).

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.

As a result of the capacity auctions held on 17 May 2017 and 26 July 2017, ENDESA, through ENEL Green Power España, S.L.U. (EGPE) was awarded wind capacity of 540 MW and photovoltaic capacity of 339 MW.

On 29 December 2016 ENDESA, S.A., through its wholly owned subsidiary ENDESA Medios y Sistemas, S.L.U., formalised the acquisition from ENEL Iberia, S.L. of the systems and telecommunications (ICT) business relating to ENDESA's scope of activity. The effective date of the transaction was 1 January 2017. The operation entailed a reorganisation of ENDESA's ICT support activities to make them more flexible in order to adapt to ENDESA's corporate scope, by simplifying internal and administrative management procedures.

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.

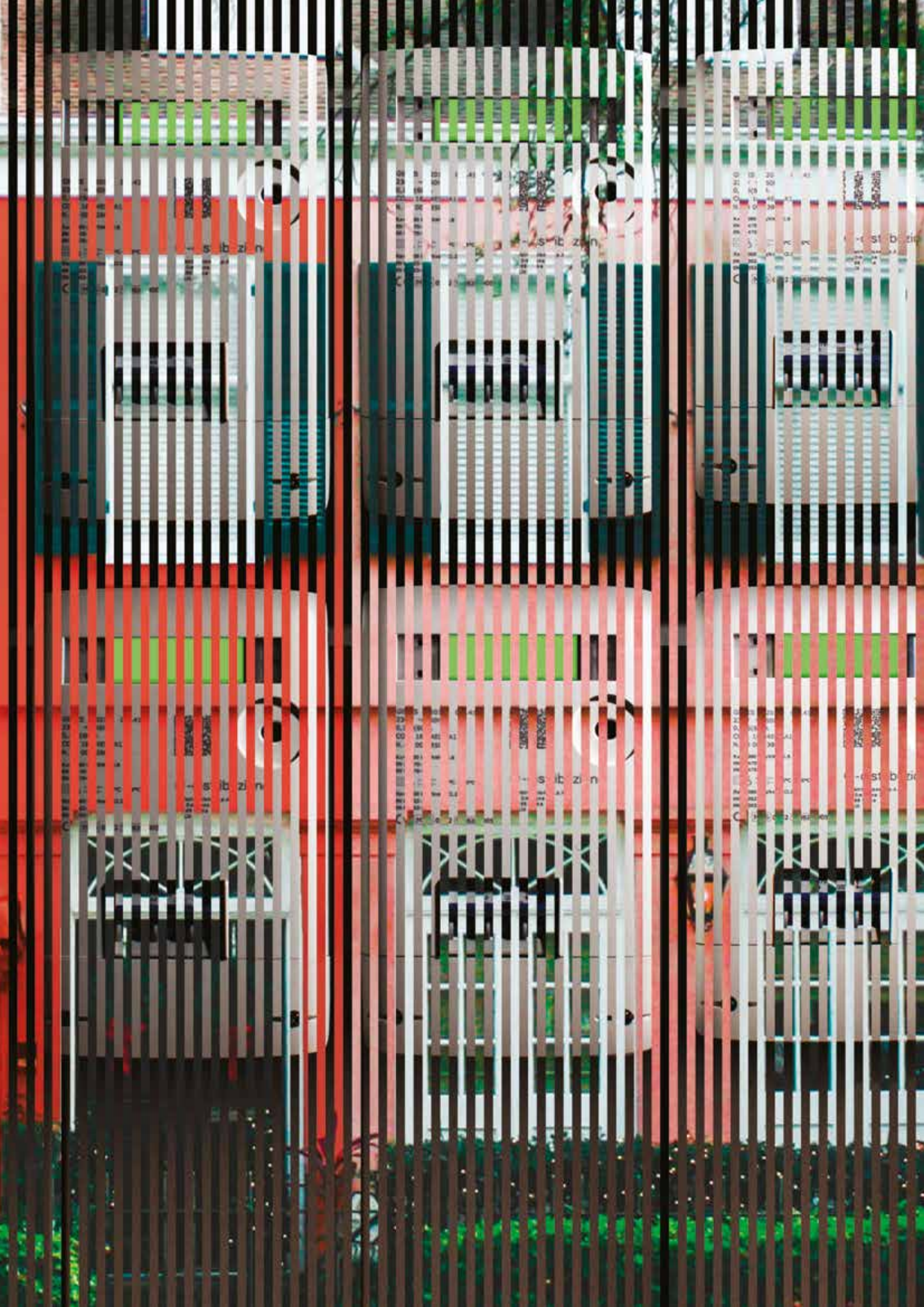
With regard to the material aspects identified, it should be noted that all of these are significant, both within and outside the organisation, for all the entities forming ENDESA.

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 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

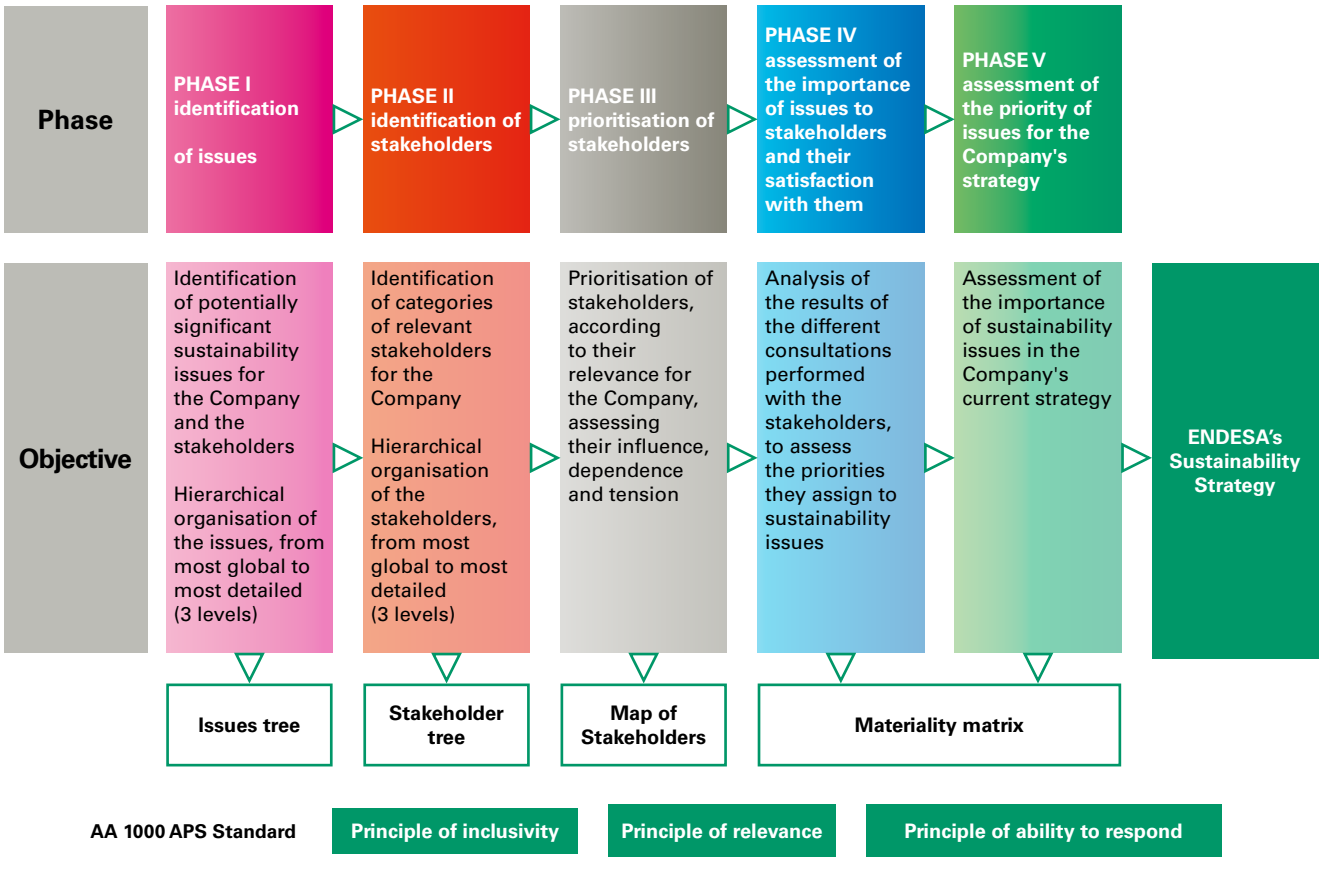
102-46

In order to integrate the expectations of the stakeholder groups in a structured manner, and in line with the company purpose, each year ENDESA performs a process of identification of priority issues, through which it assesses and selects the economic, ethical, environmental and social issues that are relevant to the stakeholders and are part of the company's strategic priorities.

The results obtained in this process contribute to strategic business planning and to the design of ENDESA's sustainability plans. They also determine the content of the Sustainability Report and contribute to the effective management of stakeholders and their expectations.

For the execution of the process, ENDESA implements the methodology developed by the ENEL Group for all its companies, which is in line with the international AA 1000 APS standard. The aim of this standard is to guide the organisation in the strategic management of interaction with its stakeholders by complying with a set of principles, after the correct identification of the latter (Principle of Inclusivity), the prioritisation of these issues which require attention from the Company (Principle of Relevance), and design of responses (Principle of Ability to Respond) to the expectations which create more value for ENDESA and for the community to which it provides services.

Identification process for priority issues



2. Participation of stakeholders

Awareness of stakeholders' expectations is a cornerstone of ENDESA's Sustainability strategy. This approach is intended to identify levers, which allow making safe, sustainable and competitive energy models viable, as well as developing innovative, comprehensive and pioneering approaches to anticipate events, manage risks and seek differentiation.

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. The areas of ENDESA entrusted with ensuring proper dialogue with the company's stakeholders annually update the rating and cataloguing of these in accordance with the Company's current situation.

Furthermore, each stakeholder group is segmented in order to identify each of the sub-groups forming it, and thus be able to optimise the identification of channels of dialogue and consultation so as to assess the perception these have regarding the management performed by the Company.

The stakeholders identified by this process are detailed 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
		Public financial institutions
		Other financial institutions
	Rating agencies and financial analysts	Rating agencies and financial analysts
Public Administration	**Political parties**	National political parties
		Regional and local political parties
	Government Institutions	Local Government
		Regional Government
		National Government
		Community government institutions
	Authorities and supervisory bodies	Local and regional supervisory bodies
		National authorities and regulators
		International authorities and regulators
	Law enforcement agencies	Local law enforcement agencies
		National law enforcement agencies
		International law enforcement agencies
Business community	**Companies and competitors**	Local companies
		National companies
		Multi-national companies
		Public enterprises
	Trade unions	Local trade unions
		National trade unions
		International trade unions
	Business associations	Local business confederations
		National business confederations
		Chambers of Commerce
		Other business associations
Civil society and citizens	**Citizens and public opinion**	Minorities
		Local citizens
		National citizens
		International public opinion
	Opinion leaders	Local opinion leaders
		National opinion leaders
		International opinion leaders
	Environmental non-governmental organisations	Local non-governmental organisations
		National non-governmental organisations
		International non-governmental organisations
	Foundations and Associations for social purposes	Local associations
		National associations
		International associations
	Religious institutions	Local religious institutions
		National religious institutions
		International religious institutions
	Research centres and academic institutions	Primary and secondary education centres
		National research centres
		International research centres
	Organisations promoting CSR	Sector organisations
		National and international 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
	Consumer associations	Consumer associations
Media	**Social networks and virtual communities**	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 communication channels with its stakeholders

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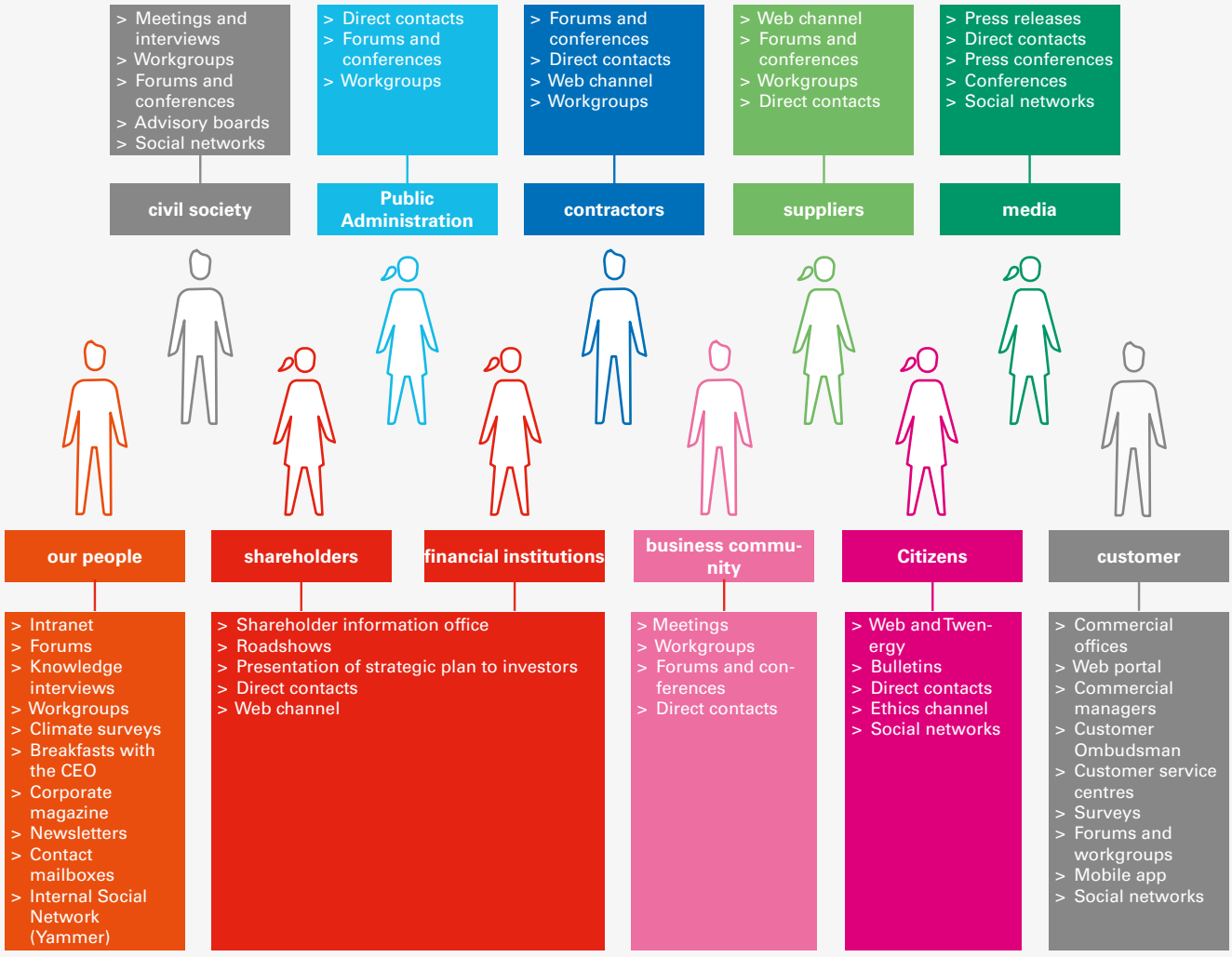
ENDESA's operational excellence is based on a continuous interaction with its stakeholders, with whom it maintains a constant relationship in the course of its activities. By means of communication channels and procedures forming its management systems, the company acquires solid knowledge of its stakeholders' requirements and expectations, and the evolution of these.

During 2017, 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 2017 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 9 events of its own as well as participation by a total of 51 experts in smart cities and e-mobility, the programme has had potential coverage on networks of more than 19 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.

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.

The recently launched corporate website (www.endesa.com) has continued to grow during 2017, thanks to new content based on storytelling and focused on the strategic objectives and current affairs of the company 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.

The web presence of the company's various business areas has been strengthened, as in the case of Energy Management-Origination , which now has its own space at endesa.com. During 2018 progress will be made in the dissemination strategy for its activities and products. Work has also been carried out on the design and development of a map of Endesa's generation plants, which will be published in the first quarter of 2018.

In the area of web accessibility, a comprehensive tool has been developed to facilitate access to content for people with visual impairment. Progress has also been made on improvements needed to achieve a high level of accessibility throughout the site, which will be certified in 2018.

In line with the company's digitisation strategy, during 2017 the development and updating of the audio-visual archive was completed, a complete tool for viewing and downloading images and videos that serves as a multimedia content repository for the rest of the digital channels.

At the end of 2017 Endesa Distribución launched a new project to redesign its website (endesadistribucion.es) and Digital Communications will therefore provide the necessary support to adapt this project to the Enel Group's global digital strategy, reviewing the correct application of the corporate brand style guide for digital media and sharing the best practices identified during the redesign of the corporate site in terms of technology, suppliers, content, etc.

Another challenge this year is the launch of a new employment portal, both at the Group level as well as, subsequently, for each country. In Spain and Portugal work is under way with the Human Resources area to incorporate the necessary changes in the current portal in order to achieve the full inclusion of Spain in this Group project.

2.3. Prioritisation of stakeholders

102-42

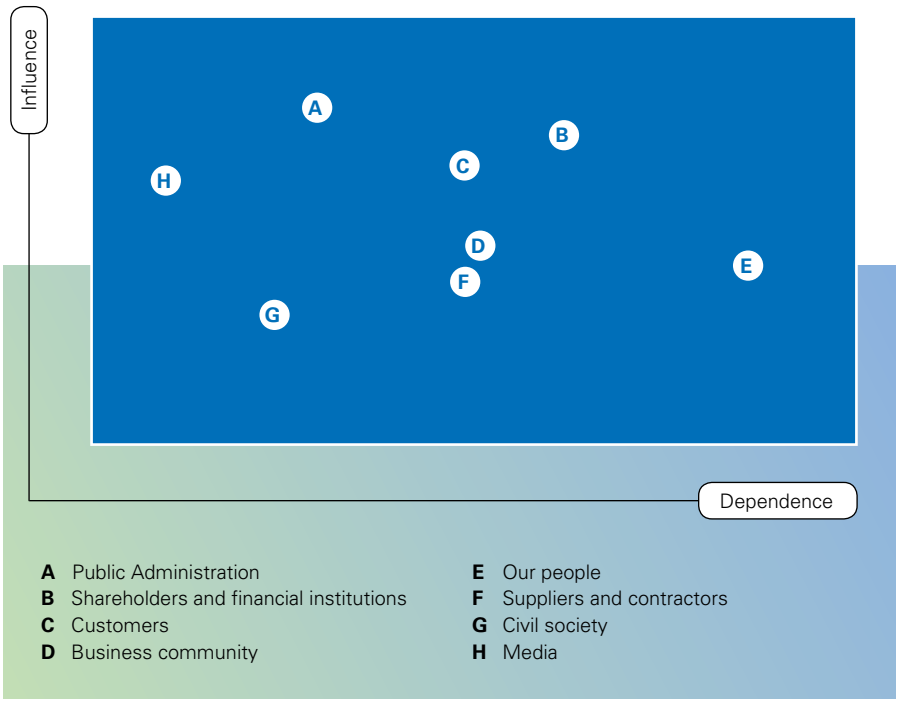
With the active participation of different business and corporate units at ENDESA, in 2017 the stakeholders were prioritised according to their relevance to the company. To this end, the stakeholders were prioritised according to two variables:

- **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 gives rise to the relevance of the stakeholder group, orienting 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.

The analysis revealed that the Public Authorities, shareholders, financial institutions and customers are the stakeholders with the greatest capacity of influence on the Company, while it is the employees who present the greatest degree of dependence.



3. Material aspects

3.1. Materiality study

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In 2017 ENDESA carried out a materiality study that has served as the basis for defining the priorities of its 2018-2020 Sustainability Plan. Thus, in 2017, almost 4,000 sources and representatives of 18 different stakeholders were consulted directly and indirectly by means of the following analyses, performing the following tasks:

- 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 employees in the management of the Company's sustainability issues.
- In-depth interviews with ENDESA's top management.
- 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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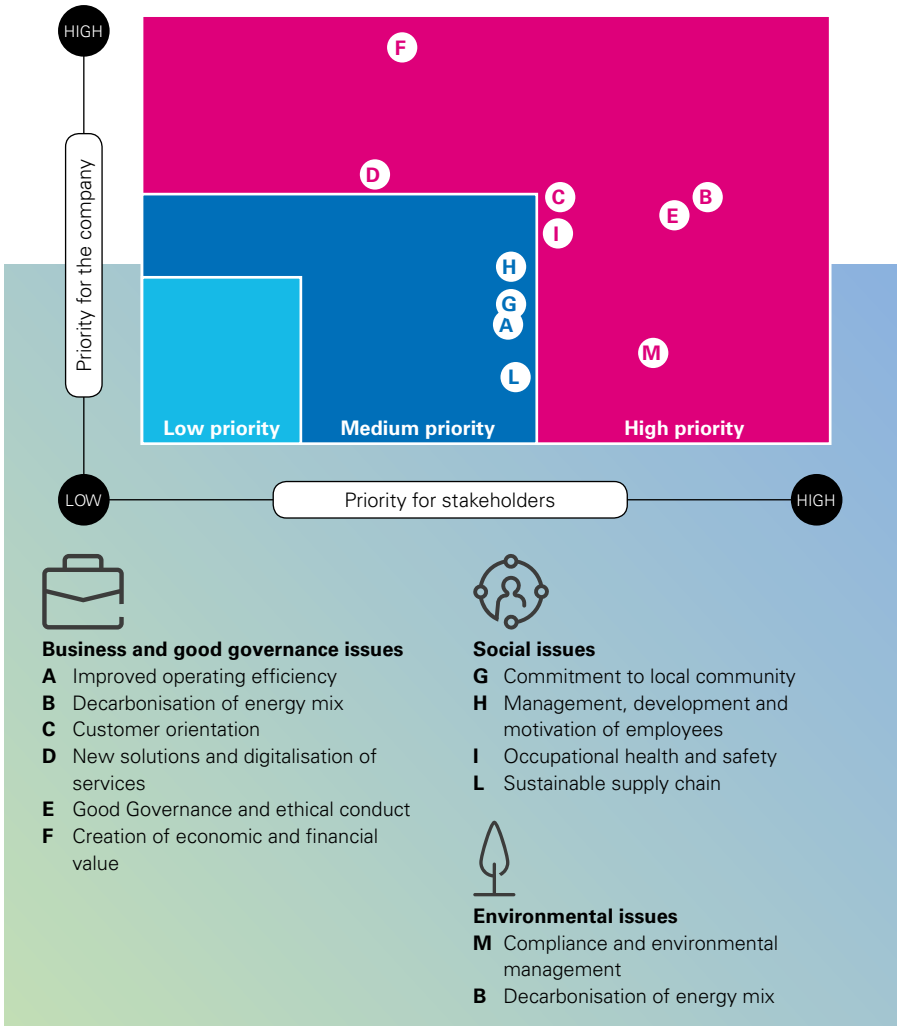
3.2.1. Priorities for the company and for stakeholders

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 rules 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 energies 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 2018-2020 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 associated.

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, the defining of a business strategy that places the customer at its centre is now essential. Likewise, excellence in commercial ser-

vice 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 2018-2020 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 2018-2020 Sustainability Plan, ENDESA has included specific activities 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 relevant. 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 occupational 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

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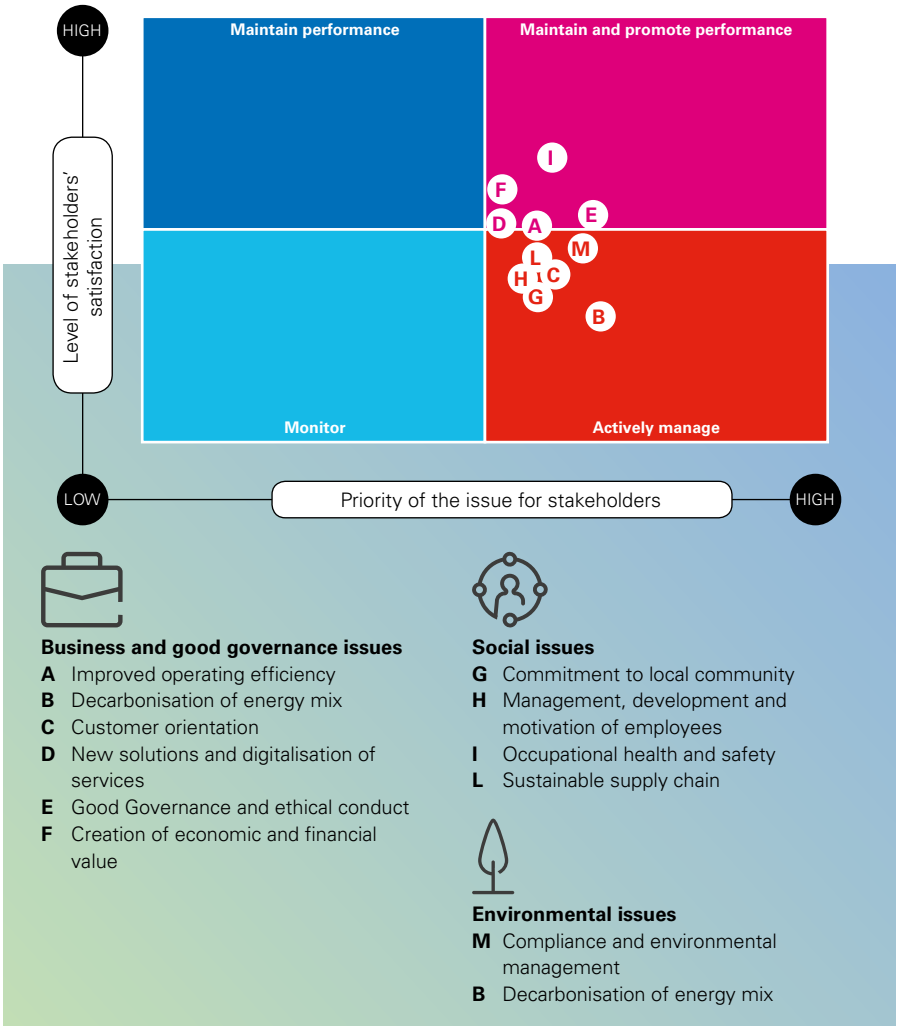
Something new since the previous year, in 2017 the level of stakeholders' satisfaction in terms of the various sustainability issues was analysed and the following results were achieved:

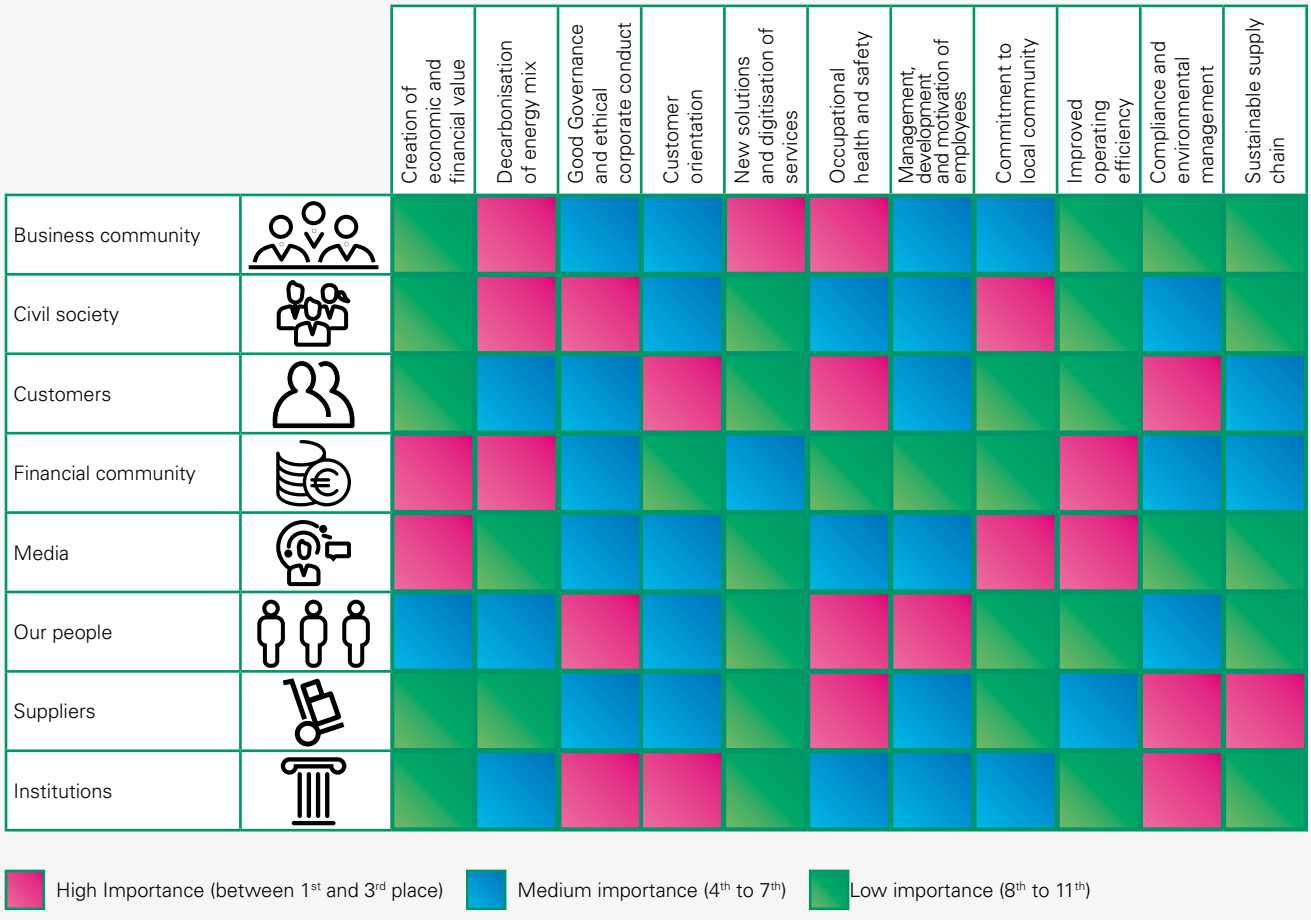


According to the stakeholders consulted, the aspects that the company should manage most actively are decarbonisation of the energy mix and customer orientation. Accordingly, both aspects are included in the strategic priorities recognised in ENDESA's new 2018-2020 Sustainability Plan, with the aim of thus meeting the expectations of the stakeholders.

3.2.3. Priority issues and satisfaction for each stakeholder group

The level of priority given by each stakeholder group to each of the sustainability issues analysed during the consultation process done within the framework of the materiality study is detailed below:

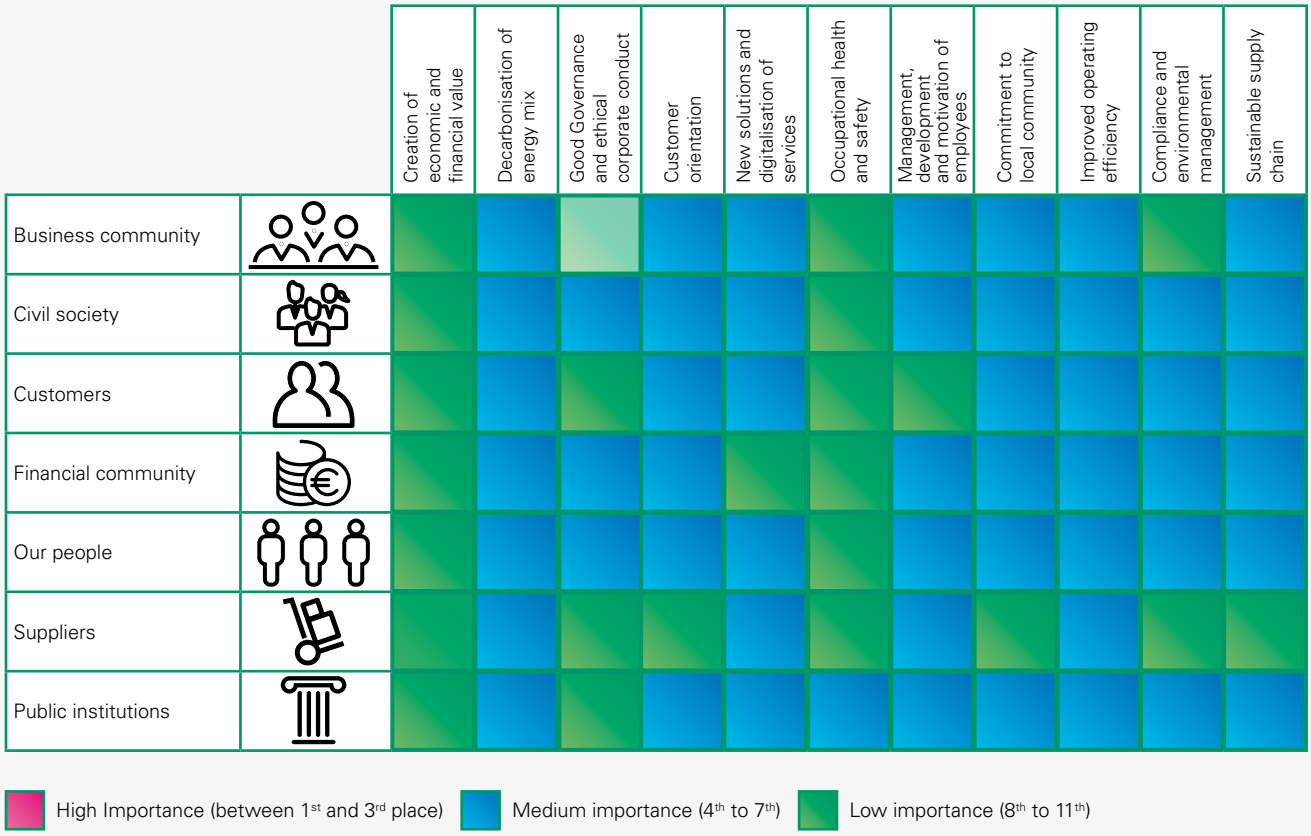
Priority ranking assigned by each stakeholder group to sustainability issues



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:

Priority ranking assigned by each stakeholder group to sustainability issues



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.

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

According to analysis of the business model, of the sector and of the expectations of stakeholders, various scopes of operation are being identified in which ENDESA will have to work to guarantee its sustainability in the coming years:

> *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 of social legitimacy:* the energy sector has high public exposure, promoted by greater social sensitivity with regard to it. Therefore, it is essential to continue working on improving social perception in order to continue competing in the new energy scenario.
- *Responsible business management:* increases the importance of environmental, social and governance issues in determining a responsible company. Among them, aspects related to the development of human capital, occupational health and safety, environmental management and the extension of sustainability to the supply chain stand out.

Ultimately, according to the stakeholders consulted, value creation for the company must be based on a set of requirements necessary for operation (such as corporate governance, environmental management, health and safety, 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 Strategy and Plan

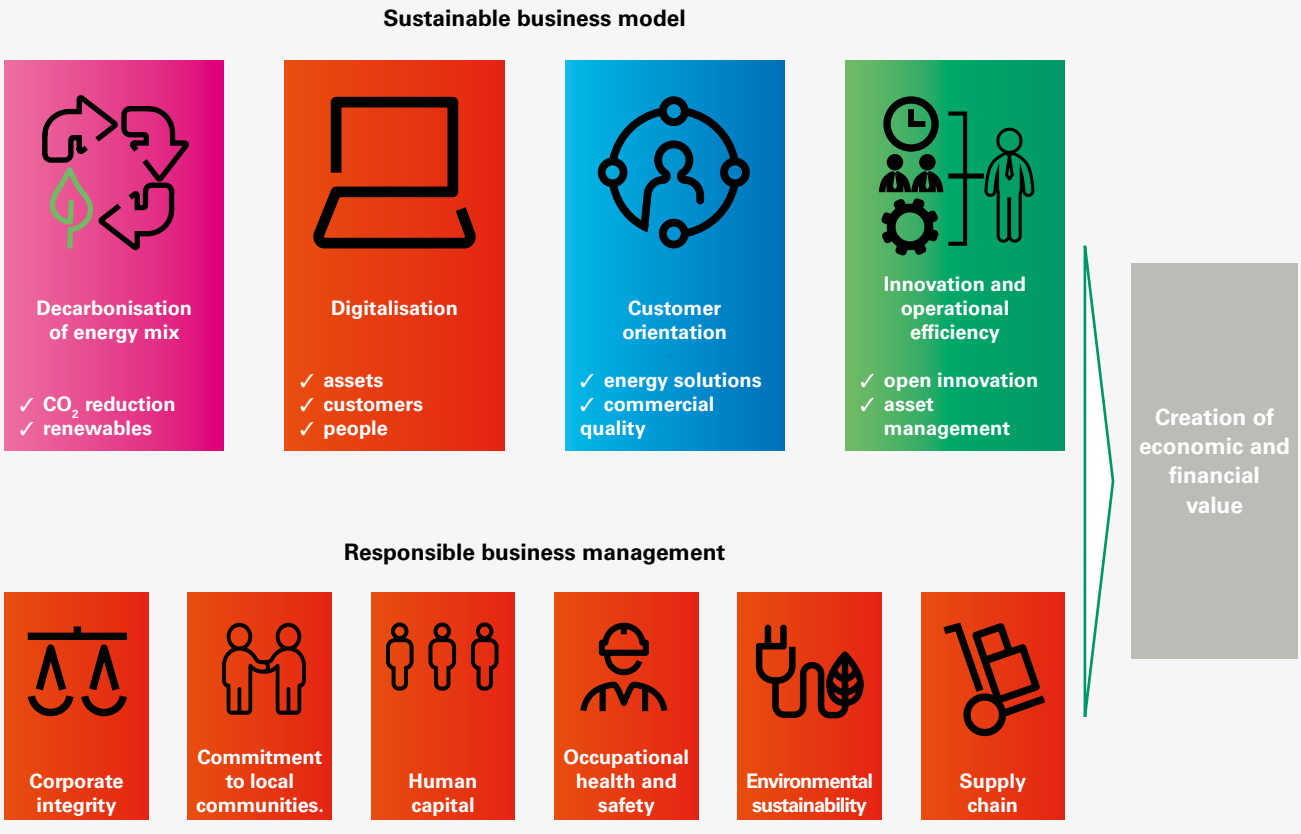
1. Compliance with ENDESA's 2017-2019 Sustainability Plan

The 2017-2019 ENDESA Sustainability Plan (ESP), focused on creating long-term economic value through fostering a sustainable and responsible business model, has established four strategic priorities: de-carbonisation of the energy mix; digitalisation of assets, customers and persons; focus on the customer; operational efficiency and innovation.

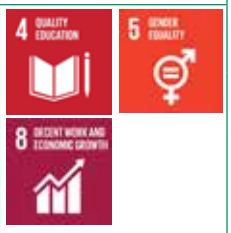
Likewise, to guarantee a high level of excellence in responsible business management, five strategic pillars cutting across all company activities were identified: integrity, commitment to local communities, human capital, occupational health and safety, environmental sustainability and supply chain.

By means of over 100 quantitative management goals, ENDESA has responded to each of the strategic pillars and priorities defined in the 2017-2019 ESP, achieving overall compliance of over 93%.

ENDESA's 2017-2019 Sustainability Plan



Field	Area of activity	Goal 17	Result 17	Accomplishment
Decarbonisation of energy mix	Reduction of total CO_2 emissions	34	34.5	94%
	Reduction of specific CO_2 emissions (g/kWh)	435	439	
	CO_2 –free production (%)	50%	44%	
	Development of renewable energies	500MW in 17-21	879 MW in auction	
Digitalisation of assets, customers and people	Low Voltage: Installation of Smart Meters (cumulative) (millions of meters cumulative)	11.2	11.2	100%
	Medium voltage: Installation of remote controls (no.)	14,925	15,110	
	High Voltage: Remote control upgrading (no. of re-motes upgraded)	70	73	
	Customer digitalisation (millions of digital customers)	3.4	3.8	
	Invoicing digitalisation (millions of digital invoicing contracts)	2.1	2.1	
	Sales via digital channels (vs other types of channel).	8%	9%	
	Development of digital transformation programmes (no. of employees)	561	465	
	Web Applications protected by Cybersecurity	75%	60%	
	Setting-up and accreditation of the CERT (Computer Emergency Response Team).	Setting up	Set up	
	Awareness activities on cybersecurity for employees.	+15	15	
Customer orientation	Overall customer satisfaction with the company	7.2	7.3	85%
	Twenergy portal visits (millions of visits)	4.8	5.4	
	Number of NGV service stations open to the public associated with fuel changes.	10	8	
Operating efficiency and innovation	Launching of innovation challenges on the Energy Challenges platform.	1	1	97%
	New *start-ups* selected each year	2	3	
	New innovation projects launched each year	2	4	
	Internal innovation events each year	2	4	
	Efficiency the renewable energy plants (availability).	96%	94.6%	
	Efficiency of hydraulic power plants (availability).	98.2%	99.3%	
	ISO 9001-certified thermal generation facilities.	100%	100%	
	ISO 9001-certified renewable generation facilities.	100%	100%	
	Electricity losses in distribution (%)	7.9%	8.12%	
	Interruption time (own + programmed ITEPI) (min.)	57	72	
	Energy Recovery (GWh)	1,513	1,513	
Corporate integrity	Development of internal standards on market abuse (%)	100%	60%	92%
	Transparency in diversity of Administrative bodies (Application of Directive 2014/95)	100%	100%	
	Annual verification of CRPM (Criminal Risk Prevention) controls	100%	100%	
	Ethical conduct training for employees	90%	90%	
	Verifiable claims analysed within 90 days	100&	100%	
	Score obtained in DJSI ethical conduct criteria	>95/100	96	

Field	Course of action	Goal 17	Result 17	Accomplishment	
Local communities	Promotion of access to energy (no. of beneficiaries)	240,000	401,141	100%	
	Access to electricity for vulnerable customers (no. of people)	60,000	106,867		
	Support for Education (no. of beneficiaries)	32,000	32,676		
	Socio-economic development (no. of beneficiaries)	42,000	120,731		
Human capital	Employee involvement in performance appraisal processes (% of employees)	100%	100%	91%	
	Participation in performance appraisal processes (% employees)*	99%	99%		
	Participation in performance feedback interviews (no. of employees)*.	93%	96%		
	Gender diversity: Overall female hires	33%	34.5%		
	Gender diversity: Women in executive positions	16.5%	16.4%		
	Boosting employee training (hours/employee/year)	46	35.3		
	Boosting of on-line *employee* training (hours/employee/year)	13	10		
	Employees benefited by improvements in work areas in offices	1,000	214		
	Services in ENDESA offices that favour reconciliation	50	53		
Occupational Health and Safety	Fatal accidents	0	1	66%	
	Reduction of the combined accident rate index	1.19	0.75		
	Safety inspections in own and contractors' facilities	66,000	74,180		
	Facilities assessed by the EcOS (Extra Checking On site) programme	15	15		
	Execution of medical check-ups on employees	+8,900	5,030		
	Increase in awareness of occupational health and safety by employees (no. of actions)	235	88		

* The population considered refers to personnel participating in the Enel Group Performance Appraisal process.

Field	Area of activity	Goal 17	Result 17	Accomplishment
Environmental sustainability	Reduction of environmental footprint (vs 2016 estimate)	3.2	1.7	95%
	Specific SO_2 emissions (g/kWh)	0.91	0.77	
	Specific NO_x emissions (g/kWh)	1.15	1.07	
	Specific particulate emissions (g/kWh)	33	23	
	Specific water consumption in generation (m^3/MWh)	0.93	0.84	
	Hazardous and non-hazardous waste in generation (ton)	45,000	24,157	
	Execution of biodiversity preservation projects	+20	25	
	Electrification of the fleet (electric vehicles)	110	94	
	Electric vehicles purchased by employees	500	534	
	Electrification of car parks at ENDESA offices	200	365	
	E-car sharing promotion (km travelled)	120,000	95,459	
	Reduction of CO_2 emissions in fleet management vs 2016	2%	17%	
	Power consumption in buildings (GWh)	31.2	31.8	
	Water consumption in buildings (thousands of m^3).	63.5	54.6	
	Reduction of space in offices as a whole (m^2 reduced)	10,800	5,583	
	Investment for integration of space into the surroundings (€ Millions)	4	2.3	
	Social and environmental actions on company assets	8	13	
Supply chain	Purchases made from qualified suppliers (% of volume of purchases)	65%	63%	93%
	% of the ratings performed on suppliers where human rights aspects are verified	20%	49%	
	% of the ratings performed on suppliers where environmental aspects are verified	20%	69%	
	% of ratings performed on suppliers where occupational safety and health aspects are verified	65%	70%	
	Appraisal of suppliers' performance (% of volume of purchases)	57%	59%	
	Contractors assessed regarding social, ethical and environmental aspects	65%	10%	

2. ENDESA's New 2018-2020 Sustainability Plan

102-15

In order to fully integrate sustainability into our business management and decision-making processes, there must be maximum alignment between business strategy and sustainability strategy, so that both are oriented toward the attainment of the same objective and use feedback to achieve this, thus generating short- and long-term economic value for the Company.

On 22 November 2017, ENDESA presented its update to its Strategic Plan for the 2018-20 period.

At the same time, and in order to achieve the maximum alignment between the sustainability and business strategies, ENDESA carried out a process of analysis, consultation and strategic reflection for the design of its new 2018-2020 Sustainability Plan, using as a basis the achievements and opportunities for improvement identified in the previous plan. This process has enabled the identification of the priorities for action for the next three years. The breakdown of this analysis, and the main conclusions, may be found in the chapter *Defining Priorities*

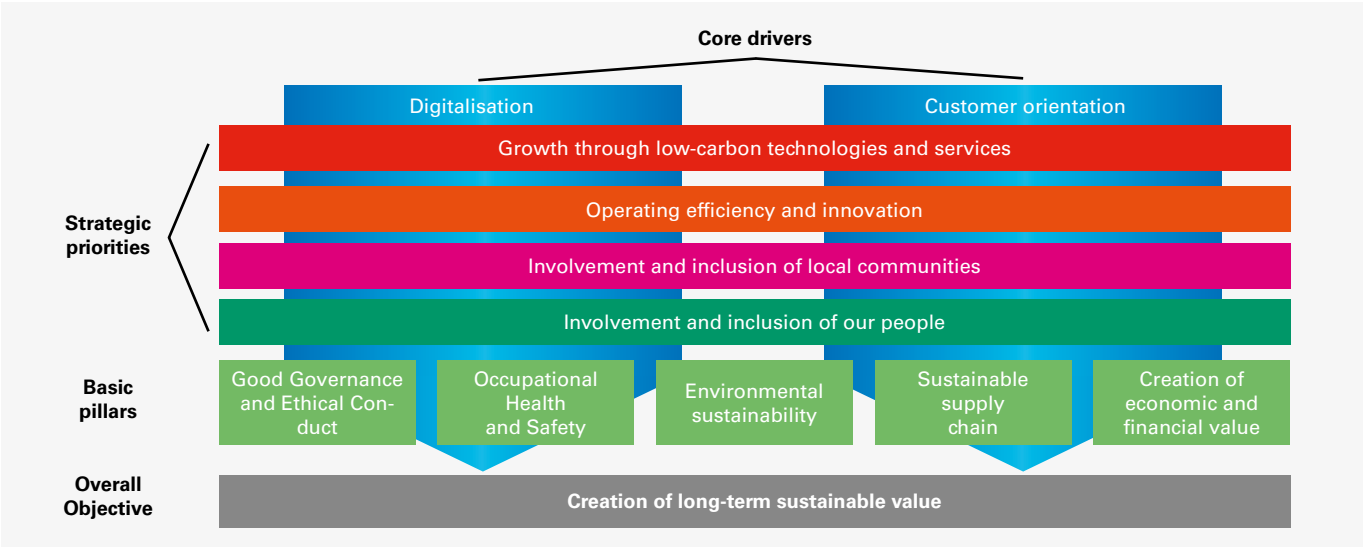
As was the case with the previous plan, the new 2018-2020 Sustainability Plan also defines ENDESA's contribution to the United Nations Sustainable Development Goals. This framework represents the basis of the sustainability plan and acts as a benchmark to establish a sustainability strategy that generates long-term value both for the Company and for the society it serves.

The new 2018-2020 ESP seeks to promote sustainable value over the long term, setting the following strategic priorities and defining over 100 quantitative management objectives:

Strategic priorities:

> **Growth through low-carbon technologies and services:** The new ESP adheres to the roadmap to make ENDESA a CO_2 emission-free company in 2050. To this end, emission reduction goals have been set, as well as an increase in investment in the development of renewable energy.

> **Operating efficiency and innovation:** The Sustainability Plan includes courses of action directed at promoting the efficiency and quality of management of generation and distribution assets, as well as fostering the sustainable mobility of employees in their relocation for work and personal reasons. Also, from a viewpoint of open innovation, the Sustainability Plan includes courses of action focusing on promoting the attraction of external talent and exploring new cooperation pathways for the development of new business solutions to further sustainability.



- **Involvement and inclusion of local communities:** From a viewpoint of shared value creation, 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 the 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 continue to promote the level of satisfaction of its employees, diversity and inclusion, development of talent and balance between professional and personal life.

Core drivers:

- **Digitalisation:** the Sustainability Plan identifies digital transformation as a fundamental driver in the achievement of 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.
- **Customer orientation:** new demands from customers require the development of new business solutions 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, the Sustainability Plan pays special attention to maintaining a high level of excellence in its relationship with customers and in the quality of the service provided.

Basic foundations for responsible management:

- **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.
- **Occupational Health and Safety:** ENDESA understands safety to be 'zero accidents' and health to be complete 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.
- **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.

The main objectives defined in the new Sustainability Plan for the 2018-2020 period are detailed below:

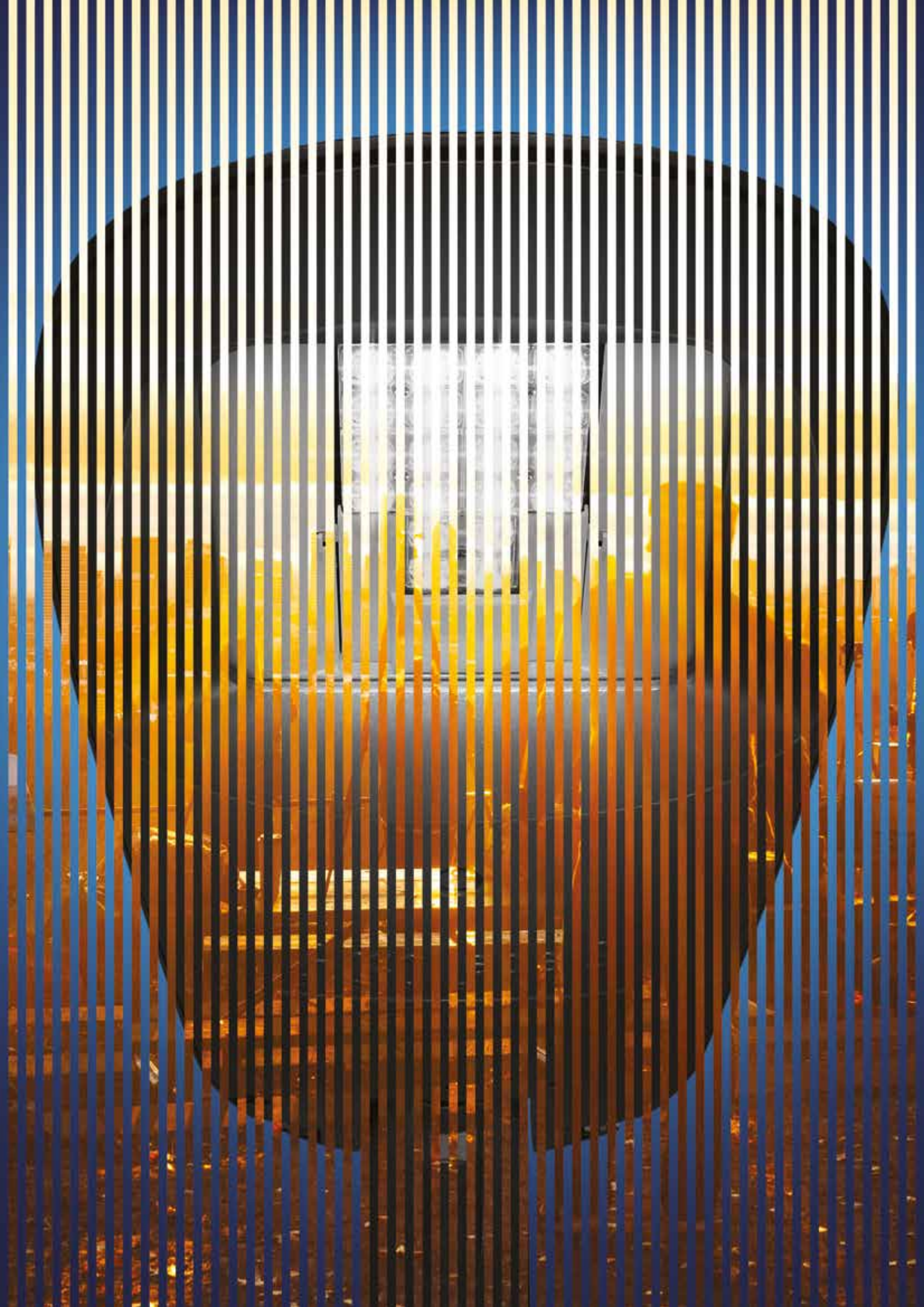
Field	Area of activity	2017 base	2018	2020
Growth through low-carbon technologies and services	Reduction of total CO_2 emissions (Mton)	34.5	33	26
	Reduction of specific CO_2 emissions (g/kWh)	439	436	350
	CO_2 –free production (%)	45%	48%	55%
	Development of renewable energies	n/a	~1GW	
	Environmental improvements of thermal power plants	n/a	+€300 Million	
	Installation of storage capacity	n/a	~90 MW	
Operating efficiency and innovation	Efficiency of renewable energy plants	94.6%	94.6%	94.6%
	Efficiency of hydraulic power plants	99.3	98.2%	98.2%
	ISO 9001-certified thermal generation facilities	100%	100%	100%
	ISO 9001-certified renewable generation facilities	100%	100%	100%
	Electricity losses in distribution (%)	8.12%	7.70%	7.07%
	Interruption time (own + programmed ITEPI) (min.)	72.3	57.5	53.4
	Energy Recovery (GWh)	1,513	+3,000 GWh	
	Electrification of the fleet (no. of electric vehicles)	94	299	443
	Optimisation of internal combustion fleet (no. of internal combustion vehicles in fleet)	1,820	1,338	854
	Reduction of CO_2 emissions in the fleet (tons)	5,361	24%	50%
	E-mobility programme employees (no. of employees with e-vehicles)	534	750	1,000
	Launching of innovation challenges on the Energy Challenges platform	1	1	1
	New start-ups selected each year	3	2	2
	New innovation projects launched each year	4	3	3
	Internal innovation events each year	4	2	2
Involvement and inclusion of local communities	Promotion of access to energy (no. of beneficiaries)	401,141	1,370,000 in 2015-2020	
	Support for Education (no. of beneficiaries)	32,676	164,000 in 2015-2020	
	Socio-economic development (no. of beneficiaries)	120,731	241,000 in 2015-2020	
	Environmental awareness and promotion of biodiversity (no. beneficiaries)	81,332	243,000 by 2020	
	Extension of shared value creation model in local operations	n/a	Deployment	
Involvement and inclusion of our people	Employee involvement in performance appraisal processes (% of employees)	100%	100%	100%
	Participation in performance appraisal processes (% of employees)	99%	99%	99%
	Participation in performance feedback interviews (% of employees)	96%	95%	95%
	Gender diversity: Overall female hires	34.5%	35%	39%
	Gender diversity: Women in executive positions	16.4%	17.5%	18.5%
	Boosting employee training (hours/employee/year)	35.3	36	39
	Boosting of on-line employee training (hours/employee/year)	10.1	10.5	12.5
	Employees benefited by improvements in work areas in offices	214	2,750	
	Services in ENDESA offices that favour reconciliation	53	60	70
	Promotion of smartworking (no. of employees)	1,173	1,200	1,400

Field	Area of activity	2017 base	2018	2020
Digitalisation of assets, customers and people	Low Voltage: Installation of Smart Meters (cumulative) (millions of meters cumulative)	11.2	12.0	12.4
	Medium voltage: Installation of remote controls (no.)	15,110	17,315	24,109
	High Voltage: Remote control upgrading (no. of remotes upgraded)	73	235	664
	Customer digitalisation (millions of digital customers)	3.8	4.2 in 2020	
	Invoicing digitalisation (millions of digital invoicing contracts)	2.1	3.7 in 2020	
	Sales via digital channels (vs other types of channel).	9%	15% in 2020	
	Promotion of e-care management (%)	68%	77% in 2020	
	Promotion of twenergy on-line channel (millions of visits)	5.4	+17 MM by 2020	
	Development of digital capabilities among employees	n/a	100% in 2020	
	Web Applications protected by Cybersecurity	60%	75%	100%
	Response to cybernetic emergencies	n/a	CERT accreditation	
	Awareness activities on cybersecurity for employees and their families	35	40	50
Customer orientation	Profit obtained from sales of energy solutions (€millions)	~€200 million in 2020		
	Overall customer satisfaction with the company	Score> 7.2 in 2018-2020		
	Installation of public access electric vehicle recharging stations (no.)	600 in 2018-2020		
Good governance and ethical conduct	Presence of women on Endesa Board of Directors	18%	30% in 2020	
	Plan of action to comply with the CNMV guide on Auditing commissions	n/a	Execution in 2018	
	Awareness upgrading plan for members of the Board of Directors	n/a	Execution in 2018	
	Annual verification of CRPM (Criminal Risk Prevention Manual) controls	100%	100%	100%
	Ethical conduct training for employees in the last 3 years (% employees)	90%	95%	100%
	Verifiable claims analysed within 90 days	100%	100%	100%
	Score obtained in DJSI ethical conduct criteria	96/100	>95	>95
Occupational Health and Safety	Fatal accidents	1	0	0
	Combined accident frequency index	0.75	1.04	1.01
	Safety inspections in own and contractors' facilities	74,180	+200,000 by 2020	
	Facilities assessed by the EcOS (Extra Checking On site) programme	15	60 by 2022	
	Execution of medical check-ups on employees	5,030	25,000 by 2022	

Field	Area of activity	2017 base	2018	2020
Environmental sustainability	Reduction of environmental footprint (vs prior year).	1.7%	-50% in 2020 vs 2017	
	Specific SO_2 emissions (g/kWh)	0.77	0.76	0.41
	Specific NO_x emissions (g/kWh)	1.07	1.09	0.93
	Specific particulate emissions (mg/kWh).	23	28	24
	Specific mercury emissions (µg/kWh))	4	4	3
	Specific water consumption in generation (m^3/MWh)	0.84	0.88	0.70
	Hazardous and non-hazardous waste in generation (ton)	24,157	45,202	44,451
	Reuse of combustions products from coal-fired power plants (% of ash, slag and gypsum)	19%	16%	22%
	Execution of biodiversity preservation projects	25	>20	>20
	Evaluation of impact on biodiversity	n/a	Deployment in 3 business and corporate areas	
	Certification of energy, environmental and internal air quality management in offices	n/a	54%	55%
	Power consumption in buildings (GWh)	31.8	32.7	31.4
	Water consumption in buildings (thousands of m^3).	54.6	54.3	53.8
	Generation of paper waste in offices (m^2 reduced)	77	69	47
	Reduction of space in offices as a whole (m^2 reduced)	5,583	36,625 m^2 reduced	
	Investment for integration of space into the surroundings (€ Millions)	2.3	€30 Million by 2020	
	Social and environmental actions on company assets	13	>10	>10
	Reduction of CO_2 emissions in buildings (tons)	11,716	-23% in 2020 vs 2017	
Sustainable supply chain.	Purchases made from qualified suppliers (% of volume of purchases)	63%	70%	80%
	% of the ratings performed on suppliers where human rights aspects are verified	49%	80%	100%
	% of the ratings performed on suppliers where environmental aspects are verified	70%	80%	100%
	% of the ratings performed on suppliers where occupational safety and health aspects are verified	69%	80%	100%
	Appraisal of suppliers' performance (% of volume of purchases)	59%	60%	70%
	Contractors assessed regarding social, ethical and environmental aspects	10%	15%	15%

04

Our Performance



Low-Carbon Business Model

44

% of net emission-free production

34.5

% of reduction in absolute CO_2 emissions (versus 2005)

1,675

MW Renewable Installed Power

18

% of reduction in specific CO_2 emissions (vs 2005)

Compliance with Sustainability Plan 2017-2019

Strategic priority	Course of action	2017 Target	31/12/17 Result	Key actions
Decarbonisation of energy mix	Reduction of absolute CO_2 emissions (Mt).	34	34.5	> Enel Green Power España has been awarded 540 MW wind power and 339 MW photovoltaic solar capacity. > Endesa continues its participation in three carbon funds. > Endesa voluntarily compensated greenhouse gas emissions from several of its national and international customers.
	Reduction of specific CO_2 emissions (g/kWh).	435	439	
	CO_2 –free production (%)	50%	44%	
	Development of renewable energies.	500 MW at 17-21	879 MW at auction	

1. Climate change, the greatest environmental challenge of the XXIcentury.

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 in the areas of Mitigation, Adaptation and Financing of climate change.

To develop these objectives, the regulatory development calendar was negotiated at the COP22 in Marrakesh, which has focused the negotiation at the recent COP23 which should be agreed upon and signed next year at the COP24 (Katowice, Poland from 3rd to 14th December 2018).

Below is a summary of the main aspects that were subject of negotiation at the last Summit held in Bonn, grouped according to the fundamental objectives of the Paris Agreement:

- **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. <749></749
- **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 provide voluntary resources.

Climate action in the European Union

Europe responded to the challenge of climate change with the Roadmap to a low-carbon economy, the climate and energy measures Package up to 2020 and the Climate and Energy Framework for 2030, with its principal priority being to significantly reduce greenhouse gas emissions (GHG) and encourage other States and regions to do the same.

The Roadmap indicates that in 2050, the EU must have reduced its greenhouse gas emissions by 80% compared to the 1990 levels and in order to achieve this, it must reach a 40% reduction in 2030, 60% in 2040 and all sectors must contribute.

The measures Package specifies climate and energy targets assumed by the European Union for 2020. Among them is the target of 20% reduction of GHG emissions compared to 1990 levels.

To give the Package continuity, new goals for reduction of emissions and renewable energies with the climate and energy Framework for 2030 were proposed, 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 theParis Agreement.

In order to achieve the goal of a reduction of at least 40%, the sectors included in 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 achieve a reduction of 30% with regard to 2005 levels through the binding goals of each member State.

Thus, it is important to emphasize that decarbonisation efforts at the European level have focused to date on the energy sector above all, giving a growing relevance to policies connected to the transportation sector, which is responsible for nearly 25% of total emissions in the European Union, with road transport being the major emitter, representing over 70% of all GHG emissions associated with transport in 2014.

National Climate Response

After ratifying the Paris Agreement, Spain assumed the commitment of working within a legislative framework that allows it to fulfil the commitments assumed regarding reduction of greenhouse gas emissions. In order to fulfil such commitments, preparation work was begun which will become the future **Climate Change and Energy Transition Law** intended to cross all sectors, in which both civil society and governments are participating.

The Ministry of Agriculture and Fishing, Food and Environment has received over 350 proposals in the public consultation process that was open from 18 July until 10 October 2017. ENDESA has played an active role in the process, being part of diverse forums and initiatives, among them seminars for discussion of the content that ought to be included in the law, organized by the Ministry of Agriculture and Fishing, Food and Environment and the Ministry of Energy, Tourism and Digital Agenda (MINETAD), at which over 400 experts from various fields were gathered. The Company had also participated in the public consultation process, bringing its support and commitment to working toward a low-carbon and climate-resilient economy to the Ministry of Agriculture and Fishing, Food and Environment

Transport emissions in Spain have increased by nearly 50% since 1990. The transport sector is one of the main sources of CO_2 emissions of the Spanish economy, entailing approximately 27% of global emissions according to the Provisional Progress Report on the Inventory of Greenhouse Effect Gases (GHG) for 2016, published by the Ministry of Agriculture and Fishing, Food and Environment That is why one of the basic goals of the future Climate Change and Energy Transition Law will be to promote a sustainable mobility and transport policy.

Therefore, the basic challenge of developed societies, in terms of mobility, is to evolve toward low-carbon consumption economic models and to reduce pollution, mainly in cities. ENDESA aspires to lead the response to this challenge through promotion of electrification of energy demand and efficient consumption, developing plants and programs directed at the promotion of electrical mobility, smart grids and energy efficiency.

As of the date that this report was written, Ministry of Agriculture and Fishing, Food and Environment, all inter-ministerial departments and the different political parties are analysing all of the proposals received in the public consultation process.

Promotion and reinforcement of ENDESA'S position on Climate Change

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, always up-to-date with intense international negotiations, aligns its corporate strategy with the com-

mitments and global targets that are currently presented in the fight against climate change.

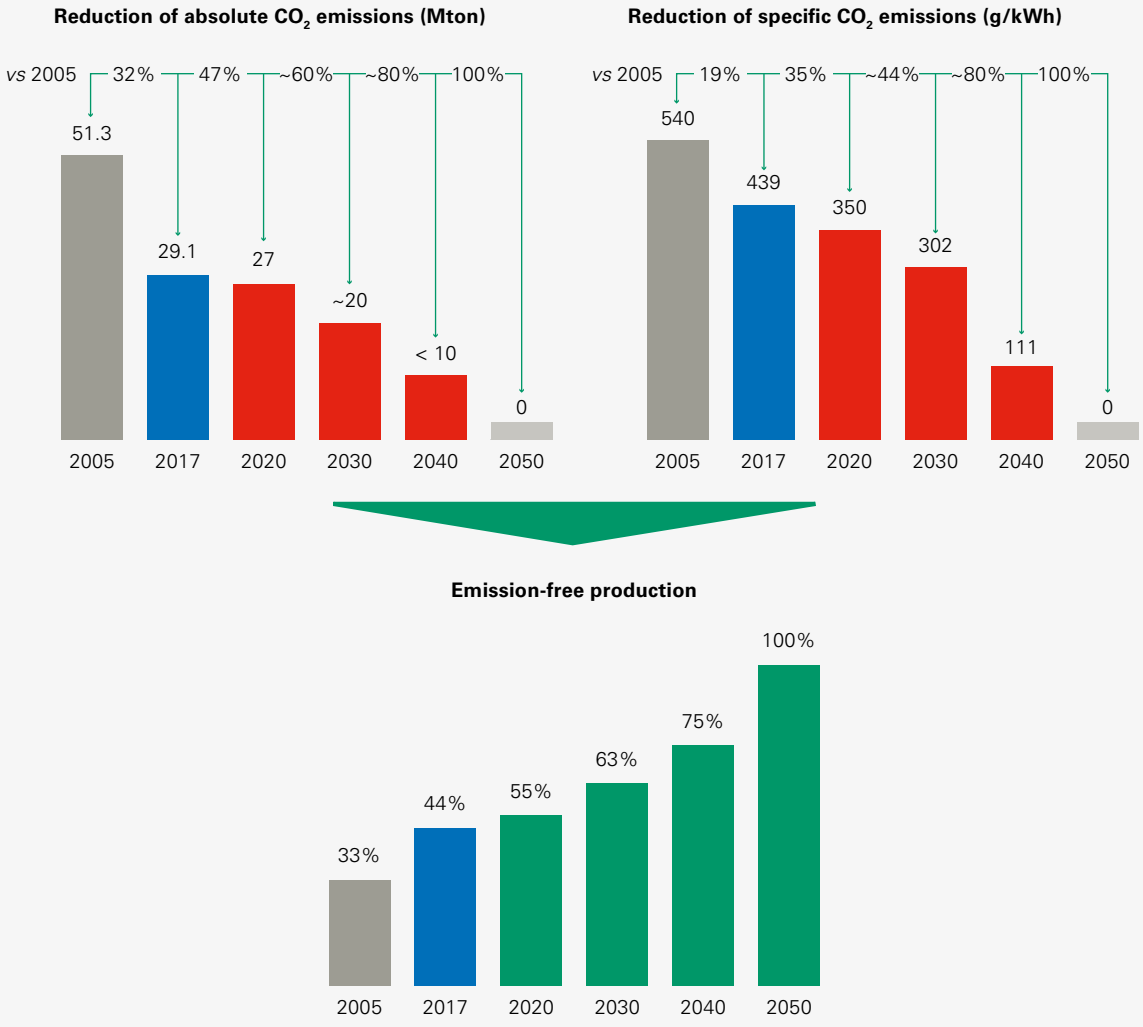
ENDESA's new 2018-2020 Strategic Plan is located in the current energy paradigm and takes into account the transition period in which we find ourselves. Among ENDESA's strategic pillars to lead the transformation are the following:

- Decarbonisation of energy mix for 2050 through an ambitious emission reduction plan;
- Promotion of renewable energies with an investment of over 900 million euros by 2020;
- And a smooth transition toward decarbonisation, assuring security of supply and avoiding new inefficient investments in fossil fuels.

The Company is aware that the path toward an efficient and sustainable energy model will be possible thanks to a greater presence in the renewable energies generation mix and electrification of transportation.

The Company updates the ENDESA Sustainability Plan, responding to changes that arise in climate and energy policies and renewing its reduction goals as a result, always with the idea of pushing the envelope 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.

CO_2 free Roadmap toward decarbonisation in 2050



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The risks and opportunities derived from climate change may be divided into two categories: physical and regulatory.

1.1.1. 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 Adaptation 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.

1.1.2. Risks and opportunities derived from the regulatory framework

The increasing regulations concerning objectives for energy and the 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 emission rights.

One important risk is the reduction of emission rights in the bid, due to both the modifications to the EU-ETS adopted in the last few years, as well as 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 its future estimates of the price of carbon and optimisation of the volume and value of its current carbon credit portfolio.

Renewable Energies

Renewable energy plays a key role in the transition toward a competitive, safe, 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 European 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 is seeking to raise the rate of renewable energies above 27% 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, double the rate registered in 2016, 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, a company though which it participated in the 2017 renewable energies auctions and was awarded 879 MW in wind and photovoltaic power. In the coming years leading up to 2020, ENDESA estimates investing 900 million euros in renewable energies in Spain and Portugal.

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 original plans.
- **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 potential 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 rate above 27% by 2030 and reinforcement of the energy savings objectives, raising the efficiency improvement goal to 30% in addition to continuing to establish measures for development of the European domestic energy market.

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 by being the active and central agents in future energy markets.

The Building Energy Efficiency Directive has been the first Winter Package Directive to be closed; it is hoped that the agreement may be formalised in the beginning of 2018. This new simplified framework will cover the 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 efficiency enables a saving in costs, as well as an opportunity for marketing of efficient energy solutions. The European Union has instigated several

initiatives to accelerate investment in energy efficiency:

- 'Horizon 2020': EU research and innovation programme for the 2014-2020 period.
- Private Finance for Energy Efficiency is the instrument of the EU LIFE Programme, which co-finances energy efficiency programmes (a budget of 80 million euros for 2014-17).
- 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 Innovation *Chapter.*

During 2017, ENDESA achieved an approximate saving of 416GJ 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 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 for a major expansion of electric mobility and of the use of electricity in household heating.

Electric Vehicle

The European Union must accelerate the electrification of its fleet of vehicles in order to achieve the objectives established in the White Book 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 CO_2 emissions and their energy content.
- The Clean Fuels Strategy was launched in 2013 to guarantee the creation of alternative fuels throughout the European Union, such as the use of electricity. It establishes a minimum number of recharge points that must be installed by each Member State by the year 2020 – specifically, 82,000 and 12,000 for Spain and Portugal, respectively.
- The Energy Union Package stresses the need to decarbonise the transport sector, as this represents over 30% of the final energy consumption in Europe.
- Energy Efficiency in Building Directive: the revised Directive promotes electric mobility, establishing the minimum requirement that buildings with more than ten parking places 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 es-

tablish requirements for installation of a minimum number of recharging points in all non-residential buildings with over 20 (twenty) parking spaces for 2025.

- Approval of the provisional agreement of 21 December 2017 on the **Effort Sharing regulation** is under way to guarantee new reduction of emissions in sectors that are outside of the scope of the EU's emission trading system for the 2021-2030 period.
- 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 CO_2 emissions by 26% with regard to its 2005 levels for 2030, by virtue of the agreement achieved, 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 of technological change in household heating caused by its electrification contributes to a reduction in CO_2 emissions, and collaterally, to an improvement in the quality of the air 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 almost 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. This scheme has been in operation since 2010, and it is expected that a total of 13 million conventional meters will be replaced by 2018.

For more information about remote management, see section 2.2.1. *Remote management and measurement control, and 2.2.2. Development of smart grids,* from the Digitalization *Chapter.*

1.2. The carbon market and 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. In spite of the crisis in the emissions market, Global Front Office has enabled ENDESA and Enel to continue to be an international referent in the carbon market.

1.2.1. CDM Portfolio

EU5

ENDESA has 3 ERPAs (Emission Reduction Purchase Agreements) in its portfolio, each comprised of 5 CDM projects, which would entail a reduction in emissions of approximately 4 million tons by 2020.

1.2.2. Carbon funds

EU5

ENDESA continues its participation 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.

Currently, and due to the proximity of the expiration of most of these funds, the total expected reduction in emissions by the end of 2018 is approximately 300,000 tons.

1.2.3. Voluntary compensation for greenhouse gas emissions

EU5

In 2017 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 emissions generated by its own internal events.

On this occasion, the credits employed for the compensation for internal events derive from a project introducing recovery, pre-treatment and exploitation systems for the biogas (methane) generated in municipal or regional refuse tips in Brazil.

On the other hand, it is important to emphasize continuity in the interest in specific credits from the voluntary market (VERs) by certain customers of ENDESA to, through ENDESA, compen-

sate for emissions originating from their industrial activity.

In accordance with the Enel Group's policy, ENDESA's aim is to continue with the voluntary compensation for greenhouse gas emissions from internal events during 2018.

1.2.4. Emissions Compensation

In accordance with the Enel Group's policy, ENDESA's aim is to continue with the voluntary compensation for greenhouse gas emissions from internal events and publications. For the 2017 year, emphasize compensation for the General Shareholders' Meeting: for which the GHG emissions generated while the meeting was held have been calculated and compensated. To that end, 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. In total, over 13 tCO_2 have been compensated.

1.3. Carbon Disclosure Project

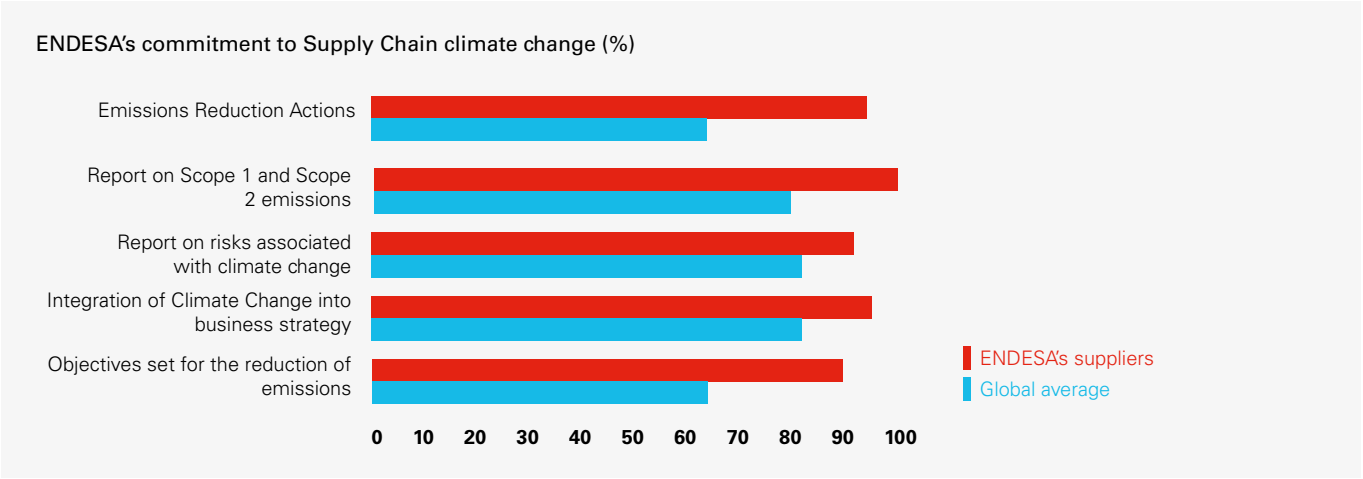
ENDESA, by its commitment to the environment, cooperates voluntarily with CDP (previously Carbon Disclosure Project). CDP is an international not-for-profit organisation whose aim is to provide the largest and most comprehensive global system of environmental diffusion, enabling investors, companies, 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.

ENDESA takes part in the CDP Climate Change, CDP Supply Chain and CDP Water questionnaires.

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. This initiative is backed by 827 institutional investors with assets of over 100 billion dollars.

In the latest edition, ENDESA has obtained an 'A' score, 'Leadership' level, a level to which only 18% of all companies participating in CDP and 25% of companies from the 'Utilities' sector belong. 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 con-



tribute 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.

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 GHG emissions. 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 to the reduction of emissions. In 2017, the rate of response was over 85%, compared with the 70% average obtained by the companies participating in the initiative.

The involvement of the suppliers in their response to ENDESA's request for information is well above the global average, the quantity and quality of the responses being higher than the average participation by suppliers of other companies taking part in said initiative.

ENDESA's supply chain is highly committed to Climate Change, is transparent at the time of communicating its emissions, has set objectives for the reduction of emissions, has reduction initiatives to meet that goal and fully understands the risks of climate change and the approach to reduce its impact.

Finally, it should be highlighted that ENDESA's suppliers display a sound performance and progress in the reduction of emissions, driven by strong relationships and cooperation with other companies and their own suppliers.

CDP Water

Information on ENDESA's participation in the 'CDP Water' initiative is included in the chapter Environmental Sustainability, section 2.4, Water resources.

	ENDESA's Suppliers 2017 Supply Chain	2017 Global Average Supply Chain
Objectives set for the reduction of emissions	90%	65%
Integration of Climate Change into business strategy	94%	81%
Report on risks associated with climate change	92%	81%
Report on Scope 1 and Scope 2 emissions	97%	80%
Emissions Reduction Actions	95%	66%

2. Development of renewable energies

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

This company is devoted exclusively to the production of electrical power generated from renewable sources in Spain, and at 31/12/2017 possessed 98 wind-turbine, mini-hydraulic, solar and biogas generation facilities, with a consolidated installed capacity of 1.7 GW and a production of 3,441 GWh.

In order to ensure an efficient transition in the generation mix, ENDESA's 2018-2020 strategic plan includes the allocation of 900 million euros for the development of renewable energies, in order to fulfil the EU objectives for 2030.

Enel Green Power España has been one of the pioneering sponsors in the revamping of wind farms. In 2010 two wind farms in Tarifa, Energía Eolica del Estrecho and Pesur, installed in 1998, were upgraded. These progressed from two farms, together producing 30 MW with 250 wind turbine generators, to two farms, together producing 74 MW and with 37 wind turbine generators. This revamping was followed some years later by five more upgrades in the Canary Islands: Arinaga, Fuencaliente and Garafía and those which have just entered into service in Cueva Blanca and Barranco de Trajana. In May 2017, work began on upgrades to the Ribaroja power station that is expected to be finished in 2020.

Among the main milestones achieved in 2017 is the awarding of a total of 879 MW of new, renewable power in two capacity auctions held in May and July by OMIE with the objective of achieving 20% coverage of power consumption for the country with renewable energies in 2020.

On May 16, ENDESA's branch of renewable energies, Enel Green Power España was awarded a total of 540 MW capacity for installation of new wind power production farms. This new capacity was assigned after bidding for 2,000 MW of renewable energies (which was expandable up to 3,000 MW). The new award entailed raising the installed capacity of Enel Green Power España to 2,214 MW and 2,157 MW of wind power.

The wind projects will be located in the Aragon, Andalusia, Castile and León and Galicia, Autonomous Communities that already have the presence of wind resources. When they begin operation, the wind facilities will generate approximately 1,750 GWh per year and avoid approximately 1,050,000 tons of CO2 emissions into the atmosphere.

On June 26, OMIE held a new auction that had the objective of achieving up to 3,000 MW of new capacity of renewable energies. ENDESA, through its renewable energies division, Enel Green Power España (EGPE), was awarded 339 MW of photovoltaic solar capacity in Spain.

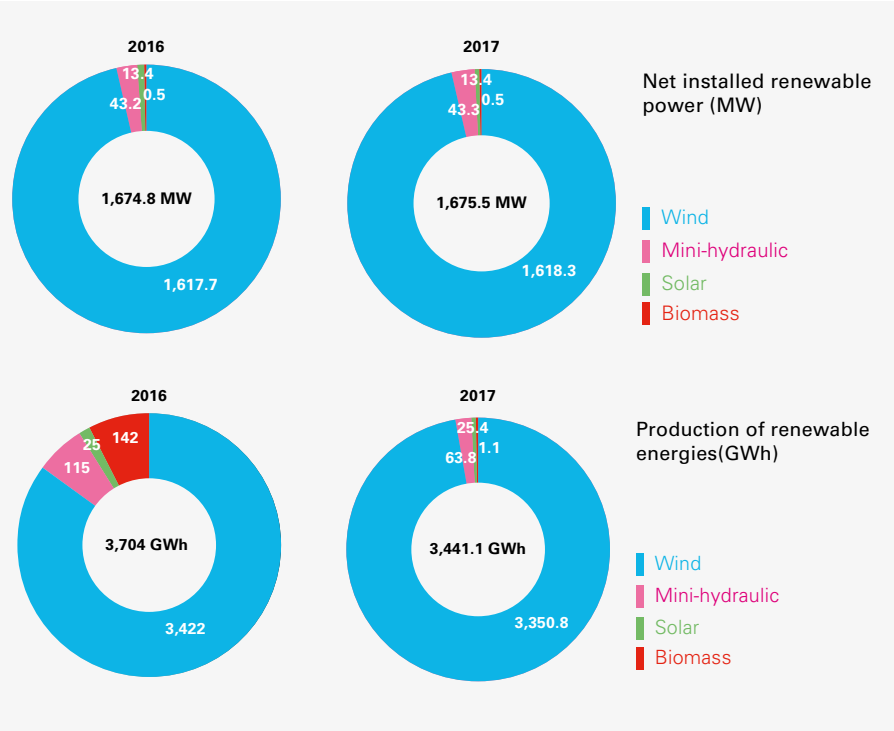
This solar capacity obtained by the company added to the 540 MW wind power that was awarded during the month of May. Thus, in 2017 as a whole, ENDESA was awarded a total of 879 MW of new renewable power which will entail increasing its current farm for these technologies by 52.4% in Spain.

ENDESA will invest approximately 270 million euros in the construction of solar power that was awarded it at this latest auction. This amount is added to the 600 million in investment anticipated as a result of the award of the 540 MW in the May auction, which supposes exceeding even the investment entailed in the site for the renewable energies in the company's current Industrial Plan.

The company estimates that the projects that will achieve this new power will enter into operation in 2019. All will market their energy in the Spanish market and the government will offer incentives through annual payments for capacity to guarantee a constant yield throughout the 25 years of the plants' useful life.

ENDESA's new solar projects, located in the Murcia and Badajoz regions, will generate approximately 640 GWh per year and avoid approximately 348,000 tons of CO2 emissions into the atmosphere.

Enel Green Power España, ENDESA's renewable energies branch, current-



ly manages 1,675 MW of capacity in Spain, of which 1,618 MW come from wind power, 43 MW from mini-hydraulic power and 14 MW from other sources of renewable energy, such as biomass and solar. The EGPE plants generate about 3.5 TWh of emission-free energy each year.

3. Reduction of the carbon footprint

103-1 | 103-2 | 103-2 Focus on Emissions Management

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 line 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.

Since 2009, the Company has calculated its Carbon Footprint, encompassing all its lines of business as well as its offices. Further, since 2014, 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.

During 2017, the calculation of the Carbon Footprint for 2016 was verified and the pertinent report was published (https://www.ENDESA.com/content/dam/enel-es/home/prensa/publicaciones/otraspublicaciones/documentos/Informe-Huella-de-Carbono-2016.pdf). ENDESA's 2017 Carbon Footprint is currently in the verification process.

3.1. Calculation and logging the Carbon Footprint

The objective of calculating the Carbon Footprint should be to know the reality and impact of the Company's activities in terms of GHG emissions 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.

The Company has calculated its Carbon Footprint, encompassing all its lines of business, since 2009. Further, 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.

In 2017, ENDESA requested logging of its Carbon Footprint for the years 2016 and 2013 in the Carbon Footprint, Compensation and Carbon Dioxide Absorption Project Registry of the Ministry of Agriculture and Fishing, Food and Environment. 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. By doing so, ENDESA will have four consecutive years of logged footprints, thus demonstrating that the organisation presents a path with trend toward lowering emissions, allowing activation of 'I Reduce' in its national seal.

In the consolidation of the results included in ENDESA's Carbon Footprint, a shareholding and operational approach is considered, according to ENDESA's scope of consolidation 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 management 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.

3.2. Direct and indirect CO_2 emissions

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

ENDESA calculates and verifies its emissions according to the directives recognized in the GHG Protocol with location-based focus. This inter-national standard provides the regulations and guidelines for companies and other organisations for the preparation of their greenhouse gas emission inventories.

CO_2 emissions Scope 1, 2 and 3

	2015	2016	**2017**
CO_2 (t) Scope 1	33,919,981	29,354,060	34,768,897
CO_2 (t) Scope 2	951,184	930,190	544,837
CO_2 (t) Scope 3	18,589,803	17,324,980	28,719,038

The figures for 2017 are liable to undergo changes, as at the moment of publishing this ENDESA Sustainability Report the external verification process was under way, as required by the UNE EN ISO 14064 Standard.

CO_2 Emissions, Thermal Generation Facilities

	2015	2016	**2017**
Tons of CO_2	33,548,165	29,089,037	34,517,220
CO_2 (Kg/KWh)	0.461	0.418	0.439

With regard to the emissions in the different scopes for Spain and Portugal, the following are of note:

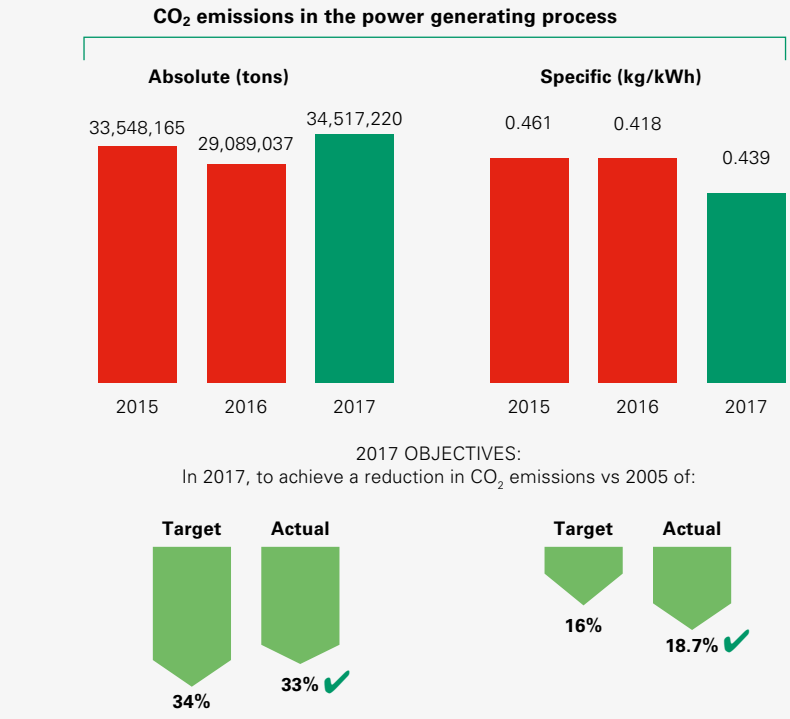
Scope 1. Direct Emissions:

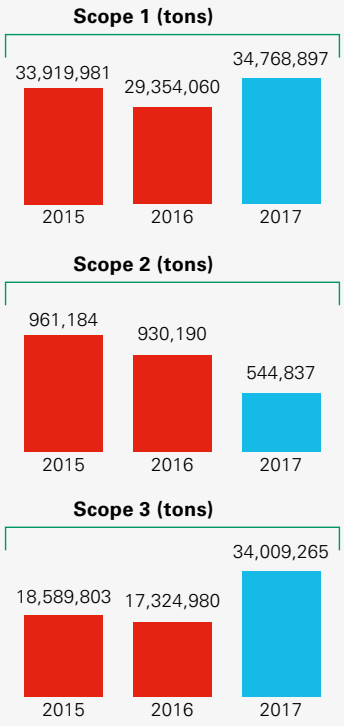
Direct GHG emissions are understood to be those coming from sources that are controlled by the company itself. Within this classification, emissions derived from the following are included:

- Fuel consumption (carbon, fuel/gas oil, natural gas, biomass) for production of electricity for power generation stations.
- 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.
- Consumption of fuels 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 for maintenance of facilities (electricity distribution, hydraulic production, wind power, solar power and buildings).

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. This past year 2017 ended as the hottest and second driest year since 1965, with precipitation between 1 October and 26 December at 44% lower than average. This situation has determined greater usage of thermal power plants with the resulting negative impact on the development of environmental indicators. This fact has impeded ENDESA's investing efforts dedicated to reducing the environmental impact of its activity from reflecting an improvement in indicators in 2017.

CO_2 free Development of CO_2 emissions





In this regard, thermal power generation increased by about 23% in 2017, resulting in an increase of both absolute as well as specific CO_2 emissions. The increase in thermal production has been distributed unequally among the different technologies: 17.2% in production in coal-fired power plants, 47.6% in production in combined cycles and 2.3% in fuel-gas technology power plants.

Scope 2. Indirect energy emissions:

Indirect GHG emissions derived from the power generation purchased by the Company for its own consumption, and not generated by ENDESA. This scope therefore encompasses the emissions derived from the generation of electricity:

- Losses on the ENDESA Distribution network by distributing energy not generated by ENDESA Generación.

ENDESA's Scope 2 emissions represent less than 1% of the company's total emissions. Since 2009, ENDESA's Scope 2 emissions have fallen by 64%.

The greenhouse gases considered in the calculation of Scope 2 Emissions are as follows: CO_2, CH_4, N_2O.

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.
- The generation of electricity marketed, but not generated by the power plants of ENDESA Generación, as the latter is accounted for in Scope 1.
- 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 commercialized by the Company and on the life cycle of the fuels used in thermal generation.

4. Carbon capture and storage

During 2017, ENDESA has continued to carry out various initiatives in the field of Carbon Capture, Storage and Use(CCSU):

- Since 2011, ENDESA has operated a pilot facility for the cultivation of microalgae for the capture of CO_2, 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 scope, during this year, the I+D Innovaalga project has been finished with interesting results in the industrial use of this type of microalgae, especially in the field of bio-fertilizers. Additionally, it has continued the project Algae for a Healthy World (A4HW), which is a consortium led by ENDESA and formed by 7 bodies and research organisms in order to move forward in the research and development of different types of microalgae for their application for nutritional purposes.

  As a second phase of this initiative, a larger plant (1 ha) with a much greater productive capacity is in the design phase, which would be in-

stalled at the same thermal power plant.

- Since 2012, ENDESA, together with Hulleras del Norte (HUNOSA) and the Spanish Scientific Research Council (CSIC) have operated a pilot CO_2 capture facility using the process of calcination-carbonation cycles at the La Pereda thermal power plant in Mieres (Asturias). This facility, 1.7 MWt in size, is the largest pilot facility in the world using this technology and the only one integrated into a thermal power plant and using real combustion gases. This technology is included among the second-generation CO_2 capture technologies, more efficient and less costly. Within the framework of this research, ENDESA has concluded the European I+D CaO_2 project this year in order to test a variant of the process, which would enable a considerable reduction in its costs.

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

5. Adaptation to climate change

ENDESA was one of the pioneer companies is the analysis of aspects concerning Adaptation to Climate Change, assessing the climatic impact at its facilities. 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.

Below some of the projects carried out during 2017 are detailed:

The 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 Rescue project focuses on assessing the impact of phenomena derived from 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 the resilience of cities in the face of current and future climatic scenarios. Rescue has a budget of 8 million euros and is to be 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 micro- networks (small-scale systems combining electricity generation, storage and distribution) may contribute to the resilience of cities.

'HYDROELECTRIC RESERVOIRS AND CLIMATE CHANGE' Project

Contribution to the strategy of adaptation to (global) climate change of ENDESA's hydroelectric facilities.

An initiative developed by ENDESA with the cooperation of the Flumen organisation, a joint university institute created by the Polytechnic University of Catalonia 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 Mataalavilla) 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:

- Identification of key parameters in the annual internal organisation (thermal cycle) of the hydroelectric reservoirs, their interdependence and their possible relationship with global change.
- Quantitative assessment of the susceptibility of the hydroelectric reservoirs to climate change.
- Determination and development of design and operation criteria for hydroelectric reservoirs for their adaptation to global change and the mitigation of associated environmental effects.

The project was launched in 2016 and it is expected to conclude at the end of 2018.

'HIDSOS IV - SUSTAINABILITY OF WATER RESOURCES UNDER GLOBAL CHANGE' Project

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, developed by the Catalonia Water Research Institute (ICRA), gives continuity to and improves the works performed previously and 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, 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 will therefore enable 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.

Project for adaptation to climate change focused on ENDESA's electricity distribution business line The project developed during 2017 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:

- **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.
- **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).
- **Assessment of the future vulnerability of the ENDESA electrical distribution station**

  Assessment of the future vulnerability of the ENDESA distribution station (considering the results of the identification exercises and risk monetization) based on public information available on the subject of evolution of the energy model for

the coming 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 personalizedalerts and support services for decision-making when coping with weather events.

In addition, ENDESA carries out 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, 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 (APA1).
- 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 climate 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 vulnerability of their activity in the face of climatic effects and the possibility of implementing adaptation and follow-up measures to minimise these impacts.

Digitalisation

93

% 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

Compliance with 2017-2019 Sustainability Plan

Basic Pillar	Course of action	2017 Target	31/12/17 result	Key actions
Digitalisation of assets, customers and people	Low Voltage: Installation of remote meters (cumulative) (millions of cumulative meters)	11.2	11.2	> Development of the Remote Management project.
	Medium Voltage: Installation of Remote Controls (no.)	14,925	15,110	> Development of High Quality Plan to improve automation of the Medium Voltage network.
	High Voltage: Remote Control upgrading (no. of remotes upgraded)	70	73	> Development of SIMON Project to improve automation of the High Voltage network.
	Customer digitalisation (millions of digital customers)	3.4	3.8	> Project for documentation digitalisation and simplification of management/contracting in face-to-face channels.
	Digitalisation of invoicing (millions of contracts with digital invoicing)	2.1	2.1	> Redesign of the customer's digital experience with digital invoicing.
	Sales via digital channels (vs other types of channel)	8%	9%	> Development and improvement of digital sales channels.
	Development of digital transformation programmes in employees (no. of employees)	561	465	> Digital competence development programmes: Are you digital? Reverse Mentoring, e-talent Training programme.
	Web applications protected with cybersecurity.	75%	60%	> New cybersecurity risk management model.
	Set-up and accreditation of the CERT (Computer Emergency Response Team).	Set up	Set up	
	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 tackle successfully 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 2017-2019 sustainability plan, investing more than 270 million euros in 2017. Digitalisation will once more be a prominent feature of the new 2018-2020 Sustainability Plan, with the company planning to invest over 1,000 million euros, addressing it from three angles: 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 management 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 operative 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

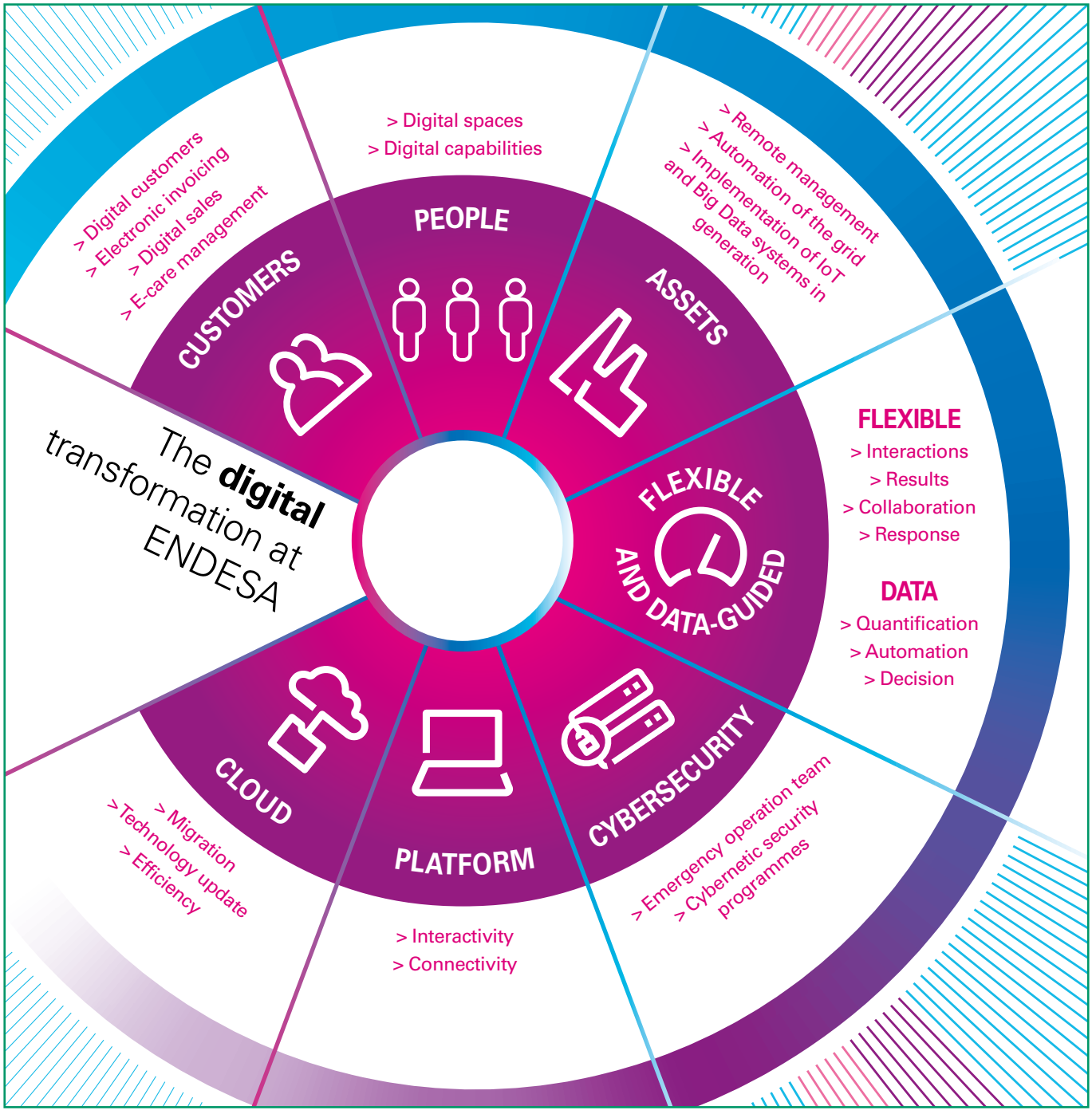
Bearing in mind that digital transformation means that the Company must adapt its value proposal to the new digital customer and must adopt new technologies in its value chain, one of the great challenges for the Company is the development of a digital culture that enables the development of the necessary skills to successfully lead the transformation. In this regard, ENDESA is working in different fields to promote the change of the Company's organisational culture and way of proceeding. Toward this end, the Company plans for 100% of its employee base 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 of the latest clouddata 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 intends 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 flexible 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.



The Open Technological Centre opened its doors to provide service to Spain, Portugal and France

The ENDESA Open Technological Centre is a leading technological centre accommodating the development of all ENDESA commercial IT systems for Spain, Portugal and France, along with other facilities

Over 130 people work there, provided with the telecommunication system infrastructure required to develop, maintain and implement all the software that serves the commercial applications and supports the distribution activities of our business.

This multidisciplinary work team has been tasked with developing ambitious projects like software that manages the smart meters that are being installed all over Spain.

This work team has been the one that made it possible for electronic billing to take off, along with the software for recharging electric vehicles.

In addition to the personnel currently working in this facility in Seville, the Open Technological Centre generates indirect employment for over 600 professionals that support our business on a daily basis in developing its IT systems.

2. Digitalisation of ENDESA's assets

EUSS Management Focus of demand

2.1. Digitalisation of Generation Facilities

The development of various pilot projects continued during 2017 in digitalising generation plants to evaluate the possible benefits that the introduction of digital technology may have on ENDESA's generation facilities. A highly ambitious digitalisation plan is being prepared based on the results obtained from these pilots, and it will be implemented in the next few years. 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.

The most notable R&D and innovation projects developed during 2017 are:

- **BESOS IoT:** A pilot project for the optimisation of the facility's operation and maintenance processes, by means of the introduction and validation of new digital technologies. The aim of this project is to tackle both

IoT Besos: Besos combined cycle
A) WIFI monitoring system for electric motors. B) New WIFI plant communication network. C) Digital assistant for discharges.

operational aspects and those of safety and environmental improvement. Applications in the area of advanced control, wireless communication, IoT sensor systems, energy harvesting, computer vision and advanced predictive diagnostics are included among the new technologies to be implemented, along with others.

- **BIG DATA:** The use of Big Data techniques and analysis of operational data for the detection and diagnosis of faults in the main equipment of the facility.
- **LIFO Project:** Use of fibre optics as a distributed sensor for direct application in components working under demanding temperature and wear conditions.
- **Combining control rooms for Cas'Tresorer and Son Reus.** The first stage will be setting up a joint organisation chart for both plants combining the management of both power plants. After that, the control room at Cas'Tresorer will be transferred to the Son Reus power plant. This will lead to the development of a remote control system.
- **HSEQ – Digital Integrated Management System.** This project involves the creation of specialised software for management of the new HSEQ - Digital Integrated Management System, allowing easy and reliable access to all information via the web and better control and management of all activities to be performed at the power plant.
- **HSEQ-Waste Management Digitalization Project.** This project is designed to improve security and traceability of waste management by the power plant.
- **SIGRID-Digital Legal Maintenance Tool.** A Web-based tool for managing the legal maintenance procedure in accordance with Spanish law.
- **TIM – Testing and Inspection Management Tool.** This is a tool for digitally managing the testing and inspection process during an audit.
- **SOMOS – Smart Overhaul Management Optimization System.** A planning tool for planned outages.
- **HeRa – Heat Rate Digital.** An automatic system for updating heat rate curves during start-up and operating processes.
- **SIMULATORS for Training in Blackout Recovery.** Simulators to be used in all isolated power plants. Training of operating personnel to providesafe and rapid recovery after an outage.
- **Start-up Digital Guideline.** A digital tool completely integrated in the SCADA of the power plants to guide control room operators in verifications and actions to be performed during start-up after an outage.
- **KIN – Know Information Now.** Mapping and validation of systems. PI web platform. Software application for rapid diagnosis of events and integration of alarms.
- **MED – Mechanical and electrical digitalisation** Rules for dealing with mechanical and electrical aspects involved in starting up Predix and Prism.

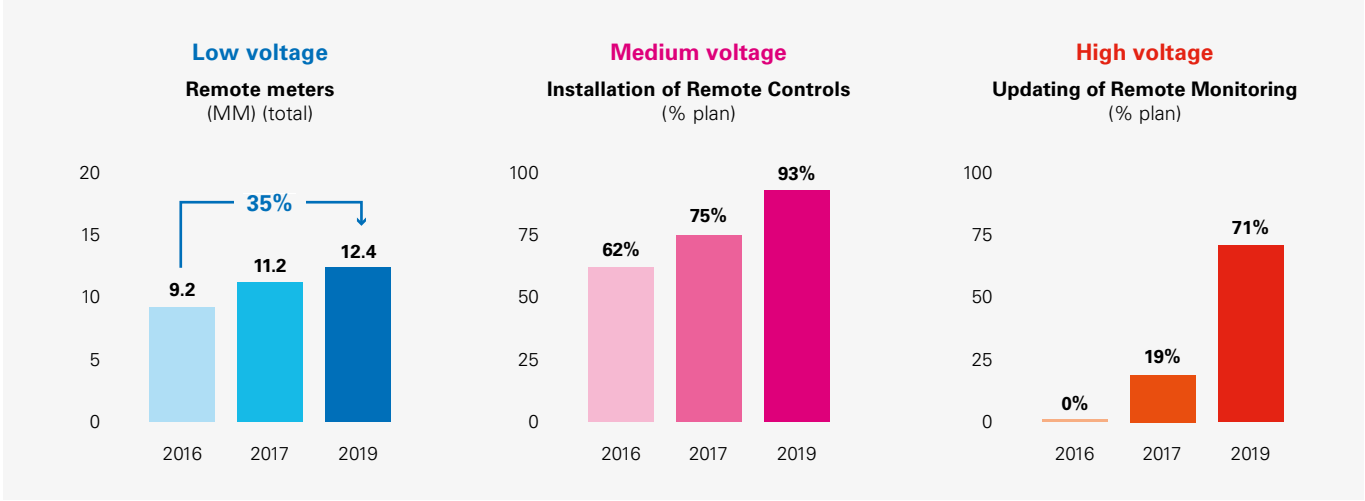
2.2. Digitalisation of the distribution grid

2.2.1. Remote management and measurement control

EUSS Management Focus of demand

The purpose of ENDESA's Remote Management Project is to implement an

ENDESA has installed 11.2 million smart meters, over 93% of meter capacity up to 15 kW



automatic remote monitoring and management system for the electricity supply of domestic customers.

Throughout 2017, ENDESA made a total of 2 million replacements during the year, raising the total to 11.2 million, achieving the goal established in ENDESA's 2017-2019 Sustainability Plan. This translates to 93% of meters with contract power of up to 15 kW.

ENDESA thus consolidates its position as leader in the development of this technological solution in the domestic market, contributing in this way to promoting energy efficiency and the sustainability of the electrical system.

As for hubs, over 13,000 have been installed during the year to reach a total of approx. 134,000, which involves 95% of hubs installed in transformation centres - transformers. This enables immediacy in the integration of equipment into the remote management system, with the corresponding remote operation of the same.

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 45 members, some of these leading companies of 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 2017 ENDESA carried out the following projects to expand in the improvement of its distribution service:

- **EXABEAT:** This was placed in operation during 2017, combining the metering management systems for all frontier points, both consumers and producers. 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 monitoring network quality.
- **EXABEAT_RdE:** This is a new module being developed in EXABEAT for recovery of energy, managing all notices and fraud and anomaly files that are currently managed between DINANA 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.
- **C3:** Predictive models based on Supervised Machine Learning techniques for the detection of abnormalities and fraud. Taking advantage of the experience with the company C3, this type of collaboration has been extended to other companies and/or institutions including Innova or the University of Seville as well as developing our own model, creating a competitive system from among the various models that promotes their continuous improvement.
- **Illegal housing and double power supplies:** Professional services of companies skilled in data processing and geographical information. Development of a mobile app with map functionality, to enable field contractors to locate areas with a high probability of fraud, and to manage a large amount of information simply and unambiguously. It is also necessary to have a PC application to enable the management of the work, assigning areas to different contractors and processing the information collected in the field.
- **APPS inspection and seals:** Based on the GEOFRAME tool in which the illegal housing app is installed, an additional two mobile applications to support the inspection and monitoring of the new seals have been developed, which will start being installed in 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.
- **ARES:** A new systems architecture/infrastructure enabling the processing of large amounts of information and the recovery of hourly curves with automatic mechanisms. It also includes an enhancement of remote functionalities for changing firmware to improve upgrading the smart meters and other functionalities for improving maintenance of the distribution network.
- **AMMS:** The collection of daily closing and sending data to Exabeat was initiated in 2017, along with the implementation and new development of advanced functionalities for the connecting of meters and hubs to improve the reachability of the equipment. The first stage of requirements for the use of the type 4 smart meter has also been developed, along with functionalities for real-time checking and for large volumes, useful for settling claims, detecting breakdowns and fraud.

For more information about smart meters, see section *1.1.2. Risks and opportunities derived from the regulatory framework Remote management and smart networks,* in the chapter *Low carbon business model.*

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 possible 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 eighth 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 grid technological areas.

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 savings of energy and a reduction in CO_2emissions, in accordance with the EU objectives 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 in real time will use all the information from the grid and the smart meters, 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.

  During 2017, ENDESA completed putting the communications in service for all the sensors installed throughout 56 Medium and Low Voltage Transformation Centres located in the 'SmartCity Malaga' area, providing the capability to receive a large variety of information on the MV and LV network in the Central Systems of the Distributor.
- **DAREED Project:** A European project whereby citizens' contribution to the management of energy in districts is being tested in Seville, where an energy-related market has been created in which private individuals and professionals may get in touch with each other. As ENEL Ingeniería's delegate in the project, ENDESA has participated directly in the city of Seville in the definition of the DAREED platform and in the tests carried out, and in the preparation of the final conclusions of the European project which ended in December 2016, although the distribution and communication activities for the results of the European Commission have continued in 2017.
- **La Graciosa:** The manufacture and installation of equipment and control systems in the field has continued throughout 2017 for initiating testing on the island, creating the test scenario that will commence starting in January 2018.

  It should be mentioned that the Graciosa project has been under way since 2015, and its main goal is to establish the necessary 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.

To this end, management policies for grid users (Demand Response), management policies for renewable resources of the grid and management policies for storage resources (HESS) will be established in the project.

> **SmartNet:** This project seeks to improve the efficiency and stability of the electrical network, taking advantage of the flexibility that the new role of the consumer, 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.

We designed testing scenarios and communication architecture during 2017 and began putting the equipment in operation at the base stations.

> **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 the resilience of cities in the face of current and future climatic scenarios.

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, 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 *1.1.2. Risks and opportunities derived from the regulatory framework Remote management and smart networks,* in the chapter *Low carbon business model.*

2.2.3. Development of Smartcities

SmartCity Malaga

The first stage of SmartCity Malaga ended in March 2013. Over these years, SmartCity Malaga has seen the development and installation of different cutting-edge technologies in terms 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 and MONICA projects are being developed based on these facilities and are becoming the basis for new experimentation proposals such as the Living Lab of the group.

Endesa's Smart City Malaga receives the first European Living Lab certificate issued to an electric company

The innovative ecosystem that ENDESA is developing in Malaga under the Smart City project has been certified as a Living Lab of the ENoll network (European Network of Living Labs).

Since its launch in 2009, Smart City Malaga has become a benchmark in energy model design for cities of the future, thanks to the introduction of the latest remote control technologies, network digitalisation and automation and the use of innovative energy efficient solutions, low consumption lighting or integration of renewable energies into the network.

Receiving this recognition means integration into a European network that sponsors co-creation, user participation and the use of experimental installations working on innovation in different sectors such as energy, media, mobility or health care.

3. Customer digitalisation

EUSS Management Focus Management of demand

As we have mentioned in previous years, digitalisation of Spanish society is a relentless trend that strengthened in 2017. This is what the last survey published by the National Institute of Statistics (INE) in October 2017 concluded regarding the Use of Information and Communication Technologies and Equipment in Homes. 83.4% of Spanish homes currently have access, compared to 81.9% 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 76.1%.

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** and 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, incorporating 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 2017:

Achievements 2017

Objectives 2020

Customer Experience with Digital Invoicing

Project for documentation digitalisation and simplification of management/contracting in face-to-face channels. Key elements:

> Digitalisation of documents
> Biometric signature capture
> Digital archive

100% implemented in 2017

Re-design of the digital experience of the client with the digital invoice, exploiting the hourly consumption capability to offer greater guidance to the client.

New/improved functionalities in 2017:

> Notice of invoice availability
> Breakdown of hourly consumption (invoiced and not yet invoiced)
> Guidance/infoenergy
> Proactive alerts on consumption, prices, etc.

Digital Sales Acceleration

The objective of this project, launched in previous years, is the continuous redesign and improvement of **Endesa's digital capacity to work with the customer in the contracting process via the Internet,** through the development and improvement of its on-line sales forces, improvement of the contracting experience (forms) and a plan to work with the client once the contracting is completed.
The new developments and improvements in 2017 have resulted in this being the **second consecutive year that Endesa has won the CRC Gold award for the best eCommerce strategy.**

Andrómeda App

Following its efforts to lead the energy service market, the objective of this Endesa project is the **complete transformation of the relationship model with the customer in value-added products and services, including the sale, management, installation and post-sale services, with a 'customer centric' orientation and via a 100% mobile digital platform.**

2017 advances:

Internal installer app: operational since the beginning of the year, making it possible for the installer to:

> **Plan visits and find out and update contact and equipment data, generating part of the service in digital format.**

> **Make commercial offers with the information provided via the app.**

> **Improve the use of this information with a unique and comprehensive vision of the offering.**

Happy Time Rate

The Happy Time rate was launched in 2017. This rate makes it possible **to select the hours during which electricity consumption is invoiced at zero cost,** based on the customer's preference, whether 2 consecutive hours each day or one day a week.

It also offers a **multichannel experience,** making it possible to **check consumption and make any schedule changes desired** through the personal area at 'My Endesa' on the Endesa website for customers or on the Endesa Customer app. It also offers personalised assistance in the customer area.

It had 353 thousand active contracts **at the close of 2017.**

E-mobility web

The E-mobility website was launched via Digital Channels in 2017 **in support of the electric vehicle initiative.** Posts and information about new features and advances that are appearing in this field can be found there.

E-deas app

E-DEAS Bulletin: for the promotion of digitalisation among our business customers and creating new relationship possibilities, a free App has been developed **for smart phones** (IOS and Android) with news about companies, innovation, efficiency and business trends:

> Designed based on customer preferences.
> With brief, easy-to-read ideas.
> To inspire innovation in business efficiency.
> Intended to help in making decisions.

ENDESA has been recognised for the second year in a row in the CRC GOLD 'Excellence in Customer Service' Awards

It has received the **accolade for Best E-commerce Service** for the second year in a row. The Spanish Association of Experts in customer relations (AEERC) have been presenting these prestigious awards for 19 years in collaboration with the International Faculty for Executives (Ifaes) and the methodology of the IZO customer experience consultancy.
The awards were presented on 4 October in the Santiago Bernabeu Stadium, timed to take place during the celebration of Customer Relations Expo, the most important event for the industry for the Customer Relations Centres.
Endesa has been recognized on two other occasions for these awards:

- Best E-commerce Service in 2016, as well as in 2017.
- Best Telephone Sales Plan in 2015, for having the best practices and processes at the Customer Relations Centre with customers in the current telephone sales section.

4. Digitalisation of our people

In today's globalised world, the considerable advance in new technologies plays a fundamental role, and is causing changes in user behaviour. Aspects such as mobility, the appearance of new competitors and technological disruption caused by artificial intelligence, *Big Data*or 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 digital tools found in the new markets and driving cultural change in the company.

4.1. Work environment

Open Power Space

The *Open Power Space* is a collaborative work core designed to promote cooperation and creative processes where ideas and projects can be developed that enable the company to deal with

ENDESA Headquarters Madrid

Open Power **Objectives Space**

since January 2016

Boosting innovation and cooperation between external employees and partners

- Reducing the time-to-market of digital initiatives
- Acting as the seed for change in organisational culture
- To be used as a space for innovation, from which new business ideas arise

the challenges of the new energy model more efficiently and sustainably. The space was conceived with the purpose of driving the Company's cultural transformation by means of innovative projects, with special emphasis on the digitalisation of the Company. Furthermore, its open design, with no offices or allotted spaces, was conceived to boost cooperation, creativity and the use of new work methodologies, and to encourage cooperation between ENDESA's personnel and other external collaborators.

Various discussions were held in 2017 focusing on disseminating awareness in line with the three pillars of the *Open Power Space*: Technology and innovation, new collaborative methodologies, and tools. The *Open Power Space Territory*initiative was also started to bring this philosophy to more company personnel that are not located in Madrid. This project transported the *Open Power Space*concept using three events that took place on site in Saragossa, Córdoba and Palma de Mallorca. Local experts discussed technology, best practices, new methodologies and collaborative tools at these workshops. The goal of the experiment was to establish a direct channel between company personnel, fostering situations of interactivity, synergies and exchanges of opinion.

The space also has a Web page that all Enel Group employees can access and find out about the activities and events of *Open Power Space*.

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. 3600 employees visited the *Tech Bar* during 2017 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.

On completion of the first year of *Tech Bar* in 2017, the results showed that ENDESA employees are accepting the cultural change in the Company. 200 workshops on collaborative work tools attended by 800 persons were held throughout the year, with surveys showing the effectiveness of these short, practical sessions and providing a great rating for them.

4.2. Development of digital skills

The main projects performed in the field of the development of digital skills in 2017 were:

Are you Digital?

This is a development project for the entire group in collaboration with the Polytechnic University of Milan. This project seeks to discover the degree of digitalisation of the people working in the Company, and to propose activities to increase it.

In 2017, the *'Are you Digital?'* project continued its aim of identifying and promoting the profiles and skills of employees in the digitalisation field.

Initiatives such as the following were implemented for the group with the most experience in digital technology:

- *Digital Global Community*: an environment for the collaboration and exchange of experience and knowledge among employees.
- Second edition of *Hackday*: a two day programming marathon designed to promote the development of skills through experimentation in which employees form teams to think up useful applications for the professional life of the Company.

Reverse Mentoring

This activity works in tandem with 'Are you Digital?', and people with digital skills helping senior employees (generally those with more work experience) to increase their knowledge of new digital tools is relevant to its success.

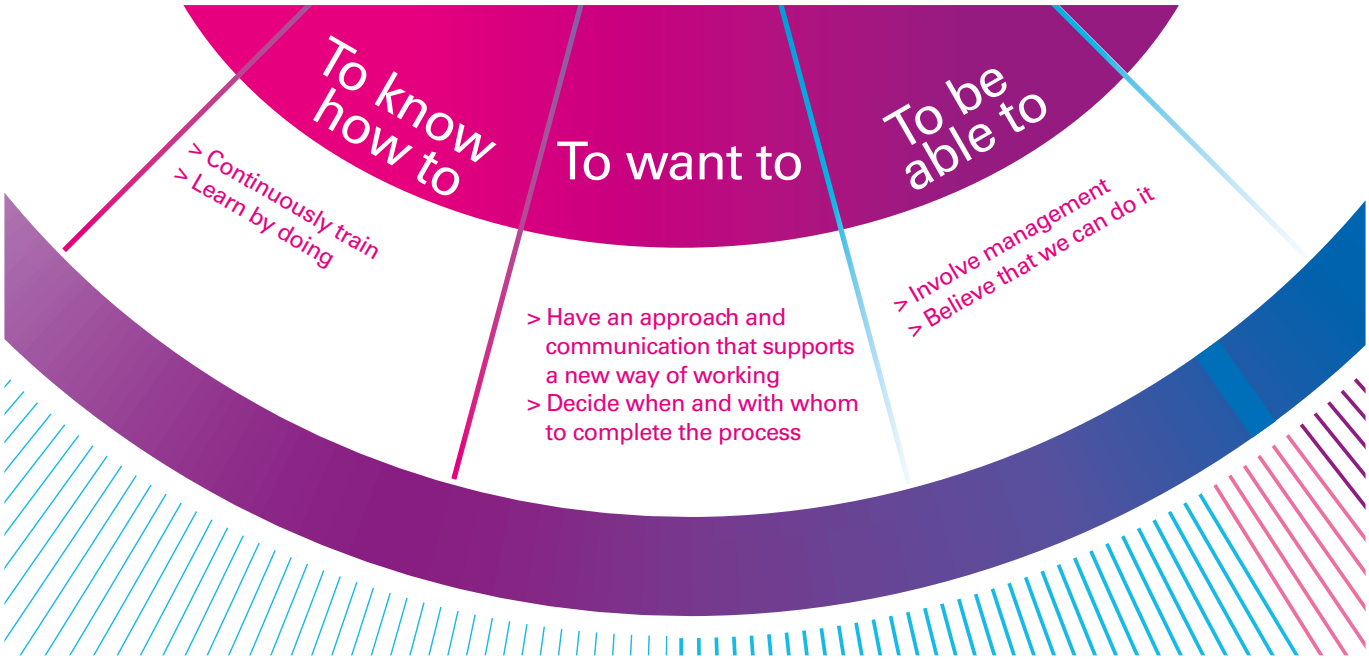
E-talent training program

The *e-talent* digital transformation training program *'Fire up your digital energy'* continued in 2017, with more content and expanding its public objective.

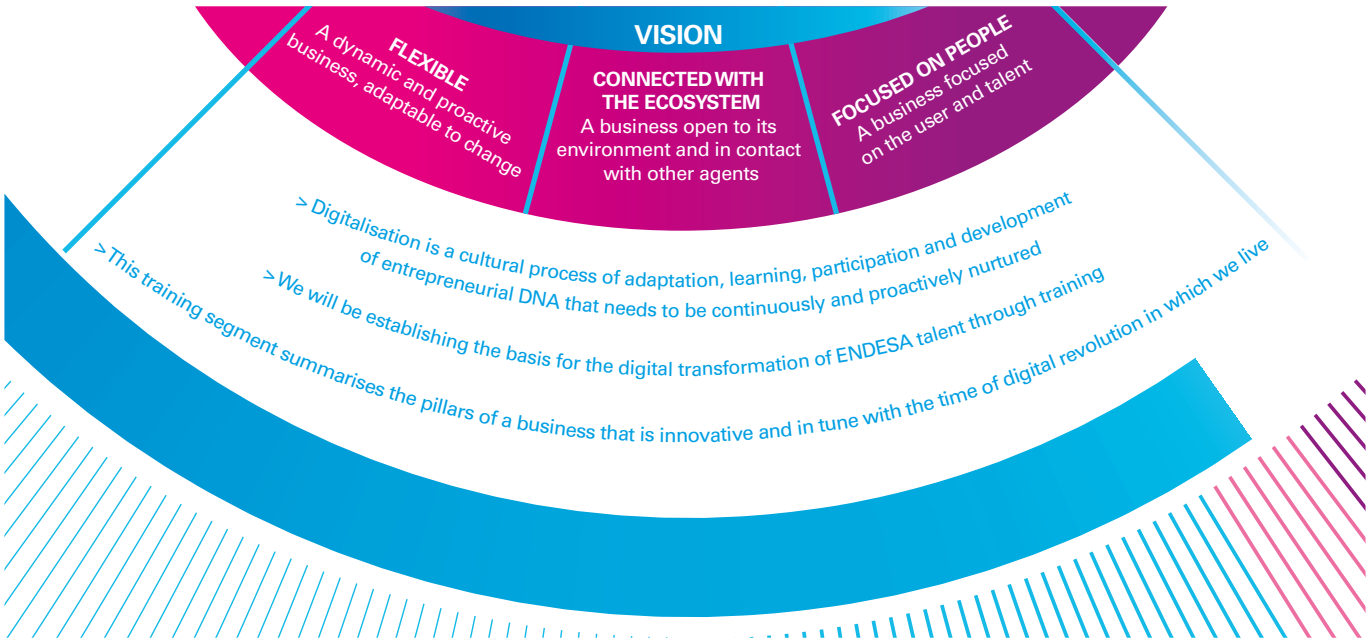
E-talent is a training program aligned with the ENDESA Strategic Planaimed at all groups in the company to train them in various digital skills to understand and deal with the most relevant aspects of digital transformation and innovation applied in a business environment.

This program accompanies persons in their digital transformation through a training process resulting in all persons involved developing the necessary skills to become a digital professional, knowing how to apply them in their daily work and being motivated to continue with their development.

This training plan was designed based on three fundamental pillars: for people to Know, but also, be Able to and Want to.


To know how to
> Continuously train
> Learn by doing
To want to
> Have an approach and communication that supports a new way of working
> Decide when and with whom to complete the process
To be able to
> Involve management
> Believe that we can do it

MISSION
CREATIVITY
SAFETY
CRITICAL SPIRIT
CONTINUOUS LEARNING
> Instil the digitalisation mindset as an opportunity for permanent change and adaptation
> Enable employees to confront the challenges of the digital world with creativity, safety and a critical spirit
> Provide the necessary resources to manage continuous, autonomous digital learning


VISION
FLEXIBLE
A dynamic and proactive business, adaptable to change
CONNECTED WITH THE ECOSYSTEM
A business open to its environment and in contact with other agents
FOCUSED ON PEOPLE
A business focused on the user and talent
> Digitalisation is a cultural process of adaptation, learning, participation and development of entrepreneurial DNA that needs to be continuously and proactively nurtured
> We will be establishing the basis for the digital transformation of ENDESA talent through training
> This training segment summarises the pillars of a business that is innovative and in tune with the time of digital revolution in which we live

The objectives of the program are:

- Fostering the new digital transformation culture at ENDESA.
- Facilitating the development of persons toward digital transformation
- Achieving a new form of working in a collaborative environment
- Inculcating novel and innovative knowledge adapted to the needs of the various groups within the company
- Training in different digital skills required to understand and deal with the most relevant aspects of the digital transformation and innovation applied in a business environment

E-talent is a complete mixed content training program (*on-line* and personal) structured in three courses:

Digital Basic
Designed for persons that are starting to work with basic digital tools, computers and smart phones

New!

Digital Basic
Designed to encourage attitude and aptitude change in persons needed in the digital environment

Digital Tools
Designed for persons that need a digital vision of the world at its more technical level, deeper knowledge of the digital tools available to them from the different areas within ENDESA

5. Cybersecurity

DMA 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 procedure 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 computer 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.

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.

This management model also includes the Company's business partners and suppliers, in order to identify possible risks that could impact ENDESA's activity.

A new management model for cybernetic risks in the ENEL Group was developed in 2017. This model is based on the identification, prioritisation and quantification of the existing security risks, in order to adopt security measures for their minimisation and mitigation. ENDESA therefore 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. All this was made possible by the activation of a secure information exchange community for cybersecurity and the creation of the *Cybernetic Emergency Response Team* (CERT), which will receive accreditation from CERT ENEL at the Spanish national CERT by 2018.

The Cybernetic Emergency Response Team (CERT) will be characterised by its capacity for: <1581></1581

- Prevention, detection and response to cybersecurity incidents;
- Vigilance against threats to Cybernetic 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'.

Cyber Emergency Readiness Team (CERT) enel

With the aim of continuing to move forward in the management of cybersecurity, ENDESA has established the following goals in its 2018-2020 ENDESA Sustainability Plan:

- Accreditation of the Computer Emergency Response Team (CERT) in 2018.
- Achieving the protection of 100% of the Web applications by cybersecurity systems in 2020.
- The performance of over 40 cybersecurity awareness and information security activities pfor employees and family members over the 2018-2020 period.
- Completion of over 350 TIC security verification actions (ethical hacking and evaluation of vulnerability, among others) on a yearly basis.

Customer orientation

10.8

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 **18**

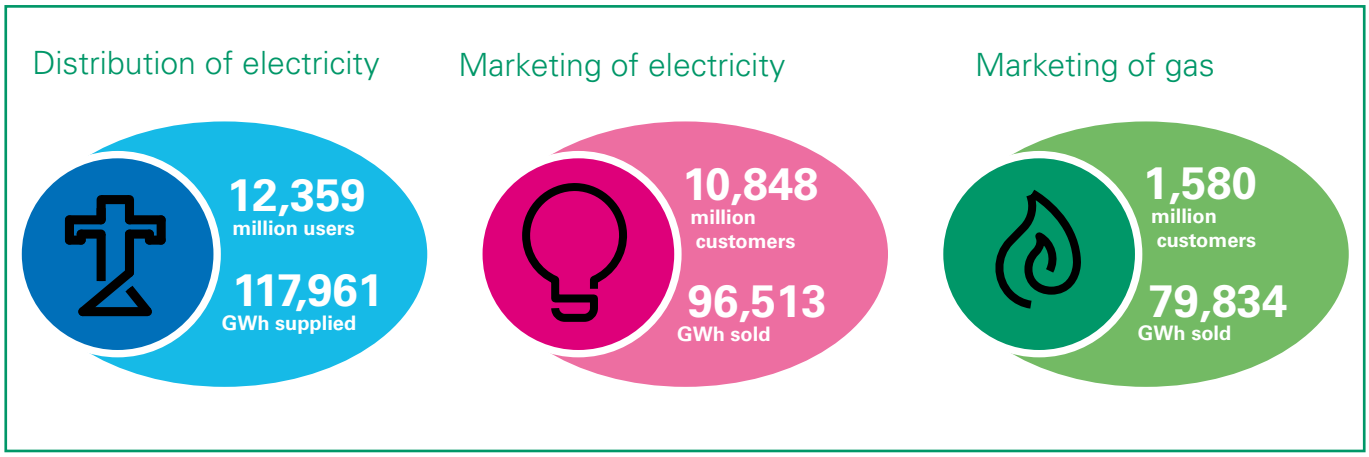
million telephone calls handled by the Call Centre

Compliance with 2017-2019 Sustainability Plan

Strategic priority	Course of action	2017 Target	31/12/17 result	Key actions
Customer orientation	Global customer satisfaction with the company (considers all segments).	7.2	7.3	> Commercial attention excellence plan.
	Visits to the twenergy portal (millions of visits, considering the visits to the Blog and the on-line store).	4.8	5.4	>Development of the twenergy portal.
Operational efficiency and innovation	Interruption time (own + programmed ITEPI) (min).	57	72	>Quality Plan for distribution.
	Energy recovery (GWh).	1,513	1,513	>Plan to combat electricity fraud.

1. Quality and safety in electrical supply as a priority

EU3 | EU10 | EU26 | Management Focus EUSS Demand Management



ENDESA considers it a priority to guarantee access to the electricity supply, and also its continuity, safety, efficiency and quality; for this reason the development of the necessary infrastructures to achieve this is essential.

The number of customers with contracts to access the Company's distribution grids increased by 0.37% in 2017, reaching a total of 12,359,985.

ENDESA distributes electricity in 27 Spanish provinces in ten autonomous communities: Catalonia, Andalusia, the Balearic Islands, the Canary Islands, Aragon, Extremadura, Castile and Leon, Navarre, the Valencian Community and Galicia, covering a total area of 195,279 km^2 and a population of almost 22 million inhabitants.

ENDESA supplied 105,420 GWh to the customers of its distribution grids in 2017, this being 2.4% more than in 2016.

The total power distributed via ENDESA's grids reached 117,961 GWh in 2017, measured at the power plant busbars, representing 44% of total Spanish demand. The latter reached 268,505 GWh, according to the Spanish electricity system operator (according to the REE Report: "Preview of the 2017 Spanish Electrical System Report").

In 2017, 814,769.23 kW were connected to ENDESA Distribución's low-voltage networks through Micro-generation plants.

In ENDESA's distribution areas there is no population without service.

Electricity sales

ENDESA had 10,848,000 electricity customers at the close of 2017, this representing a fall of 1.5% in compari-

Evolution of ENDESA's electricity supply in the Spanish and Portuguese markets

	2015	2016	**2017**	% change 2017-2016
Number of customers in the regulated market (thousands)	6,029	5,593	5,255	-6.05
Number of customers in the liberalised market (thousands)	5,083	5,423	5,593	3.13
Energy sales in the regulated market (GWh)	14,934	12,919	12,920	-6.48
Energy sales in the liberalised market (GWh)	77,965	79,675	83,594	4.91
Total sales	**92,899**	**93,490**	**96,513**	**3.23**

son with 2016. The sale of electricity to this group of customers rose to a total of 96,513 GWh in 2017, representing a 3.2% increase in comparison with 2016. Likewise, the number of customers in the liberalised market has grown to 5,593,000, entailing a 3.1% increase over the previous year, representing 52% of the total of customers.

Gas sales

ENDESA's gas sales increased by 2.2% in comparison with 2016. The total number of gas customers also increased, by 1.4%, due to the increase in number of customers in the liberalised gas market, and by 3% in comparison with 2016.

Evolution of ENDESA's gas supply in the Spanish and Portuguese markets

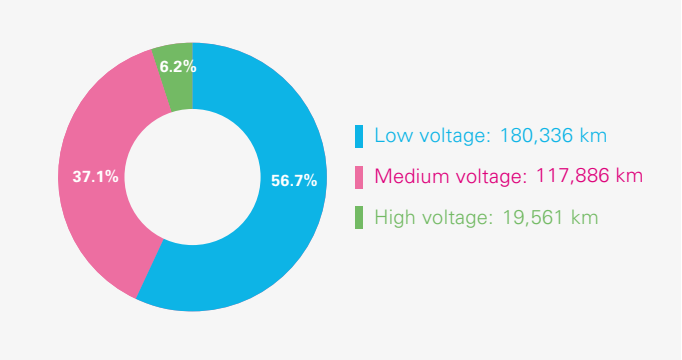
	2015	2016	**2017**	% change 2017-2016
Number of customers in the regulated market (thousands)	288	262	246	-6.11
Number of customers in the liberalised market (thousands)	1,173	1,276	1,314	2.97
Gas sales in the regulated market (GWh)	1,039	1,464	1,372	-6.29
Gas sales in the liberalised market (GWh)	47,034	48,270	46,578	-3.51
Gas sales, international market (GWh)	14,926	19,474	24,523	25.92
Gas sales, wholesalers (GWh)	8,588	8,921	7,361	-17.49
Total sales	**92,899**	**93,490**	**96,513**	**3.23**

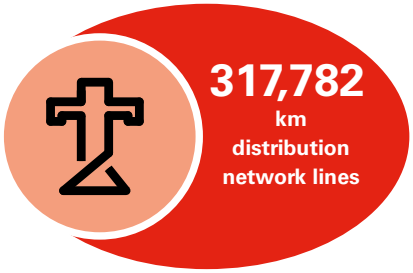
1.1. Development and improvement of distribution infrastructures

EU4 EU10 Management focus - EUSS Availability and Reliability

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.

The length of the lines of ENDESA's distribution network in Spain was 317,782 kilometres, of which 39.6% were underground lines. The number of substations at the close of the year was 1,239.





Electrical power distribution facilities in Spain and Portugal

	2015	2016	**2017**	% change 2017-2016
Length of distribution grid lines	317,675	316,562	317,782	0.4%
High-voltage overhead lines (km)	18,728	18,774	18,791	0.09%
Underground high-voltage lines (km)	751	765	770	0.65%
Medium-voltage overhead lines (km)	77,567	77,190	77,160	-0.04%
Underground medium-voltage lines (km)	40,869	40,442	40,726	0.7%
Low-voltage overhead lines (km)	95,763	95,609	95,868	0.27%
Underground low-voltage lines (km)	83,997	83,782	84,468	0.82%
Substations (number)	1,237	1,240	1,239	-0.08%
Substations (MVA)	85,854	86,324	86,279	-0.05%
Transformer centres (number)	132,307	132,771	133,193	0.32%

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 2017, with a total of 42,254 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.

1.2. Continuity of supply

Supply continuity in Spain is measured by two main indicators: the System Average Interruption Duration Index (SAIDI) and the Number of Equivalent Interruptions of the Power Supply (NIEPI). The calculation procedure is regulated by Royal Decree 1955/2000. The SAIDI and NIEPI levels are audited annually by an independent external company.

During 2017, own SAIDI in the markets supplied by ENDESA in Spain was 62 minutes, 17 minutes above the 2016 value. Dependability of service has stood at 99.99% of hours throughout the year.

EU28

In 2017, the NIEPI itself stood at 1.4, a two-tenths increase over last year's data.

The following chart shows the supply continuity indicators of the main autonomous communities where ENDESA operates:

- Mainland: 2017 has been characterised by a considerable worsening in own SAIDI in all communities. In the community of Andalusia the own SAIDI value is 75 minutes, Aragon is 84 minutes, Catalonia is 51 minutes and Extremadura is 61 minutes.
- Islands: In the case of the islands, as on the mainland, there has been an increase in the value of own SAIDI; in the Canary Islands it is 43 minutes while in the Balearic Islands it was at 44 minutes.

2017 has been characterised by the recording of multiple significant meteorological events, with more than twice as many 'atypical' days recorded as in 2016. However, many have not been able to be classified as documented Force Majeure, which has resulted in an increase in own SAIDI in 2017 compared to 2016.

EU29

System Average Interruption Duration Index (SAIDI) of ENDESA in Spain (minutes)

Interruption time	2015	2016	**2017**	Change 2016-2017
Andalusia	55	53	75	+29%
Aragon	61	53	84	+37%
Balearic Islands	36	39	44	+11%
Canary Islands	30	27	43	+37%
Catalonia	44	40	51	+22%
Extremadura	53	42	61	+31%
ENDESA	**48**	**45**	**62**	**+27%**

1.3. Safety in the facilities

103-1 Customer health and safety | 103-2 Customer health and safety | 103-3 Customer health and safety

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 conductors and surge arrestors, 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 the public health.

416-1

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 its knowledge and initiatives (technical, construction, operating, etc.) in terms of the prevention of health risks related to these causes.

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 near 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, in 2017 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 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 regularitythrough the various governing bodies of the company, including ENDESA›s Executive Committee, represented by the Chief Executive Officer and top management.

2. Excelencia en la atención comercial

2.1. Commercial Service Excellence Plan

For ENDESA, excellence in commercial service is the key value in the relationship with its customers, always seeking maximum efficiency in the functioning of its channels, tools and commercial service platforms via a process of constant innovation and improvement.

ENDESA has a Commercial Attention Excellence Plan in order to provide its customers with the best possible attention and whose goal is to improve the main customer satisfaction indicators year after year.

During 2017, this plan focused its activities on the following aspects, among others:

- Continuous improvement in the quality perceived by customers on Digital Channels and in creating a unified experience across all channels.
- Improvement in the quality of e-mail, mobile phone and (postal) address data.
- Action on the two levers with the greatest impact on the satisfaction (time periods and steps) of Companies with Complaints customers.
- 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 ensure compliance with the improvements identified in the Plan, a monthly follow-up is performed on 20 key indicators, enabling verification of the impact on the improvement of ENDESA's commercial quality.

Among the most significant results of the Plan in 2017, the following are of note:

- The significant improvement in customer satisfaction in the non-mass market with the management of its complaints in the reseller area (+30%).
- The clear improvement in customer satisfaction with service at ENDESA's service points (+2%).
- The significant improvement in customer satisfaction with billing service (+8%).
- Stability in the % of customers who do not perceive errors in mass customer electricity billing.

	Puntos de servicio	Oficinas comerciales
Andalucía-Extremadura	88	3
Aragón	24	1
Baleares	17	1
Canarias	24	2
Cataluña	63	3
Territorio propio	**216**	**10**
Expansión	61	1
Portugal	—	2
ENDESA	**277**	**13**

2.1.1. In-person attention

ENDESA's in-person attention is organised according to the customer segment, to better adapt to the requirements of each one of them:

- **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 throughout our territory, and supplements its coverage by means of a helpline and Internet service.
- **General Public:** ENDESA has 11 sales offices in Spain and 2 in Portugal, and 277 service points distributed throughout the country, aided by the Call Centre and ENDESA's virtual office (www.endesaclientes.com).

2.1.2. The Call Centre

In 2017, ENDESA's Call Centre again handled more than 18 million calls and the volumes of interactions remained the same as in previous years. Within the framework of this activity, the growth in contacts should be noted that have taken place at Portugal's Call Centre resulting from the increase in the portfolio in this market as well as the campaigns to attract customers that are being launched to position the company as a benchmark marketer within the country.

34% of customers who contacted ENDESA by this method did so for reasons related to the commercial cycle, 10% for reasons of unavailability of supply and 6% for making changes in and managing their contracts. Likewise, 12% of the total call traffic was related to requests for new contracts, preserving the Call Centre as one of the Company's main sales channels.

The year was marked by two particularly important projects aimed at redesigning and improving the service provided to the Companies segment, and the plan to empower first call resolution. Both projects are part of the strategy of the Smart Contact Centre framework that was promoted in 2016 as a program to transform the service on the Telephone Channel.

As the main points to highlight from the two projects, we have:

- The evolution of customer service for the Companies segment towards a full-front model that empowers the telephone consultant to enhance first call resolution.
- The development of personalised service models for valued customers, who will have a single advisor who will handle the customer's life cycle both reactively and proactively.
- The digitalisation of telephone service incorporating elements of support that strengthen communications with the customer, confirming the execution of requests via sms.

These actions have made it possible to continue improving the perceived quality, which is again increasing this year on all lines of service provided from this channel and, likewise, lay the foundations for improving first call resolution, causing the channel to improve in efficiency and quality.

The channel's work this year, along with the track record of transformation undertaken in recent years, has been given recognition by the contact centre sector at all levels, awarding the channel two prestigious Contact Centre Awards prizes as Best Customer Experience Strategy, for the strategy developed for value-based service, and as Best Smart Cloud Enterprise IT Project, for the cloud solution to redirect negative customer experiences with the service, and acknowledgement from the Andean Contact Centre Congress as Best Customer Service Strategy within the framework of the development of the VIP Call Centre and the handling of dissatisfied customers, as well as, on a personal but no less important level, the

ENDESA wins at the Platinum Contact Center Awards

At the VIII Platinum Contact Center Awards, ENDESA was awarded two prizes in the categories of Best Customer Experience Strategy for its project to improve customer service for value-added services, and Best Smart Cloud Enterprise IT Project for its cloud-based project to manage customers dissatisfied with the end-to-end telephone service.

The Platinum Contact Center Awards, which represent established awards in the industry, recognise quality in customer experience and technological innovation.

awarding to one of the agents who provides service in the DOIT of the Fortius prize as Best Customer Service Agent in Spain, sponsored by the Association of Experts in Customer Relations.

In this framework, 2017 has been a very positive year for the channel, and it continuing to lay the foundations for improving customer service in the upcoming 2018.

2.1.3. On-line service

At the end of 2017, ENDESA's commercial website, www.endesaclientes.com, reached 1,788,000 registered customers (18% more than in 2016), with over 2,916,000 contracts and more than 269,000 new registered customers. These users have performed more than two million interactions per month, with bill consultation being the operation most performed both on the website and in the app.

During 2017, electronic invoicing has also received a great boost. At year-end, it had 1,766,000 contracts in force with e-invoicing.

The mobile app has been updated, providing customers with new functionalities such as fingerprint access, a new home screen, consumer enquiries and payment by card.

Since March 2013, more than 450,000 downloads have been made from ENDESA's app, 150,000 of those in 2017. In 2017, more than 53,000 cases were handled on 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. In the *'Digitalisation'* chapter of this report.

1,788,000 customers registered on www.endesaclientes.com, 18% more than in 2016.

2.2. Resolution of complaints and new-contract applications

103-1 | 103-2

103-3 Management Focus Customer privacy | 418-1

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 complaints are made in them.

During 2017 all complaints that were handled at ENDESA were reported to the CNMC (National Markets and Competition Commission) on a case-by-case basis, indicating their results and resolution time. With this information, the CNMC can make a comparison with the other electricity and natural gas marketers and distributors. The CNMC has also determined the forms for communications between gas distributors and resellers, which were implemented by ENDESA in 2017.

The volume of complaints logged during 2017 stayed constant with respect to 2016. The resolution level was 100% on generation, so the pending volume has remained within the defined management thresholds.

Regarding the business line, the weight of complaints in each line has undergone slight changes with an increase in electricity complaints reaching 78% compared to 75% in 2016 and those related to gas declining from 14% to 10% and those related to the marketing of value-added products and services increasing by one point to reach 12% of the total.

The average resolution time for complaints handled by resellers has been very positive, falling from 14 days in 2016 to 8.5 days in 2017, an improvement of 39% due to the improvements implemented in the Customer Service and Commercial Cycle management processes.

2.3. Responsibility for informing customers about ENDESA's products and services

102-2 | Management Focus EUSS Provision of information
103-1 | 103-2 | 103-3 Management Focus 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 shut off due to programmed work on the grid, customers and the general public are given sufficient notice.
- When a customer is shut off 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 shut-off 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 customers considered to be "essential" by the rules shut off 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.

ENDESA 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.

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.

2.3.1. Eliminating access barriers to information about products and services

ENDESA strives to eliminate potential communication barriers concerning information on its products and services, whether they be physical, social or language-related.

The www.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, are written in Spanish and Catalan.

The endesaclientes.com website, in addition to Spanish and Catalan, is also available in English. 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.

ENDESA can communicate in English via www.endesaclientes.com, 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-services are located at street level, with accesses adapted to people with reduced mobility.

3. Access to electricity for vulnerable customers

GRI EUSS Access to Electricity Management focus

ENDESA is a company strongly committed to the fight against energy poverty, and this is demonstrated by the numerous actions and initiatives that it has been undertaking in recent years directed at families that find themselves in such situation, some of which 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 the customers, and as an example of the company's commitment to society, various initiatives have been directed toward families in energy poverty, in cooperation with various third sector entities and 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 third sector entities 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 229 agreements in force, 6 of them with the autonomous regions, covering the main geographic areas in which ENDESA operates.

Thus, since 2014 ENDESA has avoided shut-offs for more than 240,000 billings for 68,000 electricity and gas contracts with customers in energy poverty, amounting to more than 24 million euros. As an accompaniment to these agreements, training in energy efficiency and billing optimisation is provided to the technicians of the signatory entities so that they can provide guidance to families.

ENDESA is currently finalising a new agreement model to adapt to the new rates subsidy rules and to provide to the various social services departments of the Administration the operating procedures to follow in order for applications to be considered.

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.

Through its customer service channels ENDESA has also implemented a policy of splitting or deferring the payment of bills, 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.

For more information, refer to the Chapter entitled *Responsible Relationship with the Communities.*

4. Shut-offs for non-payment and re-connections in domestic customers

EU27

With the entry into force of Royal Decree 897/2017 of 6 October, which governs the identification of vulnerable consumers, the rates subsidy and other measures to protect domestic electricity consumers, the procedure for suspending supply due to non-payment has been modified. In order to adapt to the new procedure, in 2017 ENDESA halted suspensions of supply until the new operating procedure was implemented. As a result, cuts were reduced by 64% in 2017 compared to the previous period.

Of the residential customers disconnected due to non-payment, 62.2% were disconnected less than 48 hours and 7.9% were disconnected for duration of between 48 hours and one week, 5.9% between one week and one month and 3.1% between one month and one year. Likewise, 69.8% of the disconnected domestic customers have been reconnected in the following 24 hours, 7.7% between 24 hours and one week and only 1.5% more than one week after disconnection.

Shut-offs for non-payment in the residential sector, itemised by duration of the shut-off and regulatory regime (number)

	2016		**2017**	
	Domestic	General Public	Domestic	General Public
Disconnected domestic customers	160,819	205,297	55,034	74,468
Domestic customers disconnected less than 48 hours	91,923	115,455	34,393	46,353
Domestic customers disconnected between 48 hours and one week	13,112	17,136	4,350	5,883
Domestic customers disconnected between one week and one month	10,106	13,045	3,239	4,424
Domestic customers disconnected between one month and one year	5,593	7,065	1,592	2,317
Domestic customers disconnected more than one year	0	0	0	0
Domestic customers reconnected in the following 24 hours	113,091	141,947	38,114	51,992
Domestic customers reconnected between 24 hours and one week	6,989	9,831	4,434	5,735
Domestic customers reconnected after one week	536	731	906	1,100

5. ENDESA's energy solutions

302-5 | Management Focus EUSS Demand Management

416-1 | 417-1 | 417-2

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.

In addition, 67% of ENDESA's product and service categories have been evaluated for their improvement in terms of health and safety impacts.

At ENDESA, in 2017 there were no cases of non-compliance with voluntary codes or rules relating to information or labelling for its products or services.

5.1. e-Solutions: products and services for ENDESA's customers

ENDESA is highly aware of the transformation occurring in the energy sector worldwide, driven, among other reasons, by:

- **The emergence of a new and increasingly sophisticated and demanding customer profile that requires a greater decision-making capacity in the management of his power consumption.**
- **By technological advances, especially in the area of telecommunications and digitalisation.**

ENDESA, as a leading company in the energy sector in the Iberian Peninsula, aims to actively position itself in this new context. For this reason, in 2017 a new e-Solutions business line was created that is committed to innovation and the development of new products and services as engines for adapting to the needs of the environment and enhancing the use of efficient technologies to promote energy savings and reduce environmental impact.

The update of the 2018-2020 Strategic Plan, presented to the market in November 2017, reflects this feature of leadership and strengthens ENDESA's position as a provider of services involving energy by means of strategic priorities for each of the four product lines in which it is pursuing the e-Solutions business activity:

- **e-Home:** In this product line, which focuses on the marketing of solutions for residential customers (B2C), Spain stands out as a centre of excellence within the Enel Group. The strategic priority in this area focuses on boosting the growth of at-home assistance, energy equipment and micro-insurance.
- **e-Industries:** The products and services offered to industrial and commercial customers (B2B) are grouped in this area, with the priority of this line being maximisation of the potential of the current product portfolio and development of the portfolio towards flexible demand services supported on energy platforms.
- **e-City:** It develops solutions for the Public Administration (B2G), with the growth in Public Lighting and the development of new products being the main objectives. e-City is committed to high-efficiency solutions, minimum environmental impact and solutions for smart cities.
- **e-Mobility:** E-mobility solutions for residential, industrial and commercial customers and the Public Administration (B2C, B2B and B2G) are grouped in this line. The priority in this area is the promotion of sustainable e-mobility through private recharging solutions and the development of public recharging networks.

With these priorities, ENDESA is positioning itself as an agent of change in the new sustainable en-

e-Home

Maintenance and repair services

Micro-insurance

Household appliances and maintenance

Smart home solutions

e-Industries

Consulting, auditing and monitoring services

Energy infrastructure

On/off-site distributed generation

Management of demand and response to demand

e-City

Intelligent lighting

Artistic lighting

Ultra-wideband services

Infrastructure and facility management

e-Mobility

Public charging stations network

Private charging point and maintenance

B2B fleet of chargers

E-Bus

ergy ecosystem, promoting new opportunities in the field of e-mobility, management of demand and distributed generation as well as storage, leveraging the capabilities of the Enel Group by means of the leading companies recently acquired in these areas (eMotorwerks: E-Mobility; Enernoc: Demand Flexibility Services; and Demand Energy: Storage and distributed generation management services).

ENDESA installed 2,545 kW of micro-generation plant capacity in Spain in 2017 and 1,636.24 kW in Portugal, bringing the total to 4,181.24 kW.

5.1.1. Actions on business customers (B2B approach, Business to Business)

In the field of medium and large enterprises (B2B) as well as public administrations (B2G), ENDESA strengthens its position as ESE (Energy Services Company) and it proposes to its customers

The Cooperative is reducing the annual emission of CO_2 (116 tonnes) thanks to a photovoltaic installation carried out by ENDESA

ENDESA has completed the installation of photovoltaic panels on the roof of a Cooperative in Tenerife, achieving economic savings of around 300,000 euros over the installation's 25-year useful life. Likewise, a reduction of 2,901 tonnes of CO_2 is being achieved over the entire useful life of the installation, equivalent to the absorption capacity of 5,020 trees.

ENDESA is opening a vehicular natural gas plant at the Auto-Taxi Cooperative in Zaragoza

ENDESA, in cooperation with the Zaragoza Auto-Taxi Cooperative, has installed a natural gas vehicle refuelling station in 2017 with the aim of offering the possibility of refuelling to more than 1,750 members of the cooperative.

This project is part of ENDESA's strong commitment to developing mobility that is an alternative to the current mobility based on petroleum-based fuels that are much more polluting.

Vehicular Natural Gas is a fuel that is more economical than diesel or liquefied petroleum gas, with a saving per kilometre travelled of 30% compared to diesel and 50% compared to gasoline. In addition, it allows for a 95 percent reduction in particulate emissions, a 100 percent reduction in SO_x emissions (sulphur oxides), a 100 percent reduction in NO_x emissions (nitrogen oxides) and a reduction in CO_2 emissions of up to 25 percent.

to invest in improving their installations and manage them integrally.

With the aim of promoting energy savings measures, ENDESA has published the second 2017 Energy Performance Report for Spanish Companies, based on an analysis of real data between 2014 and 2017 from 3,684 companies spread throughout the territory of the nation. It concludes that 35% of the companies analysed have a potential savings of more than 20% in consumption. It also indicates that, in two and a half years, more than half of S&MEs will be able to fully amortise their investment.

Among the projects developed in 2017, the launch of the second public gas station in Francestands out. The station,

built, financed and operated by ENDESA, is open to the public 24 hours a day and distributes CNG and Bio-CNG. ENDESA underlines its commitment to regional development in France by offering an ecological and economic alternative for transporters with this second gas station, in a context of restricted urban traffic that responds to the fight against air pollution caused to a large extent by fine particles emitted by diesel vehicles. With this second gas station, in Saint Etienne, the company is also taking an innovative and sustainable step forward within the circular economy with the use of Bio-CNG gas, a renewable version of Vehicular Natural Gas (VNG), produced locally from organic waste, which reduces greenhouse gas emissions by about 80 percent compared to traditional fuels.

ENDESA and the Gran Canaria Council have also signed an agreement for the supply of 100% green energy to the island corporation during 2017, which can be extended for one year. In this way, the buildings, facilities and equipment subject to the Island Council will receive energy completely deriving from renewable sources and high-efficiency cogeneration, producing an estimated annual savings of 6% in the energy bill. With this agreement, ENDESA is opting to focus on the supply of energy of renewable origin as one of the keys to its commitment to the environment and energy efficiency.

As a demand management activity, in 2017 ENDESA monitored the consumption of 869 supply points.

5.1.2. Actions on households and small businesses (B2C approach, Business to Customer)

At the household level, ENDESA, through e-Solutions, has become the ENEL Group's centre of excellence and benchmark for B2C customers in mature markets, as a result of its good performance in home energy solutions, such as maintenance and repair services.

In addition, during 2017 ENDESA has continued to develop its Comprehensive Solutions products portfolio. Under this 'Comprehensive Solution' concept ENDESA extends small consumers the possibility of paying for energy equipment at his/her home (boilers, heaters, water tanks, air conditioning equipment) in convenient instalments, with an associated preventive and/or corrective maintenance service with ENDESA's maximum guarantee during the contract term And with the possibility of paying in convenient instalments. 2017 saw the launch of the Electric Vehicle Comprehensive Solution on the market, which enables the installation, maintenance, guarantee and financing of the recharging point.

5.1.3. E-mobility

ENDESA has established the policy of electric vehicle development as one of the main channels for the fight against climate change. Hence, it offers its customers a comprehensive commercial offer which includes the sale and installation of the charging infrastructure, plus electricity supply and advice on the rates best suited to consumption.

Throughout 2017, ENDESA focused on successfully promoting electrical mobility through projects such as the one ENDESA and Smart have signed to promote e-mobility, break down barriers to entry and encourage the public to join in the 'zero emissions' movement.

The agreement is based on three pillars: The installation of recharging points for individuals, integrating ENDESA's recharging points into the vehicle sales process. The creation of the exclusive TEMPO ZERO SMART rate by ENDESA, with green energy at zero price. And finally, the commissioning of a co-investment project for the launch of a public access recharging network.

For more information on ENDESA's commitment to e-mobility, see section 2, *Sustainable mobility,* in the *Innovation*Chapter.

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

info energía

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.

diagnosis of energy efficiency energy

It is a **free on-line advice service** exclusivelyfor 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.

twenergy

Twenergy has become the most important on-line community worldwide for sustainability and energy efficiency in the Spanish language. Launched in 2009, in 2017 it logged more than 5.4 million visits (considering the visits to the Blog and the on-line store), around 54,000 registered website users and more than 150,000 followers on Social Networks (mainly Facebook and Twitter). Twenergy is structured around a content blog, an On-line Store of efficient products with more than 1,200 references, a website and its own profiles on the main social networks: Facebook, Twitter, YouTube and Instagram.

advice and guides

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.)

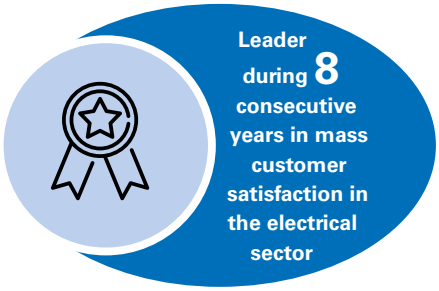
forums and platforms

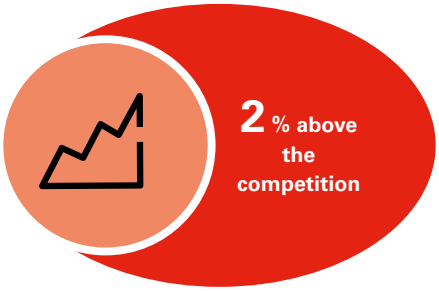
With regard to participation on forums and platforms at the national and international levels of most significance in terms of knowledge and dissemination of energy efficiency, the 'Companies for Energy Efficiency' Platform promoted by Endesa since 2011 stands out; its participants are top-level companies in various sectors and the aim is to combine efforts 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 CO_2, equivalent to the emissions of 750,000 average Spanish families each year.

For more information, visit:
https://www.endesaclientes.com/infoenergia
https://www.endesaclientes.com/negocios/diagnostico-eficiencia-energetica-online

For more information about electric vehicles, see section 1.1.2. *Risks and opportunities derived from the regulatory framework Energy efficiency,* in the chapter *Low-Carbon Business Model.*

6. Customer Satisfaction





Management focus Marketing and labelling

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The customer holds centre stage in ENDESA's business model, and for this reason, the measurement of Customer Experience is fundamental. Therefore, all of the sections, products, channels, services and processes have suitable tools to perform this function.

In 2017, in order to measure customer satisfaction, over 140,000 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 100 million customer touch points were processed.

The main methodology used in the measurement of customer satisfaction is telephone surveys. The total weight of on-line surveys continues to increase year-on-year, now being 37%.

In 2017, ENDESA continues as leading company in mass customer satisfaction in the electricity sector for the 8th year running, with 2% advantage over the competition.

In this way, ENDESA fulfils the objecting of achieving a score greater than 6.9, established in its 2017-2019 ENDESA Sustainability Plan.

Likewise, ENDESA's perception is consolidated as the leading company in satisfaction with Advice (+7% above the competition), after 3 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 (+7% 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, with the number of effective recommendations exceeding those of competitors (+5%).

Among mass customers in the gas sector, ENDESA is leading the way in satisfaction as a company for the fourth consecutive year, with a noteworthy rating.

In Gas, ENDESA is a leader in Price satisfaction (+7%) compared to its competitors. With a score close to 8 in the Commercial Cycle, the Clarity of the Bill (+5% vs Competition) stands out, as does the percentage of customers who consider the information in the bill to be useful (+6%). There is also an advantage in satisfaction with Advice and Image (+2%) compared to the Competition.

With regard to non-mass customers, ENDESA is a leader in Satisfaction with the Company, outstripping the score of the competition in this period.

In terms of advice, there is a positive gap between the percentage of ENDESA's customers and the percentage of the competitors' customers who have knowledge of Value-Added Products and Services (+6%). The same applies to the information provided on the Value-Added Services products (+21%).

The service provided by the Account Manager to non-mass customers increased significantly in 2017, with scores close to 9 (+2% vs 2016). The main sig-

Customer satisfaction index (general public electricity free market)

2014	2015	2016	**2017**
6.61	6.42	6.91	7.03

nificant improvement is the satisfaction with the Information and Advice, obtaining a notable score (+4% vs 2016). The aspects related to Proactivity (+3% vs 2016) are achieving notable scores, along with significant improvement in the Manager's availability.

> **Customer experience-Sale**

The Quality monitoring offered by the mass market sales channels (Task Forces and Telesales) in Spain reached scores of 8.23 for Task Force and 8.44 for Telesales. For personalised customers, Task Force achieved record highs in 2017 (+9.13). 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.

The telephone channel, which serves the Free Market customers, improved its satisfaction by 3% with respect to the previous year, due to better perception of satisfaction with the Number of Attempts to contact (+3%) and with waiting time (+3%).

In 2017, 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 in measurement, the best scores were in satisfaction with Treatment, order in the establishment and Clarity of Explanations. Punctuality and Functioning with customers who have requested the Pre-Arranged Appointment service stand out for their good scores.

In 2017, the improvement in the invoicing service (+7%) in relation to the on-line channel stood out.

> **Customer experience-Process**

Customer satisfaction with all processes measured is increasing for those customers who have subscribed to our on-line rate via the website (+4%). The best performing indicators in 2017 are the Information Management System that we provide in the contracting process (+3%) and the simplicity of the procedures to carry it out (+1%).

Studies on Value-added products and services

The satisfaction of customers with the offers of Value-Added Products and Services presented by ENDESA remains good, both for mass customers and large clients. The ranking of attributes is topped by the Information and advice received and the simplicity of the procedures with scores close to 8.

ENDESA awarded at the IV Awards for Customer Experience Development

The Association for the Development of Customer Experience has awarded ENDESA the prize for Best Customer Journey Project at the IV DEC Awards, recognising companies that stand out for their Customer Experience projects. DEC is an association led by large companies and professionals with the objective of promoting and disseminating best practices in Customer Experience know-how.

The Best Customer Journey Project award recognises ENDESA's work in defining and implementing the Customer Journey in CEX e-Invoice/Hourly-Curve projects, the customer's digital experience with e-Invoice, making use of information on hourly consumption, and Digital Sales Acceleration, the customer's experience in digital sales. Customer Journey is a tool for diagnosis and innovation that enables a picture to be taken of what the customer is experiencing and is missing in his multiple interactions with the company, also identifying the actions for improvement.

As for the execution or completion of the work associated with these value-added products and services (PSVAs) with non-mass customers, the level of satisfaction with the service received is notable, with the implementation of Efficient Equipment standing out with satisfaction on all attributes of this grouping at close to 9.

> New projects

After the development and digitalisation of the Quality Information model started in 2016 with the ***Quality Thermometer***tool, in 2017 the **Sales Push** studies were implemented in a fully functional manner with the mass customer, this allowing us to:

- Do real-time reporting with notifications of significant changes.
- Obtain personalised defined information for each user.
- Facilitate multi-device accessibility.
- Manage dissatisfaction (close the loop).

Dissatisfaction Management has become one of the main levers for improvement in the Company, making it possible to learn to correct and improve processes, in addition to re-contacting the customer to give him/her a satisfactory solution.

Since October 2017 a project has been initiated to define the New measurements concept involving both the 'end-to-end' processes and the systems that participate in perceived quality management, distinguishing between B2C and B2B.

7. Integrated management system (ISO9001 and ISO14001)

In July 2017 ENDESA Energía obtained AENOR certification for the Integrated Management System - ISO 9001 and ISO 14001 - in its gas and electricity marketing business.

This System certifies the ability of the gas and electricity marketing business to provide products that meet customer requirements and comply with applicable regulatory requirements as well as quality and environmental rules.

The principal objective of the Integrated Management Systemis to seek and achieve continuous improvement in the integral gas and electricity marketing processes, placing special emphasis on the processes directly related to customers.

The Integrated Management System also includes the commercial fleet within its scope, a fleet that is currently hybrid and electric. The commitment in this area is demonstrated through the incorporation of a target for the reduction of its CO_2 emissions within the Annual targets programme.

AENOR
Certificado del
Sistema de Gestión Ambiental
ENDESA ENERGIA, S.A.U.

Innovation

23.98

Millions of euros invested in innovation

534

Electric vehicles purchased by employees in three years

Compliance with 2017-2019 Sustainability Plan

Strategic priority	Course of action	2017 Target	31/12/17 result	Key actions
Operating efficiency and innovation	Launching of innovation challenges on the Energy Challenges platform.	1	1	> Meeting the Blockchain Lab challenge.
	New start-ups selected each year.	2	3	> Launching the Enel Innovation Hub Spain in Madrid.
	New innovation projects launched each year.	2	4	> Innovative projects in generation and in the distribution network; 'La Graciosa', 'Monica', Growsmarter, Flexiciency, IdEAS, 3S-CS.
	Internal innovation events each year.	2	4	> Enel Innovation World Cup; 90 minutes of innovation; my best failure; open innovability.

1. Innovation at ENDESA

1.1. Investment in innovation

EUSS Research and Development Management Focus

ENDESA is solidly committed to the innovation taking place through all its lines of business. The Company considers it to be a strategic function that should be a part of all the Company's 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)

	2015	2016	**2017**
Generation	5.30	4.70	4.54
Nuclear	1.48	1.52	2.09
Marketing	11.59	5.78	12.5
Distribution	3.12	4.17	4.61
Renewables	0.00	0.00	0.24

Two ENDESA projects cited by the highest USA electric R&D organisation

Two projects developed by ENDESA in Spain have been recognised in the latest edition of the Technology Transfer Award 2016, annual awards organised by the Electric Power Research Institute (EPRI), the most prominent electrical certification organisation worldwide.

The development of software that allows tracking and reporting the actual limits of components of critical parts for the operation of a thermal power plant was cited in the Generation category; the program was tested at the As Pontes thermal power plant and can be used in other types of thermal power plants such as coal-fired or combined cycle.

The advance in impact analysis, electric grid for non-mainland systems and in the high level of distributed generation, offering viable storage solutions with a reduction in third party emissions, was recognised in the Power Delivery & Utilization category.

1.2. The open innovation model

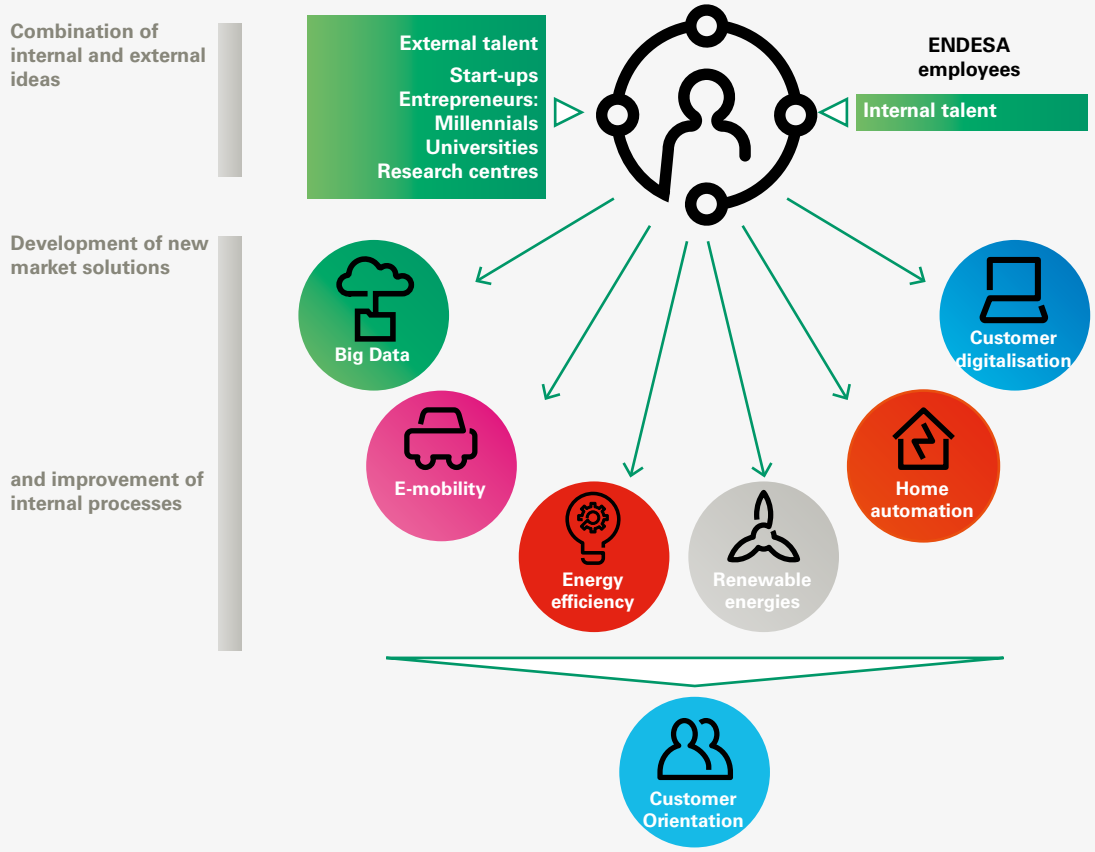
ENDESA is committed to an open innovation model, opening the company to external influences to promote collaboration and the interchange of ideas to make the best use of its resources.

Open innovation is a new relationship model between companies and external entities (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 capabilities through collaboration with the most relevant players in the innovation ecosystem that contribute to growth and the 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 service for residential customers, SMEs, businesses and large clients, digitalisation of the company and the relationship with our clients and trading, as well as new directions 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.

ENDESA's focus on open innovation



1.2.1. The Endesa Energy Challenges platform

During 2017, ENDESA continued to develop its open innovation platform ENDESA Energy Challenges (endesaenergychallenges. com) with new challenges launched at the world innovation community, in search of new energy-efficient products and services. The aim is to challenge the most brilliant minds to search for solutions to enable the creation of the energy model of the future.

The BLOCKCHAIN LAB challenge was developed during the year: our laboratory of ideas through which we have identified the best proposals and business models, using blockchain technology in applications related to the world of energy, in order to jointly develop new solutions to change the world.

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 capability of disruptive innovation, the use they make of technology, their know-how and particularly their adaptability in developing products and services and placing them on the market in the shortest time possible.

The ENEL INNOVATION HUB SPAIN was opened in coordination with Enel Innovation Holding in 2017, part of the network of Innovation Hubs located at entrepreneurial centres and strategic markets of significance for the Group all around the world: Brazil, Chile, Spain, Israel, Italy, Russia and Silicon Valley.

The Enel Innovation Hub is responsible for continuing to develop the relationship, not just in the entrepreneurial ecosystems in Spain and Portugal, markets where ENDESA already has a major presence, but also in other important European ecosystems, canvassing European start-ups that may respond to the challenges of the

ENDESA DATATHON

ENDESA DATATHON challenged the developers expert in Big Data throughout the world to demonstrate their creativity and innovative capacity to transform the future of energy in Spain.
A dataset with simulated information on the consumption of 100,000 customers was placed at the disposal of the participants to develop the projects. After 6 months of global competition, the 40 participants submitted their proposals. The 3 best ideas received awards after selection by an international panel of judges.

BLOCKCHAIN LAB

BLOCKCHAIN LAB is the laboratory of ideas where ENDESA seeks the best proposals and business models, using blockchain technology in applications related to the world of energy, in order to jointly develop new solutions to change the world.

The open innovation platform

Endesa Energy Challenges

To transform the future of energy

TEAM A

TEAM A was a project oriented toward the identification of innovative proposals in the field of digitalisation and new products, in cooperation with Pangea and a group of 8 internationally recognised young people with high potential (some of them belonging to the Forbes 30 under 30 list), who contributed their creativity and the viewpoint of the millennial generation to the proposals.

ENDESA HACKATEEN

ENDESA HACKATEEN brought the current trends on technology and robotics to the children of ENDESA employees. Find out how the 48 participants solved the challenge proposed, and which were the best 3 ideas of the competition.
The first ENDESA Hackateen brought together 48 boys and girls aged between 10 and 14 in a unique competition focused on the world of robotics. For a whole day they were able to see the new technological trends up close and to enjoy interactive workshops on programming and 3D printing.

Further information at **www.endesaenergychallenges.com**

business lines and companies of the Enel Group and develop the relationship with start-ups, specifically stimulating those start-ups of interest to the Group. The Enel Innovation Hub Spain is located at TheCube in Madrid, a business centre focusing on the Internet of Things, bringing together various players in the ecosystem.

1.2.3. Promotion of internal talent: The culture of innovation at ENDESA

ENDESA encourages the creation of a culture of innovation among its employees, through different programs and initiatives that channel and make innovation available to the entire Company. Some of the most noteworthy ones were:

ENEL INNOVATION WORLD CUP

ENEL INNOVATION WORLD CUP is a programme for the identification of new business models directed toward employees and instigated by the Enel Group, where internal teams may propose projects for the development of disruptive business models, having the opportunity to develop the initiative generated.

90 MINUTES OF INNOVATION

90 MINUTES OF INNOVATION is an initiative for internal dissemination whose purpose is to bring new technological trends closer to employees via meetings focused on innovation. Two editions were held in 2017 at which matters such as artificial intelligence or robotics were discussed.

More information at www.endesaenergychallenges.com/es/90-minutes/.

Development of a culture of innovation

To transform the future of energy

OPEN INNOVABILITY

OPEN INNOVABILITY is the new platform of the Enel Group for launching innovation and sustainability challenges, both for employees of the Group and for the entire global innovation community.

MY BEST FAILURE

MY BEST FAILURE is a digital platform enabling the Enel Group's employees to share cases of 'constructive failure' as a method of instruction, contributing to the creation of a culture unafraid of making mistakes, fostering experimentation and the capacity of taking risks within the organisation.

Further information at **www.endesaenergychallenges.com**

1.3. Innovation in electricity generation

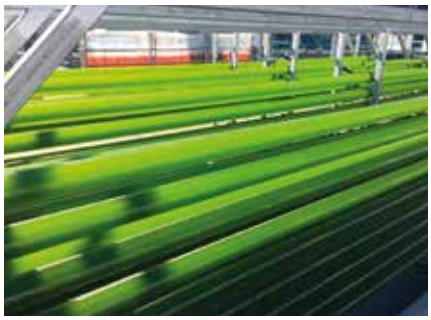
During 2017, ENDESA has continued to develop technological innovations in order to improve the efficiency of its power generation processes and to reduce the impact on the environment.

1.3.1. Innovation in generation from fossil fuels

ENDESA is committed to technological improvement and the optimisation of the natural resources consumed at its facilities, improving efficiency in generation processes.

Thus, during the year, the following projects were undertaken, aimed at reducing pollutant gas emissions, the valuation of by-products and reducing the consumption of natural resources such as water:

> **INNOVAALGA and A4HW Projects:** Valuation of CO_2 derived from combustion gases at the Litoral thermal power plant in Almeria by the cultivation of microalgae, and the valuation of the biomass generated to obtain high-value proteins and sustainable fertilisers.



A4HW: Microalgae tubular reactor for recovery of CO_2 at the Litoral de Almeria centre.

> **CaO_2: Project:** Optimisation of the CO_2 capture process through carbonization-calcination cycles by experimentation at the La Pereda 1.7 MWt pilot plant.

> **ASHREACT.:** 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 products to replace Portland cement.

> **CANEM:** installation of a system for emulsifying water in fuel oil to reduce the emissions of NOx and particulate matter in fuel-oil boilers.

> **LESSOX II:** A study of low-investment strategies to reduce SOx and NOx emissions at the thermal generation facilities, to adapt the plants to the new European Directive on emissions.

> **ORPAO:** Improvement of the desulphurisation plants by optimisation of the intermediate processes, enabling a reduction in operating costs, an improvement in the quality of the gypsum and a reduction in liquid effluents, improving quality and the environment.

> **GYLL:** pilot project for recovery of dump leachate water by the use of an innovative technology based on vibrating membranes.

> **MATCHING:** A project funded by the H2020 European Research Programme, whose main objective is to reduce the impact of water consumption in thermal generation plants, particularly that used in the cooling process.

Various projects have also been developed to improve efficiency in the electricity generation process directly affecting the reduction of emissions and consumption of material resources, such as:

> **COAL STOCKPILING:** Development of a project to prevent energy losses in coal yards as a result of natural oxidation and self-combustion processes, and also of the displacement of coal particles by wind.

> **CONAVA:** Implementation of expert adaptive predictive control systems to optimise combustions and turbine steam temperature control in different generating plants (Teruel, As Pontes and the Besos combined cycle).

> **COLIFO:** system to monitor the remaining life of the principal components of the boiler, with the aim of improving the operation of coal-fired thermal units.

> **STORE:** Analysis and pilot validation of energy storage solutions to improve generation management in isolated grids.

> **PROTEC:** Development of advanced metallic coatings for the protection of boiler pipes and increased plant availability.

> **'El Hierro':** Assessment of the installation of an energy storage system to boost the quality of electricity supply on the El Hierro island grid and improve the intake of renewable energy on the island.

El Hierro: Central Energy Storage system of Llanos Blancos on the island of El Hierro.

> **THESIS:** Study of the integration of new thermal storage technologies for solid materials to recover residual heat in electricity generation plants.

For more information about energy efficiency, see section 1.1.2. *Risks and opportunities derived from the regulatory framework Energy efficiency,* in the chapter *Low-Carbon Business Model.*

The laboratory at As Pontes reuses carbon sludge as biofuel

The team at the ENDESA laboratory in As Pontes has developed a program for the re-utilisation of carbon sludge generated in the thermal power plant, converting it into compressed dust that is re-used as boiler fuel.

The sludge is produced in the effluent scrubbing process. It consists of coal fines produced from farms and furnaces that accumulate chemically and thicken prior to compacting and extraction of moisture using filter presses. The end result is compressed coal dust that is used as a fuel.

El Progreso, 12 January 2017

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. Via the Nuclear Energy Committee of UNESA (Spanish Electricity Industry Association), 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.
- **PCI coordinated research programme,** performed with the participation of companies of the sector and of the CSN (Nuclear Safety Council), whose purpose is to analyse the safety of nuclear power plants, both for their operators and for the regulatory body.
- **PIC joint programme of the electric companies and ENUSA,** which coordinates the R&D&I activities related to nuclear fuel, defining projects of common interest.
- In cooperation with the **CEIDEN platform**, samples of the concrete from the José Cabrera Nuclear Facility, now out of use, are to be analysed in order to obtain data of great usefulness in the improvement of the safety conditions of the facilities currently in operation.
- During 2017 an analysis was performed of the **R&D and Technological Innovation (TI) projects at the Ascó and Vandellós nuclear power plants** (ANAV), performed during 2016. The value of the projects identified was 341,800 euros in IT, 23,400 euros in R+D. The ANAV R+D and IT projects completed during 2017 will be analysed in 2018.

1.4. Innovation in the electricity distribution network

102-10

The following distribution grid-related projects were developed during this year :

Monitoring and Advanced Control of medium/low voltage distribution grids ('Monica'): The idea is to move forward from simple data capture to the management and use of information that helps decision-making and the use of smart electrical grids to optimise network performance. In 2016 ENDESA installed and started up a sensor multitude service at 56 medium/low voltage transformation centres in "SmartCity Málaga". During 2017, ENDESA put the communications in service for all the sensors installed throughout 56 Medium and Low Voltage Transformation

Centres located in the "SmartCity Malaga" area, providing the capability of receiving a large variety of information on the MV and LV network in the Central Systems of the Distributor.

"La Graciosa" Project: This project aims to establish the strategies and systems necessary to optimise energy flows in order to maximise the penetration of renewable energies on La Graciosa island. The manufacture and installation of equipment and control systems in the field has been done throughout 2017 for initiating testing on the island.

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 infrastructures and sustainable urban mobility, and whose main objectives are the provision of value-added energy- efficient 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. ENDESA developed a model in 2017 based on digital technologies to support work at transformation centres that are being validated at five centres in Barcelona.

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 distribution companies with an infrastructure of remote management already in operation, these including the Enel Group and ENDESA, together 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 advanced 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-user, 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.

During 2016, the inspection and selection process was performed on those municipal buildings and offices considered most suited for the project. Likewise, the technical specifications were defined for the Energy Box devices, these being the equipment enabling the integration of the field components (generators, microgrids, consumers, etc.) into the Energy Management System (EMS) or platform for the monitoring, control and management of the users, actors, facilities and services brought into play in this initiative.

During the year 2017 the deployment and implementation phase was completed with the installation and configuration of all the equipment required in the different use situations defined in the project, including renewables, storage, new systems and equipment to enable efficient management. The demonstration is taking place in Malaga, with its City Council using the actual installations in the city itself.

The development of a local monitoring and control system (SCADA) for micrronetworks that will also be integrated with the energy management system (EMS) should also be noted. Work was also done in developing the algorithms required for equipment management in accordance with the tests to be conducted in each usage case (invoice optimisation, peak shaving and flexibility, among others).

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.

Continuing the work of 2017, functionalities, data model and interoperability specifications have been determined along with completing the training begun in 2016. Specific operational function specifications and tests from a variety of manufacturers, both operational (remote control signalling) and non-operational (exchange of oscilloscope recordings) have been worked on in relation to this. Likewise, the laboratory validation testing of the electronic functionalities (protection and control) of the equipment involved in the project is being concluded, with comprehensive documentation of the results. Functional validation and integrations testing in the laboratory environment has also commenced, which should be completed during 2018 along with the field deployment of the pilot.

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 edition 2 of the IEC 61850, which will be the fundamental objective.
- Security: electrical substations are considered by the UE 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-precision synchronisation protocols. Standards such as IEEE 1588, which enable time frames approaching high precision, will be considered, bearing in mind the future peak of the process bus.
- Wireless communications: refers to whatever results in 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 well as 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 at the general level, connecting it to the IoT platform that is most relevant.

The conceptual definition and requirements were completed in 2017 along with significant advancement in the implementation of each of the planned developments (substation monitoring and configuration tool based on IEC61850, RTU acquisition equipment with high precision synchronisation, IoT system for substation, wireless system for substation and advanced cybersecurity system and threat modelling), which will be completed in the initial months of 2018. Once these features are completed, its integration into the final system will proceed, validating the array in the laboratory and in an actual ENDESA substation. This will result in providing a pilot that combines the latest ICE61850 technology, cybersecurity, high precisions synchronisation, wireless communication and IoT connectivity in an actual substation for the first time worldwide.

Demand management projects: As an innovative project in the management of demand, the **European EnergyTic project**is of particular note It consists of different innovative solutions to enable customers in public housing to achieve water and power saving goals. The project will cover 1,000 homes in France and 700 in Spain. ENDESA plays an active role in this European project as a technology partner, leading the contribution of customer remote management in Spain.

1.5. Participation in technology platforms

In 2017, ENDESA continued to play an active role in various technology platforms oriented toward promoting the development of a much more advanced distribution grid, able to respond to future challenges. Among these, of particular note is its cooperation with the Futured platform, which is part of the steering group, and consists of a forum for dialogue and debate between differ-

ent agents, to make possible a better awareness and to define a shared vision of the grid of the future.

In addition, in 2017 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 pressure 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 the challenge of achieving a more sustainable model 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, 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, 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. ENDESA's commitment to e-mobility

In its commitment to the fight against climate change and to the furtherance of a more sustainable mobility, ENDESA is committed to the electric vehicle as a key tool.

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.

For more information on ENDESA's commitment to e-mobility, see section 6 of the chapter *Low Carbon Business Model*.

ENDESA Celebrates First Vuelta a España in Electric Vehicle

The First Edition of the Vuelta a España in an electric vehicle was held in 14 stages between 24 May and 11 June,
Seven brands accompanied ENDESA in embarking on this venture and offered their vehicles for the tours: BMW, Hyundai, Kia, Nissan, Renault, Smart and Volkswagen.
This first edition proceeded in 14 stages to 19 cities across the peninsula, the Canary Islands and the Balearic Islands. 25 company employees, drivers and alternates, made the tours in the company of a comedian publicising sustainable mobility up close and humorously.
A party was held at the end of each stage where the public could learn more about sustainable mobility.
As part of its commitment to the struggle against climate change, ENDESA is committed to el-mobility as a key element in the transition to a more sustainable energy model.

ENDESA E-Mobility Climate Project 2016

ENDESA's E-Mobility Program was selected at the 2016 Call for Climate Projects, an award presented by the Ministry of Agriculture and Fishing, Food and the Environment, and is a significant recognition of the methods used to combat climate change developed by the company.
The Climate Projects of the Carbon Fund for a Sustainable Economy (FES-CO2) are projects for the reduction of GGE 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.
The project receiving the award is developed based on two major factors: The Employees' E-Mobility Plan and the Mobility Plan through Car e-Sharing. 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 award demonstrates that electric vehicles play a fundamental role in the reduction of emissions and help Spain to achieve its objectives in the struggle against climate change.

2.1.1. The Mobility Plan for Employees

ENDESA, in line with its strategic standpoint, where innovation and sustainability are fundamental focal points, 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 Sustainable, Safe Mobility Plan, on 6 April 2017 ENDESA launched the third edition of the Employee E-Mobility Plan with the goal that new employees might decide to test the advantages of the electric vehicle, in order to reduce the pollutants and greenhouse gas emissions caused mainly during their journey to work.

This new Plan designed a value proposition for the employee comprised of the following elements:

- 100% electric cars.
- Offers for the installation of an *ENDESA Integral 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 *leasing* offer giving access to an electric car for 24 months to break the technological obsolescence barrier.
- An economic incentive to contribute to the purchase or *leasing* of the electric vehicle in exchange for the employee's cooperation in aspects related to the dissemination and image of the project.

The project finally closed on 31 December 2017 with 266 electric vehicles purchased by company employees. These 266 vehicles represent 6% of the market share of electric cars in 2017, and will prevent the emission of over 798 tons of CO_2 in Spain per year.

The aggregate results of the 2015, 2016 and 2017 Plans represent a total of 534 electric cars among ENDESA's employees, representing on average 7% of the total market share over these two years. These 534 electric cars, when travelling, will not only prevent the emission of 1,602 tons of CO2 annually, but at the same time will also contribute to reducing the emission of NOx and other pollutants that impact people's health, especially people who live in cities.

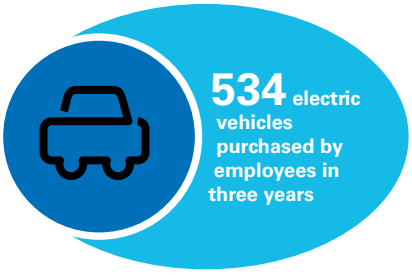
By means of this initiative, ENDESA's employees have become ambassadors of the mobility of the future and a referent for society, contributing to the furtherance of e-mobility and to the change toward sustainable consumption habits.

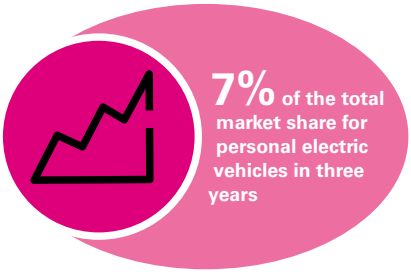
Overall, almost 6% of the staff is driving around with zero emissions as a result of these three editions of the plan. The incidence of traffic restrictions against polluting cars seen recently in cities such as Madrid or Barcelona bear witness to the need to implement sustainable mobility policies, among which the electrification of transport is revealed to be a key option to achieve this goal.

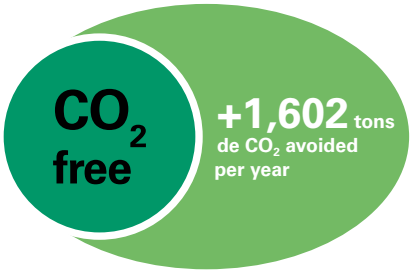
Due to the success of the 2015, 2016 and 2017 editions, and in order to continue to promote the electrification of demand and responsible consumption, ENDESA is working on the launching of new initiatives in 2018.

ENDESA's objective is not only to promote these habits concerning mobility 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

Impact of the Employee E-Mobility Plan in 2015-2017







Recognition as a Climate Project of the Ministry of Agriculture and Fishing, Food and the Environment eligible for subsidies of 3,528 tons of CO_2 at 9.70 euros/ton until 31 December 2023. Secretariat, Carbon Fund for a Sustainable Economy.

Award for the best entrepreneurial initiative of 2017 for sustainable mobility by the Spanish Association of Automobile Fleet Managers (AEGFA).

Award for the best business practice at the XIII RSC Benchmarking Workshop, which organises the Sustainability Excellence Club.

Project finalist of the 475 participating businesses in the Sustainable Life in Cities initiative sponsored by Forética. July 2017

and favouring an improvement in air quality in cities, and its corresponding impact on people's health.

ENDESA is committed to e-mobility as the mobility of the future, clean and non-pollutant, which is already a reality.

During 2017, the Employee E-Mobility Plan received several awards and distinctions in the media related to the world of e-mobility, and presentations at congresses and events. Among these, the following are of particular note:

- Recognition as a Climate Project of the Ministry of Agriculture and Fishing, Food and the Environment eligible for subsidies of 3,528 tons of CO_2 at 9.70 euros/ton until 31 December 2023.
- Award for the best entrepreneurial initiative of 2017 for sustainable mobility by the Spanish Association of Automobile Fleet Managers (AEGFA).
- Award for the best business practice at the XIII RSC Benchmarking Workshop, which organises the Sustainability Excellence Club.
- Project finalist among the 475 participating businesses in the Sustainable Life in Cities initiative sponsored by Forética.

2.1.2. 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 (13% of the total fleet, consisting of about 340 cars).

To encourage the managers to choose this type of model, the company will increase the amount they receive for leasing. The company will also provide recharging infrastructure at its 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.

This is the Company's commitment to the electrification of demand as a path towards complying with the objectives of the Paris summit against climate change; within this strategy, e-mobility is one of the main focal points.

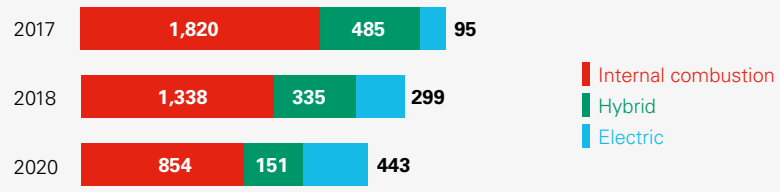
2.1.3. Sustainable management of ENDESA's fleet

Another of ENDESA's focal points 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 the electrification of the fleet.

Thus, in 2017 ENDESA had a total of 94 electric vehicles and 485 hybrids, which together represented almost 24% of the fleet, 4% more than in 2016. In order to continue to move forward in this field, ENDESA's new 2018-2020 Sustainability Plan sets the following targets:

Another action area is the promotion of the sustainable mobility of its employees in their workday commute. The

company is moving on this along two lines:



30% fleet of electric vehicles in 2020 (x5 vs 2017)
53% reduction of internal combustion fleet in 2020 (vs 2017)

> **Promotion of the e-carsharing service:**

This service, which began in 2016, continued to develop during 2017, its aim being the provision of electric vehicles for employees at specific ENDESA offices for their travel needs. These vehicles were driven 94,459 km in 2017, and this is expected to reach 150,000 km annually in 2020.

> **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. 26% of the taxi trips in 2017 were made using this application. By 2020 it is expected that 50% of employees using taxis for trips will use this shared application.

In addition, starting in 2018 ENDESA will sponsor the use of taxis that operate with the following technologies: electric, hybrid or natural gas. The aim is for 55% of the kilometres travelled to use these types of taxis in 2020.

Sustainable management of the fleet has made it possible to achieve a reduction in fleet CO_2 emissions by 15.5% compared to 2016. It is also expected to reach a reduction of 50% in 2020 compared to 2017.

2.1.4. Innovation and technological development of e-mobility

The following projects are relevant in the development of e-mobility technologies:

ecaR (Endesa Auto Charge Club); is a pioneering initiative in Spain that supports e-mobility at the same time as transport and sustainable tourism, offering a fast-charging service through a network of charging points for electric vehicles available for any user. It has a mobile app (available in iOS and Android), through which users can locate charging points, have a guide on how to get to them, display their availability and charge, unblock them and recharge without needing an actual card.

The project was launched in Mallorca with the installation of six fast recharging points (50 kW, entailing an 80% recharge of a car battery in 20 minutes), at a distance of approximately 35 km from one to the next, to effectively cover the requirements of the entire island. The service is currently available for any type of customer: members of the ecaR club, users that rent an electric vehicle with any of the rental car companies participating in the project and, since the beginning of 2017, occasional users that want to use the charging points without a prior contract with ENDESA can recharge and pay without signing up, using their credit card. ENDESA is the first company in Spain to incorporate this functionality providing universal access by any user at the charging points. The power supplied by all of these recharge points is guaranteed to be 100% from renewable sources.

Redesign of electric vehicle ENDESA WEB During 2017, ENDESA updated and enhanced its e-mobility web portal, incorporating a new style more aligned with the latest trends with more visual content and user-friendly navigation. The page not only provides information on ENDESA activity related to e-mobility, but also shares information of interest on e-mobility to bring this much more energy efficient technology, that respects the environment, to society.

To access more information about this event, please visit the website: www.endesavehiculoeléctrico.com.

ULTRAFAST; A program aimed at the development and installation of an ultra-fast 400kW charger, to offer this

service to all the heavy electric vehicles in Barcelona and initiated in 2016. In January 2017, the operation of the first two 18 metre passenger buses was launched, operated by Barcelona Metropolitan Transport (TMB), testing the technology and associated operating systems.

The 400 kW charger is monitored by the ENDESA control centre, recording information on the number of charges, the power recharged, the date and time and the battery status before and after charging.

An average of 44 tons of CO2* has not been released to the atmosphere since the charger was put in service.

This initiative forms part of the H2020 **ZeEUS** (Zero-Emission Urban System) project, developed within a European consortium to demonstrate the economic, environmental and social feasibility of urban electric buses.

http://zeeus.eu/

SMARTCHARGING; This is the development of a platform that allows management of multiple electric vehicle chargers.

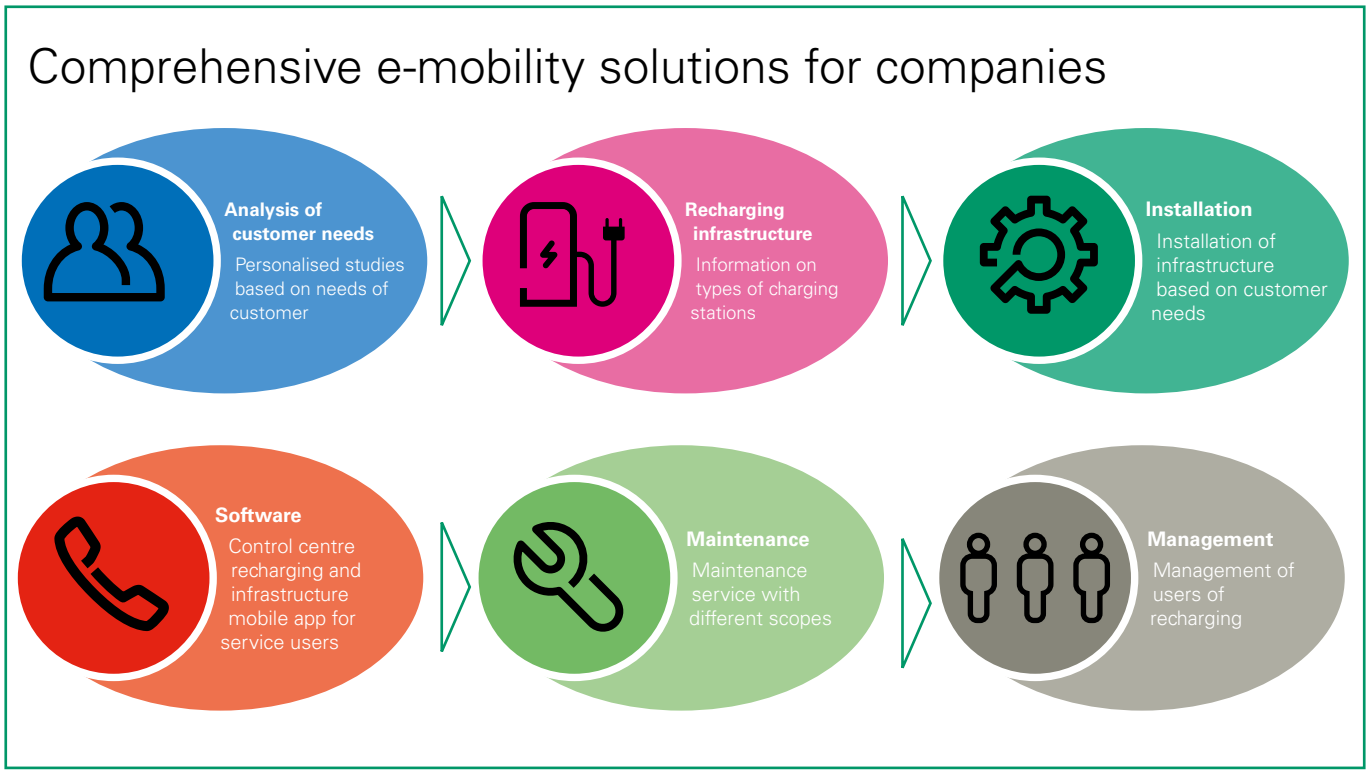
CIRVE (Iberian Fast Charging Agents); is a European project in which 8 institutions take part, with the target of deploying a grid of 40 fast charging points in urban and suburban areas, and to boost the existence of this type of infrastructure in Spain.

The project consists of 9 work groups, in which ENDESA leads the activity corresponding to the access of electric vehicle users to the recharging grid.

2.1.5. ENDESA's e-mobility tender

For both home and business use, ENDESA provides a comprehensive e-mobility solution adapted to its customers' requirements. This solution includes the recharging infrastructure, the installation of the recharge point, the electricity supply and advice on the different energy rates.

In 2017, the company also updated its website www.endesavehiculoelectrico.com, where it presents the advantages of e-mobility as a fundamental element for managing sustainable mobility.



* Data regarding the most restrictive diesel standard, Euro VI Standard.

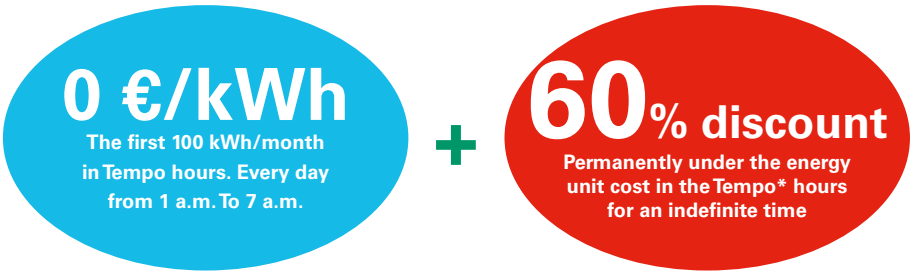
Commercial offer for homes (B2C Business to Customer Focus)

ENDESA offers its domestic customers a comprehensive package (Comprehensive Electric Vehicle Recharging Solution) consisting of a lease of the recharging point and installation with which during three or five years any incident that the customer has involving recharging and infrastructure is resolved in less than three hours, 365 days a year.

An Electric Vehicle Zero Time Rate was also launched that provides the capability of utilising 1200 kilowatt hours (kWh) a year at 0 euros for charges between 1:00 a.m. And 7:00 a.m., which would provide approximately 10,000 kilometres per year free of charge.

https://www.solucionesintegralesendesa.com/solucion-integral-recarga-vehiculo-electrico

*Add the **Zero Time Electric Vehicle Rate** to your comprehensive solutions and charge your vehicle*

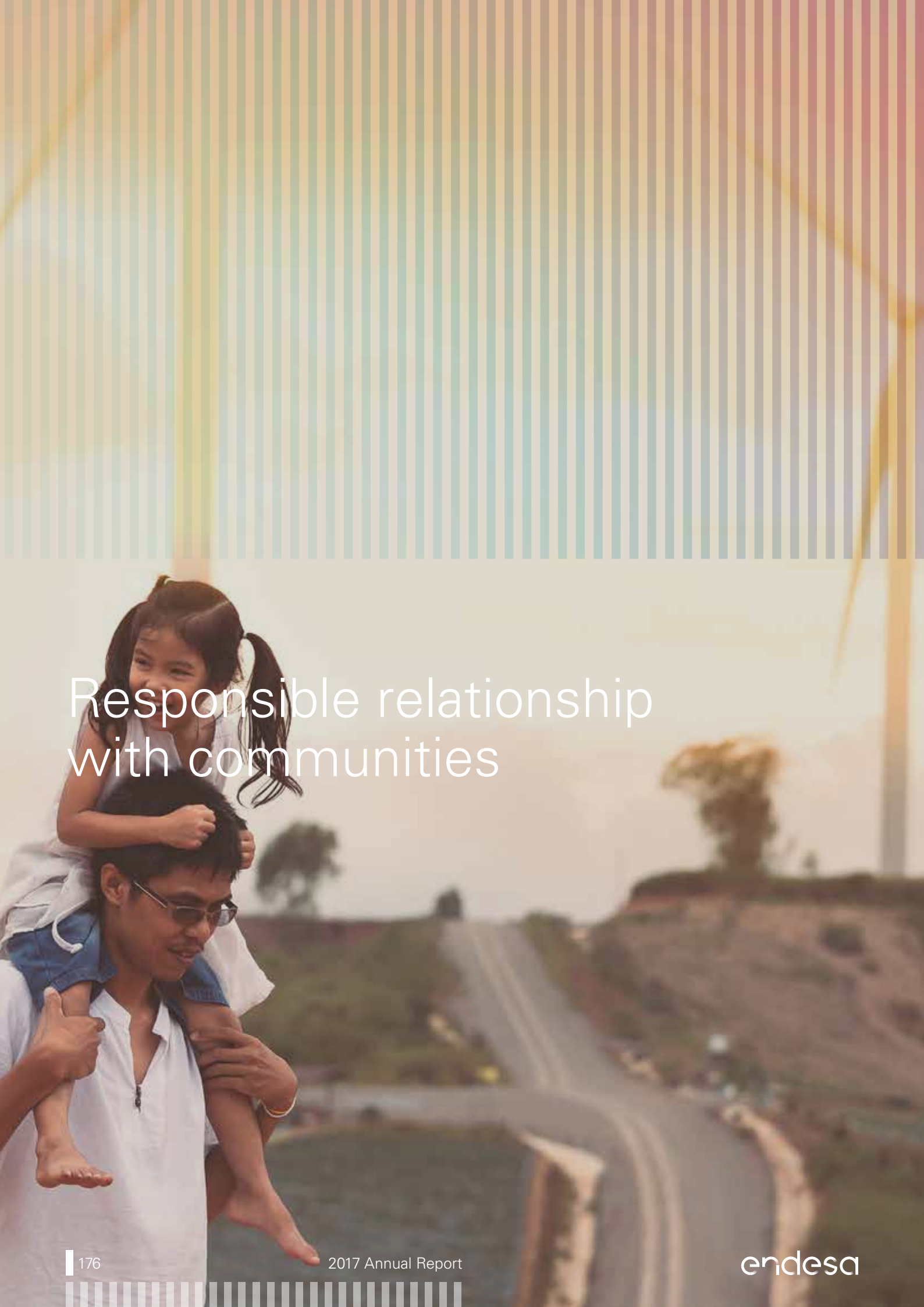


* Outside of the Tempo schedule, the energy unit cost is invoiced at the reference price. The power unit cost is invoiced at the reference price.

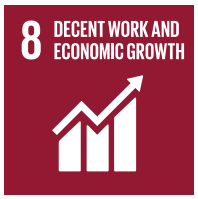
Commercial offer for business customers (B2B approach, Business to Business)

With B2B, ENDESA offers a flexible program for both customers that include electric vehicles in their fleet as well as for those that have car parks and want to offer recharge services to their customers on site.

For more information about electric vehicles, see section 1.1.2. *Risks and opportunities derived from the regulatory framework Energy efficiency,* in the chapter *Low-Carbon Business Model.*



Responsible relationship with communities



+950,000

beneficiaries in 166 projects performed in 2017

34

% of the investment aimed at projects to promote energy access

€13.8

million of social investment in 2017 according to LBG Methodology

229

agreements with the Public Administration to facilitate access to electricity

Endesa Sustainability Plan compliance 2017-2019

Strategic priorities	Course of action	2017 Target	Results 31/12/17	Key actions
Local communities	Promotion of access to energy (No. of beneficiaries).	240,000	401,141	> Agreements entered into with the government to tackle energy poverty rise to 229. > 38 programmes to tackle energy poverty: – Social innovation programme to deal with energy poverty. – Energy volunteering. – Training for tertiary sector and social services technicians. – Twenergy.
	Access to electricity for vulnerable groups (No. of people)	60,000	106,867	
	Support for education (No. of beneficiaries)	32,000	32,676	> Education projects: – The Country of Students. – Promoting STEM learning among girls. – Partnership with the San Juan Association (Canary Islands). – School and Talent. quality and inclusive education. – Reto Tech. Promoting STEM careers. – Pontificia de Comillas University Foundation study grants and awards for excellence. – Professional training in the electric sector for people at risk of exclusion.
	Social economic development (No. beneficiaries)	42,000	120,731	> 32 Social economic development projects: – Candelaria Youth training. – Get Active and Get Employed training in Puerto del Rosario. – Junior Enterprise. – 'Changing Lives' occupational training. – Transfer of use of company assets.

1. ENDESA's commitment to the communities

413-1 | 413-2 | 203-1 | 103-1 | 103-2 | 103-3 Management focus Indirect economic impacts

103-1 | 103-2 | 103-3 Management focus 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 communities*' to tackle three identified critical factors:

- Unfavourable public perception with respect to the energy sector, which demonstrates a greater distancing between electricity companies and the needs and requirements of the stakeholders and general society. 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 social-economic development in communities as they become actively involved in the Company's decision-making process.
- A political and social context, with complex, interconnected global challenges, which makes it essential to innovate in the way of approaching and interacting with the customer/citizen to cover new society expectations and build links of trust which guarantee the sustainability of the business in the long-term.

Three areas of action have been identified to respond to these challenges:

- Active listening and alliances with strategic partners: Promoting active listening of social and institutional agents of reference in material affairs of the Company, establishing collaboration alliances and creation of shared value, which promote putting down local roots 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, incorporating the creating shared value approach into the Company's

ENDESA has provided 13.8 million euros to boost the social development of the communities where it operates, of which 11.3 millions are monetary contributions or in kind.

business strategy, with the following objectives:

- Integrating the social demands of the business model with the application of methodology for creating shared value with the local communities where it operates.
- Facilitating access to energy for people belonging to groups in a vulnerable situation.
- Promoting education and social-economic development in the communities where we operate.
- Executing social and/or environmental actions that promote responsible management of assets and contribute to strengthening the Company's social commitment.

> Measurement, dissemination and awareness raising: Measure the impacts on the community and the returns for the Company of sustainability projects, improving the quality of the information offered and communicating it suitably, thus approximating the company to citizens, with internal and external sensitivity actions, both society and employees:

- Calibrating the response level of the projects to the needs of the main audiences ENDESA deals with through measurement tools of achievements, impacts and returns in the sustainability projects, rendering an account systematically and transparent to society through appropriate communication.

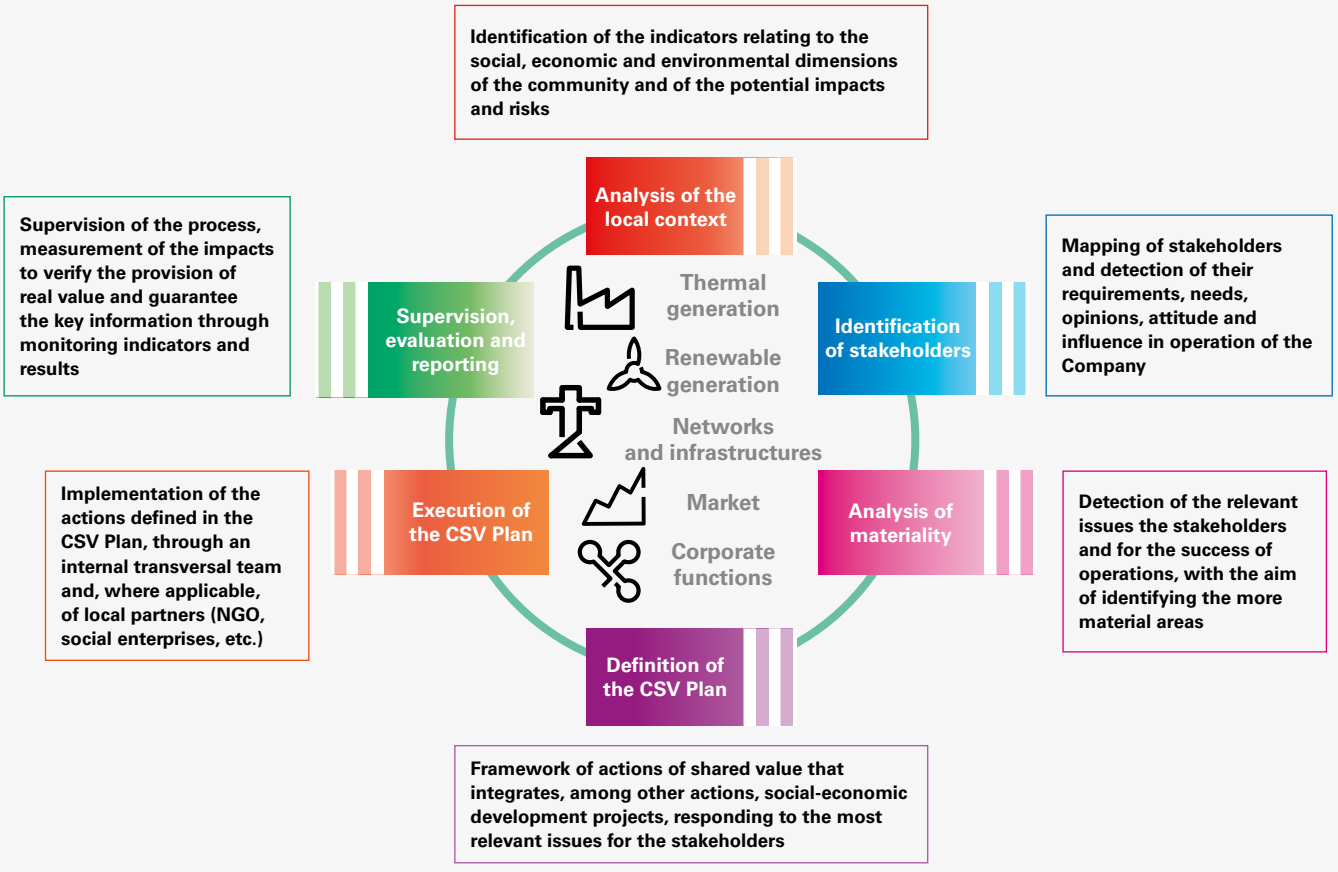
2. Action under the Creating Shared Value approach

ENDESA has been in the midst of the implementation process of the Creating Shared Value approach since 2016, as a sustainability integration tool in the business strategy and operations. To do this it applies a thorough and stringent methodology of accompanying the businesses in all phases of the value chain throughout the useful life of the assets/projects, which allows incorporating the social and environmental variables in the Company's decision-making. This boosts the competitive advantages for the Company, by adopting a shared value approach that brings together the Company's objectives with the priorities of stakeholders.

Applying the Creating Shared Value (CSV) Model involves proactively conducting specific analysis to gain an in-depth understanding of the local context, identifying key priorities, risks, impacts and the main stakeholders connected with a specific business asset/project. This ties in with the Company's objectives so that measures and projects can be identified that can build long-standing relations with local communities. These are included and set out in detail in a Creating Shared Value Plan.

These measures and projects related with specific business assets/projects and included in a Creating Shared Value Plan must be aligned with ENDESA's

CSV - Creating shared value
The way of integrating sustainability in the business



overarching strategy and with the United Nations Sustainable Development Goals (SDGs). 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.

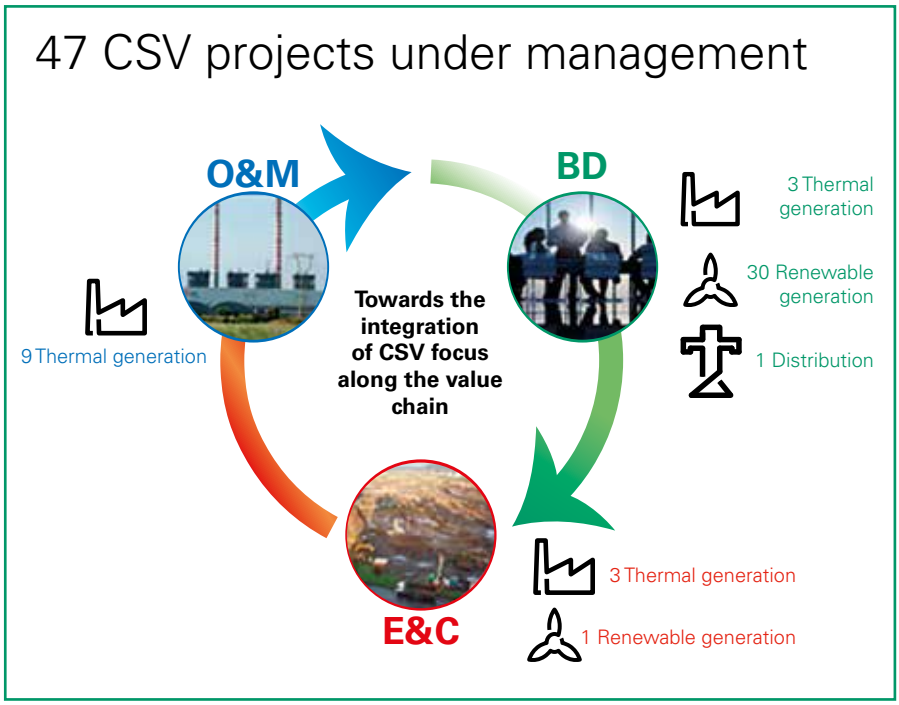
The Creating Shared Value Model is being progressively rolled out, and it is planned to gradually extend it to all Company areas, assets and operations in the coming years.

The Creating Shared Value Model has thus far been established for 47 facilities or projects across ENDESA's business, and is at various stages of implementation. Fifteen of these facilities are thermal generation facilities, 31 renewable generation facilities, and finally, one is in the infrastructure and grids area.

As an example of the actions performed, we highlight:

CSV focus in E&C (Engineering and Construction) projects

The CSV focus is presently being introduced at the Foix plant in Barcelona, the closure and dismantling of which has been approved for March 2019. The dismantling is taking place in a sustainable manner aimed at creating shared value with the Company, contractors, local suppliers and members of the community working together to reach common goals. The model also involves continuous monitoring of environmental performance, commitment to the local community, adoption of innovative economic solutions and solutions that are circular in terms of materials, engineering and infrastructure to generate mechanisms for ongoing improvement and achieve a virtuous and effective partnership with contractors and suppliers.



Management activities include:

- Taking steps to reduce environmental impact and conserve natural resources, including collecting and reusing rainwater, using solar energy and LED lighting in construction areas, using low-emission vehicles and sustainable materials such as biodegradable oil, using recyclable packaging, and making greater use of local suppliers to promote the development of the local economy.
- Ensuring the demolition work does not affect the breeding of a pair of peregrine falcons (protected species) that nest in the plant's chimney every year. Rescuing two colonies of bees, which have been removed by a bee-keeper and released after a quarantine and recovery period.
- Donating machinery and lab instruments to the scientific community, along with part of the 300 m^2 tiled wall designed by local author, Pedro Llorente, installed on the façade of the turbine building. Books, a wine press from the early twentieth century, a large anchor, a symbol of the port, and three models of the plant and port have also been donated. These donations were made to Cubelles City Council, the two schools in Cubelles, and the Polytechnic University of Vilanova y la Geltrú.
- Donating or selling second hand around 40 tonnes of materials from the mothballed plant, in accordance with circular economy principles. Equipment is also being selected for a second useful life, removing and auctioning them off in a controlled manner.
- Enhancing the visual impact of the site by removing industrial units, safeguarding protected species and maintaining green spaces, which cover approximately 50% of the total plant site.
- Carrying out selective demolition, always with the circular economy in

mind, in order to optimise the separation of the different materials so as to maximise their reuse and recycling. It is expected that 70% of all the materials from the demolition will be recovered on the construction site, including over 24 thousand tonnes of metal, more than 47 thousand tonnes of concrete and approximately 6,000 of special waste.

> It is envisaged that approximately 90% of waste will be recycled.

CSV focus in O&M (Operations and Maintenance) projects

The three CSV plans that are most advanced correspond to those performed in the power stations in Candelaria in Tenerife, Las Salinas in Fuerteventura and Punta Grande in Lanzarote. Steps were taken during 2017 to raise awareness in the community of the business ('Open Plant' campaign), along with measures to facilitate access to energy and local social-economic development initiatives deriving from the CSV Plans prepared in 2016 based on state-of-play analysis, discussions with stakeholders and identification of significant issues. Examples of this work include:

> **Open Plant.** An educational Video mapping installation at the Candelaria plant showing photo and video projections on a model of Tenerife, as well as a household's daily activities and a conventional and renewable energy circuit based on their consumption habits. The aim of this project is bring the plant and population of the town closer together to better integrate the plant with the local communities, share information on the sector and the Company, and raise awareness of efficient energy use.

> **Access to energy in energy poverty situations**

- **Energy Volunteering** (see 3.1 Access to energy projects)
- **Training for social services and/or tertiary sector workers on efficient energy consumption habits and reducing energy bills.** (see section 3.1 Access to energy projects)

> **Social-economic development,** with participation in local development programs:

- **'Get active and get employed'.** (see section 3.2 Projects for social-economic development of communities)
- **'Candelaria youth training'.** (see section 3.2 Projects for social-economic development of communities)
- **Art with Energy:** Joint initiative between ENDESA and Puerto del Rosario City Council to brighten up ENDESA's facilities in the city, in order to improve the environment, encourage tourism and support local social and economic activities. As part of the Urban Art Week held in this city every year, a competition was run for local artists to present ideas for decorating eight of ENDESA's transformer stations, using murals. The public voted on the city council's website for which sketches should be selected as finalists, and a winner was then chosen by a panel of experts for each substation. Five hundred school children – many pupils at the different schools in the area – helped decorate the south wall of the Las Salinas facility. They used bright colours and their creativity to paint a mural with the theme of climate change. After two weeks' work, the artists finished this community mural showing several elements of Fuerteventura's landscape on a colourful background, including local flora and fauna and water sports. It was a great artistic challenge to decorate the wall at the facility, which has a total surface area of 700 m² and is 130 metres long.

3. Categorisation and detail of the sustainability projects

ENDESA's sustainability projects and initiatives are implemented in the different territories where the Company operates and by each of the Company's business areas, and also by the ENDESA Foundation. The management of these projects is coordinated by the Sustainability Department and aligned with the material issues in the social area that are required by our stakeholders in Iberia.

As regards the new categorisation of projects implemented throughout the Enel Group, three project groups are established that have an impact on communities, as is a fourth 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 3).

This categorisation seeks improving project management to align them with the Group's materiality and priorities according to its commitments to the United Nations Sustainable Development Goals (SDGs), through their monitoring and tracking, in addition

Sustainability projects. Categorisation of the projects/initiatives

1 ACCESS TO ENERGY

Energy-related projects that contribute to:

- Minimising the economic barriers to vulnerable groups.
- Training and education in the energy sphere.
- Accessibility to technology or infrastructure.
- Promoting energy efficiency.
- Promoting energy-related knowledge.

2 SOCIAL-ECONOMIC DEVELOPMENT

Projects that boost local social-economic development taking a shared value approach, such as:

- Improvement in employability.
- Infrastructure development.
- Transfer of skills and know-how to communities.
- Support for local business activities.
- Community network.

3 COMMUNITY SUPPORT

Projects that help communities from a philanthropic and/or social responsibility perspective (no connection to energy or economic development):

- Education.
- Support for families and social services.
- Promotion of culture.
- Promotion of sports.
- Promotion of health and safety.
- Environmental and biodiversity protection.

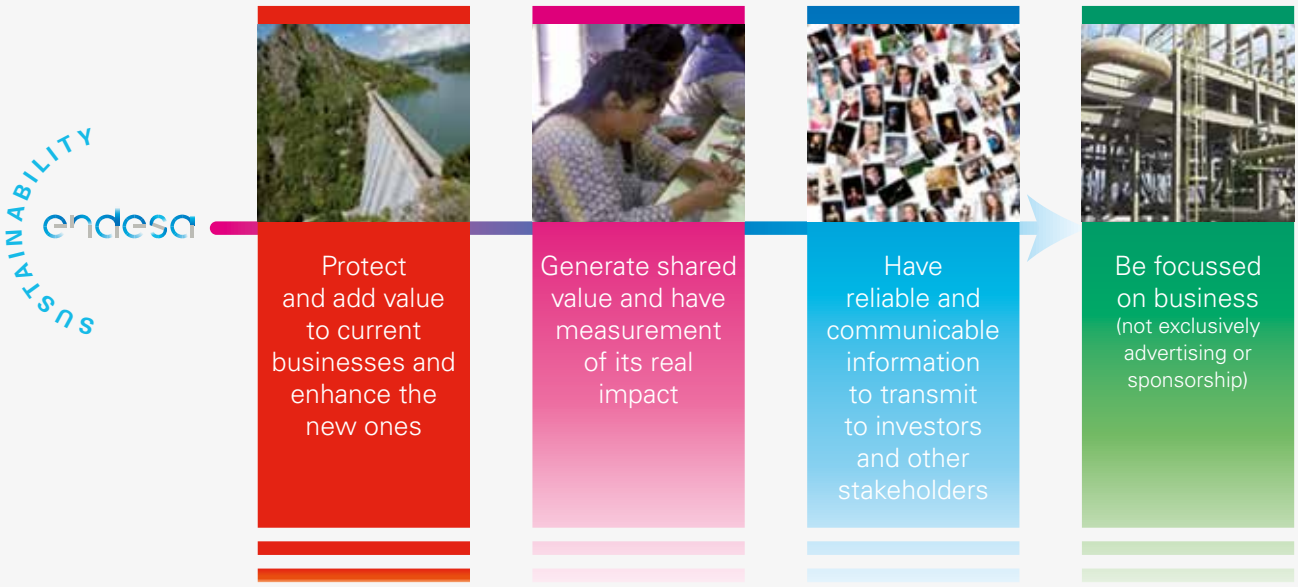
3 OPERATING EFFICIENCY THROUGH SUSTAINABILITY

Projects carried out at the Group's facilities and in its business processes, or carried out by and for Enel's employees, promoting a sustainable way of life and work **(they are not ordinary business operations)**.

Social Projects

Internal efficiency projects

Social development projects must:



to the measurement and enhancing thereof.

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 the access to electricity of the most susceptible 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:

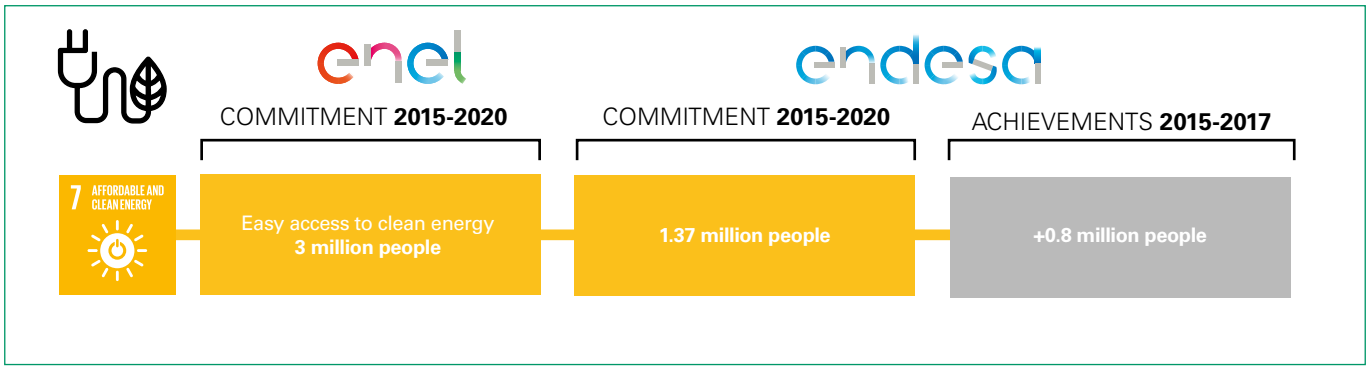
- Accompany business, generating wealth for the local community.
- Respond to the material social issues identified by our stakeholders (tackling energy poverty, conservation of biodiversity and the environment, employability and job creation, quality education and training, and lastly, entrepreneurship and economic development, etc.).
- 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.
- Have continuity in time and 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.

3.1. 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 the energy-related projects that minimise the economic barriers to susceptible groups, offering education and training in the field of energy, guaranteeing accessibility to technologies and infrastructure, and promoting energy efficiency and awareness regarding its use.

This type of initiatives, furthermore, responds to ENDESA and our parent



company, Enel Group's commitment to the United Nations Sustainable Development Goals in section 7 of 'Affordable and clean energy'. According to the 2017 Materiality Study, this is the type of initiative that many of our stakeholders call for.

In 2017, and according to LBG methodology, ENDESA has invested more than 4.6 million euros in social projects in this area, with the management of 38 initiatives, which have benefited more than 401,000 people. The most relevant can be highlighted:

> **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 2017, the number of agreements in force increased by 38% from 166 in 2016 to 229 in 2017. Thanks to this, holders of around 74,784 contracts have benefited from these actions since the campaign was launched, with more than 282,000 bills being managed favourably. 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.

34% of ENDESA's social budget, according to the LBG methodology, has been invested in projects to facilitate energy access.

> **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 run jointly with a number of NGOs such as Caritas, the Padre Pulgar Association and Norte Joven,

Most common defects in plugs

Dual mechanism, switch/plug, obsolete, without access, behind the headboard of the bed with unsuitable circuit shunts.

Obsolete plug behind bedside table, out of box, various circuit shunts connected without guarantee of connection with risk of electrical contact and fire.

Plug in bad condition, located in corner with difficult access in wall with a lot of moisture.

and also in cooperation with public authorities 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 Production Facility) or with other contractors. During 2017, this training was offered in eight Spanish cities (Madrid, Huesca, Huelva, Tenerife, Ferrol, Ponferrada, Palma de Mallorca and Tarragona). In 2017, 42% of those receiving training with Cáritas found work, while 26% of those training with Norte Joven gained employment. No figures are yet available for the Padre Pulgar Association as training is still ongoing. It plans to continue with this line of action, in a very serious unemployment situation in Spain.

> **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 to reduce their energy consumption and cut their electricity bills; and second, their electricity circuits are checked for any hazards, which are then put right by approved installers. The initiative is run with the support of ENDESA staff, who have the possibility of performing charity work as volunteers, and the Company's early retirees. ECODES is involved in the project as lead NGO and coordinates the other local NGOs to execute the programme. They also work with social services in the area, who select which families should benefit. A team of professional installers also make home improvements. Four local NGOs were participated in 2017 (the Red Cross, Provivienda, Ecoserveis and the Ozanam Foundation), During 2017 the programme was implemented in five regions: Zaragoza, Barcelona, Seville, Puerto del Rosario (Fuerteventura) and Candelaria (Tenerife), with a total of 108 volunteers and 122 participating families, which could translate into over 300 beneficiaries. The total average potential savings was 21% with a maximum of 49% in one of the homes. It is estimated that after implementation of energy efficiency measures, bills could be slashed by an additional 10%. Additionally, work by some 15 installers was facilitated and training was given in energy efficiency for around 275 people among private individuals and NGO workers.

In light of the results of the first year of the project, ENDESA and the ENDESA Foundation will continue extending the programme both geographically and in terms of content, bringing new partners and collaborators on board.

ecodes tiempo de actuar

ecoserveis

25 Ozanam

Provivienda

Cruz Roja Española

> **Social innovation programme to deal with energy poverty:** Launched in 2015 by the NGO Ashoka and the Schneider Electric Foundation, the programme aims to find creative solutions to increase access to energy and enhance the lives of people with low incomes. During 2017, the Enel Group and ENDESA joined the programme in its second year to identify, engage and support between 15 and 20 organisations working to eradicate energy poverty in Spain, Portugal, Italy, Greece and Germany, and proposing innovative solutions to help the communities affected by this problem. This year saw three Spanish (ACA, ECODES and AEIOLUZ) and three Portuguese (Just a Change, Junta de Coopérnico and CENSE) institutions being selected to receive 12 weeks of customised and specialised support (equivalent to 300 hours of training) to devise an effective strategy of scalability. They will also take part in a final European summit over two days at the end of April 2018 to showcase their strategy to expand and gather feedback from partners that are experts in this matter.

> **Training for social services and/or tertiary sector workers on efficient energy consumption habits and reducing energy bills.** ENDESA has worked with the Environmental Sciences Association (ACA) and the Spanish arm of the European Anti-Poverty Network (EAPN-ES) to design and run a series of training courses for workers from social institutions on energy efficiency and saving, 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 2017, five training sessions were held in Mérida, Seville, Palma de Mallorca, Las Palmas de Gran Canaria and Tenerife, attended by around 100 institutions that provide advice to around 17,000 people in energy poverty per annum. ENDESA plans to reinforce and expand on this type of initiative.

> **Twenergy.** A Spanish-language reference website on energy efficiency, promoting the responsible consumption of energy, providing users with solutions and tools to enable them to be more efficient in their energy consumption. It is also committed to giving a voice to professionals of energy efficiency via articles, digital meetings, and by supporting different industry initiatives.

twenergy

In line with the commitment to promote environmentally friendly activities, Twenergy has developed the **'Bamba'** project within its XII Solidarity Project. The primary objective of the project is to enhance the quality of life of vulnerable children and women in Kabarnet in the Rift Valley, Africa, through education and empowerment the workplace. Awareness of the project was raised through the Twenergy website, helping to achieve the target of raising 6,000 euros for the Bamba orphanage to refurbish its facilities and buy essential products and other goods.

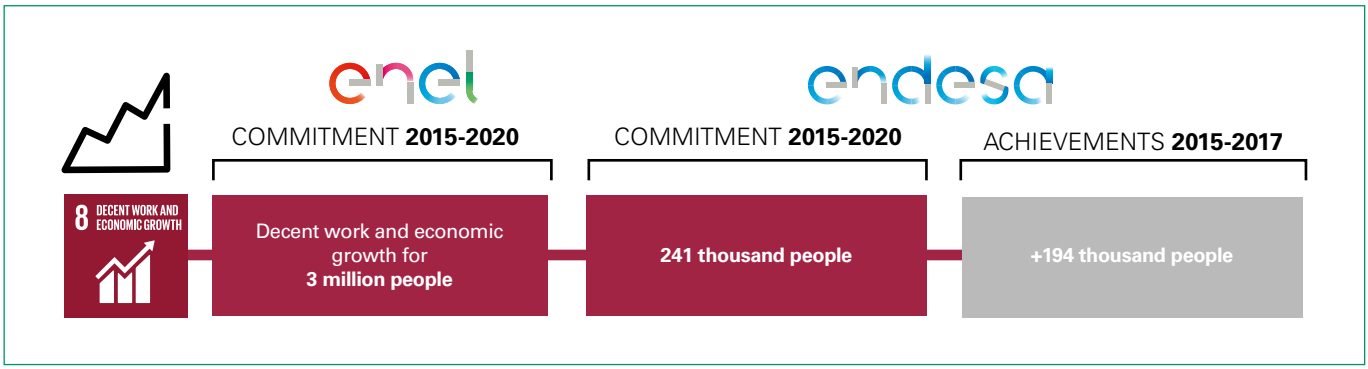
In 2017, Twenergy boasted more than 54,000 registered users and more than 150,000 followers on social networks, with more than 4.7 million visits.

For further information, more project examples are given in section 3.3.6. Corporate Volunteering Projects.

In 2017, Twenergy boasted more than 54,000 registered users and more than 150,000 followers on social networks, with more than 4.7 million visits.

3.2. Projects for social-economic development of communities

ENDESA is committed to the social-economic development of the communities where it is present, providing initiatives to drive their progress via the support, generation and creation of the local economic fabric. In this way, ENDESA contributes to the commitment established by ENEL with respect to Sustainable Development Goal 8:



30% of social investment in Spain and Portugal (25% according to LBG methodology) was devoted to socialeconomic development projects.

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 2017, the Company invested around 3.5 million euros in this type of initiative, representing 30% of social investment with the management of 32 projects that have benefited some 121,000 people.

Some of the most significant initiatives are as follows:

> **Candelaria Youth Training:** Candelaria City Council and ENDESA, along with the Red Cross Spain, signed an agreement in March 2017 to help local residents find a place in society the workplace through a combination of educational, socio-educational and occupational activities and training for work aimed at developing their social and professional skills. This partnership also strives to foster a desire to find work among the population, and acquire the right tools to take personal responsibility for actively looking for a job.

The project was open to 15 young people who have received training to work in a supermarket and serve the public, and offered 15 other young people the chance to receive advice, training and help finding an employer. After a year of classroom-based training and work experience with Alcampo, the beneficiaries are given the chance to take up posts that this company offers its young trainees. Although the course does not end until March 2018, by the summer

of 2017 five of these young people had already found work thanks to the programme.

> **Get Active and Get Employed training in Puerto del Rosario:** The first 'Get Active and Get Employed' course got under way in the municipality of Puerto del Rosario during 2017. The course was launched by the city council of this locality in partnership with ENDESA to improve the employment and employability of vulnerable and unemployed groups. The project is developed in nine training cycles of several modules offering guidance to students to identify their skills and personal development options to find the right job, as well as providing the general skills needed for the type of work offered in the region (English, IT, customer service, the fundamentals of economics, teamwork). It is targeted at people who encounter difficulties integrating into society, want to work, but would struggle to find a job without receiving prior training to develop the cross-cutting and technical professional skills they need. Seven courses were held in 2017, attended by 53 students, 22 of whom found work after the training – a success rate of 41%.

> **Junior enterprise.** In 2016, the ENDESA Foundation joined Youth Business International, a global network formed by private, independent not-for-profit organisations, domestic in nature, specialising in providing support services for young entrepreneurs, with presence in more than 40 countries. The ENDESA Foundation and the Youth Business Spain Foundation (YBS) launched the 'Entrepreneurial Skill Development Programme' in 2016. The aim was to enable the creation of 300 new businesses and 500 jobs by training 1,188 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 financial resources or the experience to get it started. Students across Spain received 'LED Skills' training on the 10 skills a successful entrepreneur must have. The training was provided through dynamic, hands-on workshops. By the end of 2017, 53 new businesses and 125 jobs had been created thanks to the scheme. Around 40 ENDESA volunteers took part in the programme, mentoring the young entrepreneurs.

> **Occupational training:** The ENDESA Foundation and the Integra Foundation jointly run the 'Changing Lives' programme to improve the employability of groups at risk of exclusion. The results of the first year of this programme have been extremely positive: 204 attendees, 154 receiving training and 140 finding work – 175% more than the initial target of 80 jobs. It is also worth highlighting the involvement and commitment of the 28 ENDESA staff and volunteers who have been in charge of the six training workshops or Strengthening Schools for the selected participants on basic skills to do well in a job interview and gain a permanent position with an employer.

Given the success of the first edition, it has been decided to replicate the programme in Seville and the surrounding areas for 2018, with the goal of training 120 individuals and integrating 40 of them into the workplace. Work will also continue in Catalonia to provide training to 125 individuals, and find work for at least 50 of them.

For further information, more project examples are given in section 3.3.6. *Corporate Volunteering Projects.*

> **Assignment of use of Company assets:** ENDESA has assigned, during 2017, multiple unused company assets and buildings to city councils and other social institutions, in order to favour the social and economic development of the communities, boost local tourism, and revitalise the local economy by bringing in visitors and tourists.

Examples include:

- Granting the councils of Escatrón, Castelnou, Samper de Calanda and Andorra access to the Escatrón-Andorra stretch of ENDESA's old mine railway to restore and transform it into a greenway for leisure and sports activities.
- Giving access to some of UPH Ebro Pirineos company's assets for different uses: Mountain refuge, land for different uses (sailing club, greenway, bee-keeping, tourist overlook, fishing area, etc.) and a cable car to boost tourism.

For further information , see the chapter *Environmental sustainability*, section 5 *Resource Sustainability Plan.*

More than 5.3 million euros allocated to local community support projects, of which over 745,000 euros were allocated to the environment and biodiversity and almost 4.6 million euros to the other initiatives.

3.3. Local community support projects

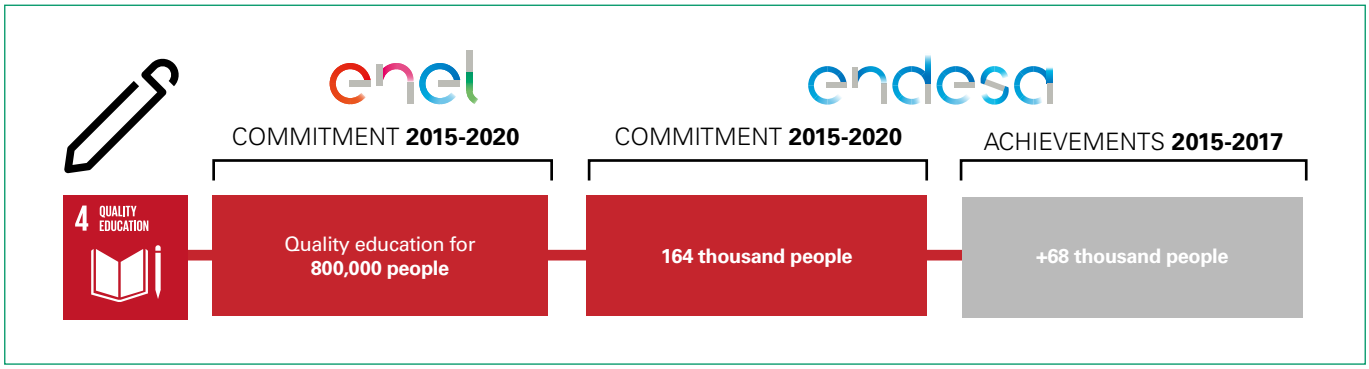
ENDESA gives support to local communities through various types of projects that have the aim of improving the well-being of people and communities, improving their education, nurturing their cultural identity, protecting their heritage, enhancing the local biodiversity and environment, boosting participation in sports, encouraging healthy habits and support to cover 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 operates, getting support from the territorial units. This axis of actionhas beena major investment for ENDESA, in response to the needs identified in the communities in which we operate, allocating 47% of the total budget, which equates to over 5.3 million euros, with 96 projects managed and more than 436,000 beneficiaries.

3.3.1. Education projects

ENDESA is committed to promoting access to quality, inclusive education, in line with the fourth UN sustainable development goal, that both the Company, and its parent company, Enel Group, have adhered to.

Multiple initiatives linked to this area have been developed, among which we can highlight:

> **The Country of students:** Press programme for teachers and students at secondary schools and involved in middle and intermediate level vocational training, with students producing a newspaper as an editorial re-



source. They discover current affairs, work in teams, learn to look at things with a critical eye, and develop their writing skills; some even finding their vocations. 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. The project is designed to be both fun and educational, helping students learn teamwork and personal development.

> **Promoting STEM learning among girls:** ENDESA has been involved in setting up the *Orienta-T* educational programme 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 programme goal was to make young people aware of the job opportunities in *STEM* (science, technology, engineering and mathematics) careers and boost the number of women leaders 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.

  As a result of this collaboration, 954 students and 79 teachers have participated in the educational phases of High School and Bachelor's Degree courses at 29 educational centres in the cities of Madrid, Valencia, Avilés, Barcelona and Las Palmas de Gran Canaria. An open and collaborative career guidance channel has been created with over 30 inspiring videos by professionals for use at educational centres throughout Spain; and after the impact study was performed, it was concluded that the Orienta-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.

> **San Juan Association:** Partnership with this entity that works with the Canary Islands Government to provide social health and social services. The goal of the partnership is to boost education in general, as well as assistance, recovery, education and social integration of people with special needs due to developmental difficulties or disabilities.

Likewise, one of ENDESA Foundation's main lines of action is the contribution and promotion of projects that transform and innovate primary, secondary, baccalaureate education and higher education for students and teachers. Furthermore, it promotes academic excellence in the university with subsidies, study grants and chairs. These actions include:

> **School and Talent. Access to a quality inclusive education:** Championed by the ENDESA Foundation, the programme aims to provide quality inclusive education to gifted children from low-income families in rural areas of Andalusia. This initiative is part of the foundation's 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 across eight provinces from 26 schools in the Sagrada Familia Foundation's network, mentoring 15 of them. The goal is to ensure all the boys and girls selected for School and Talent complete their primary and secondary education, and to help them gain a place and accompany them through quality higher education.

> **ENDESA Foundation Tech Challenge. Promoting STEM careers.** Public-pri-

vate initiative between the ENDESA Foundation and the Education Department of the Madrid regional government, to foster educational innovation through technological enterprise at schools. There has been a sharp increase in participation and quality of the boys and girls trained. Some 1,500 pupils and 150 teachers from 51 Madrid schools took part in this year's edition of the ENDESA Foundation Tech Challenge. During the 2017-2018 academic year, 3,060 pupils and 102 teachers from 65 schools in the Autonomous Community of Madrid are receiving training. It is envisaged that upwards of 4,000 pupils and 130 teachers from schools in the Autonomous Community of Madrid will take part in the next academic year.

> **Pontificia de Comillas University-ENDESA Foundation Study Grants and Awards for Excellence programme.** In 2017, the ENDESA Foundation launched the second Study Grants and Awards for Excellence programme in partnership with the prestigious Pontificia de Comillas University, aimed at students with low incomes. This year's programme had 37 students, After the consolidation of the programme in 2018, the ENDESA Foundation expects 20 additional students to be included.

3.3.2. Support projects for the family and social services.

In 2017, 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 cooperated with various NGOs in the collection either of resources or directly of food. These campaigns seek to help disadvantaged people by collecting non-perishable food and toys, in order to donate them to organisations like the Food Bank and other social organisations. A campaign was carried out in the Canary Islands in 2017. Some 5,174 kg of non-perishable food was collected thanks to the solidarity of all ENDESA's staff on the islands, especially the work of the volunteers manning the collection points and organising collections by the various collaborating entities on each island. Likewise, 1,088 toys were donated.

> **Donation of company furniture and equipment:** As a result of ENDESA Energía relocating its offices from Oporto to Matosinhos in Portugal, furniture and IT equipment valued at over 50,000 euros to the NGO, Institución Particular de Solidaridad Social Entrajuda (District of Oporto), which collects assets donated to other NGOs that help vulnerable people who need them.

> **Partnerships with several NGOs and foundations to improve the lives of vulnerable people.** The ENDESA Foundation has run several initiatives to help these institutions, including the contribution to the organisation, Las Madres Agustinas Recoletas, which provides essential care to disadvantaged people, or Las Hermanitas de los Pobres de Granada, which cares for elderly people needing help.

The financial investment in the education projects of both ENDESA and the ENDESA Foundation in 2017 went up to approximately 1.4 million euros with over 32,000 beneficiaries.

3.3.3. Culture promotion projects

ENDESA remains interested in promoting culture in society, collaborating in many initiatives in this field, such as the Royal Theatre Foundation, the Gran Liceo Theatre in Barcelona, the Palau de la Música Catalana Music Hall or the Maestranza Theatre in Seville. It also supports initiatives to involve the general public in the cultural activities run by these entities, such as 'Liceu Outdoors' by the Gran Liceo Theatre or the Digital Theatre Box by the Royal Theatre. During 2017, it also participated in exhibitions, concerts, museum events, etc. Noteworthy collaborations include those with the Friends of the Prado Museum Foundation, the

'Romantic Picasso' exhibition at the National Art Gallery of Catalonia, the 'Cela, Literature and Art' exhibition at the Círculo de Bellas Artes in Madrid, and the 'Discover Thyssen' initiative. It is estimated that these initiatives have benefited around 259,000 people.

Likewise, the ENDESA Foundation continues with its commitment to preserve and recover culture and art in its different facets. In particular, in 2017 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. Examples include the Medina Azahara archaeological site in Córdoba, the Picasso Museum in Malaga, and several important churches such as the Mont Sió Convent in Barcelona.

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 30 projects were carried out in partnership with other public and private entities in 2017, using material from our industrial heritage, thereby opening them up to a wider audience.

3.3.4. Health and safety promotion projects

In 2017, it invested more than 471,000 euros in this type of projects, which have benefited more than 19,000 people. There were two main lines of action:

- **Health Projects.** The Company supports different NGOs and associations 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 Lluita contra a Sida Foundationfighting AIDS. Another outstanding project is the 'Orchestra Morning' at the Barcelona Auditorium for people with Alzheimer's, their families and caregivers, with patients (many with reduced mobility or over the age of 85) being taken from their care centres and residences to participate in this activity.
- **Projects to care for people with disabilities.** ENDESA and the ENDESA Foundation collaborate with different associations and foundations which have the aim of supporting people with physical or intellectual disabilities and their families. The collaboration with the Seville Autism Association or the Special Territory project in Sant Just Desvern (Catalonia) are noteworthy. The latter is a national and international sporting event for athletes with learning disabilities, which intends to become a benchmark sports movement as a way to social integration.

7% of ENDESA's social investment was invested in projects to protect the environment and biodiversity.

3.3.5. 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 2017, ENDESA has allocated 7 percent of the total of its social investment to these projects.

Some of the initiatives are highlighted below:

- **Activities for the dissemination of environmental and biodiversity issues.** During 2017, ENDESA sponsored the publication of a number of studies, in order to drive the dissemination and awareness of society regarding these matters and also to act as reference material. For example: *'XXVIII Balearic Ornithological Yearbook', cooperation with the Spanish Club for Green Growth and the Andanatura Foundation, the study of the sustainability of water resources in the context of global change, the comparative study of the biodiversity of entomostraca crustaceans in the paleographic zone, the study of the influence of genetic and metabolic*

factors in the rising mobility of the native trout of Pyrenean rivers, the study of the factors that decrease the population of Pyrenean desmans (Galemys pyrenaicus) in the Cardós valley, or the study of the biodiversity in mining areas restored by ENDESA, among others. These projects have meant an investment of close to 166,000 euros.

Likewise, the ENDESA Foundation develops environmental initiatives such as the promotion of energy efficiency and the ecological culture through educational initiatives. These include:

- **Sustainable education on a restored terrestrial ecosystem** 'Educate As Pontes' is an educational programme run by the ENDESA Foundation and ENDESA in partnership with the Galician Regional Government and Santiago de Compostela University. The project is directed towards students and teaching staff and aims to raise awareness of the life of terrestrial ecosystems and biodiversity to tackle climate change. In 2017, 800 students and 40 teachers benefited from the first edition of the 'Educate As Pontes', doubling the initial target of 20 teachers and 400 students thanks to the success of the call for applications.
- **ENDESA Foundation Educational Ecoinnovation Awards:** As part of its efforts to support environmental education, the ENDESA Foundation and the Society and Education European Foundation, supported by government education and environment departments from across Spain, have launched the ENDESA Foundation Educational Ecoinnovation Awards for students. These awards are designed to encourage and acknowledge best practices by teachers, students and schools in relation to environmental commitment and responsibility, encouraging them to submit different environmental solutions to real problems in their neighbourhoods.

> **Programs to protect birdlife 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 (bats, tortoises or Pyrenean desmans). Key actions in 2017 included the conservation of endangered bat species nesting at ENDESA's hydroelectric plants, conservation measures to protect the black vulture (*Aegypius monachus*) and other carrion-eating birds, the project to boost the population of red kites in the Balearic Islands, and conservation measures to protect the European roller (*Coracias garrulus*). Laser therapy equipment has also been donated to treat birds at a forest wildlife recovery centre. ENDESA has contributed over 109,000 euros to this type of initiative in 2017.

For further information , see the chapter *Environmental sustainability*, section 4 *Conservation of 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. Various projects were run in 2017 in regard to this matter, such as the enrichment of biodiversity in Pyrenean areas of Lleida to encourage the reintroduction of the brown bear and its compatibility with human activities. Various environmental activities have been carried out in the environs of the Eume River, work has continued to reforest an area of burnt woodland in Madrid by sowing native forest species, and the former pontoon at the Besós thermal power plant has been converted into an artificial reef for marine fauna. In total, over 378,000 euros have been devoted to these works.

3.3.6. 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 2017, 18 volunteering projects have been performed with the participation of 650 volunteers, 466 of whom contributed 3,206 of their working hours. The remaining 184 have collaborated outside of business hours with a contribution of 403 hours.

As a result of these activities, in 2017, more than 10,800 people have benefited.

Some of the most outstanding projects in this field are as follows:

EU26

a Volunteering in Access to Energy projects

> **Energy Volunteering programme** (see 3.1 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. In 2017, it was held in As Pontes (A Coruña) and Tenerife with the participation of 26 volunteer employees which benefited 118 students.

> **First Tour in Electric Vehicle to promote sustainable mobility:** Over 14 stages between 24 May and 11 June, 24 ENDESA employees belonging to the e-Mobility Plan visited 19 Spanish cities in the company of a comedian to raise awareness of sustainable mobility in a hands-on and visible way: an emission-free trip.

b) Volunteering in projects of social-economic development of the communities

> **Coach project:** In collaboration with the Exit Foundation, this volunteering aims to improve the employability of young people at risk of social exclusion, dealing with their self-esteem, motivation and professional guidance, using coaching or mentoring techniques. It is a great experience to discover the business world, and this acts as a stimulus for them to continue studying. With this initiative, 59 people have benefited in 2017 with the support of 60 ENDESA volunteers.

> **You know more if you share what you know project:** This programme gives employees the opportunity to contribute to improving the social and occupational integration of people actively seeking employment. The skills, knowledge and experience of ENDESA's employees are enhanced through a training programme in which each individual volunteer is both trainer and trainee. In 2017, 72 people benefited with the support of 11 ENDESA volunteers.

> **Improvement of the employability of women who are victims of domestic violence in Seville.** Volunteering programme, in collaboration with the Integra Foundation that seeks to improve the employability of women who are victims of gender-based violence through training workshops. During this second event held in Madrid, Barcelona, Sevilla, 26 ENDESA volunteers took part, benefiting 56 women victims of gender-based violence.

> **Let's talk without barriers:** Project where volunteers who are native or bilingual in English or Italian, have conversation sessions, on-line or by telephone, with disabled university students in order to practice the language to increase their employability. Seven ENDESA volunteers took part in 2017, helping the same number of people.

c) Volunteering in local community support projects

> **Christmas collection campaign:** see section 3.3 Community support projects.

> **Solidarity races:** In 2017, ENDESA took part in two solidarity races:: The III Atades Race for a new school (21 volunteers) and the 'There is a way out' Run against domestic violence (45 volunteers).

4. Quantification of ENDESA's social investment in the community

203-2

London Benchmarking Group LBG España

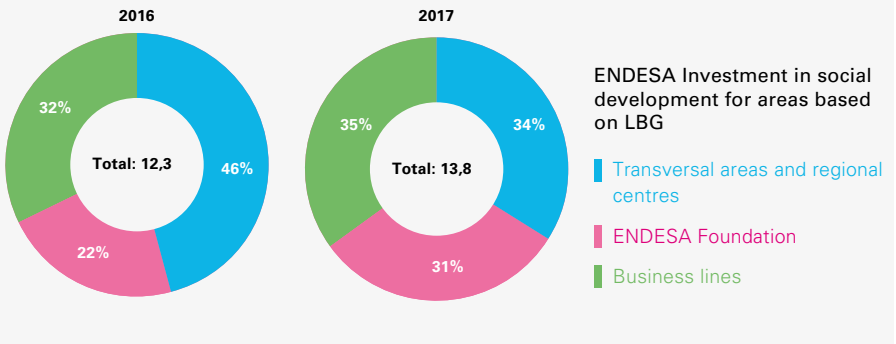
For the ninth year running, ENDESA's report on social activities has been presented according to LBG methodology.

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 2017, and according to LBG methodology, ENDESA has provided 13.8 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 of this investment, 3.3 million euros are distributed through the ENDESA Foundation, 4.3 million euros through the transversal areas and regional centres and 3.7 million through the Company's different business lines.

ENDESA's investment in social development projects 2017 (thousands of euros)

By area	Money + kind	Time spent	Administrative costs	Total
Transversal areas and regional centres	4,255	347	26	4,628
ENDESA Foundation	3,316	898	68	4,282
Business lines	3,717	1,062	81	4,860
Total Iberia	**11,288**	**2,307**	**175**	**13,770**



Investments according to LBG methodology in ENDESA's social projects continued to rise in 2017, increasing by

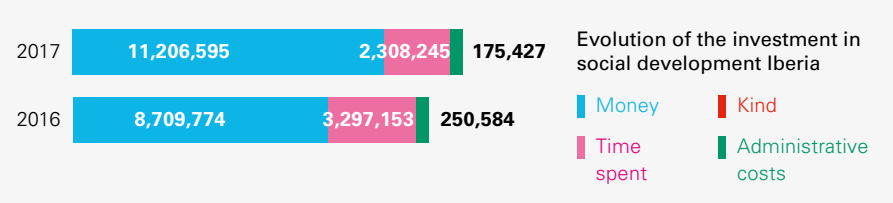
12% with respect to 2016 (13.8 million euros in 2017 compared with 12.3 million euros in 2016). This investment has benefited 8% more people than the previous year (958,335 direct beneficiaries in 2017 versus 888,508 in 2016) thanks to ongoing management improvements and optimisation, use of synergies, involvement of employees, and minimisation of associated costs.

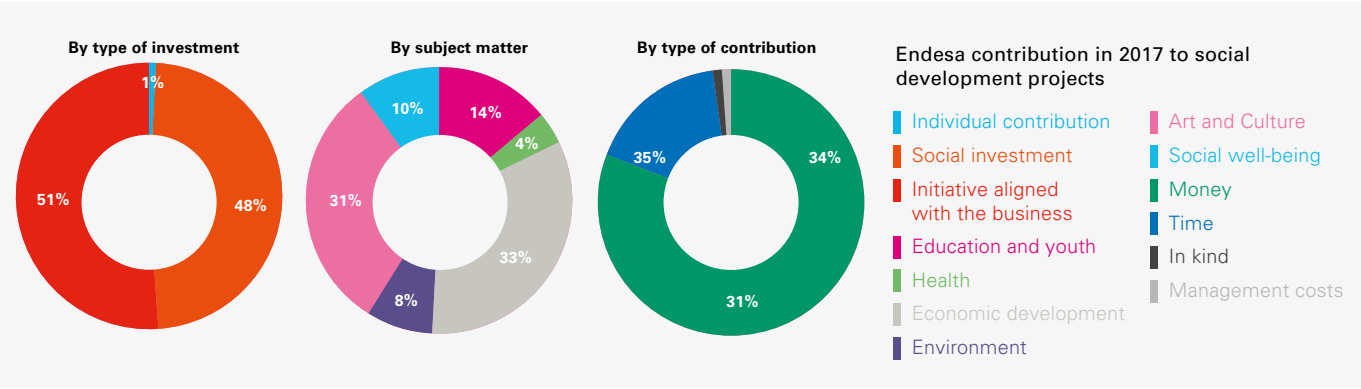
The number of projects has been reduced from 200 in 2016 to 166 in 2017, continuing the trend of focussing on the management of fewer but better optimised activities and with a greater level of impact. Social investments for 2017, considering only financial and in kind contributions, equated to 0.8% of net profit from continuing activities attributable to ENDESA shareholders – a 1% increase with respect to 2016 (0.7%).

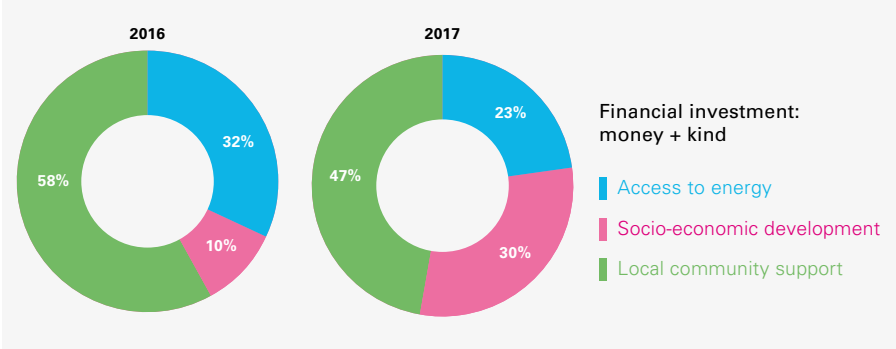
With respect to project type, the LBG methodology distinguishes between social investment initiatives, which consist of projects on strategic matters of the Company with long-term commitment, and business-aligned initiatives, which seek to promote business interests by means of support for social causes. In 2017, a balance has been maintained between both categories, with 6.6 million euros of social investment and 7 million euros of investment in business-aligned initiatives (48% of social investment and 51% in business-aligned initiatives in 2017), which in turn reflects the long-term strategic commitment to communities where it operates under the creating shared value approach between the Company and the local community.

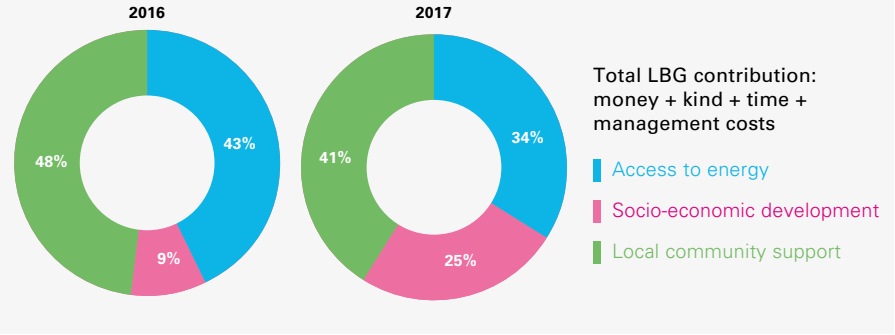
From a subject matter standpoint, according to LBG classification, it should be highlighted that 33% of the investment has gone to economic development initiatives, 31% to art and culture, 14% to education and youth projects, and 10% to projects to promote social well-being. In this regard, the distribution of funds among the main investment categories has remained similar to the previous year, aside from a few minor changes, although there has been a notable increase in the focus on economic development from 20% in 2016 to 31% in 2017.

Furthermore, if we follow the ENEL project classification (explained in the previous section), the distribution of the financial investment (money + kind) has been the following









There has been a significant decrease in investment in access to energy projects from 32% in 2016 to 23% in 2017. However, this is only when compared to the other investments, since in absolute terms, investments in this category remain practically unchanged from one year to another (2.8 million in 2016 and 2.6 million in 2017). This demonstrates the clear commitment to boost efforts in this course of action in the social sphere. Investments in social-economic development projects are up sharply in both absolute and relative terms, going from 10% in 2016 to 30% in 2017 because this course of action above all in relation to employability and job creation is one of the three priority material issues for our stakeholders. Finally, local community projects have had the greatest investment level, with 47% of the total. However, the latter has undergone a slight decrease with respect to last year of eleven percentage points, mainly due to the reduction in sports development projects, since they do not enter in the strategic priorities in the social sphere, going from 13% in 2016 to 1% in 2017.

If we add to the above, and always following LBG methodology, the investment in management time and administrative costs, the distribution of the contributions changes with respect to the above: the category with greatest contribution continues to be local community support, with 41%, albeit 7 percentage points lower with regard to the previous. This is followed by social-economic development projects, with a 16 percentage-point difference compared to the previous year, and lastly, by access to energy initiatives with 34% in 2017 versus 43% in 2016.

Finally, we should comment that in 2017, there have been no physical or economic displacement of people due to Company activities.

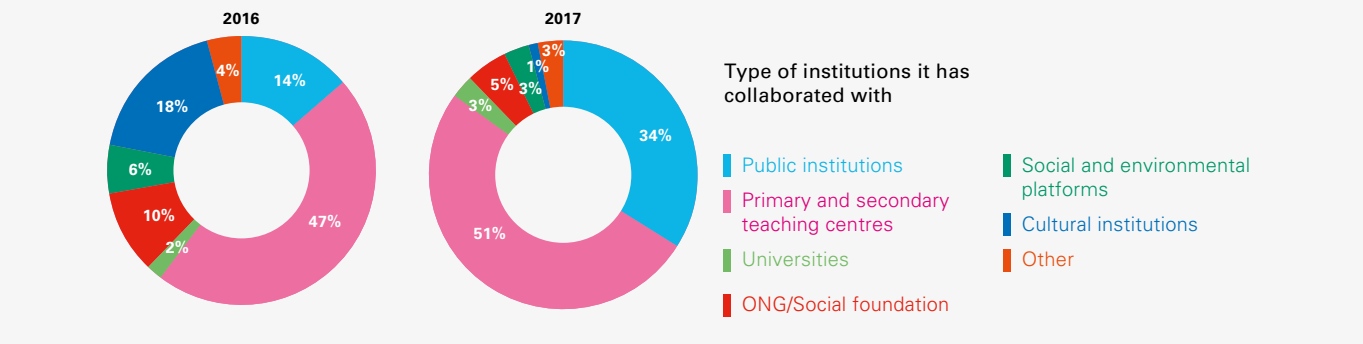
4.1. Achievements, impacts and returns

In 2017, 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, the new tool was used defined under the LBG framework in 2015, a result of ENDESA's participation in the LBG Spain work group, whose 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. To do this, a measurement system through indicators has begun to be applied, which enable monetising the benefit provided to society (SROI method) and the possible return for the Company (own method). In this regard, three pilot experiences have been performed since 2016 in Iberia with positive results in the implementation.

4.1.1. Achievements and impacts

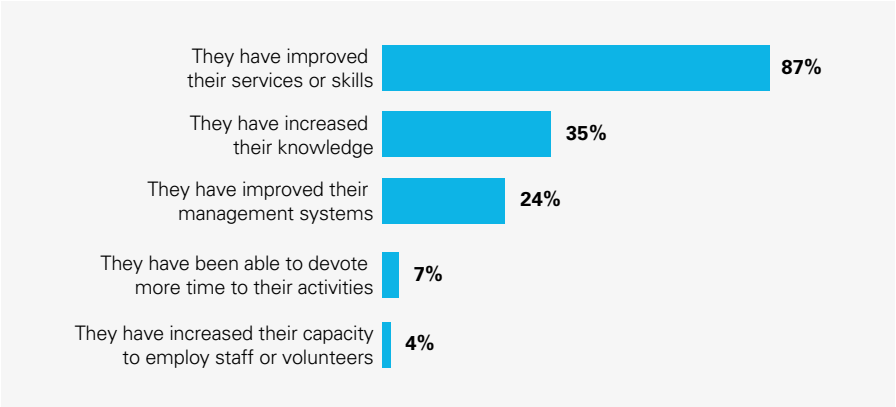
Achievements are considered to be the quantified or estimated result of an investment performed via a social de-



velopment 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 2017, 95% of the projects have been managed through strategic alliances with public and private bodies, a signal of ENDESA's commitment to contributing in projects with lasting vocation. It has collaborated with a total of 1,466 public and private institutions to develop 166 projects which have been carried out in the social sphere. 51% have been primary and secondary schools, 34% public institutions and 5% NGOs and social foundations.

Furthermore, it is estimated that the benefits obtained by the institutions due to collaboration with ENDESA have translated, in 87% of cases, into an improvement in their services or increase in capacities; in 35%, into an increase in their profile; and in 15%, into an improvement in their management systems. Twenty-one percent of the institutions enjoyed all three of these outcomes at the same time.

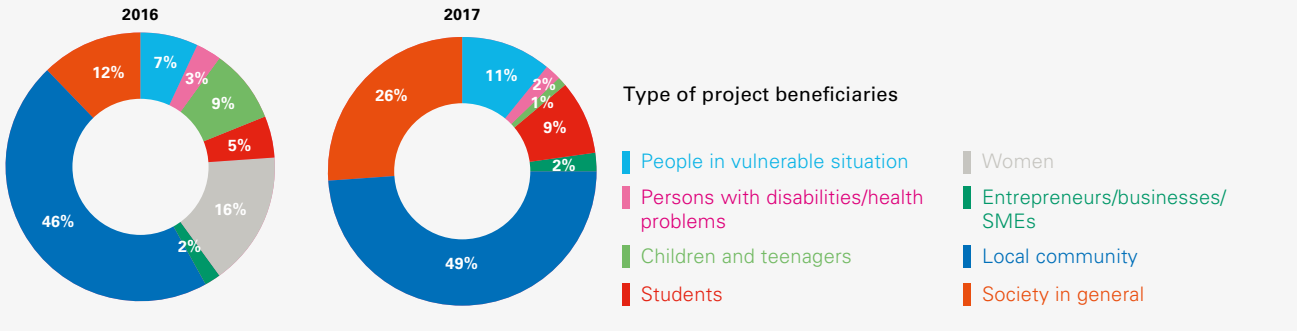


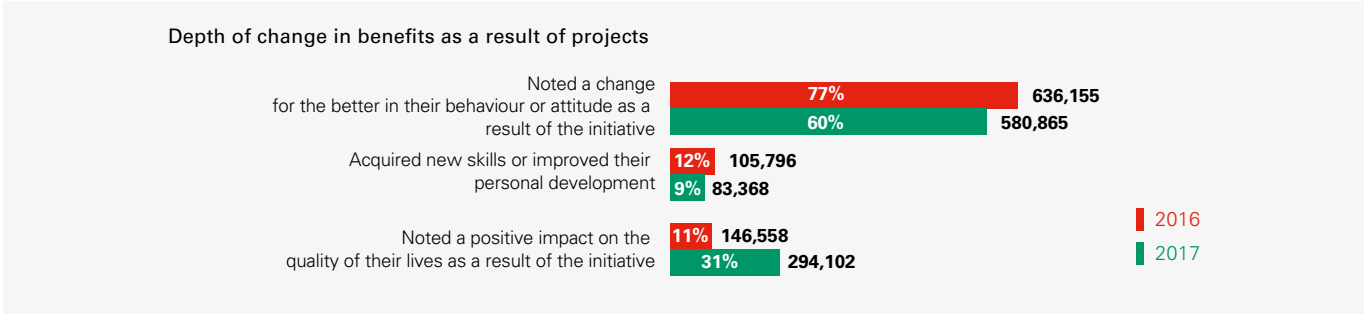
Over 958,000 beneficiaries in 166 social development projects managed in 2017.

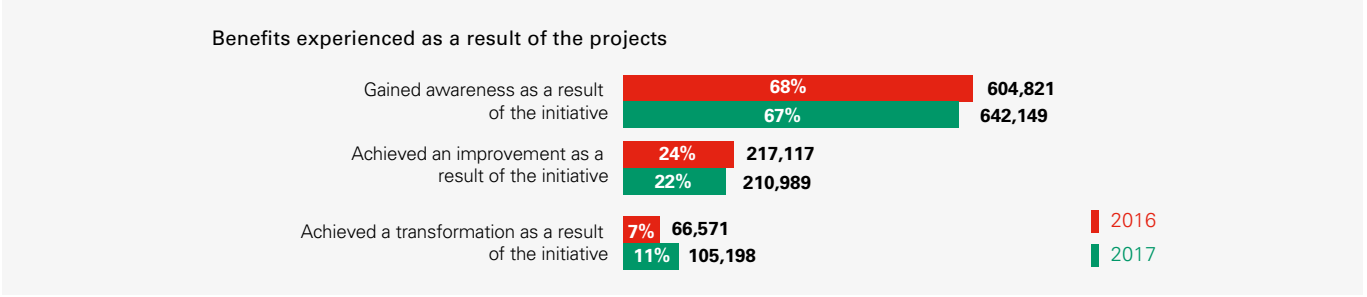
Withrespect to number of beneficiaries, in 2017 an estimate has been made of a total of 958,335 direct beneficiaries from 166 social development projects performed by ENDESA, which is a 8% increase compared to the previous year (888,508 in 2016).

From these, 49% 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 26% of beneficiaries. Third, with 11% of the total, are people in vulnerable situations (4 percentage points higher with regard to the previous year) and students, with 9% and more than 81,000 people.







Of the total estimated beneficiaries, over 294,000 people (31% of the total) experienced a positive impact in their quality of life, an almost two-fold improvement with respect to the previous year's result. Nine percent, some 83,368 people, acquired new skills or improved their personal or professional development, and over 580,000 (60%) experienced a positive change in their behaviour or attitude as a result of the initiative.

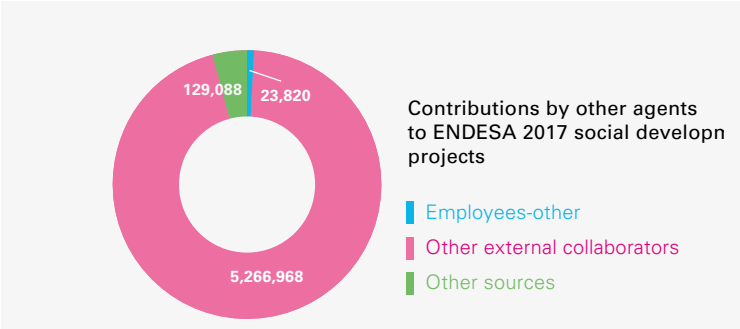
Likewise, more than 105,500 people achieved a positive and relevant transformation in their lives as a result of the initiatives in 2017, versus 66,000 in 2016. This is a 58% increase compared to the previous year. Twenty-two percent achieved an improvement and 67% (more than 642,000) became more aware of the issues at hand thanks to the projects.

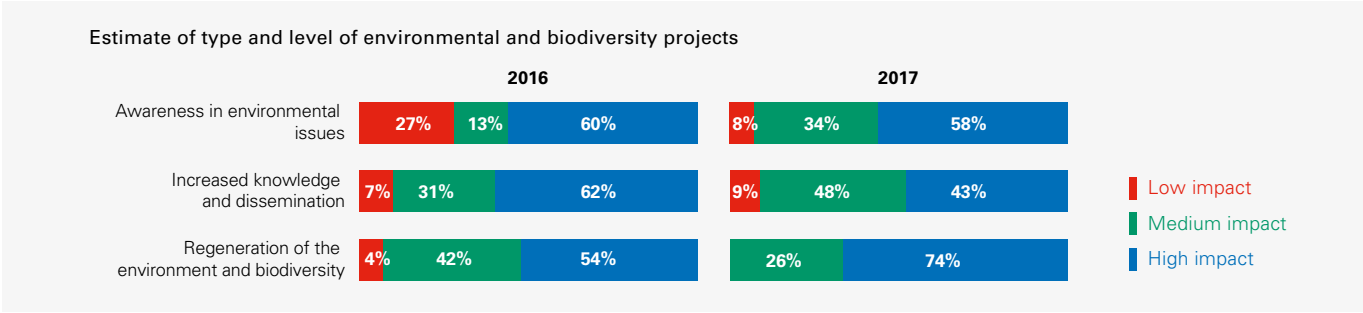
These estimated results are an increase in the quality of the projects managed as the percentages of quality of life and achievement of transformation with respect to the previous year have improved.

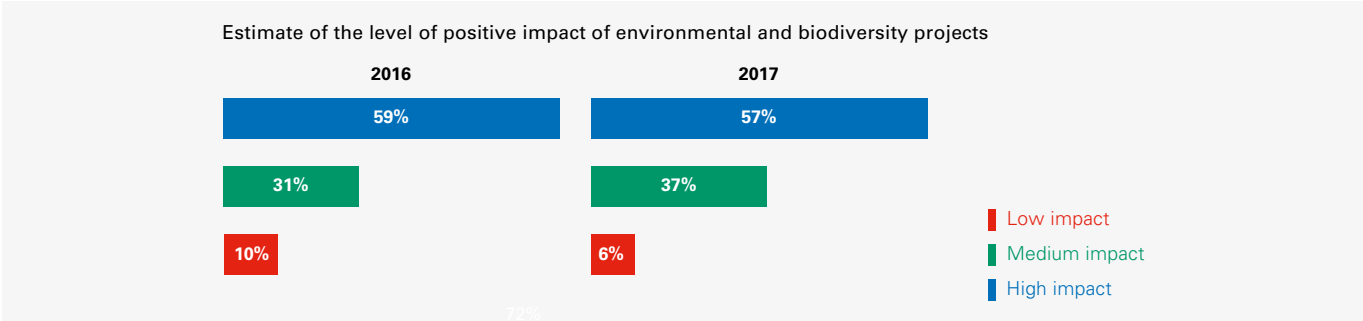
Besides, taking into account the multiplier effect, as an additional result of ENDESA's social development projects, other agents have provided a total of 5.4 million euros to these, by means of economic investment or in kind.

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. The level of medium and high impacts has increased across all categories, except knowledge and dissemination, which has dropped slightly.

Of 29 environmental and biodiversity projects managed, 57% have had a high and 37% have had a medium positive impact or 94% of these, an increase of 4 percentage points with respect to the previous year (90%).



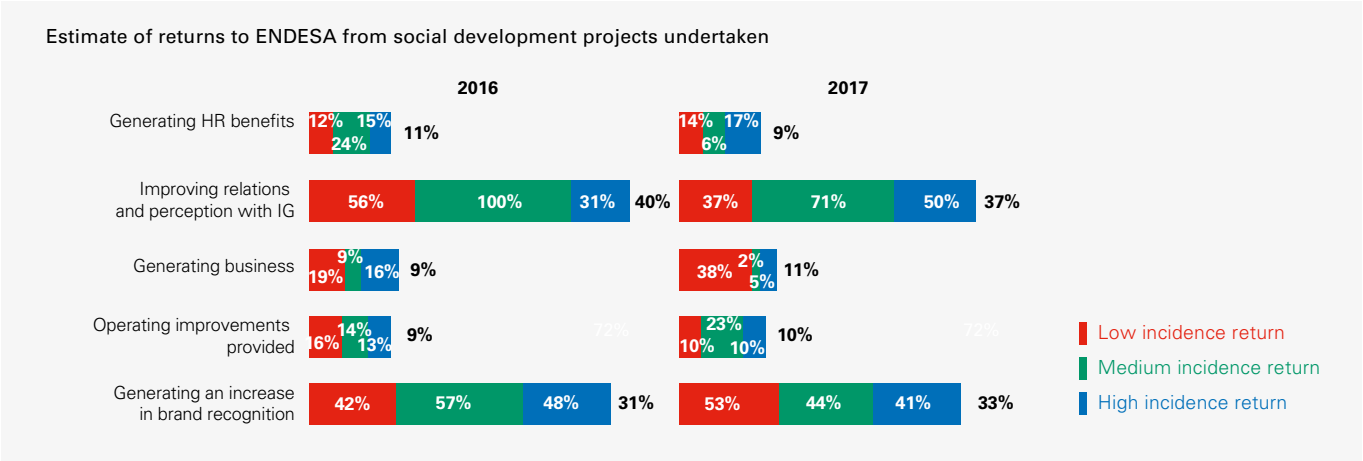




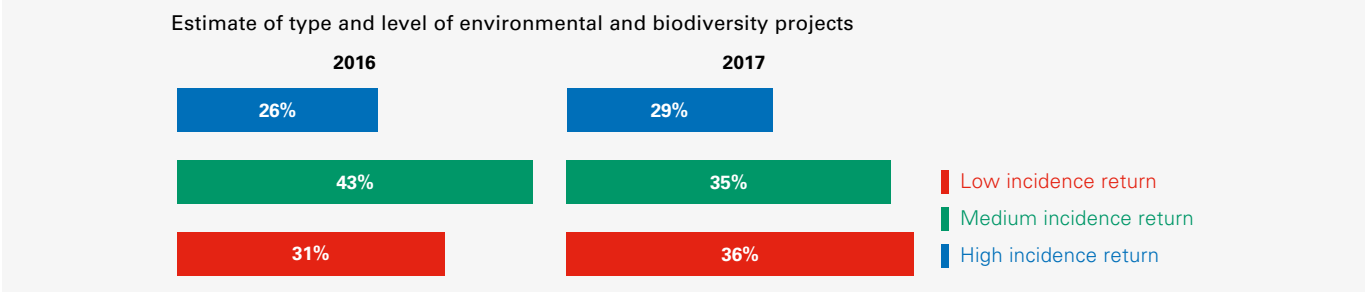
4.1.2. Returns

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 421 positive impacts in the Company from 166 social projects carried out in 2017. 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 (33%). These two returns coincide with the two main ones estimated in 2016.



Furthermore, 29% of projects have had high incidence in the Company, an increase of 3 points with respect to the previous year.



Our People and Their Value

9,706

employees in the workforce

89.33

% participation in performance appraisal processes

35.3

Hours training per employee (average)

25.46

% Reduction of the combined accident frequency index

ENDESA Sustainability Plan compliance 2017-2019

Basic Pillar	Course of action	2017 Target	Result s31/12/17	Key actions
Human capital	Employee participation in performance assessment processes (% employees)*.	100%	100%	> Development of the 'Performance Appraisal' assessment system.
	Participation in performance assessment processes (% employees)*.	99%	99%	
	Participation in performance feedback interviews (% employees)*.	93%	96%	
	Gender diversity: Overall Women hires.	33%	34.5%	> Action plan to promote gender equality.
	Gender diversity: Women in executive positions.	16.5%	16.4%	
	Boosting employee training (hours/employee/year).	46	35.3	> Sustainability, environmental and digitalization training actions, among others.
	Boosting on-line employee training (hours/employee/year).	13	10	
	Employees benefited by improvements in work areas in offices.	1,000	214	> Renovation in offices to build more open and collaborative spaces.
	Services in ENDESA offices that favour conciliation.	50	53	> Car service arrangements. > Dry cleaners and footwear repair service. > Locker room service. > Personnel management service. > Clothing repair service. > Car cleaning service.
Occupational health and safety	Fatal accidents.	0	1	> Development of occupational risk prevention system.
	Combined accident frequency index.	1.19	0.75	
	Safety inspections in own and contractors' installations.	66,000	74,180	> Safety inspections plan. > External and internal audits.
	Installations assessed by the EcOS (Extra Checking On site) programme.	15	15	> Development of EcOS programme.
	Execution of medical check-ups on employees.	+8,900	5,030	> Health monitoring actions.
	Increase in awareness of OHS in employees (No. of actions).	235	88	> Dissemination of research and good practices. > Awareness campaigns.

* The universe under consideration makes reference to the workforce that participate in the "Performance Appraisal" mechanism of the Enel Group.

1. ENDESA's workforce

102-8 | 405-1 | EU15

As of 31 December 2017, ENDESA had 9,706 employees; 9,668 were in the Spain workforce and 38 in the Portugal workforce.

During 2017, 723 people were introduced, of which 256 were due to new hires in Spain and Portugal and the rest due to company transfers from the Enel Group and reincorporation of those on leave. There were 711 records of contract terminations in the same environment, of which 452 correspond to voluntary departures, severance packages and retirements and the rest for contract terminations, leaves of absence and transfers to the Enel Group. ENDESA's workforce has increased 0.12% with respect to 2016. Some details that allow the ENDESA's workforce as a whole to be characterised are shown below.

405-1

The segmentation of the workforce by age shows that the largest number of employees, 33.7%, was in the age range 45 to 54. The average age of the workforce was 46 years.

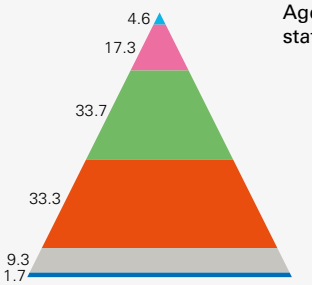
ENDESA's workforce at 31 December

	2015	2016	**2017**
Spain and Portugal	10,000	9,694	9,706

Average workforce

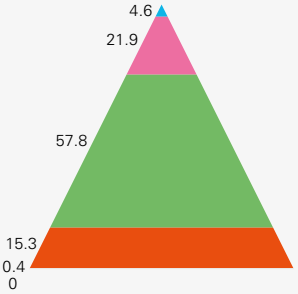
	2015	2016	**2017**	% variation 2016/2017
Spain and Portugal	10,242.90	9,819.40	9,856.60	0.38%

Age pyramid for Spanish and Portuguese staff (%)

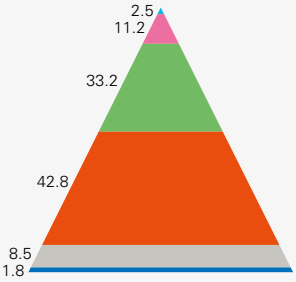


Over 60 years of age
35-44 years of age
55-59 years of age
28-34 years of age
45-54 years of age
Under 28

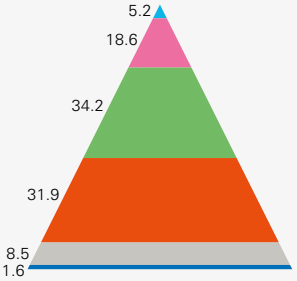
Age pyramid of staff by professional category in Spain and Portugal (%)



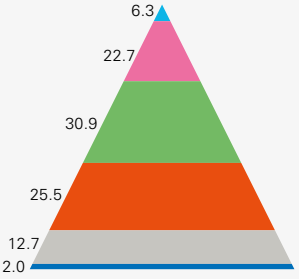
Executives



Middle management



Administrative and office staff



Manual workers

97.5% of the workforce with an open-ended contract.

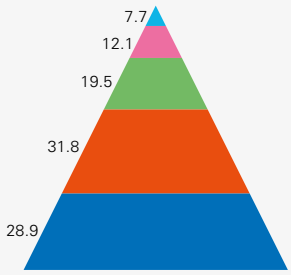
97.5% of the workforce had an open-ended contract, which meant 9,459 contracts. The figure of temporary contracts was 247. The average time an employee has been in the company is 17.9 years: over 71.1% of employees have been working in the company for over 10 years.

As regards working day, the large majority of employees work full-time. 9,702 employees have full-time contracts and 4 are part-time.

102-8

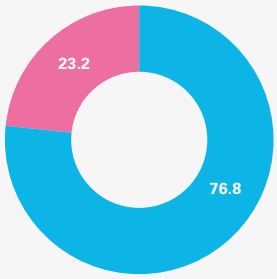
Employees hired by type of employment

Content		Spain
Full-time	2015	15,923
	2016	13,183
	2017	13,536
Part-time	2015	2,341
	2016	2,957
	2017	2,699
Total	**2017**	**16,235**



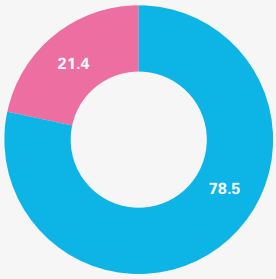
Years with the Company in Spain and Portugal (%)

- > 35 years
- 30-34 years
- 20-29 years
- 10-19 years
- < 10 years



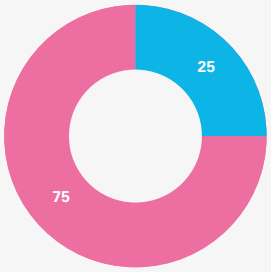
Permanent employment by gender in Spain and Portugal (%)

- Men
- Women



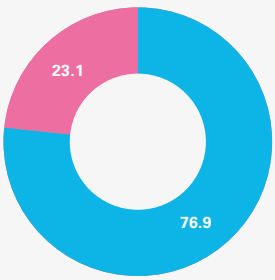
Fixed-term employment by gender in Spain and Portugal (%)

- Men
- Women



Part-time temporary work by gender in Spain and Portugal (%)

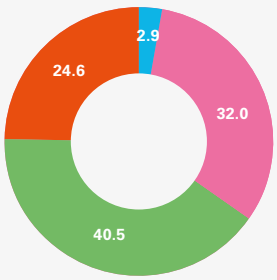
- Men
- Women



Full-time temporary work by gender in Spain and Portugal (%)

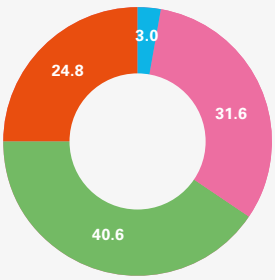
- Men
- Mujeres

By workforce category, 40.5% were administrative and office staff, followed by middle management (32%), manual workers (24,6%) and executives (2.9%).



Staff distribution in Spain and Portugal at 31 December (%)

- Executives
- Middle management
- Administrative and office staff
- Manual workers



Distribution of middle management staff in Spain and Portugal at 31 December (%)

- Executives
- Middle management
- Administrative and office staff
- Manual workers

With respect to the distribution by sex, the workforce was composed of 76.8% men and 23.2% women.

Distribution of the workforce in Spain and Portugal by sex (%)

	Executives		Middle management		Administrative and Management staff		Manual workers	
	2016	**2017**	2016	**2017**	2016	**2017**	2016	**2017**
Men	83.6	83.6	69.2	68.1	71.1	70.9	96.9	97.3
Women	16.4	16.4	30.8	31.9	28.9	29.1	3.1	2.7

EU15

Distribution of the workforce in Spain and Portugal

		%	
Number of women	2015	21.5	2,147
	2016	22.4	2,168
	2017	23.2	2,248
Number of men	2015	78.5	7,853
	2016	77.6	7,526
	2017	76.8	7,458
Total number of the workforce	**2015**	100	**10,000**
	2016	100	**9,694**
	2017	100	**9,706**

Employees in Spain eligible for retirement in the coming years by professional category (%)

	Retirement during next 5 years	Retirement during next 10 years
Executives	4.65	26.50
Middle management	2.50	13.74
Staff Administration	5.16	23.79
Manual workers	6.30	28.96
Total	**4.57**	**21.92**

2. Leadership and Personal Development

103-1 Education and Training | 103-2 Education and Training | 103-3 Education and Training

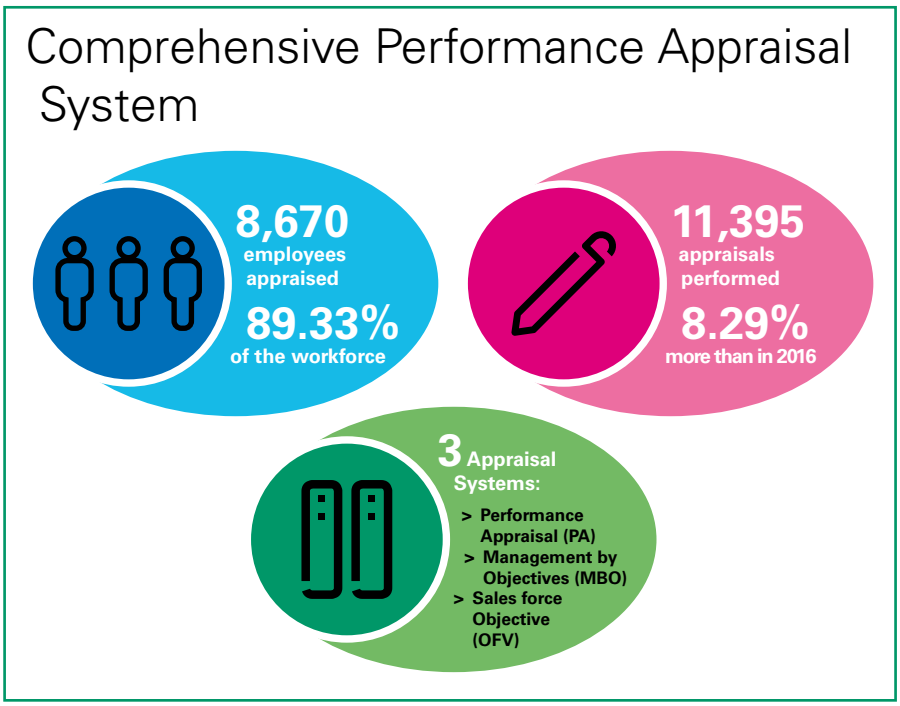
ENDESA continually seeks to identify and develop personal potential so that their performance can contribute to making the Company a benchmark in the sector. In this light, talent management ensures personal development based on merit and contribution.

2.1. Leadership model

404-3 | 103-1 Education and Training | 103-2 Education and Training | 103-3 Education and Training

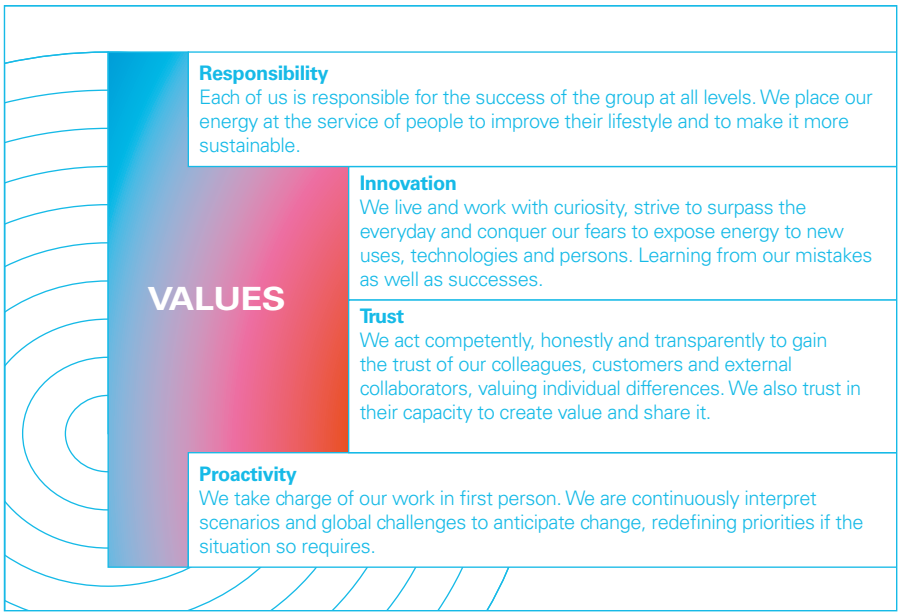
Leadership in ENDESA is based on the Group's vision, mission, values and behaviour. The *Open Power* values are present in all people management systems and these are:

404-3



In 2017, in ENDESA, 89.33% of employees received regular performance and professional development appraisals through any of the Company's appraisal systems, assessing in this way 8,670 employees, 0.5% more than in 2016.

On the other hand, ENDESA has continued the *Performance Appraisal* (PA) behaviour evaluation. This is in addition to the Management by Objectives (MBO) and Sales Force Objectives evaluation systems. As part of the objectives appraisal systems, the *Annual Bonus* (AB) is applied to employees with variable re muneration that are not included in the Management by Objectives or Sales Force Objective systems. 11,395 appraisals were performed in 2017.



Number of performance and professional development appraisals

2015	3,102
2016	10,522 (1)
2017	11,395 (2)

(1) Includes *Annual Bonus, Management By Objectives* (MBO), Sales Force Objective (OFV) and *Performance Appraisal* (PA).
(2) Includes *Management By Objectives* (MBO) appraisals, Sales Force Objective (OFV), *Performance Appraisal* (PA) and for the first time this year, *Annual Bonus*(AB).

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	%	2015	32.75
		2016 (1)	85.35
		2017 (2)	89.33
Employees that receive regular performance and professional development appraisals (men/total appraised)	%	2015	71
		2016 (1)	77
		2017 (2)	76
Employees that receive regular performance and professional development appraisals (women/ total appraised)	%	2015	29
		2016 (1)	23
		2017 (2)	24
Total employees appraised	**No.**	**2014**	**3,931**
		2015	**3,102**
		2016 (1)	**8,273**
		2017 (2)	**8,670**

(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, *Annual Bonus* (AB).

Appraisals by professional category

		Number	% Appraised
Executives appraised	2015	329	100
	2016 (1)	298	99
	2017 (2)	281	95
Middle management appraised	2015	2,526	94
	2016 (1)	2,440	89
	2017 (2)	2,842	91
Administrative and office staff	2015	243	5
	2016 (1)	3,516	84
	2017 (2)	3,485	87
Manual workers appraised	2015	4	0
	2016 (1)	2,019	78
	2017 (2)	2,062	84

(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, *Annual Bonus* (AB).

2.2. Talent development

404-2

ENDESA has continued the different professional development actions it has been rolling out in recent years. We can highlight the individual knowledge 'Getting Acquainted' interviews with people, *coaching*, *mentoring*, consulting for team development, *job shadowing*, workshops for skills development, *onboarding*programmes, business knowledge seminars and definition of succession plans.

- **Onboarding:** Monitoring programmes for people that are hired by the company that, from the development standpoint, seek to expand the skills of new hires connecting with the Group's *Open Power* values. Through the different phases of the programme, skills such as the following are exercised: trust, commitment, team building, business vision, personal growth, proactivity, innovation and responsibility.
- **Knowledge interviews:** 2017, ENDESA continued with the 'Getting Acquainted' interview initiative, which consists of an interview performed by Human Resources experts with each one of the employees. The purpose is to know, first hand, their interests,

aspirations and motivations. Before the interview, a self-profile questionnaire is completed that is designed to discover, at that time, the individual interests profile. During 2017, 5,811 new interviews were held.

> **Succession plans:** In 2017, ENDESA continued the succession plans to identify successors to 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.

> **Coaching:** ENDESA has continued commitment to *coaching*. During 2017, 141 people have benefited from this type of individual or group actions. ENDESA has an internal *coaching* network which performs these processes.

Additionally, by means of the *From Leader to Coach*programme directed toward all Group Executives and with the practical participation of the entire group in Spain (149 people), presenting and experiencing new leadership through tools like *coaching*, in tune with a culture model of *Openness,* present in the Enel Group, through the four *Open Power values has been pursued.*

Additionally, 166 people managers have taken part in the manager-*coach*, workshops, compared to 141 in 2016. The subject matters covered have been, among others, *feedback*, communication, listening, creation of trust within the team, and coordination of actions, among others, which offer the managers *coaching* tools to transform the manager profile in ENDESA.

During this year, ENDESA reinforced an internal consulting line which gives *ad hoc* solutions to the needs posed by the businesses. This action is performed by internal development experts applying *coaching*techniques and tools.

One successful programme in this line has been 'From Management to Leadership,' directed at the middle management of Infrastructure and Grids with the participation of 290 people and with key tools for this management role in changing environments.

Also of note is the *'Jump on the coach',* programme directed at the role of Human Resources. By applying group *coaching* techniques, it has contributed to promotion of the role of *HR Business Partner*in which 48 people participated.

Further, the programme 'Let's Go' was begun in 2017, directed at the Company's technical personnel with the purpose of facilitating skills and responsibilities derived from *coaching* necessary for development of their position, which had 14 people participate in the pilot launch course.

> **Mentoring:** It's a project for transferring knowledge through individual and group *mentoring* and 19 people participated in the conventional mentoring programme in 2017.

Completion of the *Reverse Mentoring*programme, linked to the Company's Digital transformation Plan, in which 27 mentors and 30 *mentees*participated. It is an innovative initiative where the mentors, compared with conventional *mentoring* , are people who are younger than their *mentees* and provide their extensive experience in digital skills.

In 2017 a programme called *Women Mentoring*began, closely related to the Group's Diversity and Inclusion Policy, intended for women executives of the Group and in which the principal objective is enabling the development and incorporation of women in senior levels of responsibility within the Company. The Group's executives participated in this initiative in the role of *mentees*, as well as the Top 200 group in the role of mentors, 22 and 18 people, respectively.

> **Job Shadowing:** Development initiative that enabled acceleration of learning and relationships. 23 people from the Group's senior management in Iberia selected a colleague with whom to exchange a work week and using a structured daily agenda, they learned about a business that was different from their own, developing skills in empathy, innovation, *networking*, collaboration, challenges and *feedback*, among others.

> **Business Knowledge Seminars:** In 2017, this initiative was continued, which has the objective of increasing the participants' knowledge of the Company and giving them a global and integrated view of the company's different areas of activity. This year, 117 people have participated.

3. Training

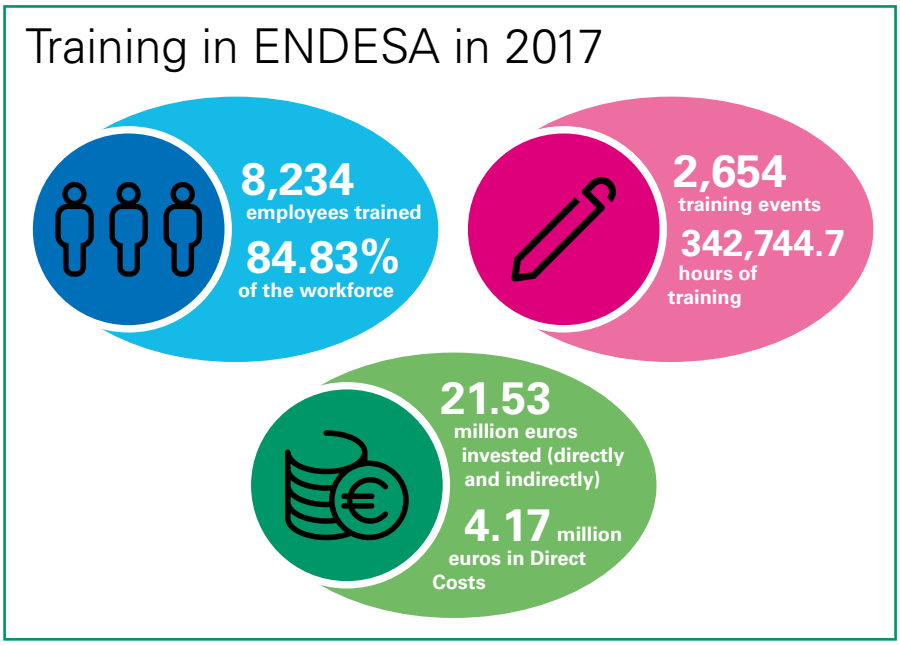
3.1. Key figures and relevant aspects

404-1 410-1

ENDESA established its Training Plan with the purpose of giving people the qualifications they need to perform their functions and to develop personal and professional attitudes and aptitudes. This Plan centred on achievement of the Company's strategic objectives and on promoting its values of responsibility, innovation, proactivity and trust.

To perform this activity, ENDESA has invested 21.53 million euros, 4.17 million euros in direct costs of the training activity.

During 2017, 2,654 training events have been performed in ENDESA. 8,234 employees took part in these events. This activity has allowed providing 342,744.7 hours of training, achieving an average of 35.3 hours.



404-1

Total hours training	2015	401,296.1
	2016	444,063.4
	2017	342,744.7

Total hours in-person and on-line training	People trained	Participations	No. of events	Total Costs of Training (thousands of euros)
342,744.7	8,234.0	35,266	2,654	21,535.6

* Includes cost of working hours.

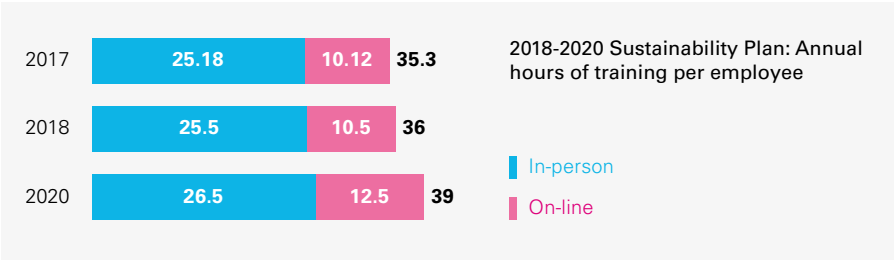
Number of hours of training according to the type of training

		Spain and Portugal
On-line management training	2015	10,370.0
	2016	14,274.0
	2017	11,918.0
In-person management training	2015	45,344.6
	2016	50,353.0
	2017	54,028.8
On-line technical/specific training	2015	118,031.3
	2016	110,309.0
	2017	70,718.0
In-person technical/specific training	2015	227,550.1
	2016	242,936.4
	2017	175,444.9

Average hours training per employee, itemised by gender and professional category

Executives	2015	56.6	Administrative and office staff training	2015	27.9
	Men	54.0		Men	28.2
	Women	71.7		Women	26.9
	2016	29.9		2016	42.3
	Men	28.8		Men	44.7
	Women	35.4		Women	36.4
	2017	36.9		**2017**	31.0
	Men	36.2		Men	32.8
	Women	40.7		Women	26.6
Middle management training	2015	58.3	Manual worker training	2015	40.8
	Men	57.5		Men	41.0
	Women	60.0		Women	36.2
	2016	52.9		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

To continue promoting training (both *on-line* and in-person), ENDESA has established a new objective in its 2018-2020 Sustainability Plan:



3.2. Type and content of training

404-2 | 103-1 Education and Training | 103-2 Education and Training | 103-3 Education and Training

ENDESA's commitment to people results in their professional and personal development through continual training, aligned with the company's strategic objectives in all of its fields of activity in a way that contributes to the Company's excellence.

Training activities provide a response to the needs detected in different analysis processes that ensure that teaching continues in the different defined typologies:

1	2	3	+
Skills	**Technique**	**Safety**	**Recommended**
Transversal training to develop personal and professional attitudes and aptitudes.	Training necessary for correct performance of each job position.	Training in prevention of occupational risk and safety and health on the job of a mandatory nature.	Training necessary to comply with regulations (legal or corporate), for required certifications other than those of the student.

ENDESA is firmly committed to comply with current legislation in relation to each one of the areas where it operates, which entails the inclusion of numerous training activities, among which we can highlight those relating to safety, criminal risk prevention, sustainability and the environment.

Sustainability Training

Hours training in issues of sustainability (environment, safety and health, etc.) per employee	2015	13
	2016	18
	2017	13
Total training hours in sustainability	2015	125,732
	2016	175,882
	2017	127,079

> **Energy Sustainability Training.** The new energy model in which we are globally immersed, must include a strengthened commitment to sustainability as proposed by the Group's *Open Power* positioning. In this way, training in this field takes on great importance with the design, development and providing of courses in which ENDESA employees can internalise the principles of sustainability in the area of action, both professional and private, and that with a change of energy behaviour they become a benchmark for society.

> **Health and safety training.** Fully aware of safety, health and well-being, the Occupational Risk Prevention courses are aimed at the entire workforce with mandatory character, combining *on-line* and in-person methodology, depending on the content and public objective. Additionally, specific actions are carried out for specific positions of responsibility as regards occupational 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 given.

Combined with the mandatory training, training activities have been carried out in the area of road safety as are safe four wheel driving and safe motorcycle driving in which 2,000 people have attended and in the area of well-being, an *on-line* course on stress management has been given, in which about 3,000 people have participated.

> **Environmental training.** Environmental training has taken on a lead role in ENDESA's commitment to lead development and application of new technologies to generate and distribute more sustainable energy, paying special attention to renewable sources and smart distribution grids.

About 7,000 hours of training have been dedicated to ENDESA employees to refresh their knowledge about the environment in addition to their training complying with the established requirements for renewal of the different ISO 14001 certificates and the Integrated System for Environmental Management, Energy and Indoor Environment Quality (SIGAEC) that the company has.

> **Digitalisation training.** Another year of training focused on promoting the digital transformation has involved an important chapter in the annual plan, providing over 8,126 hours. A new version of the training programme '*e-talent: turn on your digital power*' was launched and the offer of courses on digitalisation was added, *big data*, *Sales force*, Google *analytics*, marketing digital and social media *management*taking on a notable presence .

> **Other training activities.** Through training in managerial, social and leadership skills, ENDESA has provided employees with tools for their personal and professional development. This type of training is transversally managed between the different businesses and support areas. The amount of skills hours reached 67,482 hours in 2017.

In 2017, training for managerial positions was promoted in flexibility and management of change with design, development and providing of the course '*Remote team leadership*', launched with the 'Work Outside of the Office' initiative, which welcomed over one thousand people.

The training programme '*From leader to coach*' has been directed toward the group's executives with the objective of empowering leadership through coaching tools in line with the Enel Group's *Open Power* values.

Another of ENDESA's fundamental commitments upheld throughout the years is technical training of employees. This allows their professional progress and gives them the necessary qualifications to perform their activity. Over 95,000 hours of technical training have been given in 2017 in the Generation, Renewables, Distribution, Marketing, *ICT*, Procurement and Support Areas.

In addition, ENDESA has empowered language training actions, mainly English and Italian, with a wide range of different types of language programmes.

Training security staff

410-1 | 103-1 Safety | 103-2 Safety | 103-3 Safety

The safety 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 authorised by the Ministry of the Interior. Part of their training includes aspects about private safety legislation, basic rights of people and Human Rights.

As part of deployment of the action plan relating to Human Rights due diligence that the company has developed throughout 2017, launching of a Human Rights training plan directed at the entire staff is planned for 2018.

412-2

Training of the employees in policies and procedures related to relevant human rights for their activities

			Spain and Portugal
Training of employees about policies and procedures related to relevant human rights for their activities	hours	2015	48
		2016	200
		2017	1,200
Employees that received training in human rights	No.	2015	6
		2016	1
		2017	6
Employees that received training in human rights	%	2015	0
		2016	0
		2017	0.06%

4. Attracting and retaining talent

In order to attract the best talent, ENDESA focuses on "*Employer Branding*" to promote the Company 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, informing young people of ENDESA's strong commitment to innovation. Likewise, profiles that fit the values of the company are sought after: trust, responsibility, innovation and proactivity. Actions have been taken such as an idea competition among university youth and professional training initiatives such as '*Millennial Day*' in different formats, with a public objective of young people on the verge of graduating or who have recently received degrees (children of employees).

In our digital environment, communication and relations with candidates are quickly changing and so the company's presence on social networks and other *on-line* platforms has been improved and enhanced, these digital routes being one of the main channels for boosting recruitment.

In 2017, 161 young *Millennial* graduates have joined the company through ENDESA's Scholarship programme. Enhancing their employability and allowing them to put the knowledge acquired during their time at university into practice and start their professional career. 35% of these people are incorporated into the staff at the end of their scholarship.

ENDESA uses internal promotion to cover vacancies, giving preference to professionals with outstanding performance of their duties. Thus, the merit of our employees is recognized with the possibility of professional career development within our company.

401-1

The staff rotation rate in Spain has been 7.3%.

Below, information is given on the employees joining the workforce in last 3 years:

New hires

Total new hires	2015	291
	2016	556
	2017	256

New hires 2017

	%
New hires under 30 years of age	52.7
New hires between 30 and 50 years of age	43.7
New hires over 50	3.6

New hires by gender

	%
Men	65.5
Women	34.5

Below, information is given on contract termination both by gender and age:

401-1

Contract terminations by gender

Total women leaving workforce (resignation, voluntary severance and retirement)	No.	2015	132
		2016	81
		2017	92
Total men leaving the workforce (resignation, voluntary severance and retirements)	No.	2015	439
		2016	590
		2017	360
Total women leaving compared to total women in the workforce (%)	%	2015	6.15
		2016	3.74
		2017	4.09
Total men leaving compared to total men In workforce (%)	%	2015	5.59
		2016	7.84
		2017	4.83

Average seniority in the company of employees who have left the Company in 2017

Average seniority in the company of the male employees who have left the company during the year	27.26
Average seniority in the company of the Women employees who have left the Company during the year	21.33
Average seniority in the company of the employees under 30 years of age who have left the company during the year	1.36
Average seniority in the company of the employees between 30 and 50 years of age who have left the Company during the year	10.05
Average seniority in the company of the employees over 50 years of age who have left the Company during the year	32.36
Average seniority in the company of all employees who have left the Company during the year	25.76

ENDESA held the third event of the Competition 'Ideas Move'

After the success of previous events in Catalonia and Madrid, the third event of Ideas Move was held in Seville. It involved an initiative promoted jointly between ENDESA and the University-Company Foundation that had the objective of fostering the generation of ideas relating to energy among university students and professional training centres.

The three winners of the third event of 'Ideas Move' with responsible persons from ENDESA and the University Company Foundation (FUE).
Source: FUE

4.1. International mobility

During 2017, 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 the Group's multinational character. In 2017, ENDESA managed 65 expatriate employee processes and 12 impatriate processes. Additionally, a further 16 international mobility processes were managed in Spain within Enel Group, outside the perimeter of ENDESA, S.A.

In these processes, special attention is paid to the following aspects:

- Guaranteeing the expatriate staff maintains the standard of living of the country of origin.
- Compensating for the 'drawbacks' 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. Selection of personal

202-2 | 103-1 Market Presence | 103-2 Market Presence | 103-3 Market Presence | 103-1 Forced labour | 103-2 Forced labour | 103-3 Forced labour

ENDESA has encouraged employees to participate in its hiring processes, promoting internal mobility and providing opportunities for people looking for new learning and professional development opportunities according to their interests and personal motivation. For this purpose, priority is given to publication of in-house job offers.

In 2017, 230 published internal selection processes were performed, involving over 1,700 employees.

In cases where internal promotion is not possible, ENDESA contacts those people who have already had direct links with the Company's activities, through internships, scholarships or specific contracts. It may also consult various databases.

Where internal promotion is not possible the Company advertises on the job market. In 2017, more than 200 external processes were carried out in Spain and Portugal for permanent and temporary vacancies. They have mainly looked for professional profiles, with commercial, technological and scientific/technological vocation.

In 2017, ENDESA has continued the updating of the 'Join Us' space on the corporate website, which you can use to consult and apply for job offers. The change we have made allows simple and intuitive navigation and makes it easier for candidates to join.

Total employees who have joined the workforce during the year	2015	291
	2016	556
	2017	256
Total local employees who have joined the workforce during the year	2015	278
	2016	509
	2017	241
Total local Senior Managers (executives + middle management) who have joined the workforce during the year	2015	134
	2016	275
	2017	116

In relation to senior management (members of the Executive Management Committee) that come from the local community.

202-2

Number of senior executives from the local Community	13
Total number of senior executives	17

Rejection of forced and child labour

103-1 Child labour | 103-2 Child labour | 103-3 Child labour | 103-1 Forced labour | 103-2 Forced labour | 103-3 Forced labour

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 2017.

Likewise, this approach extends to all the contractor and supplier companies with which it has relations. 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 | 405-2 | 103-1 Forced labour | 103-2 Forced labour | 103-3 Forced labour

ENDESA's remuneration policy is in line with the national and international legislation regarding Corporate Governance. Its main 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. In this regard, ENDESA's remuneration policy supervises that there is competitive and equal remuneration of its employees. The remuneration is determined by analysing the external competitiveness based on market salary surveys, using a job appraisal methodology with criteria from similar companies in terms of employee numbers and turnover.

Likewise, ENDESA's remuneration policy values the principles of meritocracy. ENDESA's meritocracy 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 2017, as in previous years, meritocracy policies have been applied for all employees achieving all professional categories. These processes have the chief purpose of awarding people's effort and their commitment to the Company, assigning salary adjustments in differentiated manner, whilst guaranteeing the minimums established in the Agreement. This policy, furthermore, enhances the role of the manager in people recognition.

In this way, ENDESA's Remuneration Policy, regulated in the Framework Agreement, establishes remuneration conditions for employees much higher than the basic salary established in Spain and Portugal and also includes the commitment of increasing the annual salary. Additional mechanisms are also established for salary increase related to the Company's increase in EBIDTA, of the Company which may involve salary rises up to 2%, as well as an increase in efficiency payment.

In 2018, it will be negotiating ENDESA's V Framework Agreement, in the context of which the Company commits to align its remuneration policy with market references in similar sectors, offering attractive labour conditions that motivate and recognize the best professionals. Thus, in a remunerative manner, it is considering offering social benefits for active personnel that allow all employees to flexibly opt for those that best fit their personal circumstances at any time.

Company benefits not required by law

401-2

Company benefits not required by law

			Spain and Portugal
Medical care	(Thousands of euros)	2015	3,420
		2016	3,908
		2017	3,086
Cultural and leisure activities	(Thousands of euros)	2015	948
		2016	931
		2017	972
Financing of electrical consumption	(Thousands of euros)	2015	15,121
		2016	13,427
		2017	12,735
Insurance for non-professional accidents	(Thousands of euros)	2015	516
		2016	1,085
		2017	1,090
Pension funds	(Thousands of euros)	2015	54,343
		2016	51,816
		2017	51,407
Other (e.g., seniority bonus, special assistance for marriage, house purchase, etc.,)	(Thousands of euros)	2015	17,352
		2016	18,380
		2017	17,675
Number of employees involved in the Company benefits policy	(No.)	2015	9,898
		2016	9,575
		2017	9,599

Flexible Remuneration

In 2017, ENDESA continued offering its employees Flexible Remuneration, which was implemented for the first time in 2016. This compensation system allows each employee to decide, voluntarily, how to receive part of their monetary remuneration so that it adapts to their personal and family needs at all times, making use of the tax advantages of certain products and services. The products included in ENDESA's Flexible Remuneration Plan are: Health Insurance, Childcare vouchers, Meal vouchers, Transport vouchers and training.

Overtime

Furthermore, through the different Collective Agreements, the Company Management and the Company 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 current legislation and, in particular the provisions of RD1561/1995, 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).

Salary gap

To perform a complete analysis of the salary gap between men and women, it is necessary to consider, in addition to the workforce composition, the salary evolution of the new members joining the Company at the different times in its history. Until 2000, before signing the Framework agreement, the salaries were defined based on the different collective agreements of the companies that make up ENDESA; after 2000, with the signing of Framework Agreement I, homogeneous salary tables were defined for all new members in ENDESA; after 2013 with the signing of Framework Agreement IV, salary tables were implemented more in line with market practices for external recruitments. This effect, together with evolution of the workforce and the Company's current remuneration policies (meritocracy), indicate to us that the salary gap is narrowing, although there is still some way to go.

405-2

Fixed average salary of men in euros meeting their professional category (1)

		Spain and Portugal
Executives	2015	158,069
	2016	152,507
	2017	143,391
Middle management	2015	71,208
	2016	72,786
	2017	71,085
Administrative and office staff	2015	52,320
	2016	57,811
	2017	57,981
Manual workers	2015	55,490
	2016	52,575
	2017	50,931
Media	2015	61,061
	2016	62,912
	2017	62,240

(1) Average salary considering only fixed salaries without taking into consideration the variable part, compensations or similar.

405-2

Fixed average salary of women in euros meeting their professional category (1)

		Spain and Portugal
Executives	2015	129,490
	2016	123,942
	2017	119,226
Middle management	2015	63,158
	2016	65,048
	2017	63,813
Administrative and office staff	2015	47,564
	2016	49,378
	2017	49,996
Manual workers	2015	46,959
	2016	45,698
	2017	48,143
Media	2015	54,752
	2016	56,688
	2017	57,374

(1) Average salary considering only fixed salaries without taking into consideration the variable part, compensations or similar.

405-2

Average fixed salary for women compared to men (%)

		Spain and Portugal
Executives	2015	81.9
	2016	81.3
	2017	83.1
Middle management	2015	88.7
	2016	89.4
	2017	89.8
Administrative and office staff	2015	90.9
	2016	85.4
	2017	86.2
Manual workers	2015	84.6
	2016	86.9
	2017	94.5
Media	2015	89.7
	2016	90.1
	2017	92.2

202-1

Relationship between the initial salary and minimum salary

	Women	Men
Initial salary	23,680.92	23,680.92
Minimum salary Spain	9,906.40	9,906.40
Relationship between the initial salary and minimum salary	2.39	2.39

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, and defined benefits for death or incapacity. In 2017, the total number of employees with an individual pension fund sponsored by the company was 10,020.

A shared company-employee contribution system was established, with a maximum of 6% of the pensionable salary paid into the pension plan by the company and 3% of this same salary for the employee. The company's contribution to the pension plan in 2017 was 31.8 millions euros.

There are additionally workers affected by agreements other than the Framework Agreement:

- Defined contribution for retirement, and defined benefit for death and incapacity and with benefit and contribution systems differing from those described above, the situation varying 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 underwritten 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 underwritten, 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, 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 changes in the prices of the underlying assets (benchmark 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.

5 Social dialogue

403-4 | 103-2 | 102-41 | 402-1 | 407-1 | 103-2 | 103-1 Relations between workers and management | 103-2 Relations between workers and management | 103-3 Relations between workers and management | 103-1 Freedom of association and collective bargaining | 103-2 Freedom of association and collective bargaining | 103-3 Freedom of association and collective bargaining

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:

		Spain and Portugal
Total number of complaints relating to labour practices logged by formal complaint procedures during the reporting period	(u.)	7,900
		7,900
		7,700
Of the complaints identified, number of complaints addressed during the reporting period	(u.)	7,900
		7,900
		7,700
Of the complaints identified, number of complaints resolved during the reporting period	(u.)	7,900
		7,900
		7,700

With respect to the collective bargaining procedures, in 2017, in ENDESA they were performed strictly complying with Spanish legislation and that of ENDESA in relation to reorganisations, transfers of workers between Group Companies, etc. In Portugal, the employment conditions are fixed through the employment contract.

103-1, 103-2, 103-3 Freedom of association and collective bargaining

103-1, 103-2, 103-3 Relations between workers and management

Working conditions at ENDESA are regulated by collective bargaining agreements to improve employment regulations in fields in which the Company operates. ENDESA guarantees the right to freedom of association for its employees and for all its contractors, suppliers and business partners.

102-41

In Spain and Portugal there are four collective agreements in force at the end of 2017, which affect 8,880 people and cover 91.49% of the workforce. Likewise, 98.6% of ENDESA's contractor employees are covered by a collective agreement.

402-1

Existing 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, Agreement on Voluntary Suspension) establish the criteria that should be adhered to in the event of business reorganisation and corporate restructuring (Chapter III of the Guarantees Framework Agreement). It also contemplates that the Company Representation will be notified with at least 30 days' notice before the efficacy of the corporate reorganisation operations.

The most important actions regarding collective bargaining in 2017 were as follows:

- Negotiationon the transfer of workers between different companies.
- Negotiation regarding new organization in the Distribution area.
- Negotiation about reorganization of Hydraulic Production Units, the Colón Combined Cycle and Global *E-Solutions*.

Within ENDESA's scope in Spain, it should be noted that on 26 June 2017, the negotiation process of ENDESA's V Collective Bargaining Agreement was reported and promoted, forming on 26 October 2017, the Negotiating Committee of ENDESA's V Collective Bargaining Agreement.

Spain has formed part of the ILO since it was established in 1919. ENDESA's conventional legislation complies with the Agreements in force ratified by Spain.

6. Workplace environment

During the year 2017, specific action plans were put into operation for all of ENDESA's units and responsible persons, beginning at the first executive level, to improve the employees' motivation and commitment to the Company.

The initiatives these plans form are aimed at enhancing the strengths and using them as levers to reinforce the identified areas of improvement. A large number of these are aimed at continuing to improve management skills in increasingly flexible and diverse environments. Another important set of measures is directed at fostering employees' participation in decision-making for projects and processes, developing values such as trust, proactivity, responsibility and innovation, upon which ENDESA bases its management model.

As an example of some actions included in these action plans, we can point to the communication campaign relating to all of the Conciliation measures that ENDESA makes available to its employees or the launching of flexibility policies with the powerful impetus given to the 'Work Outside of the Office' project. The latter initiative is really important because it implements our management philosophy based on flexibility and autonomy in the selection of spaces, times and types of work in order to promote trust in employees and a focus on the teams centred on responsibility over results. Without a doubt, 'Work Outside of the Office' has helped to drive the labour flexibility policies and establish a solid, coherent basis for a new work model. During 2017, there have been 1,112 employees who have taken advantage of this labour flexibility method.

Another initiative that has helped to improve the climate is the pilot project *Smart Workplace*, that has the objective of making a new environment for development of their duties available to ENDESA's *E-Solutions* area team, which allows them to be more productive and at the same time, happy in their job position. It involves revolutionising several basic approaches in the work method of a business unit: the physical spaces, technology, processes and human resources 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. Climate action plans have had periodic monitoring to ensure compliance with planning and planned objectives for this year.

7. Responsible People Management at ENDESA

103-1 Diversity and equal opportunities | 103-2 Diversity and equal opportunities | 103-3 Diversity and equal opportunities | 103-1 Employment | 103-2 Employment | 103-3 Employment

At ENDESA, in its focus on responsible people management, annually holds various activities in each of these areas:

- Managing diversity and equal opportunities.
- Conciliation and flexibility.
- Integration of disabled persons and people at risk of social exclusion.
- Promotion of volunteering.

7.1. La apuesta de ENDESA por la diversidad

401-1 | 103-1 No discriminación | 103-2 No discriminación | 103-3 No discriminación | 406-1 | 103-1 Diversidad e igualdad de oportunidades | 103-2 Diversidad e igualdad de oportunidades | 103-3 Diversidad e igualdad de oportunidades

ENDESA is also committed to diversity among its employees; it feels that diversity enriches the company, constituting an important asset. The figures that we present below show the progressive increase in women in the workforce,]increasing their proportion to the total number of workers by one percentage point per year during the last three years, which is very impressive and demonstrates the company's firm commitment to gender diversity, taking into account the size of the workforce, its historic composition, very high percentage of contracts of an open-ended nature and the stable nature of labour relations. Regarding age, it reflects a solid and secure company with regard to seniority and in turn, progressive renewal.

7.1.1. Policy of Diversity and Inclusion

405

Within the framework of the Diversity and Inclusion Policy of the Enel Group 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, honour 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, ENDESA 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
> Gender equality in internal and external selection processes > Agreements with technical universities. > Parental programme.	> Tutoring programme for expatriates	> Identification of an internal reference (focal point).	> Tutoring programme for new hires. > Transfer of knowledge between seniors and juniors

Transversal
> 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 the development of talent and ensuring equal opportunities and treatment, the following actions were taken:

- In both the internal as well as external selection processes, Human Resources 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.
- Human Resources established specific relationships with universities, oriented toward identification of programmes and collaborations that promoted participation and inclusion of women students, especially in technical schools.
- Human Resources implemented parent programmes aimed at balancing the needs people have as parents and their aspirations of professional growth.

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 (seniors) was drawn on wherever possible, so that they could act as internal trainers.

Nationality

In order to recognize, respect and manage the differences between different nationalities and to promote their integration, all expatriates were assigned a tutor from the destination country who helped and supported them during their expatriate 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. That person supported the Human Resources *Business Partners* , the pertinent Health and Safety units, managers and employees to handle any question relating to disability and specifically, to persons with disabilities in fulfilment of their needs and aspirations.

Transversal dimension

Workshops and/or specific training courses relating to behaviours and values of diversity and inclusion, especially for the professional family of Human Resources, new hires and new managers.

Diversity elements and inclusion in Enel's behaviour model that will be adapted for the performance evaluation process were included.

406-1

In 2017, 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 2017-2021 Sustainability Plan.

Thus, the hiring of women figure reached 34.54% in 2017.

Respecting positions of responsibility, the percentage of responsible positions (executives) held by women in 2017 remained at 16.4%.

Application of the policy

Within the framework of the Enel Group's Diversity and Inclusion Policy, ENDESA has defined a gender action plan with the following lines of work:

1. Increasing the percentage of women in selection processes: Promoting gender equality in both internal and external selection processes, in the *short-list*, in other words, when defining the pool of eligible candidates for interviews aimed at selecting final candidates.

2. *STEM:* promoting agreements with universities and institutes to foster participation of women students in *STEM* (English acronym for Sciences, Technology, Engineering and Mathematics) studies.

3. *Parental Programme*, implementing the programme aimed at balancing the needs people have as mothers and fathers and their aspirations of professional growth.

Regarding the increase in the percentage of women in the selection processes, during 2017 ENDESA has monitored the development of this data through quarterly *reporting* carried out with regard to the Diversity and Inclusion Policy.

Regarding the fostering of technological vocations among students, ENDESA has collaborated in the development of the educational programme *Orienta-T* along with *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.

As a result of this collaboration, 954 students and 79 teachers have participated in the educational phases of High School and Bachelor's Degree courses at 29 educational centres in the cities of Madrid, Valencia, Avilés, Barcelona and Las Palmas de Gran Canaria. An open and collaborative career guidance channel has been created with over 30 inspiring videos by professionals for use at educational centres throughout Spain; and after the impact study was performed, it was concluded that the *Orienta-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.

Numerical Data for *Orienta-T*

Students	954
Teachers	79
Programmes	5
Voluntary Workshops	87
Voluntary Speakers	45
Educational Centres	29
Cities	5

Regarding parent support, ENDESA has developed the following two initiatives:

1. *Parental Programme.*

2. Training workshops for parents (education in diversity).

The *Parental Programme* , is a programme aimed at balancing the needs people have as mothers and fathers and their aspirations of professional growth. It consists of a series of structured interviews between the employees, their managers and Human Resources *Business Partners* before and after the maternity/paternity experience to increase their value, both for the worker and 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 reinclusion 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 calm-

ness and to renew their commitment to the professional field.

As a supplement to this programme, ENDESA has launched three training workshops aimed at parents with the objective of addressing education in diversity in a broad sense. It has been attended by over 250 people at the Company's branches in Barcelona, Madrid and Seville.

In addition, as part of its gender action plan, ENDESA has launched some unique projects aimed at its women employees:

1. *Women Mentoring.*
2. Women *Coaching* .

The *Women Mentoring* 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 the same lines, ENDESA has continued with a first follow-up conference to the group *coaching* initiative, aimed at all women from the Catalonia Division West-Distribution developed in the second half of 2015. The focus of the seminar held in 2017 was sharing and reflecting on planned progress with the challenges during the last session.

Annually, ENDESA holds the succession plan design exercise 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.

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.

'More Women, Better Companies' initiative.

2. *STEM.*Initiative.
3. Anonymous CV
4. '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, the Ministry renewed ENDESA's Gender Equality Seal for a period of three years.

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, work-life conciliation, promotion, 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 reached 20% in 2018 and was exceeded in 2016.

*STEM*Initiative

During 2017, ENDESA participated in workshops that the Ministry proposed regarding the scope of *STEM*. Being aware that it is precisely in the more male-dominated branches of activity (new technologies, engineering, architecture, physical sciences, etc.) where job opportunities of the future are and where one of the keys to combat horizontal and vertical segregation and the gender wage gap lies, the Ministry has designed a project to support women who have taken courses connected with the scientific and technology fields, both at university as well as vocational training courses at the high school level and up to increase their visibility, enable their employability and convert them into future benchmarks for children and young people.

Anonymous CV

ENDESA has signed a Protocol with the Ministry to develop a project for design, implementation and evaluation of the Anonymous CV. It involves implementing selection procedures and depersonalised professional promotion ('*anonymous or blind curriculum vitae'*), understood as one that eliminates personal references such as the first and last names, sex or age, marital status and number of children, etc., and that does not include a photograph. The objective of this project was to eliminate any bias that could persist in hiring and personnel selection processes and that could allow any type of inequality.

'For a Gender-Based Violence-Free Society' initiative

Within the framework of the collaboration agreement signed with the Min-

istry in 2012, ENDESA collaborates annually in advertising sensitivity and gender-based violence prevention campaigns launched by the Ministry.

Thus, during 2017, ENDESA has echoed the 'Ten Forms of Digital Gender-Based Violence' campaign aimed at young people and adolescents to prevent, sensitise and detect gender-based violence through the Internet and social networks as well as the campaign 'When abuse occurs between a couple, it's not just the couple's business'. 'Don't allow gender-based violence' aimed at the population in general 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 since it began in 2014.

Gender-Based Violence

Additionally, ENDESA, along with the Integra Foundation, since 2016 continues the corporate volunteering programme Promoting Talent' aimed at improving employability of women victims of gender-based violence, 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 in society, that allows them to leave the abuser and live in freedom with their children, it also increases sensitivity about this social blight.

ENDESA launched the corporate volunteering programme 'Changing Lives' in 2017, aimed at women victims of gender-based violence and other groups 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 other groups, giving them the tools necessary for their incorporation into professional life through workshops given by ENDESA volunteers. As a result, 46 women victims of gender-based violence have participated in the programme, 30 were trained and 17 have found employment.

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's Collective Agreement IV in Spain, published in the Official State Gazette, the negotiation of which concluded in 2013, includes 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 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 for 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 recognize, respect and manage the differences between generations, 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 traditional *mentoring* programmes such as *reverse mentoring*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 2017, ENDESA has participated with business managers belonging to different generations in the various intergenerational Leadership Forums of the Observatory that were held in Madrid. Likewise, it has participated with employees from different generations in *focus groups* that were held to analyse the employee's voice. As a result of these efforts, the study 'Diagnosis of Generational Diversity: Analysis of Intergenerational Talent in Companies' was published. ENDESA has hosted the Observatory's Good Practices Meeting at its Barcelona branch.

Nationality

In order to recognize, respect and manage the differences between different nationalities and to promote their integration, ENDESA has launched a tutoring programme for expatriates involving the assignment of a tutor to expatriates who will help and support them during their expatriate period.

Disability

In order to recognize, respect and manage the different capabilities of people, making the most of the potential that each one possesses, ENDESA has identified its *focal point*, a reference person with respect to the disability, whose mission is to support the Human Resources *Business Partners* , the pertinent Health and Safety units, managers and employees in order to handle any issue relating to the disability and specifically, people with disabilities in meeting their needs and fulfilling their aspirations.

7.2. Conciliation of professional, personal and family life

In 2017, over 1,260 employees took advantage of some course of action aimed at balancing professional, personal and family life in Spain and Portugal.

401-3

Employees benefiting from some course of action aimed at conciliation of professional, personal and family life in 2017

Men	607
Women	653

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.

As measures for striking a balance between personal and family life with working life, the current Collective Bargaining Agreement at ENDESA Spain provides for the adjustment of working hours to the employee's needs through flexible working hours, temporary change of working hours, reduced working hours, leaves of absence to care for family members, paid leave, unpaid leave and teleworking.

For years now, a set of services have been available to facilitate conciliation of employees in the Madrid office such as car cleaning service, dry cleaning services and shoe repair service and a service for personal formalities (accompany a family member to the doctor, wait for a tradesman in your home, etc.), a personalised nutrition service given by a nutritionist.

Additionally, with the aim of encouraging women who have become mothers, the Company has provided breastfeeding rooms for nursing mothers at its Barcelona, Madrid and Seville offices. Women have used these intimate, quiet facilities to express breast milk after their maternity leave has expired and, therefore, do not need to end this practice.

In 2017, the initiative 'Work Outside of the Office' has been launched as well as the development of the 'Work at Home' initiative. This new initiative is aligned with the promotion of balancing of the personal life with the professional life in addition to promoting management based on flexibility and autonomy in the selection of spaces, times and types

of work, in order to reinforce greater trust between manager and associates as well as responsibility for the results. In all, 1,112 employees (559 women and 553 men) have participated in this initiative during 2017. Without a doubt, 'Work Outside of the Office' has helped to drive the labour flexibility policies and establish a solid, coherent basis for a new, more modern and advanced work model.

401-3

Levels of employees returning to work and retention after maternity or paternity leave, by gender

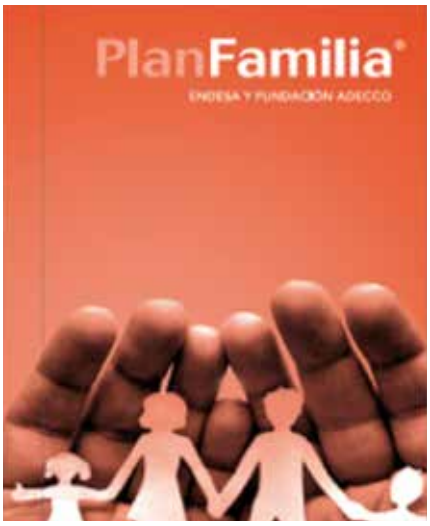
Employees taking paternity leave	197
Employees taking maternity leave	94
Employees returning to work following paternity leave	193
Employees returning to work following maternity leave	93
Employees returning to work following paternity leave still working 12 months after their return	193
Employees returning to work following maternity leave still working 12 months after their return	93

7.3. Commitment to people with different capabilities

ENDESA carries out various initiatives to integrate staff with disabilities. Specifically, in Spain the workforce contains a total of 80 disabled people.

In Spain, the following actions were carried out in 2017:

- They maintain collaboration agreements with the Adecco, Randstad, Prevent, Universia, Prodis and Integra Foundations. In collaboration with these entities, various disability-related 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.
  - Thanks to the collaboration agreement with the Prevent Foundation, we channelled the CVs of relatives of employees with disabilities, thus helping them with their job search.
  - Together with the Universia Foundation we are 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.
  - The *'Human Resources People Business Partner,'* project, from ENDESA's Human Resources unit, gives support in order to provide approachability, to advise and assist employees with anything relating to the disability.
- The Family Plan, developed by the Adecco Foundation, has continued. Through this plan, 75 family members of employees with a disability have received various types of aid in the form of advice and therapy.
- Along with the Randstad Foundation, a specialized, confidential consulting service to provide information and consultation for employees who have any interest in better understanding the implications and treatment of a disability, whether through the General Law or within ENDESA.



From the standpoint of announcements and communication, in 2017 a campaign was launched for the development of Diversity and Inclusion values and one of the fundamental facets has been disabilities. At ENDESA, we value the contribution of everyone, without exception.

As alternative measures, ENDESA has committed to indirect hiring initiatives through the purchase of goods and services from special employment centres. In 2017, these purchases were valued at 1,898,741 euros.

7.4. Corporate volunteering

ENDESA commits to corporate volunteering and, therefore, it cooperates in the development of numerous social development projects with the involvement of its employees. Corporate volunteering 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 partici-

pants. Further, it has a firm commitment to development of the communities in which it operates by contributing with its own personnel in activities that combine the interests of the Company and of its stakeholders in order to streamline access to energy for groups in a vulnerable situation, to provide employability, improve the environment, etc.

In 2017, 18 volunteering projects have been performed with the participation of 650 volunteers, 466 of whom contributed 3,206 of their working hours. The remaining 184 have collaborated outside of business hours with a contribution of 403 hours.

As a result of these activities, in 2017, more than 10,800 people have benefited.

ENDESA, as founding member of *Voluntare,* has continued in 2017 to support this international initiative to promote corporate volunteering, formed by companies and entities of the third sector.

Given the good acceptance among employees and the positive impact on the community where ENDESA operates, the following initiatives in Spain have been continued this year:

- **Energy volunteering:** Social project in the energy sphere, promoted by ENDESA and the ENDESA Foundation through which employees have the possibility of engaging in joint activities as volunteers, helping households in a situation of energy poverty. As part of this volunteering, in addition to the active personnel, pre-retirement age personnel from the company also participate in the ECODES initiative and collaborate as principal NGO and coordinating NGO for other locations for execution of the programme. These local NGOs collaborate with social services for the region that select families and a group of professional installers to make improvements on the homes. In 2017, a total of 4 NGOs participated at the local level (Cruz Roja, Provivienda, Ecoserveis and Ozanam Foundation) in five territories: Zaragoza, Barcelona, Seville, Puerto del Rosario (Fuerteventura) and Candelaria (Tenerife), with a total of 108 volunteers and 122 participating families, which could translate into over 300 beneficiaries. The total average potential savings was 21% with a maximum of 49% in one of the homes. It is estimated that, after implementation of energy efficiency measures, it is possible to achieve an additional 10% savings on the bill. Additionally, work by some 15 installers was facilitated and training was given in energy efficiency for around 275 people among private individuals and NGO workers.
- **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. In 2017, it was held in As Pontes (A Coruña) and Tenerife with the participation of 26 volunteer employees which benefited 118 students.
- **Coach project:** In collaboration with the Exit Foundation, this volunteering aims to improve the employability of young people 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. With this initiative, 59 people have benefited in 2017 with the support of 60 ENDESA volunteers.
- **Sabes + si compartes lo que sabes (You know more if you share what you know) project:** This programme gives employees the opportunity to contribute to improving the social and occupational integration of people actively seeking employment. The skills, knowledge and experience of ENDESA's employees are enhanced through a training programme in which each individual volunteer is both trainer and trainee. In 2017, 72 people benefited with the support of 11 ENDESA volunteers.
- **Solidarity races:** In 2017, ENDESA again took part in two solidarity races: III Atades Race for a New School (21 volunteers), and 'There Is A Way Out' from Gender-Based Violence Race (45 volunteers).
- **Let's talk without barriers:** Project where volunteers who are native or bilingual in English or Italian, have

conversation sessions, *on-line* or by telephone, with disabled university students in order to practice the language to increase their employability. In 2017, 7 ENDESA volunteers participated and helped benefit the same number of persons.

- **Women victims of gender-based violence:** Volunteering programme, in collaboration with the Integra Foundation that seeks to improve the employability of women who are victims of gender-based violence through training workshops. During this second event held in Madrid, 26 ENDESA volunteers took part, benefiting 56 women victims of gender-based violence.
- **Christmas collection campaign:** This campaign seeks to help disadvantaged people by collecting non-perishable food and hygiene products, in order to donate them to organisations like the Food Bank or other social organizations. In 2017, it was held in the Canary Islands where 5,174 kg of non-perishable food was collected thanks to the solidarity of all ENDESA employees in the islands and especially to the work of the volunteers that manned the locations for donations and organized the collection by different collaborating entities on each island. Likewise, 1,088 toys were donated.
- **First Tour in Electric Vehicle to promote sustainable mobility:** From May 24 to June 11, in 14 stages, 24 ENDESA employees belonging to the Electrical Mobility Plan, travelled to 19 Spanish cities in the company of a comedian, publicising sustainable mobility in a practical and close-up manner, an emission-free trip.

ENDESA promotes social integration and employability of youths at risk of social exclusion with the Coach project

The Coach project is an initiative developed by the Exit Foundation in collaboration with ENDESA that helps youths at risk of social exclusion receive occupational training and has been held in all of the company's branches.

In all, in the five territories in which ENDESA is present, 63 volunteers have participated who, during the two months duration of the programme, have contributed to the development and integration of the same number of youths as well as to the improvement of their professional skills and their bond with the company through a tangible socially responsible action.

These beneficiaries, between the ages of 16 and 19, come from a background of school failure and lack role models in their family or in their immediate environment to guide them in their occupational future. Thanks in part to the help of the volunteers, 78% of them passed at the end of the course and 84% continued with their studies with the goal of achieving employment in the future.

7.5. Socially responsible investment

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 ASG 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.

See *section 3.1. Materiality study* in this chapter for further information.

8. ENDESA: a safe and healthy environment

103-1 EUSS Health and safety at work | 103-2 EUSS Health and safety at work | 103-3 EUSS Health and safety at work | 102-11

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.

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 2017 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 ENDESA´S working procedures and in actions or behaviour which are not acceptable from an Occupational Health and Safety standpoint.

Additionally, Safety Walks are held. These are visits to jobs that the business´ Senior Management carry out accompanied by the Joint Occupational Health and Safety service to check that the actions are performed in accordance with the established health and safety criteria.

In this framework of action, timely audits have likewise been performed on contractor companies.

Throughout 2017, integration of Enel Green Power within the ENDESA structures has been consolidated, including EGP's adherence to the Joint Occupational Health and Safety Service. As a result, all companies that are part of EGP will be incorporated into the Joint Occupational Health and Safety Service to the extent that the contracts in effect for the different External Prevention Services are nearing expiration.

Likewise, events of great repercussion have continued to be held throughout ENDESA, such as the World Day for Health and Safety at Work; the Stress Policy has been implemented and has been made available to internal personnel and the Stop Work Policy has been made available to collaborating companies.

Finally, 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 different General Managers and the CEO also incorporate indicators and objectives in this regard.

With the aim of continuing to promote Occupational Safety and Health, ENDESA has set the following objectives in its ENDESA 2018-2020 Sustainability Plan:

Occupational health and safety objectives in the ENDESA 2018-2020 Sustainability Plan

Safety

+200,000

Safety inspections at our own facilities and those of contractors in 2018-2020

+36

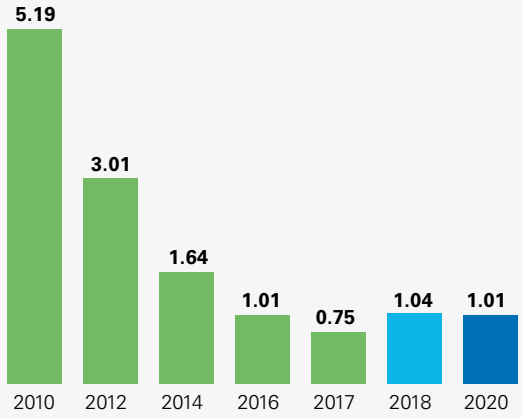
Inspections evaluated by the EcOS (Extra Checking On site) program

Health concerns

+15,000

Medical examinations performed in the 2018-2020 period

Accident rate



(1) 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 in 2016. Furthermore, they consider the investment percentage in ANAV (85.41%).

8.1. Standard Occupational Safety and Health Management

403-3

The Delfos tool, designed by ENDESA, addresses all Occupational Health and Safety processes, accident management, medical check-ups, safety inspections, risk assessment, preventive planning, etc. 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

8.2. Occupational health and safety, training and inspections

During 2017, ENDESA has given a total of 106,096 hours of occupational health and safety training to its own employees. 3,390 people have attended occupational safety and health training courses.

During 2017, 74,180 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 impact on reducing the number of work-related accidents. Likewise, the number of Safety Walks performed in 2017 came to 300.

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 committee must be formed which analyses them in detail and under the methodology of *Root Cause Analysis*. 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 made aimed at informing the rest of the organisation on the measures to avoid that type of accidents.

8.3. 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 as they are more efficient at Group level in our fight against accident rate.

According to the results of the 2016 occupational climate, health and safety survey and after identifying the different areas for improvement, a set of actions of a diverse nature were carried out in 2017 in the interests of promoting knowledge, preventive culture and commitment in Occupational Risk Prevention.

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.

Likewise, the Company promotes initiatives which contribute to promoting a culture of Occupational Health and Safety, mainly through different occupational

health and safety campaigns performed from the Joint Occupational Health and Safety Service. These activities include the following programmes:

- Respiratory Diseases.
- Stress Prevention Plan.
- Sedentary Lifestyle 'Get Training Fit Programme'.
- Healthy Diet.
- Osteo-Muscular Disorders.
- Alcohol, Tobacco and Other Substances.
- Cancer.
- Cardiovascular Diseases.

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 2.60% in 2017.

Likewise, a total of 5,030 medical check-ups were performed on ENDESA's employees to improve their health and prevent risks.

It serves as an example that in the framework of the shock plan against respiratory diseases, yet another year the flu vaccination plan was performed for all employees.

Likewise, with the objective of learning the degree of awareness of our workers regarding occupational safety, the questionnaire SF36 was randomly sent out.

On the other hand, during 2017, the usual lines of action have continued to be implemented, including the following:

- Safety Inspections.
- Vendor Rating monitoring and application of sanctions in the event of safety breaches.
- Communication and analysis of accidents and near misses.
- Dissemination of research and good practices.
- 'Personalized Safety plans', 'Extra On-Site Checking' in the Generation business.
- Internal and external audits.
- Intrinsic safety in the installations and equipment.
- Appraisal of Psychosocial Factors.
- Awareness-raising campaigns about different risks and unsafe acts.

Once the issuance of reports phase corresponding to the Psychosocial Risk Appraisal was completed in which the factors relevant to all of ENDESA's companies were analysed, then those preventive measures that might positively result in a reduction of the psychosocial factors load in the occupations was included in preventive planning for all lines of business. A method to evaluate the efficacy of implementation of these measures in the organization was designed.

8.4. Occupational Health and Safety Committees

403-1

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 Occupational 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 Occupational 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 Article118 forward of our Framework Agreement.

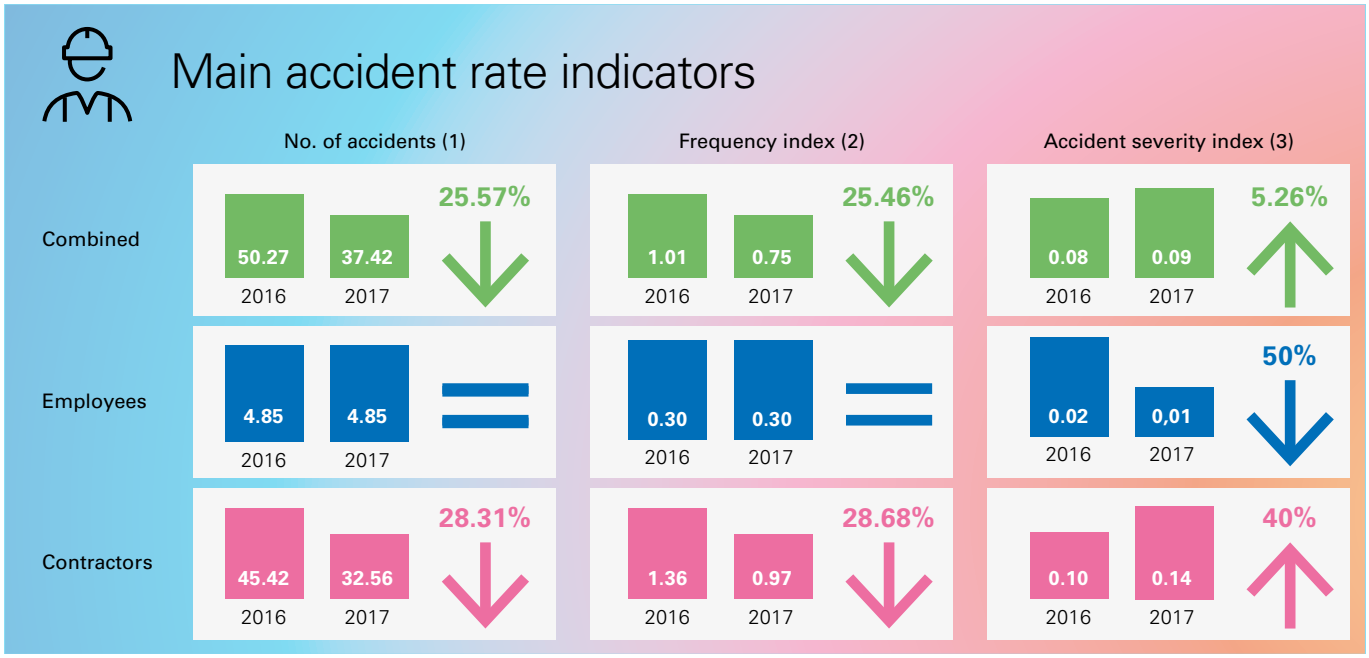
8.5. Drop in Accident Rate

403-2 EU25

All of the work and effort carried out by ENDESA regarding occupational health and safety has led to a significant reduction in accidents in 2017 compared to previous years. In that respect, it is worth pointing out:

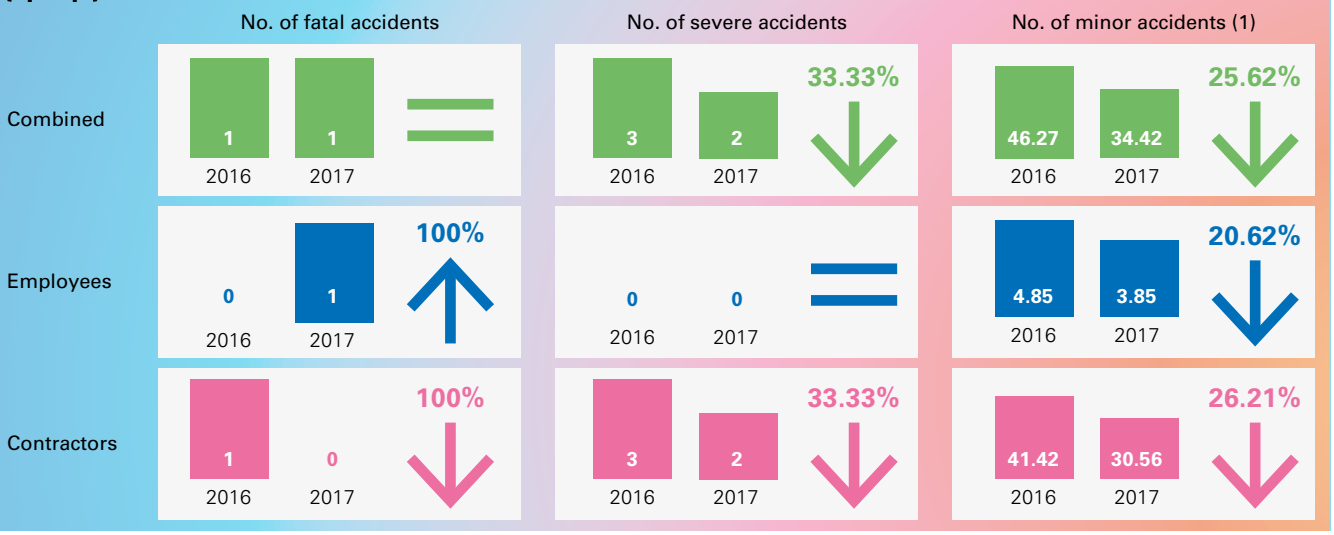
- The 25.46% reduction in the combined frequency index (employees and contractors), with respect to 2016.
- The reduction of 25.57% in the number of accidents of employees and contractors, with respect to 2016.
- ENDESA regrets the occurrence of a fatal accident in the 2017 fiscal year, an accident involving its own personnel.
- The absenteeism index has been reduced 2% with respect to 2016.
- The number of days lost by employees due to absence during the year has been reduced by 29%.

ENDESA investigates any incident that occurs in its facilities and in the event that the accidents are relevant, serious or fatal, it forms an investigation commission which analyses the primary causes of the accidents. The methodology used in these analyses is based on the root cause method. All participants on these investigation commissions have specific training in accident investigation using this method.



(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%).

Classification of accidents



(1) Includes accidents with leave between 2 and 30 days.

Classification of accidents by gender

Contractor accidents broken down by gender in 2017

	No. of fatal accidents	No. of serious accidents	No. of minor accidents
Total	**0**	**2**	**30.6**
Men	0	2	28.6
Women	0	0	2

Internal personal accidents broken down by gender

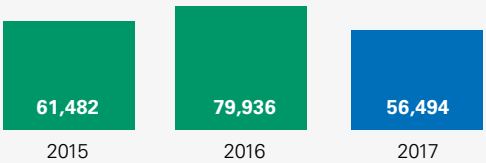
	No. of fatal accidents			No. of serious accidents			No. of minor accidents		
	2016	**2017**	Dif.	2016	**2017**	Dif.	2016	**2017**	Dif.
Total	**0**	**1**	**100%**	**0**	**0**	**—**	**4.85**	**3.85**	**–20.62%**
Men	0	1	100%	0	0	—	3.85	3.85	—
Women	0	0	—	0	0	—	1	0	–100%

* Until 2014, the data relating to ANAV, including number of accidents, hours worked and days lost are reported based on shareholding investment of ENDESA in the Association established by 85.41%.

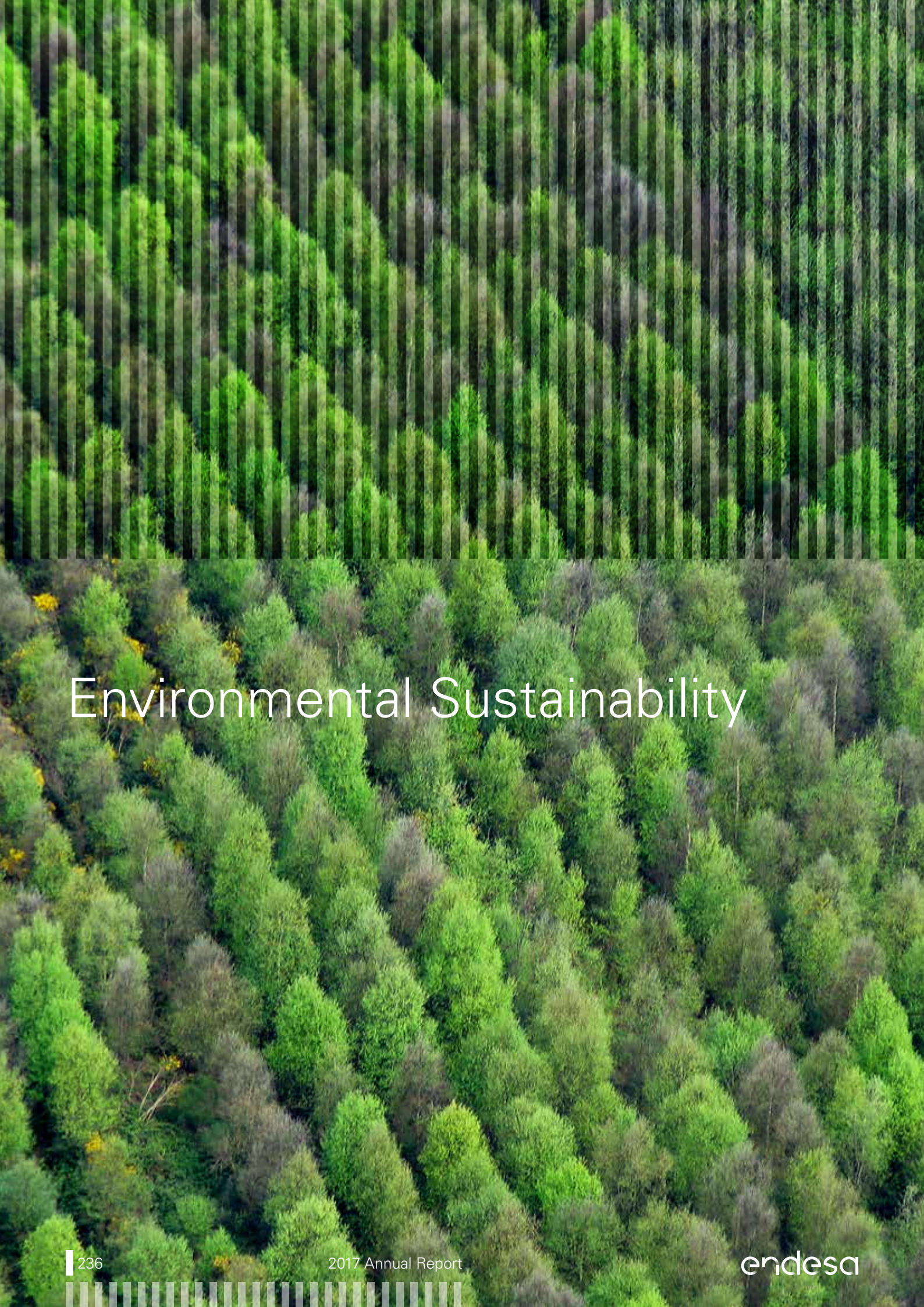
Absenteeism and days lost by employees due to absence

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.



Environmental Sustainability

1,635

Millions of euros of accumulated environmental investment

100

% of the generation and distribution certified by ISO 14001

88 and **43**

% reduction of SO_2 and NOx emissions compared to 2005

25

biodiversity actions performed in 2017

Endesa Sustainability Plan compliance 2017-2019

Strategic Priority	Course of Action	2017 Target	Results 31/12/17	Key actions
Operating efficiency and Innovation	Efficiency of the renewable energy facilities (availability).	96%	94.6%	> Actions to improve efficiency in maintenance of renewables and hydraulic facilities.
	Efficiency of the hydraulic power facilities (availability).	98.2%	99.3%	
	ISO 9001-certified thermal generation facilities.	100%	100%	> In 2017, the Management Systems was integrated, incorporating the quality requirements in compliance with the standard UNE-ISO 9001 into it.
	ISO 9001-certified renewable generation facilities.	100%	100%	> ENDESA has expanded the scope of certification of its management system, extending it to all of its facilities (hydraulic, wind powered, solar and biogas), in compliance with the international standards ISO 14001, ISO 9001 and OHSAS 18001.
	Electricity losses in distribution (%).	7.9%	8.12%	> Plan to fight electricity fraud. > Actions for improvement of the distribution grid.
Environmental Sustainability	Reduction of environmental footprint (vs 2016 estimate).	3.2%	1.7%	> Implementation of environmental management systems in generation and distribution operations as well as in certain buildings.
	Specific SO_2 emissions (g/kWh).	0.91	0.77	> Desulphurisation and denitrification projects in the Compostilla and Teruel thermal power plants.
	Specific NO_x emissions (g/kWh).	1.15	1.07	
	Specific particulate emissions (mg/kWh).	33	23	
	Specific Water Consumption in Generation (M^3/MWh)	0.93	0.84	> Efficiency actions in water consumption at the thermal and nuclear power plants within the framework of the environmental management systems.
	Hazardous and non-hazardous waste from generation (ton).	45,000	24,157	> Implementation of operating procedures to improvement waste management and minimize its production.
	Execution of biodiversity preservation projects.	20	25	> Implementation of biodiversity preservation programme.

(continued)

Endesa Sustainability Plan compliance 2017-2019

Strategic Priority	Course of Action	2017 Target	Results 31/12/17	Key actions
Environmental Sustainability	Electric vehicles purchased by employees.	500	534	> Electrical mobility plan for employees.
	Electrification of the fleet (electric vehicles).	110	94	> Sustainable mobility actions within the framework of the Sustainability of Resources Plan aimed at promoting electrification of the fleet, its optimization and responsible and sustainable use of the transport resources for professional reasons.
	Electrification of parking places at ENDESA'Sbranches.	200	365	
	Furtherance of e-car sharing (km travelled).	120,000	95,459	
	Reduction of CO_2 emissions in fleet management (vs 2016).	2%	17%	
	Power consumption in buildings (GWh).	31.2	31.8	> Preparation and application of the Standards Guide for Construction of Offices at ENDESA to improve energy efficiency.
	Water consumption in buildings (mil m^3).	63.5	54.6	> 15 branches have a triple certification system: ISO 14001, ISO 50001 and UNE 171330-3.
	Reduction of space in offices as a whole (m^2 reduced).	10,800	5,583	> PIMO Plan (Comprehensive Office Improvement Plan).
	Investment for the integration of space into the surroundings (MM €).	4	2.3	
	Social and environmental action on company assets.	8	13	12 sustainability actions on unused assets: > Assignment of various sections of the highway to the Council of Susqueda (Gerona) to serve as a connecting artery. > Collaboration with the Council and Consortium of Besós for adaptation of the old dock for the Besós thermal power plant as an artificial reef that would encourage the development of marine fauna (Barcelona). > Assignment of several sports facilities to the As Pontes Council for their recreational and sports use.

1. Environmental management

103-1 Materials | 103-2 Materials | 103-3 Materials | 103-1 Energy | 103-2 Energy | 103-3 Energy
103-1 Environmental Compliance | 103-2 Environmental Compliance | 103-2 Environmental Compliance

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 industrial 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.

1.1. ENDESA's Environmental Policy

103-1 Materials | 103-2 Materials | 103-3 Materials | 103-1 Energy | 103-2 Energy | 103-3 Energy
103-1 Environmental Compliance | 103-2 Environmental Compliance | 103-2 Environmental Compliance

ENDESA approved and published its first environmental policy in 1998. Since then, it has evolved to adapt 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 environmental policy
Basic principles for acting

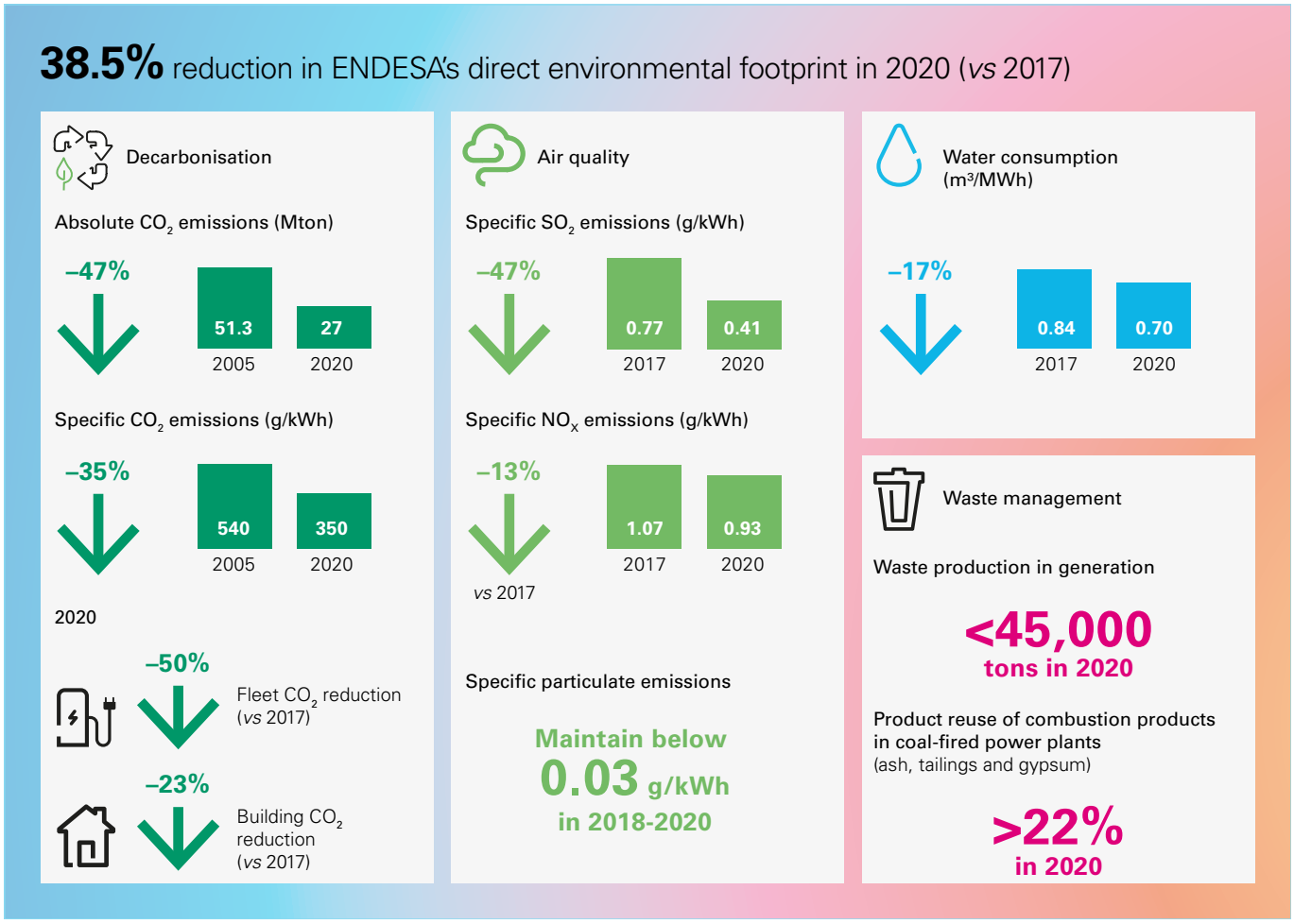
- **Integrating environmental management and the concept of sustainable development within the corporate strategy of the Company, using environmental criteria documented in the planning and decision-making processes as well as in the process of analysing new business opportunities, mergers or new acquisitions.**
- **Maintaining continuous monitoring of compliance at all centres with legislation in effect and voluntary agreements adopted, and periodically reviewing the environmental behaviour and security of its facilities, advising 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 their activity, reducing negative impact to a minimum and compensating for 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 interest groups.**
- **Requiring that its contractors and providers implement environmental policies based on these same principles.**

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 interest groups. Consultations made within the framework of the 2017 materiality study brought to light that the most relevant environmental issues for promotion of a sustainable business model are decarbonisation of energy mix and minimization of environmental impacts. Thus, ENDESA has recognized the following objectives for the year 2020 in its Sustainability Plan.

38.5% reduction in ENDESA's direct environmental footprint in 2020 (*vs* 2017)



1.3. Significant investment effort

ENDESA makes a significant effort to achieve excellence in environmental management.

Thus, during 2017, ENDESA's activities in environmental activities have meant an increase of 1.9% with respect to 2016, which has contributed to an increase in accumulated investment of 7.2% in 2017.1.

Annual gross environmental investment

	Millions of Euros		% Var.
	2017	2016	
Property, plant and equipment			
Generation and Marketing	92	93	(1.1)
Distribution	18	15	20.0
Structure and others	—	—	N/A
Total	**110**	**108**	**1.9**

Accumulated Gross Investment Environment

	Millions of Euros		% Var.
	2017	2016	
Property, plant and equipment			
Generation and Marketing	1,290	1,198	7.7
Distribution	345	327	5.5
Structure and others	—	—	N/A
Total	**1,635**	**1,525**	**7.2**

Annual Environment costs

	Millions of Euros		% Var.
	2017	2016	
Annual Expense			
Generation and Marketing	69	59	16.9
Distribution	31	17	82.4
Structure and others	—	4	(100.0)
Total (1)	**100**	**80**	**25.0**

(1) Of total environmental expenditure, 45 million euros in 2017 and 25 million euros in 2016 went to depreciation and amortisation of the investments.

Itemisation of investments

	2017(Millions of Euros)*
Waste management	0.37
Protection of atmospheric air	74.4
Protection of biodiversity	3.7

*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

201-2

To comply with the requirements of the Spanish Environmental Responsibility Law,within the periods established in Ministerial Order APM/1040/2017 of 23 October 2017, ENDESA has developed the MIRAT Project, which aims to establish the compulsory financial guarantee required by this law for our conventional thermal and combined-cycle power plants with a thermal capacity of over 50 MW, through an environmental risk analysis.

According to the periods established in the aforesaid Ministerial Order, the mandatory financial guarantee shall be set if so required in light of the results of the environmental risks analyses.

The methodology used to perform the environmental risks analysis has been created on a sector level and has been approved by the Ministry of Agriculture, Food and the Environment of Spain.

As a result of its commitment to protecting the environment, ENDESA feels 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 be reflected in their elimination, disposal or reuse.

Environmental liabilities may be classified as high, average or low, depending on their potential environmental impact, risk for people and their scope and surface area.

In 2015, the demolition tasks for the old thermal power plants of Badalona and Santa Adria finalised. The work has commenced to recover the soil and groundwater with the aim of restoring the site to the conditions prior to the start of any industrial activity, works which have continued during 2017.

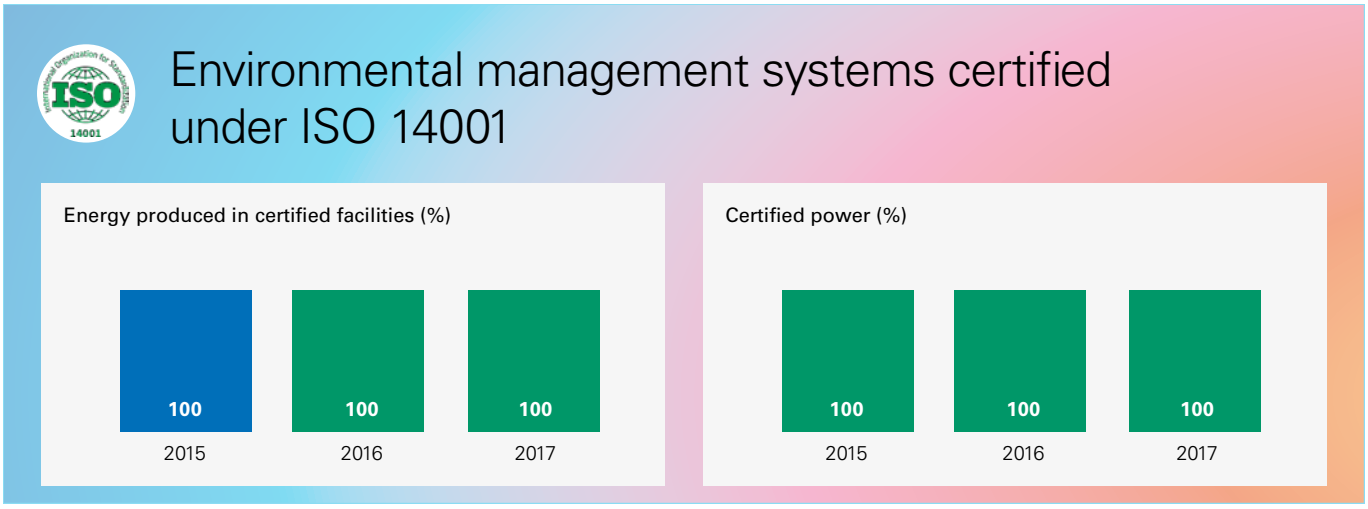
1.5. Environmental management systems

ENDESA is committed to achieving excellence in the environmental management of its business activity through the value chain. Hence, its 2017-2019 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 2017, is maintained in the new 2018-2022 Sustainability Plan.

1.5.1. Certification of environmental management systems

1.5.1.1. Thermal generation

At year-end 2017, all of ENDESA's installed thermal capacity was certified according to the standard UNE EN ISO 14001:2014 as well as all of its port terminals and mining operations.



In 2017, ENDESA obtained certification of the Environmental management system under Standard ISO14001 in a multi-site model for all port terminals. This has made it possible to achieve uniformity and process homogenisation, establishing common goals and proposing the actions necessary for continuous improvement.

In 2016, ENDESA GENERACIÓN obtained certification of its Environmental Management System under the International Standard UNE EN ISO 14001:2004 through a multi-site model for its thermal generation facilities.

In 2017, the Management System became integrated, incorporating the occupational quality, Health and Safety requirements according to the stand-

ard UNE-ISO 9001 and OHSAS18001, achieving use of a firm and aligned control and management plan.

In addition, during 2017, ENDESA GENERACIÓN has been working on upgrading the Integrated Management System to be adapted to the new version of the standard UNE EN ISO 14001:2015, always seeking the objective of continued improvement, planning for its certification under this new version this year, 2018.

What is more, 78.3% of the installed net power or capacity of all ENDESA thermal power plants is produced in plants registered with the European EcoManagement and Audit Scheme (hereinafter, 'EMAS'). Likewise, all port terminals are registered in EMAS.

1.5.1.2. Renewable generation

ENDESA has expanded the scope of certification of its management system in 2017, extending it to all of its facilities (hydraulic, wind powered, solar and biogas), in compliance with the international standards ISO 14001, ISO 9001 and OHSAS 18001.

1.5.1.3. Distribution

All energy distributed by ENDESA and its associated infrastructure is managed under a single certified system, which guarantees identification, surveillance and control of environmental impacts that its facilities and operations could generate. That management system is based on international standard ISO 14001 and is audited annually by an official accreditation agency.

In 2017, it maintained the ISO 14001 certificate, having satisfactorily exceeded the external audit carried out by the Spanish Standardization and Certification Association (AENOR), the entire organization's involvement in the pledged objectives and environmental goals thus being approved for another year. Further, adaptation of the management system to the new standard ISO 14001:2015 was validated, as a result of which ENDESA has incorporated an analysis of environmental requirements of its interested parties and an evaluation of the risks and opportunities relating to its environmental management. Likewise, the environmental processes relating to communication (internal and external) have been reinforced with environmental training and sensitivity for personnel and those relating to general planning processes (qualification of providers, purchasing of equipment and services, project design, etc.).

In July 2017, an update of its Environmental Policy for the business was published, specifying strategic environmental objectives specifically relating to its activities and infrastructures and including its medium- to long-term strategic corporate vision. This document is available on ENDESA's web page and was also sent to the Company's most relevant suppliers and collaborators, in order to make them participants in the environmental protection and pollution prevention commitment.

Additionally, in 2017 it worked to update certain environmental technical instructions related to achieving improvement in the environmental performance of the Company (e.g. in management of oils and equipment containing it, storage of chemical substances and operational control of electromagnetic fields, noise and vibrations).

1.5.1.4. Resale

In July 2017, ENDESA Energía obtained the certificate for its Integrated Management System (SIG). This System certifies the capacity of the gas and electricity resale business to provide products that meet the customer's requirements, which comply with the applicable regulatory requirements and regulatory requirements regarding quality and the environment.

The principal objective of the SIG is to seek to and achieve continuous improvement in the main processes of gas and electricity resale, placing special emphasis on processes directly related to customers.

The SIG also includes the commercial fleet in its scope, a fleet that is currently hybrid and electric. The commitment in this scope appears through incorporation of an objective of reduction of CO_2emissions in the annual objectives Programme.

1.5.1.5. ENDESA offices

During 2017, 15 branches have a triple certification (SIGAEC) system: Environmental Management (ISO 14001), Energy Efficiency Management (ISO 50001) and Indoor Environmental Quality (UNE 171330-3). At certified branches, there is a total of 4,000 employees (representing 58% of the work force that work in offices) and representing 57% of the total office floor area.

The commitments acquired by the Resources Department is to expand the energy management, environmental and indoor air quality models for the buildings with an ENDESA office park, including new buildings or large remodels. Such is the case with the Omeya (Cordoba) building that was incorporated into the SIGAEC in 2017 and was remodelled during 2015-2016 (Energy ticket A) and the Aznar Molina building, the new Aragon branch, the remodel of which was finished in December 2016 (Energy ticket B).

Aznar Molina Building

During the 2017 year, it has continued with improvement of the environmental, energy and indoor environmental quality management processes and as a result, improvement of control over environmental, energy and indoor environmental quality management and the resulting assurance of compliance with legal requirements, objectives and other voluntary commitments acquired by the Organization.

Issuance of the Leed Gold certification 'Leadership in energy & environmental design' for ENDESA's corporate headquarters (Madrid)

LEED certificates are quality seals that are issued to buildings to certify that they have been designed and constructed in a sustainable manner that is respectful of the environment, taking into account strategies aimed at improving their environmental performance.

This voluntary certification is based on cooperation in the building design with all aspects relating to energy efficiency, the use of alternative energies, improvement of indoor environmental quality, water consumption efficiency, sustainable development of free spaces on the lot and selection of materials.

By obtaining seals such as the LEED Gold at Ribera de Loira, ENDESA promotes efficient and responsible management of its buildings as an essential part of its activity.

1.5.2. Environmental authorisations

The project for upgrading of the As Pontes de García Rodriguez thermal power plant to the European Emissions Directive includes 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. Due to the execution of these actions not being planned simultaneously, the processing of the pertinent authorizations was done through two different projects.

Processing of environmental and administrative authorizations of the NO_x ($DeNO_x$) reduction began in 2016. In May of that same year, the Resolution of the Galicia Government Council was obtained, through which the project was qualified as a non-substantial amendment of the comprehensive environmental authorisation for the power plant. In the month of March 2017, a favourable Decision was obtained from the Ministry of Agriculture and Fishing, Food and the Environment for the environmental impact assessment process. Currently, the works for this project are in development and some parts of it have been commissioned.

With regard to the reduction of SO_x emissions project ($DeSO_x$), the requests for a Decision on the non-substantial amendment of the project and the environmental impact assessment were made in January 2017 to the same Public Administrations as in the earlier case. The Resolution for the environmental impact assessment was made in September and that of the non-substantial amendment in October. At this time, the project work has begun.

It is worth noting that, despite handling projects for the purpose of obtaining an improvement in the environmental behaviour of a power plant by reduction of the concentration of pollutants in their atmospheric emissions, it is necessary to carry out the procurement process for environmental authorisation for the projects since the possible impacts on the rest of the environmental vectors should also be assessed.

Enel Green Power España was awarded 879 MW of renewables in the auctions held during 2017, 540 MW of wind power in the auction held in May and 339 MW in photovoltaic power in the auction held in the month of July. All power awarded should be in operation no later than 31 December 2019, therefore, during 2017, the pertinent environmental processes were begun. It is worth noting that one of the milestones of the aforesaid wind power auction was met, by having identified the projects to be developed in order to reach the top figure awarded of 540 MW. The aforesaid projects are located in Aragón, Andalusia, Castile and León, Castilla-La Mancha, Asturias and Galicia.

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

416-1 | 103-1 EUSS Spills and waste | 103-2 EUSS Spills and waste | 103-3 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, radiation monitoring is carried out of the surrounding environment by analysing the air, 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

Management focus 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. Dismantling

Management focus EUSS Dismantling of plants

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 to monthly by the owners of the nuclear facilities.

1.7. Environmental Sanctions

307-1

Despite ENDESA's efforts to go beyond the environmental legislation, during 2017 some environmental incidents have been recorded.

For more information, see chapter *Learning about ENDESA,* section 5.7 *Sanctions Received.*

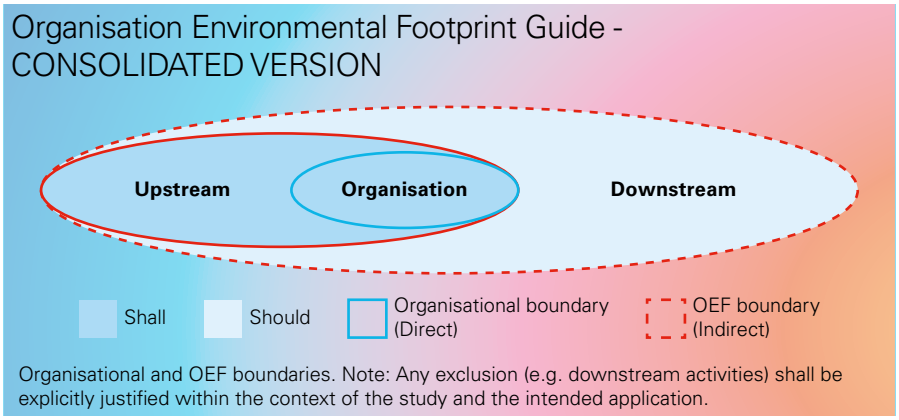
2. ENDESA's environmental footprint

ENDESA calculates its environmental footprint based on the own calculation methodology based on 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.

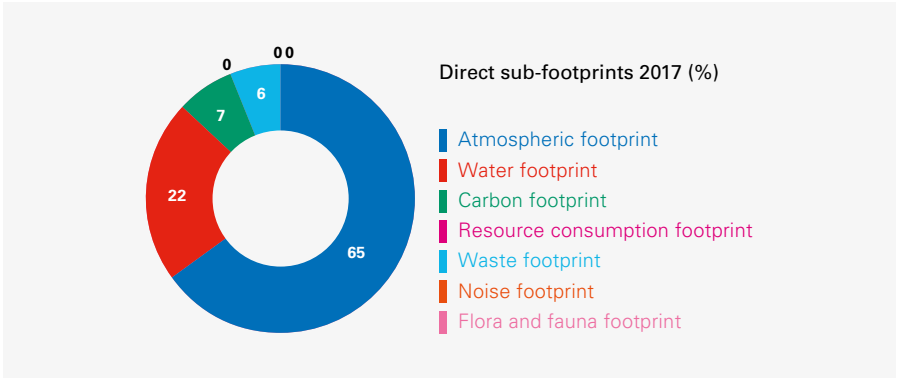
ENDESA's commitment to excellence in environmental sustainability, and with the most advanced trends in environmental management, has led it to establish environmental footprint reduction objectives within its 2018-2020 Sustainability Plan that involve a reduction of over 38% in 2020, with respect to 2017.

Likewise, in 2017 the company established a goal to reduce by 3% compared to 2016. However, the result achieved has actually been 1.7% lower than it was for the year 2016, slightly lower than the planned objective.

The development of the most representative environmental indicators during 2017 has not been positive due to weather conditions throughout the year. The 2017 year closed as the hottest and second driest since 1965; precipitation between 1 October and 26 December was 44% lower than average. This situation resulted in greater usage of thermal power plants with the resulting negative impact on the development of the environmental indicators. This fact has prevented ENDESA's investment efforts dedicated to reducing the environmental impact of its activity being reflected in 2017 in an improvement in the indicators. This fact is demonstrated both in the individual indicators (shown in the following sections) as well as the value of the environmental footprint representing them as aggregate data.



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. Energy Resources

103-1 Materials | 103-2 Materials | 103-3 Materials | 103-1 Energy | 103-2 Energy | 103-2 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.

2.1.1. Electricity Consumption

302-1

During 2017, there was a reduction in the consumption of electricity from the hydraulic pumping power plants due to lower operation and an increase in thermal production power plants as a result of greater production.

Electricity consumption (GJ)*

	2016	**2017**
Thermal power unit (TPU)	6,931,183.3	8,162,076.8
Hydroelectric Power Unit (HPU)	487,954.0	350,096.4
Hydroelectric pumping stations	3,517,513.5	2,011,836.8
Nuclear power	3,861,835.2	3,939,458.4
Mining operations	5,977.2	1,682.3
Port terminals	27,092.2	29,250.9
Wind power	154,103.7	688,269.2
Photovoltaic power	567.1	2,153.7
Biomass generation	Included in thermal production	166.0
Office Buildings	95,902.4	100,037.0
Total	**15,082,128.8**	**15,285,027.6**

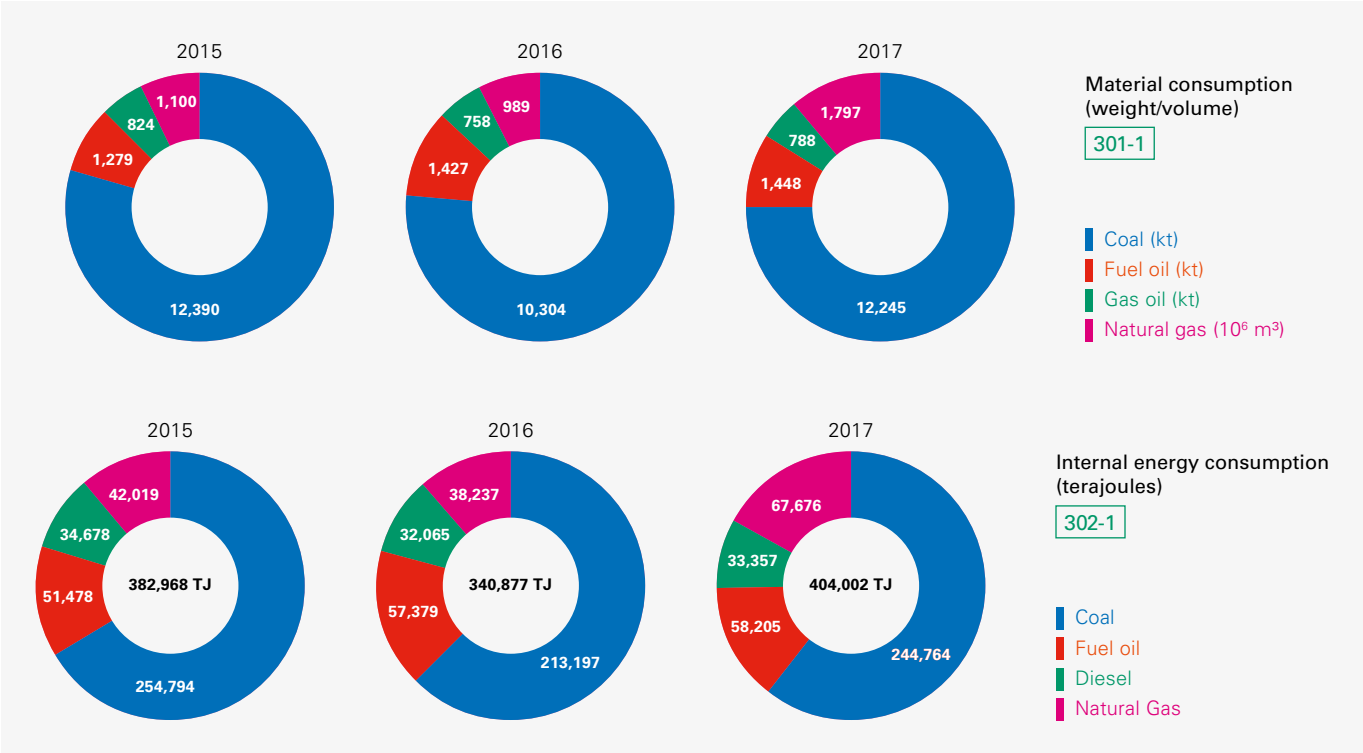
*GJ: Giga Joules

2.1.2. Fossil fuel consumption

301-1 302-1 302-2

The materials used to produce electricity are mainly fuels and are considered non-renewable. A greater consumption was observed in all fuels due to greater 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.



2.1.3. Other consumption

EU11

ENDESA uses other consumables necessary for electricity production. During 2017, total consumption has been 577 kilotons, 38% greater than in 2016 (418 kilotons) in Spain and Portugal.

ENDESA consumables (tons)

Spain and Portugal	2016	**2017**
Lime	570.59	524.41
Iron chloride	442.81	450.83
Ammonia	102.1	707.46
Caustic soda	786.42	959.42
Sulphuric and hydrochloric acid	440.78	2,074.18
Sodium hypochlorite	621.19	762.18
Chlorine dioxide	1.16	1.77
Magnesium oxide	134.31	128.00
Limestone used for combustion-gas desulphurisation	408,565.11	559,569.94
Lubricating oil	5,763.85	5,423.03
Dielectric oil	242.66	5,751.25
Other*	350.43	467.40
Total	**418,021.39**	**576,816.87**

* Includes chemical components used infrequently.

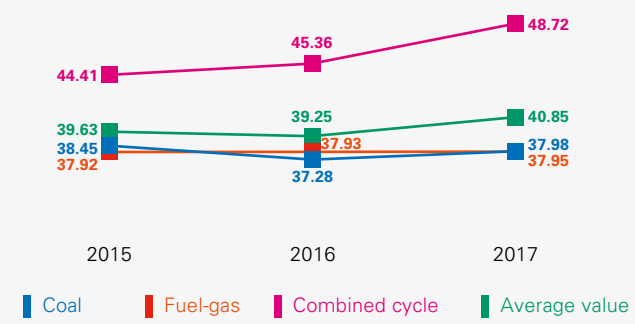
2.1.4. Energy efficiency and outage in electricity generation

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.

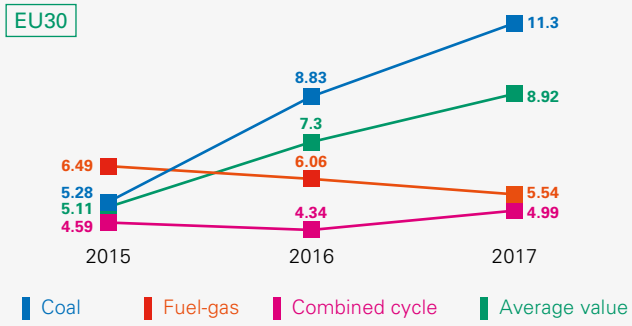
For ENDESA's generation business, the energy output obtained from the natural resources used is primordial. Thus, the efficiency of ENDESA's thermal power plants in 2017 increased in all technologies.

Energy efficiency of thermal power plants (%)



Unavailability of thermal power plants (%)

EU30



Power plant outage (%)

	Fortuitous outage	Outage for inspections	Total outage
Coal thermal power plants	6.25	6.54	11.3
Combined-cycle thermal power plants (Mainland)	3.06	2.88	5.90
Combined-cycle thermal power plants (outside the Mainland)	0.52	1.67	2.2
Thermal power plants with turbo generator	2.92	1.74	4.7
Diesel thermal power plant	3.33	3.67	7.0
Steam turbine thermal power plants	3.00	3.52	6.50
Average value	2.23	2.56	4.80

In 2017, the efficiency of the nuclear power plants has been 35.39% and outage 9.01%, well in line with the values of last year (efficiency: 35.36% and outage: 11.07%).

2.1.5. Energy efficiency in internal processes

302-4

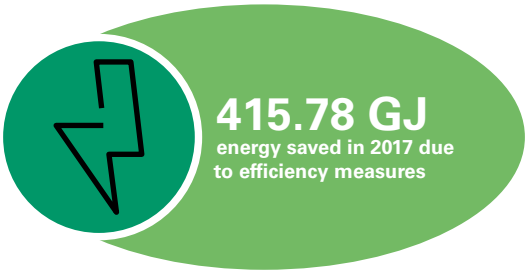
In 2017, ENDESA has saved 415 GJ of energy thanks to development of energy efficiency programs, including programs centred on process redesign or equipment and adaptation, in addition to changes in behaviour of its employees during their work. This energy saving is a decrease in the Company's carbon footprint and contributes to reducing the business' operating costs. During 2017, several efficiency measures were put into operation in the buildings, but no reduction was observed in their power consumption, mainly derived from an increase in consumption due to air conditioning.

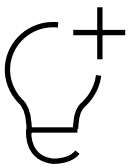
302-2

For the year 2017, it is estimated that external power consumption was 66.42 TJ, considering the fuel expense for vehicles of providers who usually work with ENDESA. The calculation was done based on a carbon footprint tool verified by AENOR according to UNE EN ISO 14064. The data may be modified since at the time of publication of this Statement, the external verification pro-

Energy savings due to conservation and improvements in efficiency (GJ)

Type of Fuel	2015	2016	**2017**
Process redesign	16,500.61	5.389.22	0
Equipment conservation and adaptation	6,503.94	10,322.88	415.78
Changes in staff behaviour	70.41	1,256.81	0
Total	**23,074.96**	**16,698.98**	**415.78**





Equipment conversion and adaptation

Replacement of two Group I mills with a more efficient model in Teruel thermal power plant, change of lighting at Alcudia thermal power plant.

cess was being performed according to standard UNE EN ISO 14064.

302-3

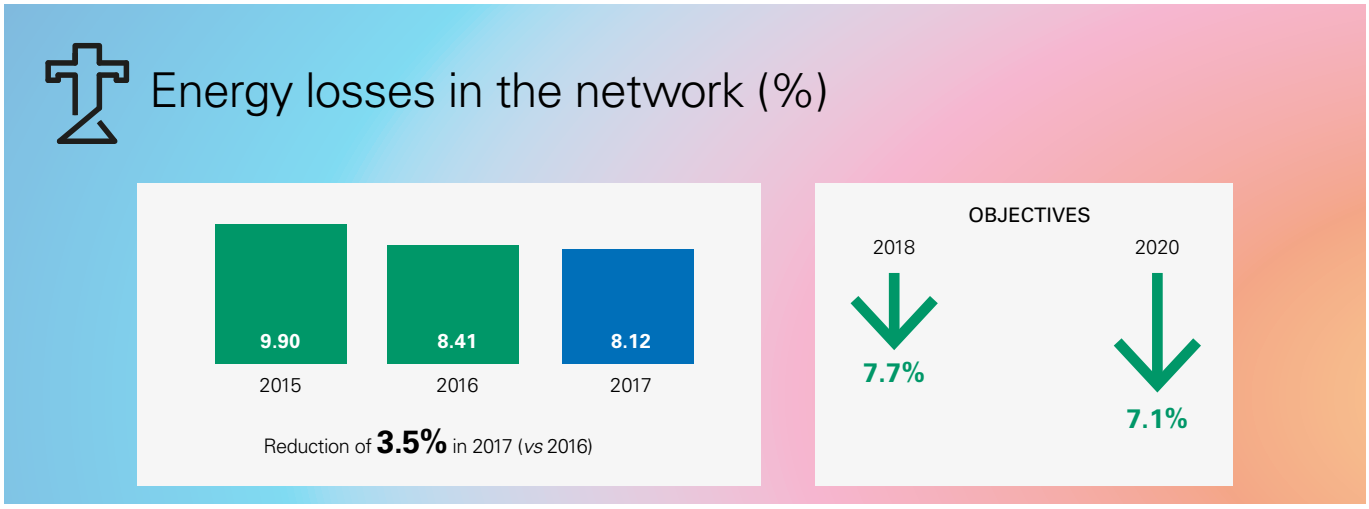
The energy intensity, understood as total energy consumption (TJ) per net production unit (MWh), in 2017 was 5.16 TJ/ MWh, compared with 4.90 TJ/MWh of 2016. The power intensity value is affected by the proportion in the different generation technologies and the operation of each during the year.

Domestic power consumption was considered for calculation of power intensity, The total energy consumption figure used to make the calculation includes the direct and indirect energy consumption, in addition to fuel consumption. Power intensity values were recalculated for the years 2016 and 2015 to harmonize the calculation criteria with those used for the Carbon Footprint.

	Total energy consumption (TJ)	Net production (MWh)	Energy intensity (TJ/ MWh)
2015	382,968	72,715	5.27
2016	340,877	69,566	4.90
2017	404,002	78,222	5.16

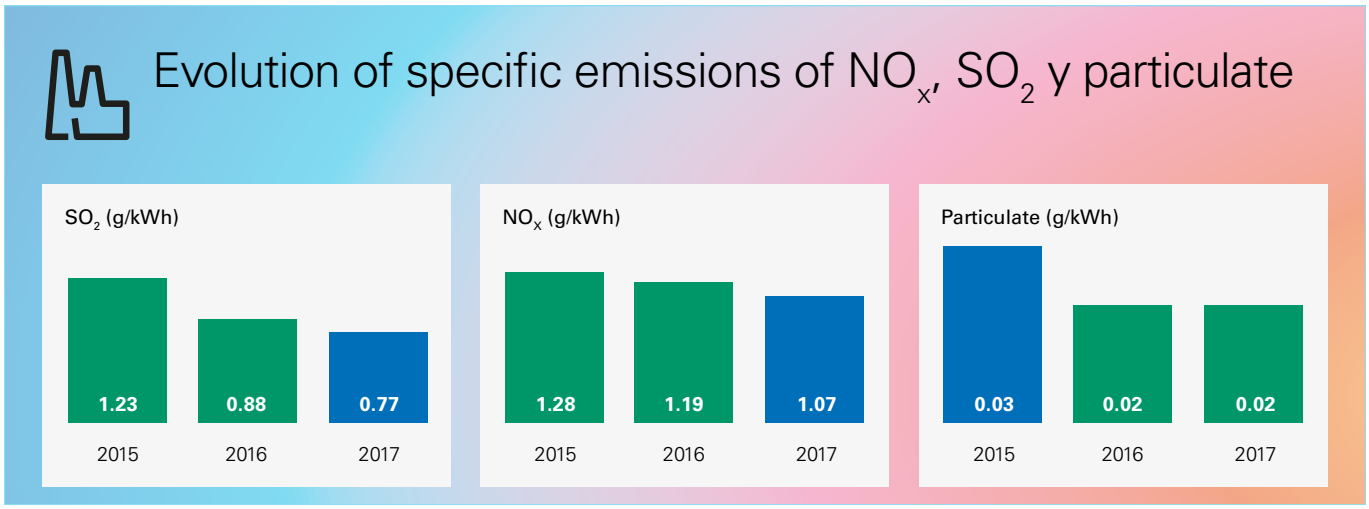
2.1.6. Energy losses on the distribution network

EU12



2.2. Air quality

103-1 Emissions | 103-2 Emissions | 103-3 Emissions | 305-1 | 305-2 EUSS | 305-3 | 305-4 | 305-5 | 305-7



Despite greater operation of the thermal power plants, a 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 2008-2015, when the National Emissions Reduction Plan was carried out (PNRE) 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, NOx and particles). Up to 2015, this brought about a reduction of 87% in emissions of sulphur dioxide (SO_2), a 62% reduction in nitrogen oxide (NO_x) emissions and an 83% reduction in particles 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, giving a progressive reduction of emissions between 2016 and mid-2020. This progressive reduction in emissions ceilings would mean for those ENDESA facilities part of the plan over 50% reduction for SO_2 and NO_x and approximately 40% for particulates between 2016 and 2020.

This mechanism (Transitional National Plan (PNT)) means, if possible, greater stringency and greater commitment to decreasing current emissions from ENDESA's main thermal power plants.

Likewise, in new mechanisms established by the industrial emissions legislation, the island facilities affected by Directive 2010/75/EC have had recourse to the Small Isolated Network Mechanism, whereby it extends the application of the Limit Emission Values with a view to being able to make the necessary investments to be able to comply with them by 2020.

During the 2017 year, the Best Available Techniques Reference or Best Reference Document (BREF) for large fuel facilities ('Commission's Execution Decision (UE) 2017/1442 of 31 July 2017 was approved, establishing conclusions regarding the best available techniques (BAT) according to Directive 2010/75/UE of the European Parliament and the Board for Large Combustion Facilities') and supposes the review and adaptation within a maximum of four years of the Comprehensive Environmental Authorisations for all thermal power plants to be adapted to and to adopt the best available techniques regarding performance and environmental management.

Within the framework of this new mechanism, important actions and procedures have already been performed in the power plants aimed at complying with the PNT and the emission levels demanded by the industrial emissions legislation, such as:

- In 2016, investment in units 1 and 2 of the Litoral de Almeria thermal power plant have been completed for the installation of denitrification (SCR) and desulphurisation systems of combustion gases. 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 the specific emission, emission reductions of about 70% were achieved for SO_2 and 30% for NO_x.
- In the As Pontes power plant, 2016 has seen approval of the investment to implement de denitrification (SNCR) techniques with urea injection and wet desulphurisation. These systems have been designed not only to meet the IED (Industrial Emissions Directive) must also reach the BREF (Best Available Techniques Reference), which are very significant reductions of SO_2 and NO_x emissions compared with current values. The actions are planned to begin in 2019.
- In 2015, ENDESA obtained the Decision from the regional ministries with authority over the Environment of the Autonomous Communities of Castile and Leon and Aragon, declaring the projects to adapt the thermal power plants of Compostilla and Teruel, respectively to be non-substantial modifications, with a view to the new demands of the Industrial Emissions Directive. These projects will consist of the installation of the equipment necessary to reduce nitrogen oxide (NO_x) emission levels below the limits indicated in said Directive.

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 2017 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 2017, investment was approved and installation of new Automatic Metering Systems was begun for atmospheric emissions in the chimneys of 15 fuel facilities: Ten turbines for the Canary Islands thermal power plants and five turbines for the Balearic Islands.

2.3. Emissions of ozone depleting substances

305-6 | 103-1 Emissions | 103-2 Emissions | 103-3 Emissions

Additionally, in Spain and Portugal 1.14 tons of CF11 equivalent were emitted, distributed as follows: 0.0031 tons of CFC (0.0031 tons of CFC11), 0.071 tons of HCFC (0.0036 tons equivalent of CFC11), 0.74 tons of R22 (0.041 tons of CFC11 equivalent) and 1.36 tons of Freon (1.091 tons of CFC11 equivalent).

During 2017, 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 SF_6, electric power transportation and distribution and authorized managers of SF_6 gas waste and the equipment containing them), for joint coordination in terms of comprehensive management of the use of SF_6, in a manner that is most respectful of the environment. The fundamental driver is contributing to the objective reduction of greenhouse gas emissions in widespread sectors assigned to Spain (10% in 2020 regarding 2005 levels).

During 2017, after identifying the best available techniques and combining of criteria obtained the previous fiscal year, a neutralisation protocol entitled 'Elimination of SF_6 decomposition solid wastes from electrical equipment containing it at the end of its useful life' was approved. Currently, a recovery protocol entitled 'Recovery of SF_6 from electrical equipment containing It at the end of its useful life' is in the process of adoption, with specific requirements regarding waste gas extraction at the end of the useful life of the equipment. With recycling management, SF_6 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 EUSS Water | 103-2 EUSS Water | 103-3 EUSS Water

ENDESA has identified water as a critical resource that will be affected by climate change. According to the Organisation for Economic Cooperation and Development's (OECD) forecasts, by 2050, almost half of the world's population will live in areas of high water stress unless new policies are implemented. Additionally, the World Economic Forum identifies in its 2016 Global Risks Report that water is the greatest social and economic risk in terms of impact until 2025.

Companies will play an important role in the development and implementation of solutions for these water problems. This is why in 2017, and for the eighth consecutive year, ENDESA, assuming a position of leadership among Spain's power companies, adhered to the *CDP Water Disclosure*, an initiative, which provides water and water-management data from the world's largest corporations to inform the global marketplace on investment risk and commercial opportunities and to guide investors towards sustainable use of this resource. This year, the level obtained by ENDESA was 'Leadership' with inclusion on the A-List, above the average sector value, which is 'Management'. The result obtained was higher than the previous year in which ENDESA achieved the 'Leadership' level, but was not included on the A-List. Appearing on the A-List is a distinction for companies that stand out for their performance, in this case with regard to water.

As part of this initiative the CDP publishes an annual report. This year the 'Thirsty business: Why water is vital to climate action–2016 Annual Report of Corporate Water Disclosure', analyses through the response of 607 companies (48% of those invited to take part) that have taken part in the initiative the main risks and opportunities identified by the companies in relation to water

ENDESA has been included on the A-List for its performance in water management, a list that only ten companies have made worldwide in the 'utilities' category.

availability and the company's management trends in relation to these risks. This report highlights the integrated water management performed by ENDESA.

On 20 November, the 'CDP Europe Awards 2017' ceremony took place in Brussels, in which ENDESA received the award recognizing its performance in relation to water, due to having been recognized by its appearing on the A-List. The A-List is of a worldwide nature and only includes ten companies from the 'utilities' category, of which only four, including ENDESA, have been recognized by their excellent water management. The Enel Group was also recognized in the same ceremony for its appearance on the A-List, thanks to its contribution to decarbonisation and reduction of emissions.

In the photograph, from right to left: Teresa Luis, Representative of ENDESA in Brussels and Vanessa Tedeschi, Enel Environmental Policies.

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 strategy with the aims of public policies and initiatives put forward by the many stakeholders.

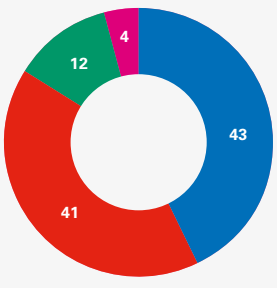
Through flexible and ongoing contact with the stakeholders, it should be possible to understand, anticipate and respond to new problems and expectations. An open dialogue could also be useful for preventing and reducing the risk of future water- related conflicts.

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 of its providers, ENDESA has participated for the first time in the **Water from CDP Supply Chain Programme**. Thus, the Company demonstrates its commitment with value chain management, also requesting information about water management, thus being able to tackle the risks associated with water and make the most of opportunities.

The rate of response was 84%, compared with the 62% obtained by the companies participating in the initiative. In the case of ENDESA, half of the providers who sent the questionnaire expressed that water is not a material aspect in their company. 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.

Of the providers that reported information on their water strategy, over 70% report on the risks relating to water in their direct operations and have established objectives.

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



2017 CDP Supply Chain Water response ratio (%)

- Questionnaire sent
- Questionnaire sent without information on water
- No response
- Questionnaire activated but not the set of questions on water

and favour the more rational use of the resource.

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.

2.4.1. Water consumption

303-1 EUSS | 303-1 | 303-2 | 306-3 | 303-5 | 301-2

Integrated water management is one of ENDESA's greatest concerns. The main lines of action in this area focus on efficient consumption, water quality by controlling discharges and waste water, and reservoir management, assessing the ecological potential to provide shelter for bird life, the possibilities to control invasive species and prevent the existence of dried up sections of regulated rivers.

303-3

During 2017, 15.461 m^3 of waste water was reused in the processes, which represents 0,023% of the total freshwater from catchment.

99% of ENDESA's water catchment for use in its facilities is returned to the environment so that it can be reused.

Specific water consumption for electricity generation in 2017 was 840 m^3/GWh, exceeding the target set for 2017 of 940 m^3/GWh. Likewise, ENDESA's new 2018-2022 Sustainability Plan establishes a new target reduction of 17% in 2020.

During the last year, there has been catchment of freshwater, seawater and waste water for use in the Company's plants always following criteria of sustainability and efficient consumption. Water catchment for industrial uses has increased compared to 2016 due to greater activity in the facilities.

Process water consumption (Hm^3)

	2015	2016	**2017**
Thermal power unit (TPU)	51.04	44.02	50.43
Nuclear power	16.45	16.69	15.60
Mining	0.935	0.29	0.02
ENDESA	**68.42**	**60.99**	**66.06**

Waste water approved for processing (%)

2015	0.009
2016	0.026
2017	0.026

Total water catchment by sources (Hm^3)

	2015	2016	**2017**
Industrial use			
Catchment of fresh water	65.55	58.59	63.24
From surface water	60.21	57.42	62.29
From wells	0.87	0.29	0
From municipal mains	0.64	0.87	0.95
Catchment from seawater			
Catchment from seawater (desalinated)	2.87	2.51	2.80
Catchment from waste water (internal use)	0.006	0.016	0.015
Use for refrigeration			
Seawater (open cycle)	4,248.88	3,083.31	3,265.27
Surface water (open cycle)	1,647.28	1,607.97	1,502.80
Water (closed cycle)			
Processed water volume	286.65	242.93	285.29
Drainage from cooling towers	252.23	221.99	246.27
Civil use	**0.19**	**0.18**	**0.20**
Total (1)	**6,217.01**	**4,978.14**	**5,080.59**

(1) The total does not include processed water volume used for cooling in a closed circuit.

306-5

Water masses affected by discharges

Water masses significantly affected		
By catchment ≥ 5% total annual 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

303-2

Water masses 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 protected 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

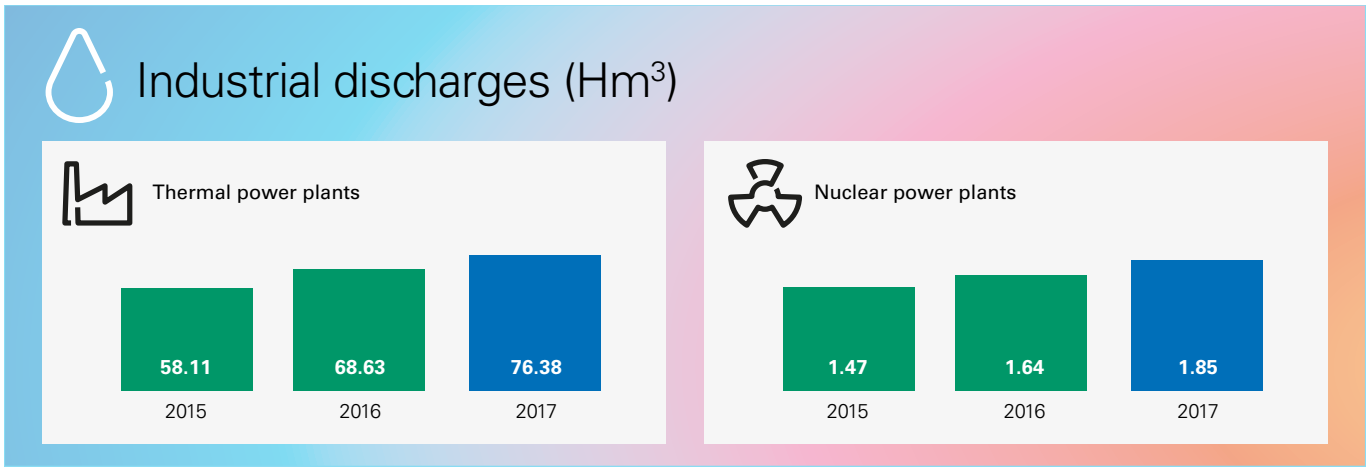
2.4.2. Water discharge

103-1 EUSS Effluents and waste | 103-2 EUSS Effluents and waste | 103-3 EUSS Effluents and waste | 306-1

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. Water discharges in Spain and Portugal increased in 2017 due to the higher water consumption resulting from the increased weight of thermal generation.

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:

- **Teruel Thermal Power Plant:** Reuse of the water surplus from the plant operation (cooling tower bleed) in the desulphurisation process. This achieves a decrease in clean water consumption.
- **Litoral de Almería 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:** Maintains the policy of elimination of the discharge points of sanitary waste waters with the purpose of replacing authorised discharges by 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.

2.4.3. Water stress

In 2017, 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 80% 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 8.5% of ENDESA's installations, producing 1.84% 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 demonstrates 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.

2.5. Wastes

306-2 | 306-3 | 301-2 EUSS Materials | 103-1 EUSS Spills and waste | 103-2 EUSS Spills and waste | 103-3 EUSS Spills and waste | 306-4

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-fired 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 the hazardous waste that allows this (e.g. used oils or cleaning solvents).

In 2017, ENDESA has maintained the collaboration agreement with a Collective System of Expanded Product Responsibility (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 2017, a significant portion of the waste recovered by ENDESA is at its external facilities, 88% of total non-hazardous waste in Spain and Portugal and 42% of hazardous waste being recovered in the same geographical area of Spain and Portugal.

In 2017, as a result of actions carried out at the thermal power plants and an increase in jobs in the distribution network, waste production increased and the assessed percentage of it also increased, both for hazardous as well as non-hazardous wastes. Specifically, there was a 9% 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 increased by 17%.

During 2017, various actions have started and been executed in the thermal power plants aimed at continuous improvement and increase in efficiency of combustion facilities. These specific actions involve a necessary increase in generation of certain waste. These works include projects to improve yield and reduce contamination emissions from the generation units, changes of fuels designed to optimise operating and environmental performance and execution of various maintenance actions in the generation units.

Recovered waste is considered to be waste 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)	
	2017	**2017**	**2017**	**2017**
	Produced	Recovered	Produced	Recovered
Total	**11,335.69**	**4,819.89**	**46,206.41**	**40,478.12**
Thermal Power Units (TPU)	7,644.76	3,416.10	12,475.35	7,328.46
Hydroelectric Production Units (HPU)	655.11	238.79	877.51	915.61
Mining	0.84	0.84	201.65	201.43
Port terminals	12.75	12.75	1,094.26	1,094.26
Nuclear	294.05	74.08	2,118.43	1,501.64
Distribution	2,639.28	1,329.17	29,436.01	29,436.71
Wind power	88.58	18.15	2.48	0
Production with biomass	0.31	0	0	0

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Used materials recovered

	Unit	
Dry sludge for energy use	ton	8,271.71
Wood	ton	0.6
Lubricating oil, filtered and reused	ton	274.67
Dielectric oil, filtered and reused	ton	470.06
Total Recycled	**ton**	**9,017.04**

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Types of non-hazardous and hazardous waste and its fraction recovered

	Unit	2015	2016	**2017**
Non-hazardous waste				
Sludge	ton	8,589.22	8,404.96	5,310.56
Fraction recovered in external facilities	ton	3,724.18	690.77	796.81
Machinery and equipment	ton	157.22	547.35	1,063.74
Fraction recovered in external facilities	ton	154.90	546.22	1,059.39
Packaging materials	ton	704.26	418.75	426.74
Fraction recovered in external facilities	ton	697.22	383.7	423.94
Other waste	ton	34,676.19	33,006.55	39,405.37
Fraction recovered in external facilities	ton	32,697.64	28,892.50	38,197.97
Total produced	**ton**	**44,126.88**	**42,377.61**	**46,206.41**
Total recovered	**ton**	**37,273.94**	**30,513.19**	**40,478.12**

	Unit	2015	2016	**2017**
Hazardous waste				
Used oils	ton	1,574.90	876.46	1,243.73
Fraction recovered in external facilities	ton	1,225.23	591.36	663.55
Machinery and equipment	ton	705.59	1,439.87	2,071.25
Fraction recovered in external facilities	ton	45.28	307.40	1,115.65
Used batteries	ton	87.34	139.37	76.00
Fraction recovered in external facilities	ton	29.78	77.59	39.98
Materials with asbestos	ton	403.43	632.92	596.84
Fraction recovered in external facilities	ton	10.64	194.02	30.36
Sent to vitrification treatment	ton	0.00	0.00	0.00
Other waste	ton	5,302.35	6,612.54	7,347.87
Fraction recovered in external facilities	ton	1,910.52	2,687.36	2,970.35
Total produced	**ton**	**8,073.59**	**9,701.16**	**11,335.69**
Total recovered	**ton**	**3,221.45**	**3,857.73**	**4,819.89**

Radioactive waste (m^3) produced

	2015	2016	**2017**
Liquid	**4.19**	**0.6**	**1.67**
Solid	**226.62**	**221.8**	**196.8**
Compactable	142.61	139.5	143.26
Other treatments (fragmentation, cementation, etc.)	69.45	57.6	38.43
Remaining	14.56	24.6	15.11

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 the national territory, although in 2017, waste began to be exported to other countries of the EU and USA for the purpose of increasing the maximum percentage of recovery. The main recovery markets are the cement industry, in the case of ash and manufacturing of building panels in the case of gypsum.

Production and management of ash, slag and gypsum in ENDESA's coal-fired thermal plants (Spain and Portugal)

	2015	2016	**2017**
Ash (t/year)			
Produced	1,302,572	936,414	1,315,879
Recovered	434,744	236,579	399,792
Restoration	0	0	0
Landfill	867,828	699,835	916,086
Slag (t/year)			
Produced	228,014	161,170	242,739
Recovered	6,548	22,869	36,880
Restoration	0	0	0
Landfill	221,466	138,301	205,859
Gypsum (t/year)			
Produced	1,160,300	791,359	1,165,933
Recovered	49,152	39,659	80,060
Landfill	1,111,149	751,700	1,085,873

3. Circular economy

As a starting point at ENDESA, after publication of the Commission's Action Plan on the Circular Economy in December 2015, the existing activities that contribute to and promote change toward a circular model were analysed, placing the aspects in common at a sectoral level to promote them sooner. In specific fields of the multi-R concept, such as recycling and reuse.

ENDESA has promoted circulating of some wastes generated in business activity for some years, e.g., prioritizing reuse of by-products of coal combustion products, minimizing their being sent to a landfill. In 2017, 30% of ash produced was recovered.

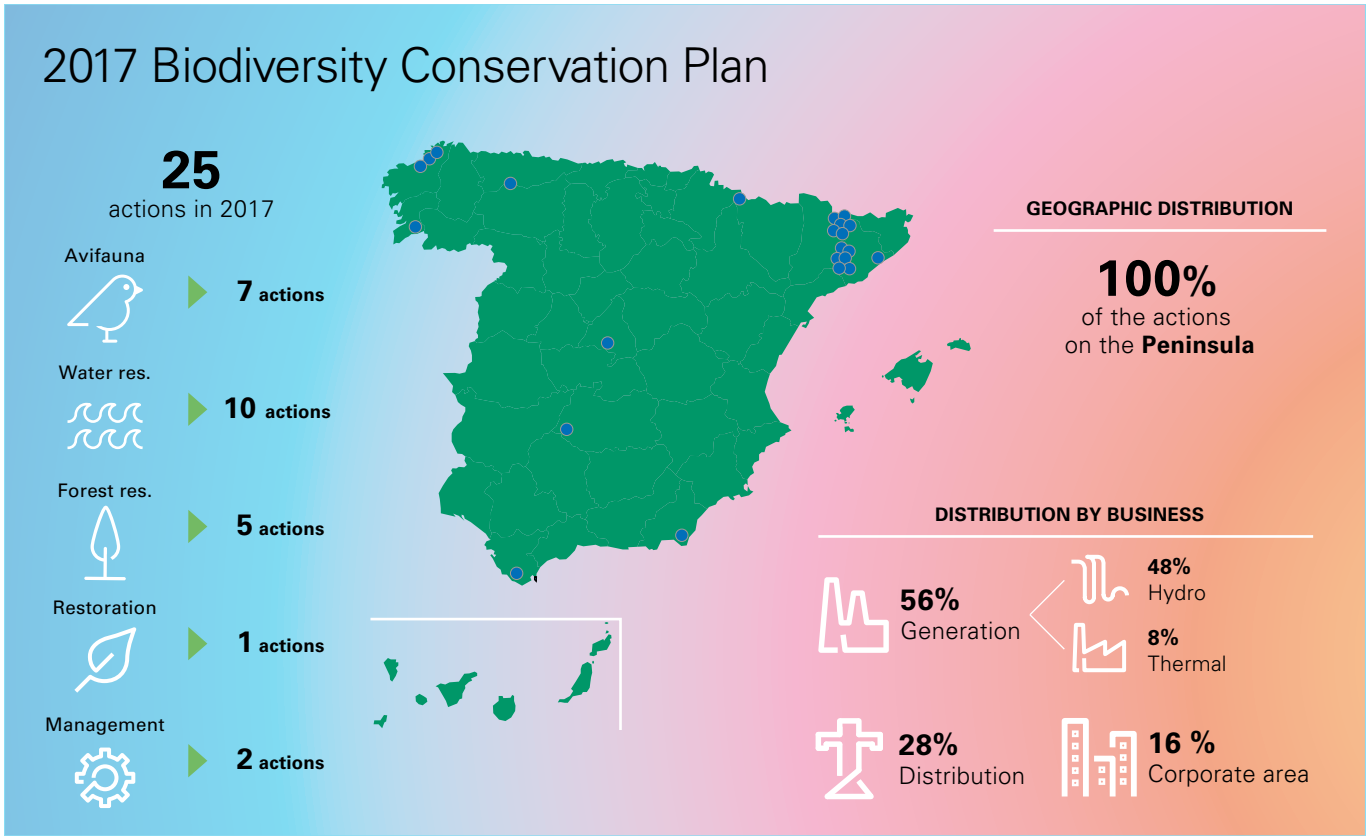
On the other hand, more recently, there have been specific actions on construction and demolition projects, such as inclusion of dismantling of the CT Foix project as a corporate example on the *Business Europe* platform regarding a Circular Economy.

There is clear synergy between a circular economy and at the same time a economy. Thus, actions directed toward a circular economy should contribute to reducing emissions, thus emphasizing ENDESA's Electrical mobility Programme' with actions that aim at reducing greenhouse gas emissions and promoting the use of 100% electric vehicles among ENDESA's employees, directly and indirectly, promoting knowledge and use of them as a sustainable mobility alternative for society.

A programme aimed at a low-coal consumption economic model and pollution reduction that ENDESA aspires to lead, through promotion of electrification of energy demand, smart grids and efficient consumption.

In any case, the context in Spain is regarding transition and change to the circular model. ENDESA signed the Circular Economy Pact during the last quarter of 2017 and will give special attention to measures that are promoted in the Spanish Circular Economy Strategy from the Ministry of Agriculture and Fishing, Food and Environment (MAPAMA) and the Ministry of Economy, Industry and Competitiveness. The date of publication of this report was during a public consultation procedure for the Spanish Circular Economy Strategy.

4. Conservation of biodiversity



EU13 | 103-1 EUSS Biodiversity | 103-2 EUSS Biodiversity | 103-3 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 the public with all ENDESA's activity about study, management and conservation of biodiversity: https://www.ENDESA.com/es/sostenibilidad/a201610-conservacion-biodiversidad.html.

4.1. Biodiversity conservation plan

304-2 EUSS | 304-3 | 304-1 | 103-1 EUSS Biodiversity | 103-2 EUSS Biodiversity | 103-3 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:

		SCOPE OF APPLICATION (Biodiversity Components)			
		Spaces		Species	
		Management of uses and infrastructures (A)	Habitat management (B)	Native (C)	Invasive exotic (D)
FIELDS OF ACTION	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 2017 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 (birdlime, 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 2017, the Biodiversity Conservation Plan had a total of 25 activities under way, with the following balance: 20 started in previous years (with 5 of them ending in 2017 and 15 which continue active) and 5 further actions started in the last year.

The following table shows the distribution of ENDESA's Biodiversity Conservation Plan actions under way in 2017, 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.

		SCOPE OF APPLICATION (Biodiversity Components)				
		A. Management of use and infrastructures	B. Habitat management	C. Native Species	D. Invasive exotic species	Total
FIELDS OF ACTION	Own facilities (1)	4	1	1	0	6
	Areas of influence (2)	2	1	3	1	7
	Research projects (3)	2	1	2	2	7
	Socio-environmental projects (4)	1	2	1	0	4
	Emblematic projects (5)	0	0	1	0	1
	Total	9	5	8	3	25

Distribution of actions by subject

	No. of Actions	%
Birdlife	7	28
Water resources	10	40
Forest resources	5	20
Restoration of Natural Spaces	1	4
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 56% of the Plan actions; while Distribution received 28% and the corporate area 16%.

4.2. Key actions

304-2 EUSS

4.2.1. Studies and research

The main activities in the scope of research of the Biodiversity Conservation Programme carried out during 2017 are described below.

During the past year, development of the methodology to assess the ecosystem services associated with ENDESA's hydroelectric infrastructure has been studied in detail, a subject already begun through the project regarding assessment of ecosystem services in the Noguera Pallaresa river basin, which was concluded in 2016. The new project begun in 2017 contributes the following developments in this area:

- The area of application of the study was expanded to four of ENDESA's hydroelectric infrastructures located at different points in the geography of Spain: the Talarn and Ribarroja reservoirs at the Ebro-Pirineos HPU, the Cala reservoir at the Southern HPU and the Eume reservoir at the Northwest HPU.
- The methodology was reviewed and adapted, enriching it with the latest developments in terms of assessment of ecosystem services: the study and test of measuring and assessment methodologies for the flow of ecosystem services is still a new field, in a constant state of development. Also, new sources of data were added.
- An additional future scenario was included in the study in which the expected changes in the flow of services due to conditions imposed by climate change are calculated.
- Assessment of both impacts as well as dependence that ENDESA's hydroelectric activity has on certain ecosystem services in included in the study.

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.

Of the four planned reservoirs, the analysis of one of them (Talarn) was finished during 2017, which has served to develop the assessment methodology. This methodology is based on international standards, mainly MAES (*Mapping and Assessment of Ecosystems and their Services*, an initiative of the European Commission) and the aforementioned CICES classification.

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 this same field of measuring the interrelationship of ENDESA's activity with the environment, in 2017 a project to put a biodiversity indicator system into operation and application was developed. The specific objectives of this project are:

- To assess and quantify the effect that ENDESA's activity has on biodiversity.
- To assess and quantify the degree of ENDESA's dependence on biodiversity.

> To establish the bases for calculation of biodiversity balances and monitoring of ENDESA's activities regarding conservation of biodiversity.

In 2017, the first results were obtained after putting the first version of the biodiversity indicator system into operation. The geographical information regarding ENDESA's facilities was digitalized, so that they can be cross-referenced with existing public information about species, habitats and protected natural spaces at various levels. Likewise, information from the difference lines of business and communications were integrated.

It is planned that the system review and integration of information not yet included will be completed during 2018.

During 2017, progress was also made on the project for assessing the ecological assets of roads under power lines.

Roads under power lines are longitudinal areas where logging and pruning work is done on trees and shrubs pursuant to applicable legislation in order to reduce fire risks as much as possible. These areas are converted into grassland, the presence of which supposes a physical discontinuity evident in the forest ecosystem surrounding it.

Traditionally, these roads are counted as a reason for a negative impact. However, ENDESA took an interest in studying the possible functions and real effects that roads under power lines could be contributing to diversity and ecological operation of the forest system, from their conception as ecotones fulfilling a relevant and positive ecological role. Therefore, this project was born with the objective of determining the use that the flora and fauna make of the ecosystem that forms on roads under power lines, studying the biological components present as well as their distribution and biodiversity in comparison with other nearby natural habitats.

By integration of information from different sources (satellite images, helicopter flights with high-definition sensors, field work and others), a detailed biophysical characterization of the roads and areas of influence of the electrical grid and surrounding biotopes was obtained, species and interactions with the fauna were identified and overall, the ecological functions of the ecosystem generated under the lines was assessed.

Additionally, the same means could be used to carry out monitoring of the state of the lines and surrounding vegetation, which will permit early detection of risks associated with the lines. The technology of taking high-definition images for this work is completely innovative in the sector.

During 2017, the first test flight was taken, which allowed adjusting the calibration of the sensors to optimal values for gathering data. This project will continue to be developed during 2018.

Also related to the interaction of the power lines with the environment, in 2017 with the support of CIMNE (International Centre for Numerical Methods in Engineering) a project for research and development of new anti-collision technologies has been carried out. 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, night, 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.

During 2017, different solutions were planned and later prototypes were constructed that were tested in the laboratory to verify their accuracy. Currently, a prototype has been selected that was manufactured using 3D printing for wind tunnel tests. The prototype was also commissioned in the field, although not at ENDESA's facilities, but on an outdoor cable to observe its real behaviour and make the pertinent adjustments to its design.

Currently, the finishing touches are being put on the design of the fastening clamps and the first pilot tests are expected to be done at ENDESA's facilities during 2018.

Finally, it should be pointed out that preparation by Enel Green Power España of an inventory and status report on the population of *Centaurea ultreiae* is in progress for the purposes of writing an ecological interaction manual that allows adequately managing maintenance tasks for the Castelo wind farm that is compatible with this plant endemism that only exists on the Monte de Castelo [Castelo Mountain].

4.2.2. Birdlife protection actions

In 2017, ENDESA continued the conservation measures project for the Montagu's harrier (*Circus pygargus*), extending it to new zones of Spain's geography. The Montagu's harrier is a bird of prey protected at the European level by the Wild Birds Directive in addition to being considered a vulnerable species in the Spanish Catalogue of Endangered Species. It nests on the ground (frequently in grain crops), therefore, one of the most serious threats that it faces is predation of the nests by mammals and land reptiles, in addition to other birds.

That is why, ENDESA has carried out this project since 2015, with two basic facets: one is to protect them by using a metal fence that makes it difficult for predators to get into the nest, in order to protect as many harrier nests as possible during the breeding season. These fences have an important advantage in that, once the chicks have flown, they can be removed from the nest and reused the following season.

In 2017, a total of 83 nests of the Montagu's harrier were protected, one of which was a marsh harrier and the other a pallid harrier, geographically divided as follows: 24 nests in Lleida (including the marsh harrier and pallid harrier), 3 in Girona, 3 in Huesca, 33 in Badajoz, 2 in Cádiz, 2 in Huelva, 5 in Jaén, 3 in Málaga and 8 in Seville. The total number of successful nests (in which at least one chick fledged) was 55, one of them being a pallid harrier and the rest Montagu's harriers. In all, thanks to the protection of the fences, 142 Montagu's harrier chicks fledged and 2 were marsh harriers.

As already mentioned, under normal conditions, predation is the most common cause of egg-laying failure of the Montagu's harrier. This year, of the 85 protected nests, only 10 suffered some type of predation (12%), all of them concentrated in zones where the fences were installed for the first time.

The second facet of the project is introduction of Montagu's harrier chicks using *hacking*. *Hacking* allows raising harrier chicks from breeding programmes or those rescued from the environment where there is a hazard and introducing them into the environment as self-sufficient juvenile specimens. In 2015, an enclosure was built for that purpose at the Plana de Lleida. Food and refuge is provided there for the harrier chicks in an effort to reduce their direct interaction with human beings as much as possible. They are gradually given freedom so that they become accustomed to hunting. Given that the enclosure is open, when they have grown enough, the specimens can make their first flights and return to the enclosure until they abandon it at the end of season to migrate to their overwintering areas.

The past year, ten Montagu's harrier chicks and two marsh harriers were received at the enclosure. One of the marsh harrier specimens died during one of its first flights out of the enclosure, due to an attack from another bird. The rest of the specimens (11) developed normally, thanks to the food provided at the enclosure and during the months of July and August 2017, they fledged successfully.

In 2017, the Coracias Project was started again: conservation measures for the European Roller (*Coracias garrulus*) in the environs of the Aiguamolls de l'Empordà Natural Park (PNAE).

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 Empordá 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.

For all of these reasons, ENDESA has considered it worthwhile to make the most of the potential positive impact that the company has, thanks to the presence of PNAE distribution lines and its environment.

Since 2001, ENDESA has been installing nesting boxes on the power line pylons by mutual agreement with the Park's Management. The project, begun in 2017, gathered momentum and increased technology for these measures from the following innovations:

- Installation of 30 new, more durable nest boxes with characteristics that make their occupancy by the target species more likely, reducing the probability of their being occupied by more

common and opportunistic species. Both technical and ecological criteria were integrated for their installation (regarding height and positioning).

- 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. This has allowed obtaining data, not only from efficiency of measures taken by the Company, but also extremely valuable population data that will allow fine-turning the conservation measures adopted even further in years to come.
- Banding of Roller chicks hatched in 2017 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 three 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. The experiment of GPS banding of the Roller has involved a very valuable advance in terms of R+D+i, since it was necessary to find a solution for a reliable marker for the species, which until now had not been achieved due to their small size (which requires that the device also be very small and light) and very elusive nature (which makes recapture difficult).

The results obtained have demonstrated that the measures taken by ENDESA have been a great success for the Park's population of the European Roller, besides having obtained very valuable new information about the species.

An increase in occupation of the nesting boxes by several species was recorded: 66% of available boxes. Of the occupied boxes, 80% were new and 20% old.

In all, 22 Roller pairs were detected reproducing in the nest boxes installed by ENDESA, with this being the most prolific species in the monitored nesting boxes. The Rollers laid between three and six eggs, with an average of 4.27 eggs per nest. Successful hatching (% of nests in which at least one egg hatched) was 68.18% and the reproductive success of the pairs (% of nests where at least one chick fledged) was 50%.

Population data is encouraging. In all, 96 successfully fledged chicks were counted in the Park and its environs, of which it was possible to band 74.

Of the three individuals marked with GPS, two disappearances were recorded, possibly due to the nest having been preyed upon and the adults having left the zone afterwards. Fortunately, thanks to the third specimen, it was possible to obtain a great deal of positional data. The vital domain of a Roller pair was estimated to be 43 ha.

There is also the possibility of any of the three marked specimens returning to the Park for the next breeding season. In this case, data on the migratory route of the European Roller from the Empordá zone may be obtained, which route is still largely unknown to Science, given the aforesaid difficulty of marking.

ENDESA installed thirty nesting boxes in the Aiguamolls de l'Empordà park

ENDESA has installed thirty nesting boxes in the Aiguamolls de l'Empordà natural park to encourage conservation and reproduction of rollers. The devices are located on electrical towers and pylons and increase the nesting spaces for these species. In conjunction with the Amics del Parc (APNAE) association, the Company also planned banding the chicks and placement of GPS on three pairs of adults to learn about their movements during reproduction (*La Vanguardia-Vivir,* 12/04/2017)

The year 2017 also brought significant continuation and expansion of the maintenance project for the Supplementary Feeding Stations (SFS) network for the black vulture and other Pyrenees birds of prey.

The past year continued to have good results regarding reproductive parameters of the Pyrenees black vulture colony. The season began with the mating of 14 reproducing pairs, of which 12 began laying. As a result of the egg-laying, five black vulture chicks later hatched, thus confirming the positive trend from 2016. Additional contributions from the various Feeding Stations located in the Pyrenees and the foothills of the Pyrenees of Lleida has been fundamental to this success, among them are the three managed by the Trenca association with the support of ENDESA's workforce.

The Siall Supplementary Feeding Station has become the most visited by the black vulture colony. Almost all of the individuals belonging to the reintroduction project have been detected there. Also, specimens passing through have been detected (coming from France and other points on the Mainland).

As in previous years, use of the Supplementary Feeding Station by other endangered scavenger birds of prey such as the Egyptian vulture and the bearded vulture was also recorded. To a lesser degree, the red kite, black kite, common buzzard and the golden eagle.

In addition to continuing management and normal monitoring of the already existing Supplementary Feeding Stations's, in 2017 the goal to begin to model the Supplementary Feeding Station network in a way that favoured expansion of the black vulture colony from Boumort to the Aragonese Pyrenees to the west was planned. The reason behind this goal is that the Boumort National Reserve, where the colony is now concentrated, is reaching its load capacity for this species, therefore, it is foreseeable that growth of the colony will stall unless their domains expand.

Work on expansion of the black vulture colony to Aragon was done in 2017 in a series of specific activities. Firstly, food specific to the black vulture began to be provided at the Baells (Huesca) Supplementary Feeding Station. Further, agreements were reached to install artificial platforms and decoys to encourage the black vultures to go to them and settle and to monitor the use of the Supplementary Feeding Stations's being supplied.

Finally, work to create a new Supplementary Feeding Station in Senterada (Pallars-Jussà) was begun. Since this Supplementary Feeding Station is very near Aragon, it will serve as a station between Boumort and the expansion zones in Huesca. After providing test supplies and proving that there was satisfactory usage by the black vulture and other birds of prey, a custody agreement regarding the territory was obtained with the Senterada government to establish this new Supplementary Feeding Station in its municipal district, that will also have a *hide* to observe and photograph the activity of the birds of prey that come to feed. This new Supplementary Feeding Station will allow combining ecological and socio-economic objectives: the *hide* will provide revenue that will enable the self-sufficiency of the Supplementary Feeding Station network through the local associations and will generate specific tourism that will benefit the socio-economic fabric of the zone.

This activities in behalf of birdlife were completed in 2017 with the laser therapy project for birds impacted by electrocution incidents on electrical pylons.

The extensive presence of power distribution lines in the environment renders it impossible in actuality to reduce the impact that these structures have on birdlife to zero. That is why, while ENDESA works toward continual updating of its distribution network, it also favours the use of new technologies for treatment of injured specimens that can be recovered.

Thanks to ENDESA's involvement, the Vallcalent Wildlife Recovery Centre (Llei-

da) purchased laser treatment equipment in 2017 with the objective of improving the recovery rate of specimens treated at the centre for electrocution. The results of laser therapy are already well-known in human beings and can also be employed on birds with similar benefits: mainly, enabling recovery of damaged muscle tissue.

The laser equipment provides service to individuals found throughout the Catalonia territory at the Vallcalent Centre. Since its purchase, five individuals belonging to different species have been treated, all of which were under a certain degree of protection. Among the species treated were the Bonelli's eagle, the most protected of all, since it is catalogued as Vulnerable in the Spanish Catalogue of Endangered Species.

Fortunately, this specimen and another, a lesser kestrel, were cured and kept alive with sufficient quality of life to become part of both breeding in captivity programmes, thanks to the laser treatment.

Two other specimens treated developed complications and could not be saved. The fifth and most recent specimen, the golden eagle, is progressing well but is not yet ready to determine if it can return to life in the wild.

In addition to the projects included in the Biodiversity Conservation Plan, in 2017, 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:

ENDESA collaborated with a pilot test to prevent electrocution in Vallcalent

The Birding Natura technicians designed an anti-nesting device to avoid electrocutions of birds. To prove its effectiveness, these items have been installed on two electrical pylons, assigned by ENDESA to the Vallcalent Wildlife Centre. This pilot test was performed in an aviary at the facilities of the Departament de Territori i Sostenibilitat and, in terms of results obtained, it is anticipated that there will be a field test on a power line. The objective is to test the prototype and to be able to develop a highly reliable anti-electrocution product. It involves a three-phase experiment in which the behaviour of different species will be observed (*La Mañana,* 23/06/2017)

- **Andalusia:** Collaboration continues with the Environment and Territorial Planning Council of Andalusia to correct black points for birds on overhead power lines. Within this framework, during 2017, 443 pylons were corrected in response to urgent petitions and correction of another 300 additional pylons is planned. Correction of supports to avoid electrocution has resulted, among other things, in an 80% reduction in mortality of the *Iberian Imperial Eagle* caused by electrical lines, according to data from the Andalusia Council.

  It is also worth noting the transfer of some 300 trees that grew naturally under a medium voltage line in the Doñana Natural Space, which were replanted outside of its range and also the installation of some protectors to prevent animals impeding their growth. It involves taking cuttings of willows and poplars.

- **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 2016, layouts, assessments and other studies of the lines indicated in the Decision have been performed, 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.

Within the framework of the collaboration agreement between the Government of Aragon and the Company 'for the development of projects in power lines, to reduce or eliminate the risks of collision and electrocution of threatened bird life' (signed in 2010) no actions have been performed during 2017 due to lack of budget allocated by the Aragon Government. Contacts have been maintained and meetings have been held to unify action criteria with the Aragonese Institute of Environmental Management.

We can also highlight the tests performed on several line pylons with the installation of anti-perch elements of new design, with proven efficacy as well as the plan for leak tests for transformer tanks installed near water sources.

> **Balearic Islands:** Within the framework of the Collaboration Agreement with the Department of Agriculture, Environment and Territory of the Balearic Island Government 'For the Coordination of Environmental Actions arising from electricity distribution and protection of birdlife' (in force since 2004), to reform pylons and isolate or mark power lines that may have a risk of collision and/or electrocution for the birds. To date, over 1,250 actions have been performed.

Furthermore, Company is collaborating in the European Project LIFE-BONELLI in coordination with the Species Protection Service of the Balearic Islands Government for recovery of Bonelli's eagle *(Aquila fasciata)* in the islands, from where it disappeared in the 1970s. The balance of 2016 in Majorca is highly satisfactory and both the population and number of territories continue increasing with every year. The project started in 2012 and by the middle of 2017, there were 30 specimens of the species and its territory covers a large part of the island of Mallorca (LIFE-BONELLI data). Since the Company has collaborated with the modification and adaptation of the pylons considered hazardous in lines in the area of distribution of this bird of prey in the areas of the Sierra de Tramuntana mountains, west and south west of the island of Majorca, 54 actions were taken since collaboration started, 17 of which were executed during 2017.

On the other hand, it is collaborating in different Territory Stewardship Agreements and Conventions at farms owned by the Company. It is worth mentioning that the stewardship Agreement for a property located in the Es Marjals zone of the municipal district of Sa Pobla bordering the l'Albufera d'Alcudia Natural Park in collaboration with the Balearic Islands Government Environmental Council and the GOB (Balearic Ornithology Group). The property includes some 30 hectares of wetlands in which habitat recovery, maintenance and stewardship activities are being carried out.

Within this scope, another Collaboration and Stewardship Agreement with the Balearic Islands Government Environmental Council was framed at the Son Orlandis farm located in the municipal district of Palma, which has a land surface of approximately 100 hectares. The proximity of the farm to the city was conducive to the creation of a recreational area, the construction, conservation and stewardship of which is the responsibility of the government. Further, different itineraries were planned that allow visitors to learn about natural, scenic and ethnological values of the farm.

> **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 framed in an agreement signed between the Company and the Consortium that reinforces the collaboration between both parties which began over 20 years ago.

It further states the launch of upgrades to an overhead medium voltage power line that runs through the Massís del Montrgi in the Baix Empordá using birdlife protection devices with the goal of reducing the risk of electrocution and at the same time improving the power supply to almost 5,000 customers. This work, which has a budget of over 105,000 euros, will be executed within the area of the Montgrí Park.

> **Canary Islands:** During 2017, actions have been continued since 2010 with the aim of minimising the risk of collision of birds in medium-voltage power lines of Lanzarote and Fuerteventura. To minimize this risk, 130 new beacons were installed on the Soo-Famara line north of Lanzarote, in addition to the 22 kilometres of power lines beaconed on these islands for birdlife protection. Further, the distance between voltage elements has been increased for 26 pylons in Fuerteventura and 22 pylons in Lanzarote in these islands to avoid the risk of electrocuting birds.

In June 2017, the European Commission approved a LIFE project in which ENDESA Distribución, S.L.U. participates with e-distribuzione, S.p.A. (Distributor of 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 in the islands of Fuerteventura and Lanzarote in the Canary Islands and the Egyptian vulture, present in several regions of Italy and in danger of extinction. The synergy between the local institutions of Italy and the Canary Islands has been instrumental in the awarding of the European project. Among the actions planned is breeding in captivity and release into nature of the individual juveniles born in captivity, the minimization of risks of electrocution on the power lines, protection of nesting sites, creation of feeding stations and the fight against the use of poisoned bait.

4.2.3. Projects with a socio-environmental component

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In 2017, 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 Oso Pardo 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, in woods, native fruit trees or the restoration of habitats in danger of degradation shall be performed. The compatibilisation with human activities, including ENDESA's hydroelectric activity is guaranteed by the selection of areas of action, holding training and information seminars and the employment of people at risk of exclusion in the area to enrich biodiversity. The choice of these solutions that integrate and make the presence of bears in the area sustainable is what gives an eminently socio-environmental character to the project.

In 2017, designing of planting actions was finished, zones of activity were mapped and new plant material for reproduction was collected. This work has resulted in the selection of two valleys of interest for planting of fruit trees, four zones where scrub clearance will be done to facilitate the growth of blueberry bushes and eight zones where scrub clearance will be done to facilitate the growth of pastures, mainly, umbellifers. Further, four zones have also been selected for collection of raspberry propagules, where approximately 1,600 propagules have been collected.

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 appropriateness.

There has also been progress in obtaining greenhouse seedlings. The total amount of 4,915 cherry, whitebeam and crab apple seedlings was reached in 2017 in the Tremp nursery. Contacts have been made with experts in local varieties of apples and with raspberry experts, since the raspberry is a species that can be found at 2,000 meters elevation in addition to being of trophic interest for bears. Likewise, several private nurseries have been contacted about obtaining more bear-attractive plants.

During the past year, the ENDESA Forest initiative has continued, with reforestation of areas affected by fires with native resilient species. The first of these areas was La Atalaya, a territory belonging to the municipality of Valdemaqueda (Madrid). Actions in this area began in 2016 and have continued in 2017.

This action aims to restore the forest ecosystem in a surface area of 21.52 hectares affected by a recent fire via direct sowing techniques and planting of native forest species. These works will use workers from the area, giving priority to the unemployed, young people, women, over 45s or a risk of exclusion.

This project's aims are threefold, as in addition to favouring the recovery of biodiversity and providing a social benefit, it contributes to mitigating climate change by creating a forest mass, which removes CO2 from the atmosphere and retains it.

During 2017, a further two socio-environmental projects started in recent years continued: the study of the trophic effect in cascade of the actions for improvement of the forest ecosystem carried out in the Caza de Boumort natural reserve and the creation of a breeding group of Mediterranean tortoises.

30 Mediterranean turtles released at Valle Mayor de Bovera in Les Garrigues

The Trenca Association and theCatalonia Amphibian and Reptile Recovery Centre (CRARC) released 30 turtles on Saturday, 30 September, that will live in semi-wild conditions on the Valle Mayor de Bovera farm (Garrigues). The action is part of the Mediterranean tortoise (Testudo hermanni) reintroduction project in the district of Les Garrigues in an area adjacent to the Montsant Natural Park, in which ENDESA also participates. The reintroduction programme began in 2015 with the adaptation of the farm and in June 2016, the first release of a total of 52 specimens was carried out. During this time, monitoring and maintenance of the facility was carried out to improve the habitat of this very rare species in a natural state in Western Europe that is endangered.

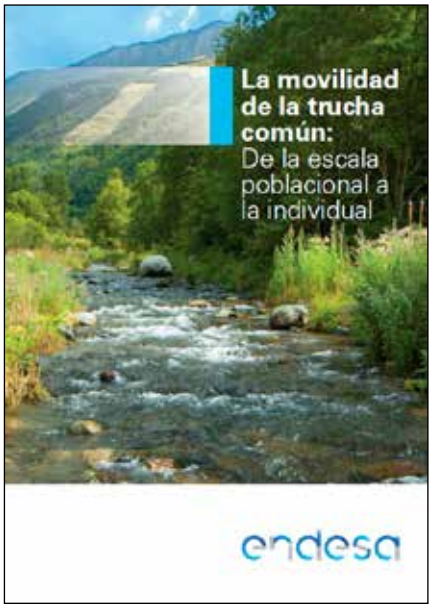
The project, carried out by the Trenca Association with the collaboration of ENDESA, has the main objective of creating a refuge for the Mediterranean tortoise, together with other similar projects, to increase the interconnections in different areas of Catalonia between rare, wild populations of this animal in Western Europe.

Specifically, it intends to reverse the historic trend of the tortoises, which by nature are docile and friendly, and have been more of a pet than a wild animal. To an extent, they are in danger of extinction and although the number of specimens in captivity is very numerous, there are not many in a natural state in Europe and even fewer on the mainland. In fact, they are only found in the wild in Catalonia and Mallorca. For that reason, projects such as this one are of vital importance in the long run to help this species recover from this critical situation.

In the first phase, a farm was adapted to create the ideal habitat for the tortoises and therefore, among the work done, two ponds waterproofed with clay were constructed. The necessary enclosures were built to protect the released tortoises from potential predators (wild boars and foxes). In fact, once the enclosure was ready, the first release of 52 specimens took place which, according to the results from observations and monitoring throughout the following months, the tortoises have adapted successfully to the environment, even before it was expected (*ACN,* 03/10/2017)

4.2.4. Publications

ENDESA has continued to promote dissemination and knowledge of biodiversity in 2017 through active participation in technical and scientific forums, as well as the publication of its research. During this year, 2 scientific Articles have been published and 2 communications made to congresses, arising from various Biodiversity Conservation Plan projects. The edition and publication of a new ENDESA monograph in 2017 merits special mention, on this occasion dedicated to mobility of trout entitled, *Mobility of the Common Trout: from the Individual to the Population Scale.* This monograph publication gathers all of the results obtained to date, thanks to ENDESA's research project being developed since 2013 aimed at delving into the climbing behaviour of trout inhabiting sections of river influenced to a greater or lesser extent by its hydroelectric activity as well as ecological, metabolic and genetic factors that bring about such behaviour and the importance it could have on a population scale.



Thus, this monograph joins a collection of monograph publications that ENDESA has edited since the beginning of the Biodiversity Conservation Plan, a collection that totals nine titles.

ENDESA promotes and encourages that all the activities of its Biodiversity Conservation Plan with results that may be of interest due to their scientific, technical 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

ENDESA participated in November 2017 in the Corporate Workshop regarding the Natural Capital Protocol (NCP) organized by the Excellence in Sustainability Club in Madrid.

The Natural Capital Protocol is a framework developed and proposed by the Natural Capital Coalition and endorsed by UNEP, WBCSD, IUCN and the EU Platform UE Business@Biodiversity, among other entities. The objective of the Natural Capital Protocol is to guide the integration process of the Natural Capital into the companies' activity.

Several companies from the energy sector were welcomed to the Corporate Workshop and other sectors were also represented, such as the food or financial sector. During the sessions, several experts from the world of environmental economy, conservation and corporate biodiversity management presented the different phases of the Natural Capital Protocol. Finally, practical cases were presented in which each representative had the opportunity to contribute their experience and at the same time, be enriched from the experience of the rest of the participants.

It is worth noting that the work of ENDESA and the Environment and Territorial Planning Council of the Council of Andalusia for the protection of birds of prey in the 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, held at the end of November 2017 in Túnez, 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.

During these sessions, organized with the Mediterranean Cooperate Centre of the UICN and the Forest Directorate General of Tunisia (DGF) along with the collaboration of the Tunisian 'Friends of the Birds' Association and the Tunisian Power and Gas company, ENDESA and the Council shared the joints measures put into operation for the protection of bird in Andalusia.

The objective of this two-day workshop was to learn to recognize 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 interchange of experiences and knowledge among the different players involved.

4.2.6. Other initiatives

As part of the commitment acquired by signing the Biodiversity Pact, ENDESA is an active member of the Spanish Company and Biodiversity (IEEB) initiative. This Initiative configured specific working groups in 2015 which have continued their activity in 2016 and 2017. 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.

Additionally, as a signor of the Biodiversity Pact and a member of the IEEB, ENDESA has participated in the 2013-2015 progress report on companies that are adherents of the Pact, published in 2017.

ENDESA is part of the Biodiversity Observatory's Excellence in Sustainability Club that submitted its second corporate biodiversity management report in 2017, in which it presents a methodology for implementation of a biodiversity strategy as well as a good practices compendium.

4.3. Environmental restoration

304-3

In 2017 the plant and fauna biodiversity study continued in the five restored mining areas of ENDESA: Corta Barrabasa and Corta Gargallo in Andorra (Teruel), Corta Ballesta Estes and Corta Cervantes (in the image) in Penarroya (Cordoba) and Puertollano mine (Ciudad Real). Field work was finished in 2017, and the final conclusions about the vertebrate fauna were also obtained this year, which are summarized in the following table:

The number of species includes those found during field work associated with this project and outside references to it. To calculate it per hundred protected species, all of those considered 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 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.

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.

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)	158	78

ENDESA installed three nesting boxes for bats at the La Baells Hydroelectric power plant

The Company intends to relocate the species that occupy the roof area of the plant's control room. They want them to remain in the area, but away from the building.

Yesterday, Thursday morning, ENDESA installed three nesting boxes for bats at the La Baells Hydroelectric power plant. The goal of the installation is to offer alternative shelters for the bat colony that is in the false ceiling of the plant's control room. The action is part of the ENDESAbats project and involves the first intervention at the facilities where there are bat colonies.

ENDESA's workers installed three nesting boxes in locations where the specialized technicians from the Catalonia Forest Technology Centre (CTFC) had previously instructed them. The current location did not allow for the permanent presence of the species at the facility, so alternatives were sought so that the bat colony would not leave the area. Thus, two nesting boxes were installed in the main façade of the building and another inside a small loft.

There are several reasons why ENDESA wants to ensure that the species does not leave Baells, but simply changes location. To start with, they are animals that control pests

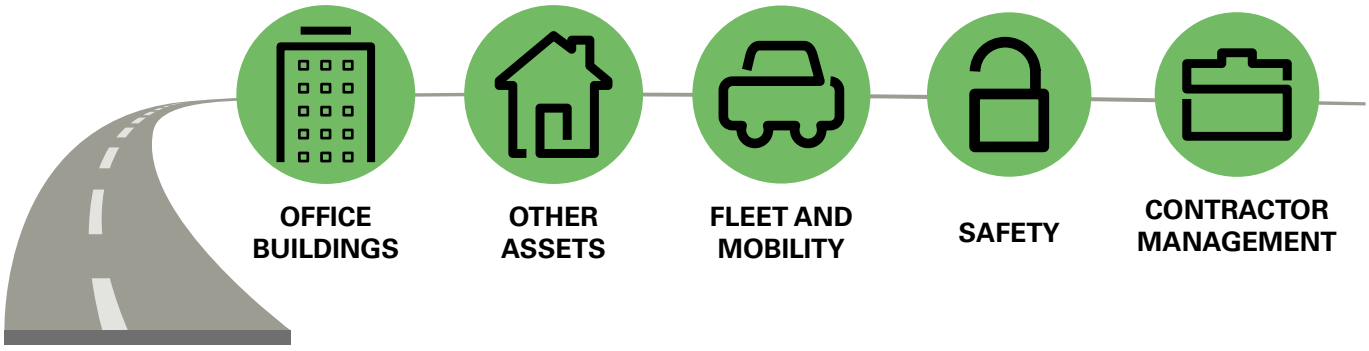
and prevent them from reproducing, according to Helena Roca, a technician from the CTFC. Nevertheless, the person responsible for the plant, Albert Rauet, explained that it is important that the animals change location because they create bad odours inside the plant and trigger the alarms. In order to avoid this, a screen was placed over a hole in the building so that the animals can leave without difficulty, but they cannot return again.

The nesting boxes installed yesterday at different points in the area around the plant are made of concrete, with a small entrance in the lower part. They are constructed with materials that attract the bats so that the CTFC is confident that relocation of the species will be a success (*El Punt Avui,* Catalonia Plant edition, 26/05/2017)

5. Resources Sustainability Plan

Since being put into operation in 2015, the Iberia Resource Sustainability Plan has contributed to fulfilling ENDESA's Sustainability Plan in those specific areas of action of the Management (Services, Assets and Safety): Although some of the actions have already been discussed in other parts of this report, we are presenting them here in a structured format since the environmental aspect carries relevant weight in several of the actions and we feel it is relevant to providing the comprehensive vision of the Environmental Sustainability Plan. The plan is structured in five large areas:

- **Office buildings:** Implement sustainable actions in space management, energy management and service management for the administrative offices.
- **Other company assets:** Promote actions with social or environmental purpose on company assets not connected to the business activity.
- **Fleet and mobility of employees:** Implement sustainable mobility through optimization and electrification of the corporate fleet of vehicles as well as introduction of new mobility solutions to employees.
- **Safety/Security:** Contribute to the company's sustainability from the safety aspect through prevention of safety, legal or reputation risks and awareness regarding information security.
- **Contractor management:** contribute to the sustainable supply chain from the contractors' area of control.



Actions Performed in 2017

Below are the most significant actions carried out in 2017 in each of the Iberian Resources Sustainability Plan areas:

Action	Description/Objectives	Milestones	
Office buildings			
Optimising office portfolio.	Reduce the ecological footprint, optimising the use of space and reducing energy consumption, supplies and waste generation	> Annual reduction of **5,583 m²** of space used for offices (64% in Andalusia, 16% in Catalonia, 13% in Aragon and 6% in the Canary Islands).	
Implementation of new workspaces.	Improve the working environment, promoting innovation, collaboration and exchange of ideas	> Allocation of new work spaces for **214 employees** in buildings in Almería, Fuengirola, Linares, Úbeda, Antequera, Alagón, San Miguel de Abona, Puerto de la Cruz... > Pilot of Smart Work Place at the main office in Ribera del Loira with capacity for 103 people and 1,193 m² of surface area. > Allocation in Vilanova of the 'Espai Externs Almogavars' with 340 m² of surface area.	
Modernisation and adaptation of buildings.	Improve the safety, functionality and comfort of buildings, in addition to their integration in the environment.	> Updating and remodelling work in **13 buildings** (Almería, Granada, Oporto, Antequera, Úbeda, Linares, Alagón, Calatayud, Arrecife...). > Outside urbanization area and covered parking for the Omeya building (Cordoba). > Improvement of landscaped areas that surround the Aznar Molina building (Zaragoza).	
Implementation and savings and energy efficiency devices in our offices.	Standardise architectural and construction requirements to improve energy efficiency, quality, comfort and safety in our offices.	> Preparation and application of the **Standards Guide for Construction of ENDESA's Offices.**	
Contracting of auxiliary services in the special employment centres.	Encourage employment integration of people with physical, mental or sensory disability.	> The total of **119 people** who provide the auxiliary services in the buildings are contracted to Special Employment Centres.	grupo sifu
Conciliation services for employees.	Implementation of services for employees that contribute to the conciliation, improvement of working environment and that encourage efficiency and performance at work (personal procedures, finance, health, sports...).	> Provision in the main offices, to date, of **53 services** relating to personal procedures, health, sports, etc.: – 15 services in Ribera del Loira. – 12 services in Vilanova. – 11 services in Borbolla. – 3 in Aznar Molina. – 5 in San Juan de Dios. – 3 in Woermann. – 4 in Ponferrada. > In 2017, 11 new services were implemented and a pilot APP has been launched with the basic services provided from Medios Iberia.	

Action	Description/Objectives	Milestones	
Triple building certification model.	Consolidate and expand this model in energy, environmental and indoor air quality management to systematise all actions in this regard and integrate them in daily operations.	> To date, **15 offices with 4,000 employees are certified** (they represent 57% of the surface area and 58% of the office workforce). More information in the chapter on: *Environmental sustainability / Certification of Environmental management systems.*	
Other certifications, accreditations, seals or awards.	Exemplify and demonstrate efficient and responsible management of our buildings.	> Issuance of the **Leed Gold certification 'Leadership in energy & environmental design'** for the corporate headquarters in Ribera del Loira.	
Monitoring of energy consumption uses for buildings.	Know consumption distribution, define possible measures to improve and estimate their potential savings.	> To date, **five offices are monitored** (Ribera del Loira, Vilanova, Borbolla, San Juan de Dios and Woermann).	
Assessment of the buildings' energy qualification.	Know the energy-efficiency level, diagnosis of possible improvements and comparison of energy characteristics and features.	> To date, obtained energy rating certificates for **27 offices** (19% A and B; 59% C and D; 22% E, F and G).	
Buildings' energy audits.	Establish a useful baseline for later certification processes, as well as define the most efficient and rational actions.	> **13 buildings** energy audited that guarantee that 85% of our final consumption is ISO 50001 certified or energy audited.	
Actions in energy inefficient buildings.	Improve the energy efficiency level of those buildings identified as more inefficient.	> Eight improvement actions performed on **six offices** with energy rating E, F and G: – Granada-Escudo del Carmen. – Huelva-Paseo de la Glorieta. – Lérida-Magraners. – Cádiz-Caracola. – Ibiza-Centro laboral. Zaragoza-Argualas. > The actions performed have reduced buildings with an E, F and G rating by 5%.	
Good practices campaign directed at the users of the buildings.	Promote a sustainable culture, reinforce the commitment to responsible consumption and engage users in the consumption reduction objectives.	> Publicity campaign **'Good practices guide for a more sustainable office'** and distribution of the summary brochure to all the office employees.	

Action	Description/Objectives	Milestones	
Other assets			
Sustainability actions on unused assets.	Reinforce the company's social and environmental commitment to the local communities, contributing to improving their infrastructures, vitalizing their economies and promoting alternative uses (tourism, recreation, sports, etc.) as well as enabling actions that are favourable to the protection, conservation or recovery of the area's environment.	**Execution of 12 actions:** > Formalized assignment of several highway sections to the Susqueda Council in order for the highway to act as a connecting artery between the different population nuclei of the area (Gerona). > Formalized assignment of several log houses catalogued as a cultural asset to the Torre de Capdella Council for its public use (Lérida). > Formalized assignment of the highway section of the Prada-Celavente highway to the A Veiga Council to improve access to a natural environment of great scenic value (Orense). > Formalized assignment of real estate to the Mañón Council for adaptation as access parking for the Estaca de Bares overlook (A Coruña). > Formalized assignment of several urban properties to the As Pontes Council for non-profit usage (A Coruña). > Formalized assignment of several sports facilities to the As Pontes Council for their recreational and sports use such as a rugby field, car racetrack and other sports equipment (A Coruña). > Formalized assignment of hunting rights on ENDESA land in the municipality of As Pontes to the 'La Venatoria' hunting and fishing association to encourage attracting visitors (A Coruña). > Formalized assignment of hunting rights on ENDESA land in the municipality of As Pontes to the 'La Venatoria' hunting and fishing association to encourage attracting visitors (A Coruña). > Formalized assignment of the chapel to the parish of the municipality Andorra for religious services. It involves a unique property that has prestige and tradition among the population (Teruel). > Formalized assignment of farms occupied by old public facilities to the Fiscal Council (Huesca). > Collaboration with the Council and Consortium of Besós for adaptation of the old dock for the Besós thermal power plant as an artificial reef that would encourage the development of marine fauna (Barcelona). > Formalized assignment of land at the Buitreras hydroelectric power plant for construction of a reservoir intended to supply the municipality (Málaga).	

Action	Description/Objectives	Milestones	
Fleet and mobility of employees			
Rationalisation of the fleet.	Contribute to reducing emissions, saving fuel and decreasing costs associated to management.	> **162 combustion vehicles** eliminated from the Company's fleet.	
Progressive electrification of the fleet.	Contribute to reducing emissions, saving fuel and improving the company's image.	> **94 electric vehicles** currently in our fleet.	
Incorporation of lower consumption vehicles in the fleet of vehicles.	Contribute to reducing emissions, saving fuel and decreasing costs associated to management.	> Replacement of **55 combustion vehicles** by cars with lower emissions.	
Car Sharing:	Pool of electric vehicles in the main office buildings for use of the employees in work activities in order to save fuel and reduce emissions.	> **20 electric vehicles** currently in service and **95,500 km** travelled in 2017, meaning more than 10 tons of CO_2 avoided.	
Shared taxi.	Comprehensive management of corporate transport in taxi with the aim of reducing emissions, contributing to sustainable and safe mobility and increasing digitisation and traceability of the service.	> To date, a total of 154,832 km travelled and 11,391 trips recorded, of which **26% were shared trips with 47% of passengers.**	
Sustainable mobility actions.	Adoption of measures that contribute to the sustainable mobility of employees, raise awareness in reducing emissions and improving the company image.	> To date, **5 car parks implemented for electric vehicles with a total of 165 spaces** at the offices in Ribera del Loira, Vilanova, Borbolla, Aznar Molina and La Cepa. > To date, **378 charging points installed** for electric vehicles.	
Safety/Security			
Intelligence analysis to prevent safety/ security risks.	Contribute to good company governance, prevent situations that place the normal company operation at risk and preserve the safety of people and assets.	> 11 **analyses** of the physical and digital environment and **140 new monitoring entities.**	
Prevention of legal and reputational risks.	Contribute to responsible management of supply chain, guarantee compliance with values and other established ethics legislation and preserve the image and reputation of the company.	> 82 **counterpart analyses** carried out.	
Fight against electricity fraud.	Contribute to preservation of the sustainability of the electrical system, consumer protection and raising awareness in customers and public administrations.	> 159 **fraud investigations performed:** 82 closed and 77 in progress.	

Action	Description/Objectives	Milestones	
Information security awareness among employees.	Train employees in the basic concepts of information security and raise awareness on the risks present in both the professional and family environment.	**11 actions performed:** > Awareness sessions during safety week throughout the territories (Balearic Islands, Aragon, Canary Islands, Catalonia, Andalusia and Madrid). > Safety information sessions aimed at the families of employees throughout the territories (Balearic Islands, Aragón, Canary Islands, Catalonia, Andalusia and Madrid). > Design and distribution of awareness materials among employees at the national level (safety warnings sheet, contactless card protector, webcam caps and mobile phone support). > 25 social engineering attack simulations (HumSec) held in three areas: documentation printed confidential information, USB and social engineering calls. Action carried out throughout the national territory. > Update of content on the Security mini site to promote security awareness on the job and in personal life. > Creation of a security community among employees and distribution of a specific security news bulletin. > Information provided in ENDESA's newsletter regarding security warnings and services (security on vacation, malware protection software, centralised digital certificate service...). > Design and distribution of 2018 Security calendar. > Design of the 2017 security Decalogue. > Design of a specific security Decalogue for work outside of the office. > Development of a Security app available to employees.	

Contractor management

Assessment of performance in contractors as regards social, environmental and ethical conduct.	Contribute to the responsible management of the supply chain and guaranteeing compliance by our contractors and suppliers.	> Monitoring questionnaires given to **131 contractor companies.**	

Sustainable supply chain

1,887

millions of euros in purchases of materials and services

5,548

Suppliers provided services to ENDESA

649

Suppliers rated in last 4 years

100

% of the contractors in Spain and Portugal have received Occupational Health and Safety Training

Sustainability Plan compliance 2017-2019

Basic Pillar	Area of activity	2017 Target	31/12/17 result	Key actions
Supply chain	Purchases made from rated suppliers (% of purchase volume).	65%	63%	> Updating of sustainability requirements in the supplier rating process, including human rights, environmental and occupational health and safety criteria.
	% of the ratings performed on suppliers where human rights aspects are verified	20%	49%	
	% of the ratings performed on suppliers where environmental aspects are verified	20%	69%	
	% of ratings performed on suppliers where Occupational Health and Safety aspects are verified	65%	70%	
	Assessment of suppliers' performance (% of purchase volume)	57%	59%	
	Contractors assessed regarding social, ethical and environmental aspects	65%	10%	

1. Responsible management of the supply chain

102-9

1.1. 2017 results

In 2017, ENDESA worked with 5,548 suppliers, 8.4% fewer than in 2016, including in this total the suppliers subject to delegated procurement. The value of purchases from suppliers has declined slightly compared to 2016, to 5.5%, to reach 1,887 million euros.

EU17

Likewise, the number of days worked by contractors or subcontractors involved in building, operation and maintenance activities in 2017 was 3,785,481, representing an increase of 0.6% compared to 2016.

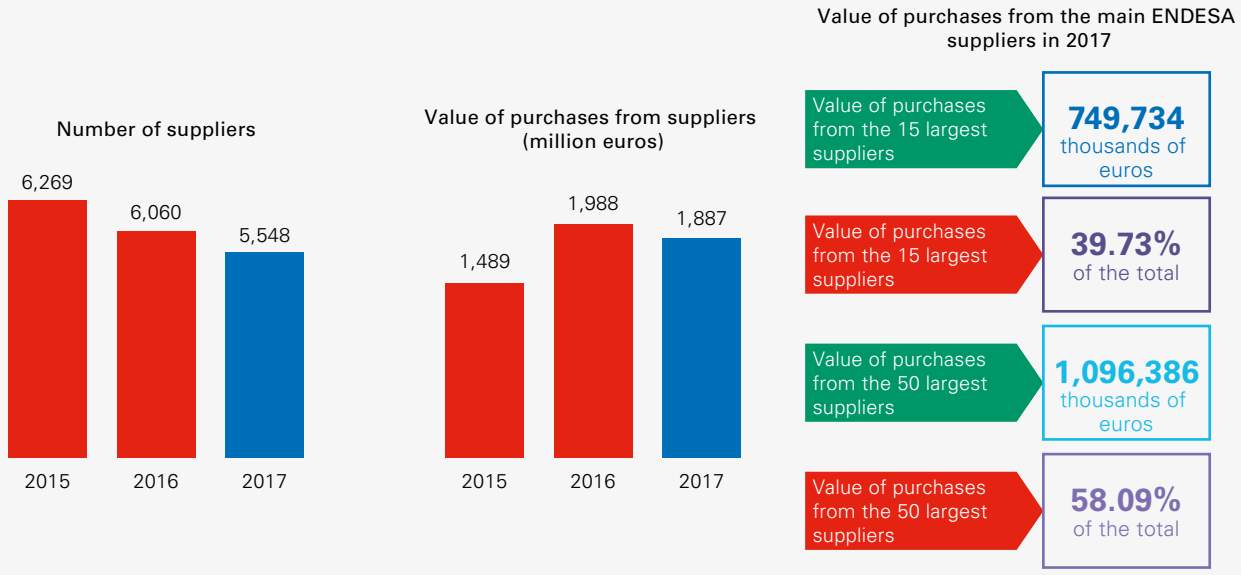
1.1.1. Commitment to local suppliers

204-1 303-2

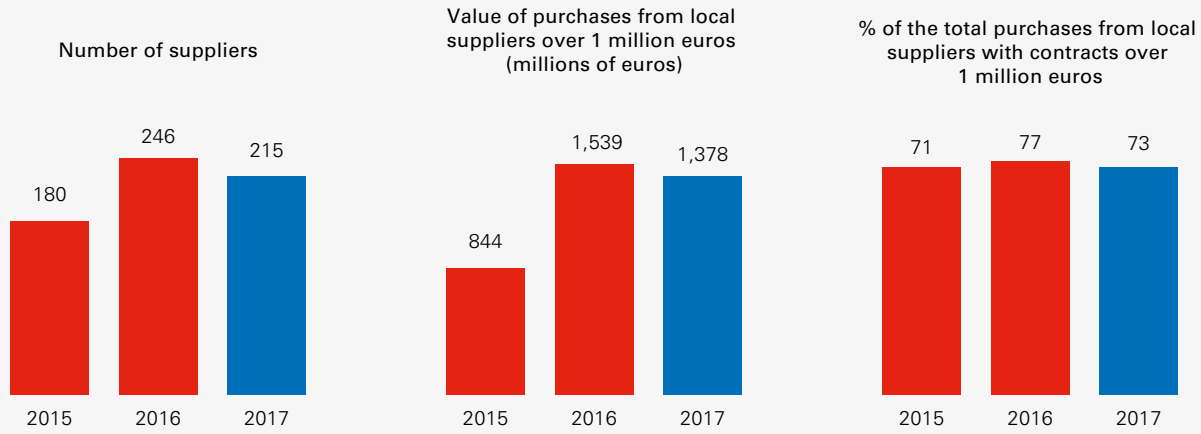
ENDESA's activity in the countries and territories where it operates is aimed at creating value for local suppliers. In line with our commitment to them, 86.7% of the budget use (1,637 million euros) has been allocated to these suppliers, understood as those incorporated in Spain. In 2017, the contracts for amounts over one million euros to local suppliers reached 1,378 million.

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 from foreign suppliers was 8% in 2017.

Number of ENDESA suppliers in Spain and Portugal

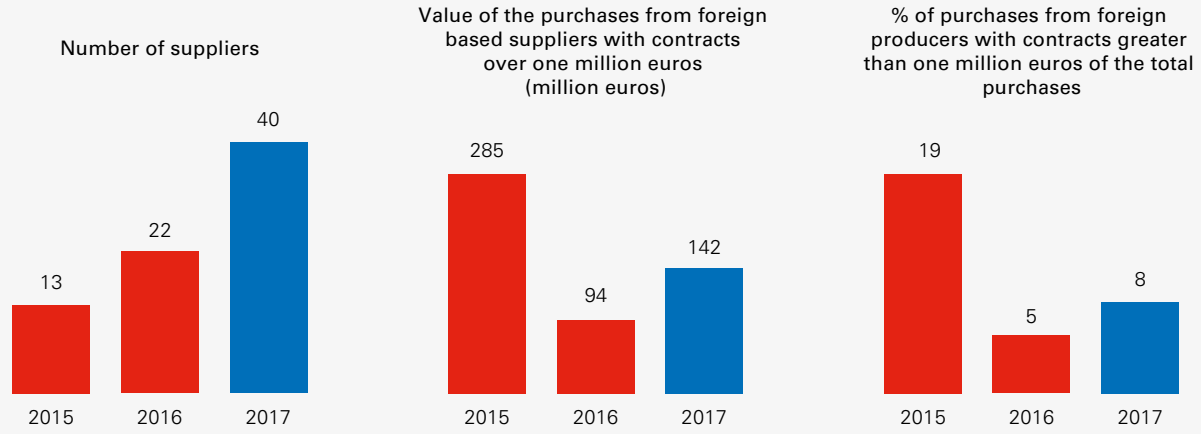


Purchases from local suppliers* with contracts over 1 million euros



* 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.

Purchases from foreign-based suppliers in each country



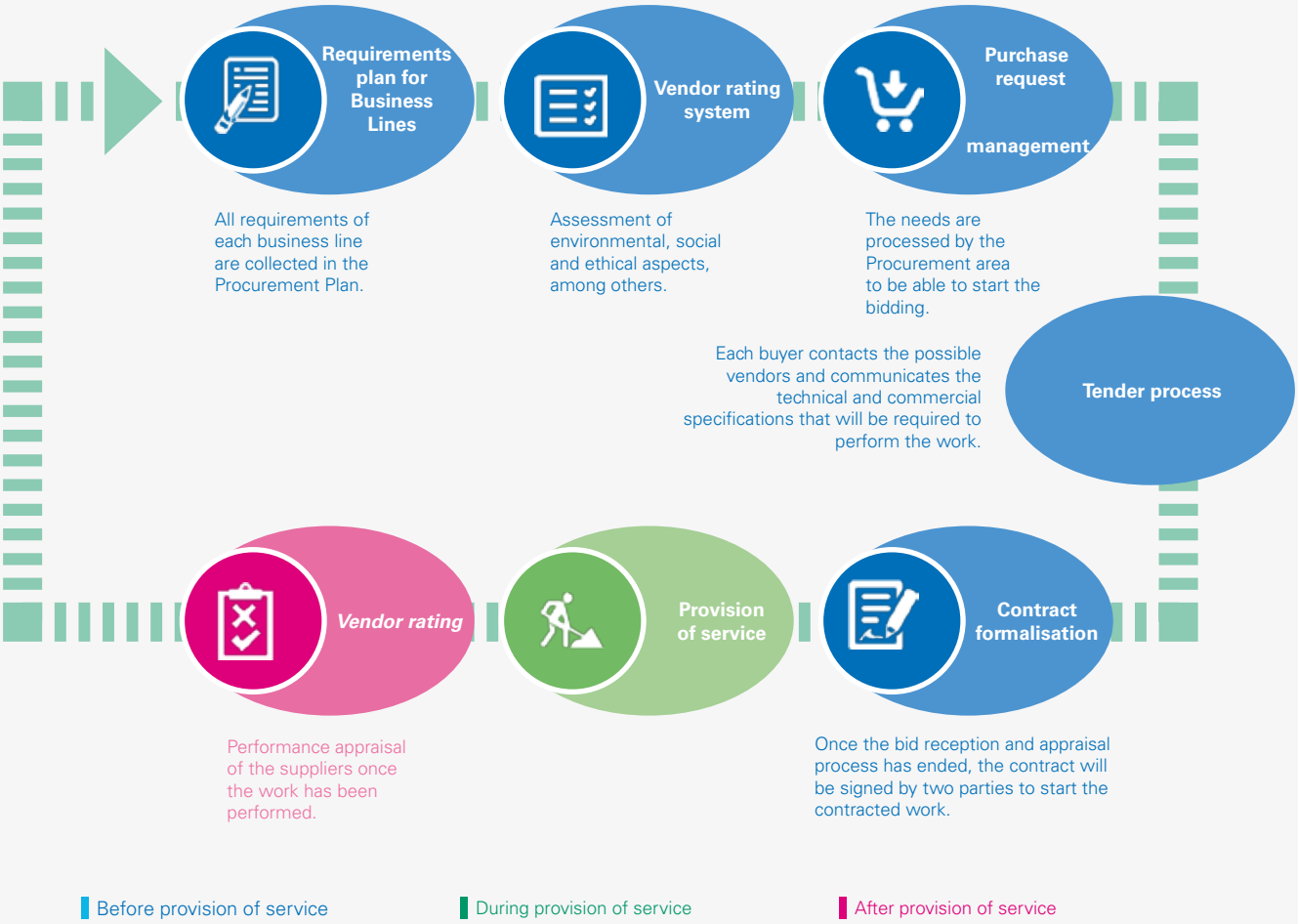
1.2. Integrated procurement process at ENDESA

103-1 | 103-2

103-3 Procurement practices management focus

In order to promote responsible management in the supply chain, ENDESA has an integrated procurement process, which requires suppliers to be rated following sustainability criteria (environmental, social, ethical, integrity, human rights) in addition to technical and economic criteria, before the tender process and contract formalisation. Finally, once the service has been provided, its compliance and performance level shall be assessed in this provision.

Integrated procurement process at ENDESA



1.3. Sustainability requirements in contracts

103-1 Child labour | 103-2 Child labour | 103-3 Child labour | 408-1 | 103-1 Forced or compulsory labour | 103-2 Forced or compulsory labour | 103-3 Forced or compulsory labour | 409-1 | 103-1 Supplier social assessment | 103-2 Supplier social assessment | 103-3 Supplier social assessment | 414-1 | 414-2 | 412-1 | 412-3 | 103-1 Supplier human rights assessment | 103-2 Supplier human rights assessment | 103-3 Supplier human rights assessment | 308-2 | 308-1 | 103-1 Supplier environmental assessment | 103-2 Supplier environmental assessment | 103-3 Supplier environmental assessment

In the Sixth Edition of the Enel Group Global General Conditions of Contract (GCC)), which apply to 100% of contracts, the supplier undertakes to comply with a set of sustainability requirements, including:

- Environmental Management: compliance with environmental legislation, in addition to aspects related to energy efficiency, the management of hazardous substances or environmental training, among others
- Human rights: fully assume and respect the 10 Global Compact principles, both for own staff and contractors.

- Ethical conduct: apply the same principles established in the ENDESA Code of Ethics or other equivalent.
- Occupational health and safety and labour aspects.

102-10

On 01/04/2017 the new sustainability rating requirements came into force, including evaluation of suppliers in the supply chain, in relation to compliance in the area of Human Rights, the Environment and Occupational Safety. Considering that the rating processes match activities previously attributed a certain level of risk, it is believed that all of the suppliers evaluated in these activities may have a potential negative impact.

1.4. Supplier rating

The Supplier Rating System, which came into effect in 2009 to reinforce compliance with applicable legal, employment, safety and environmental protection regulations, has kept in line with the planned development. It establishes whether a supplier meets the requirements to work with ENDESA. For the activities considered to be the most pertinent, and in addition to fulfilment of legal requirements, economic and financial solvency and technical capacity, this system specifically evaluates the level of a supplier's compliance in terms of sustainability following criteria previously defined according to the risk associated with the purchase family that the supplier belongs to:

- Assessment of compliance with Human Rights standards.

Growth of the supplier rating system

Evolution over the last 3 years (accumulated)

963
ratings obtained

649
rated suppliers

63.05%
of the volume of purchases made

407 suppliers have ISO 9001 quality certificate (95% of the total*)

360 suppliers have ISO 14001 environmental certificate (84% of the total*)

308 suppliers have OHSAS 18001 safety certificate (72%*)

* Suppliers characterised as ENDESAService Points are excluded from monitoring.

Evolution over the last year (annual, new suppliers)

388
ratings obtained

341
rated suppliers

267 supplier rating processes have revised occupational safety requirements, which represent:
- 68.81% of the ratings reviewed.

271 supplier rating processes have revised environmental requirements, which represent:
- 69.85% of the ratings performed in 2017.

- Assessment of compliance with Environmental Standards.
- Assessment of compliance with Occupational Safety standards.

The sustainability requirements for new rating cases entered into effect in April 2017 and will apply to the entire supplier families base subject to rating starting in March 2018.

In addition, as part of the environmental and safety sustainability requirements, it has been established that it is necessary to obtain the corresponding management system certifications in these areas in accordance with ISO 14001 and OHSAS 18001 standards for designated high-risk activities.

At the end of 2017, the Supplier Rating System was implemented in 181 purchase families, 118 Global families (international rating) and 63 local families in ENDESA.

In order to promote continuous improvement with responsible management of the supply chain, ENDESA, as part of the ENEL Group, has reviewed and improved the sustainability requirements 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. These requirements, as noted above, entered into effect in April 2017.

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:

Nota: Objetivos establecidos de acuerdo al nuevo sistema del Grupo ENEL para la verificación de aspectos de sostenibilidad en el proceso de calificación de proveedores.

1.4.1. Integrity and fight against corruption

Management focus Evaluation of supplier impacts on society

414-2

ENDESA strengthened the controls related to compliance with supplier integrity requirements, in groups of items and contracts that are most sensitive to this aspect.

On 26/10/2016 organisational procedure number 209, 'verification of honourability requirements', was approved

The company's operating guidelines are designed to strengthen the control system existing in the supply chain through more effective action against corruption, and in particular:

- Establishing specific criteria to verify the legal requirement and honourability documents, homogeneous and applicable to the procurement process (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.

1.4.2. Compliance with Human rights

414-1 | 414-2 | 407-1 | 103-2

In 2017, 288 contracts that exceed 1 million euros have been entered on the books, pertaining to a total of 255 suppliers (215 local and 40 foreign).

All of these contracts include human rights clauses relating to the Global Compact and the Ethical Standards (clauses 26 and 27) that reflect the supplier's commitment to comply with the Global Compact principles, including those relating to human rights, as well as the commitment to comply with the legal rules involving child and female labour protection, equal opportunity, prohibition of discrimination, abuse and harassment, freedom of association and representation, forced labour, environmental safety and protection, conditions of health and hygiene, along with compliance with the current legislation on wages, social security contributions and pensions, insurance, taxes, etc., in relation to all workers employed for any purpose in the execution of the Contract.

Under this criterion, based on contractual clauses, 100% of operations would have to be submitted to review or evaluation of the human rights impact.

On the other hand, during 2017 a new specific Human Rights evaluation criterion has been introduced as part of the supplier rating processes, for which a coverage target was set at 20% for the ratings obtained in 2017 as well as a 60% target in 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.

The assessment of each area differs according to the number of staff in each company.

The implementation of some protection tools/measures is considered the 'winning' requisite in the evaluation of a company, while an absence of tools considered 'fundamental' would require further action by Enel. .

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.
- **Audit at the company:** visit to the company's facilities.

Since the entry into effect of the sustainability requirements in April 2017, a total of 190 rating processes have been analysed for new rating applications by analysis of a questionnaire provided for this purpose in the rating circuit.

With these figures, it has been possible to verify 48.96% on the ratings issued in the field of Human Rights, surpassing, as mentioned above, the 20% 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.

Contracts for the procurement of materials and services that include Human Rights clauses

	Year	Spain and Portugal
Number of significant* contracts that include human rights clauses	2015	191
	2016	284
	2017	288
Percentage of significant* contracts that include human rights clauses	2015	100%
	2016	100%
	2017	100%

* Contracts of over one million euros are considered significant

1.4.3. Environmental management

308-1 | 308-2

Supplier environmental assessment management focus

ENDESA assesses whether the contractor companies fulfil the environmental requirements requested, examining the organisational and management performance and quality of the companies in terms of environmental responsibility on the basis of various information and documents sent by the company.

Specifically, ENDESA will verify that the company:

- Has implemented an organisational and management model that complies 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.
- Has and updates the corporate Environmental Aspects Assessment document relating to its own activities in accordance with the environmental requirements of the country in which it operates.

As part of the environmental requirements assessment process, after having analysed the relevant documents, the performance of a possible specific audit may be necessary. The Audit may be carried out at the company's premises (Headquarters Visit) and/or at a work site (of ENDESA or of Third Parties, for the product groups that envision activities at the work site) where the company is carrying out activities during the technical assessment period (Work Site Visit).

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

Since the entry into effect of the new sustainability requirements, the rating families designated as having high environmental risk as well as those that, although not high risk, may have been deemed subject to mandatory compliance, the supplier must have an Environmental Management System in compliance with ISO 14001 for the work and services relating to the activities subject to this rating, certified by a body accredited by ENAC, with the certifying body also providing the scope of the certification and the expiry date thereof.

During 2017 environmental assessments were done on a total of 271 supplier rating cases (190 of which were referenced to the new criteria that entered into effect on 1/4/2017).

This signifies a level of compliance, in terms of ratings, at 69.85% of the total number of supplier environmental rating cases verified, far exceeding the 20% target set.

None of the ratings done involved high-risk activities and the rest of the cases reviewed, pertaining to medium- or low-risk activities, did not display a severe assessment either.

Likewise, no impacts of an environmental nature have been detected in the performance of contracts that have led to rating suspensions or proposal of an improvements plan to be implemented in order to recover the status of rated vendor.

1.4.4. Occupational health and safety

ENDESA assesses whether contracted companies fulfil the necessary Safety requirements by examining the company's Safety performance and management and organisational quality and performance on the basis of the information and documents sent by the company itself.

In order to measure the overall performance of a company in the last three years, the following 4 parameters are evaluated:

1. IF - Average Frequency index for the last three years: (Numberof accidents/hours worked) per 1,000,000.
2. IG - Average Severity index for the last three years (number of days of absence due to accidents/hours worked) per 1,000.
3. IM - 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 latest value and the development of the Safety Index category of the Vendor Rating related to the Product Group rated.

The values obtained for each of the 4 indicators are compared to the specific thresholds predefined by the Enel Group 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.

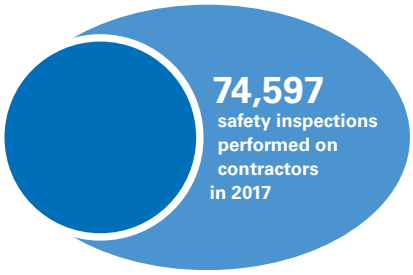
414-1

During 2017 occupational safety assessments were done on a total of 267 supplier rating cases (190 of which were referenced to the new criteria that entered into effect on 01/04/2017).

This signifies a level of compliance, in terms of ratings, at 68.81% of the total number of supplier safety rating cases verified, exceeding the 65% target set.

It should be noted that, for safety reasons, rating was suspended during 2017. The suspension, established according to the company's internal policy for these issues, was followed by the implementation and execution of an improvements plan. As of the end of 2017 review of the correct assessment thereof remained pending and once the minimum suspension period established in the global operating note (REPEATED VIOLATIONS OF HEALTH AND SAFETY AND PROCUREMENT PROCEDURES) approved in May 2016 passes, supplier rating will be able to resume.

2. Extending 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 2016 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 (*in vigilando*). 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, 74,597 inspections have been performed in Iberia on work and/or projects 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 137 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 (IPAL) 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 or those working as site foremen, as well as OHS resources and health and safety coordinators.

2.1. Risk activity control program

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. 74,597 inspections were performed in 2017 in the different businesses.
- Extra Checking On Site 'ECoS' programme, whereby an expert team trained by co-workers from different companies visit production centres to inspect specific tasks, comparing and promoting the best practices observed to the rest of the organisation. In 2017, 15 instances of 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 initiatives carried out by ENDESA within the framework of this strategy in 2017 focused mainly on specific accident action plans, maintenance and creation of new alliances with partner firms and action plans with outside contractors with high accident rates.

2.2. Contractor training

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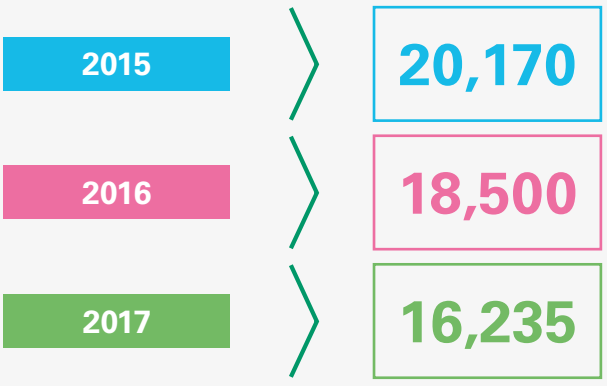
In 2017, 100% of ENDESA's contractors and sub-contractors received occupational health and safety training to perform their activities.

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

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 in Spain and Portugal



requirements, legal, economic-financial issues, quality and/or environmental management systems, etc. were evaluated.

Throughout 2017, inspections continued to be performed on companies from the sectors considered most hazardous, placing emphasis on maintenance activity.

Rated suppliers

	2015	2016	**2017**
Spain and Portugal	615	774	649*

* 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

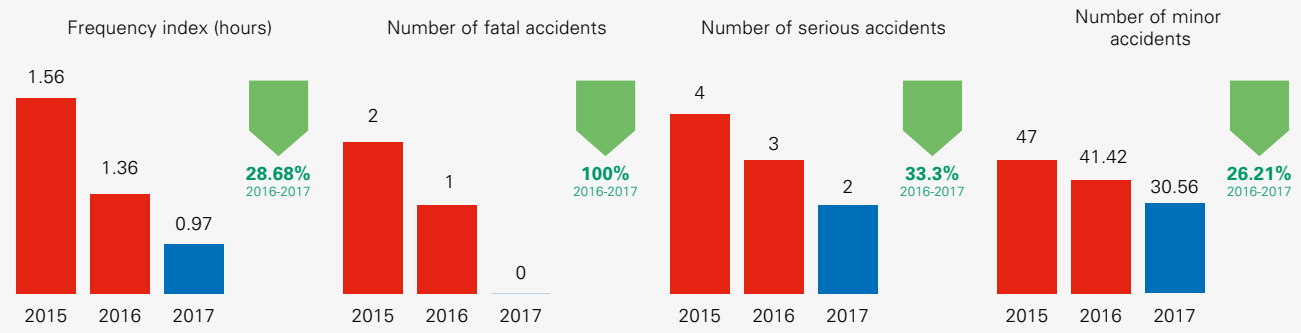
ENDESA's performance in raising awareness of occupational health and safety among its employees and contractors has continued to pay off in recent years. The total number of minor accidents with the contractor personnel in Spain and Portugal has decreased by 26.21% compared to 2016, and stood at 30.56% in 2017.

Serious accidents have declined from 3 in 2016 to 2 in 2017.

There were no fatal accidents involving contractor personnel this year.

The accident frequency rate of these employees in Spain and Portugal has gone from 1.36 in 2016 to 0.97 in 2017.

Accident rate indicators



3. 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 2017 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 various 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. Significant progress was made in 2017,

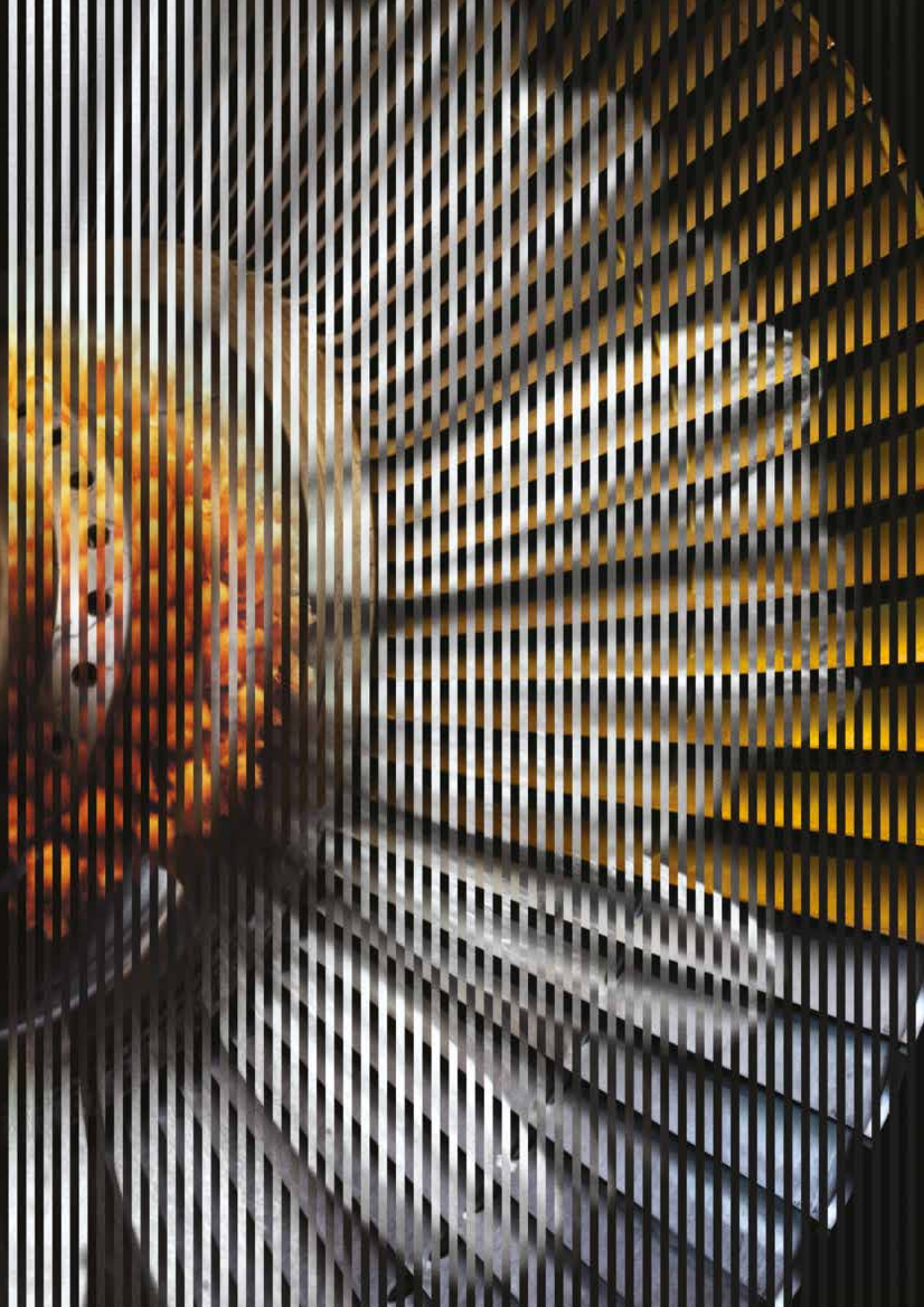
- The number of mining companies formally committed to Bettercoal through the signing of the letter of commitment has risen to 13.
- 3 new mining companies have joined Bettercoal and have carried out site-assessment analyses at the facilities level, increasing or initiating their presence in new markets such as Russia, the United States and Kazakhstan
- A new analysis (reassessment) has been carried out at Kuzbassrazrezugol Coal Company OJSC (KRU) in Russia.
- A country prioritisation strategy has been developed and implemented in Colombia, Russia and South Africa.
- A new, more robust supplier analysis process has been developed and the Bettercoal code has been aligned with OECD standards
- A collaboration agreement has been signed with the World Coal Association

The beginning of 2018 presents itself as intensely active, with 3 analyses at the facilities level at Kangra Group, SUEK and Cerrejon, as well as the inclusion of the first member of Bettercoal from Asia, which will boost the global character of the organisation.

Bettercoal's main strategic priorities for 2018 are to complete the process of reviewing the analyses (assessments), to implement the analysis quality programme, to effectively follow up on the continuous improvement plans developed from the analyses, to increase supplier participation and to increase the number of members, as well as to review the association's governance model.

05

Appendices



Appendix I: ENDESA's commitment to information on sustainability

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ENDESA fulfils its commitment to transparency by means of the public information that it provides to its stakeholders through various information channels.

Through its corporate website: www.endesa.com, ENDESA reports on its sustainability performance and offers quarterly information to shareholders and financial markets, which also have Endesa's Shareholders' Office at their disposal. In addition, ENDESA, annually and at the end of the business cycle, publishes its Sustainability Report, which reports on the actions carried out throughout the financial year and offers a response to stakeholders' expectations through the Endesa Sustainability Plan.

Furthermore, ENDESA publishes other corporate reports every year at year-end, among which we can highlight: the Activities Report, Legal Documentation, and Corporate Governance Report. Endesa Foundation's annual report also provides information on the social commitment activities carried out.

In this way, ENDESA conveys to its stakeholders its commitment to generating of long-term value and sustainable management of its business.

If readers would like more information on Sustainability, they have the following channels at their disposal:

Website

www.endesa.com

Customer channels

Customer Service:

- Deregulated market customers: 800 76 09 09 / From abroad: 0034 - 937 061 510
- VPSC Customers (Voluntary Price for Small Consumers): 800 76 03 33 / From abroad: 0034 - 937 061 509
- Companies: 800 76 02 66
- Endesa Distribución: 902 509 600 / From abroad: +34 937 061 513
- Endesa One: 900 905 085

https://www.endesaclientes.com/

http://www.endesaone.com/

www.endesadistribucion.es

Customer Ombudsman: https://www.endesaclientes.com/defensor-cliente.html

http://www.defensordelcliente.endesa.es/

Shareholders and investors

Investor Relations Department:

Ribera del Loira, 60. 28042 Madrid.

Tel. + 34 91 213 1503

ir@endesa.es

Shareholders' Office Spain:

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@enelomnichannel.com

Employees and their representatives

Corporate Portal: Intranet. 100% of employees have access to the corporate intranet.

Employees also have a multi-channel platform (web, telephone and chat) called "On-line", through which they can make inquiries, resolve questions and carry out tasks related to HR personnel administration. This initiative, which takes advantage of the new technologies, is part of the Company's digital transformation plan, aimed at reducing response times and increasing employee satisfaction levels.

Websites of ENDESA's trade unions:
www.ugtendesa.com
www.ccooendesa.com
www.asie-sindical.com/

Service to the general public

Sustainability:
sostentabilidad@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

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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 Director of 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)

This report has been prepared in accordance with the GRI Standards Essential Option

Appendix II. Independent review report

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Ernst & Young, S.L.
C/Raimundo Fernández Villaverde, 65
28003 Madrid

Tel: 902 365 456
Fax: 915 727 300
ey.com

INDEPENDENT REVIEW REPORT 2017 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 "2017 Sustainability Report" 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 APS 2008 issued by *Accountability (Institute of Social and Ethical Accountability).*

The limits set by Endesa for the preparation of this report are defined in section 9 ("scope of 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 Assurance standard (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 APS 2008.
- 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 APS 2008, no aspect was discovered that would indicate to us that Endesa has not applied the principles of inclusivity, relevance and responsiveness 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 APS (2008); the most significant recommendations refer to:

- **Inclusivity:** Endesa identifies and classifies stakeholder at the national and local level. Each stakeholder is also segmented to optimise 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.
- **Relevance:** 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.

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.

AA1000 Licensed Assurance Provider

Maria del Tránsito Rodriguez Alonso
Partner
Madrid, 05 March 2018

Appendix III. GRI content index

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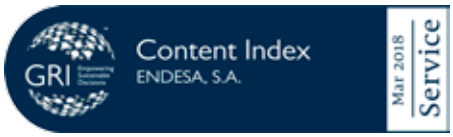
GRI Content Index



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	**Organisational profile**				
	102-1 Name of the organization	Ch. Getting to know Endesa: 1.2. Main activities			
	102-2 Activities, brands, products, and services	Ch. Getting to know Endesa: 1.2. Main Activities; 1.4. Organisational structure			
	102-3 Location of headquarters	Appendix 1			
	102-4 Location of operations	Ch. Getting to know Endesa: 1.3. Main markets			
	102-5 Ownership and legal form	Ch. Getting to know Endesa: 1.4. Organisational structure			
	102-6 Markets served	Ch. Getting to know Endesa: 1.3. Main markets			
	102-7 Scale of the organization	Ch. Getting to know Endesa: 1.1. Endesa in figures			
	102-8 Information on employees and other workers	Ch. Our People: 1. Endesa's workforce			
	102-9 Supply chain	Ch. Supply chain: 1. Responsible management of the supply chain			
	102-10 Significant changes to the organization and its supply chain	Ch. Getting to know Endesa: 1.4.2. Renewable energies: Endesa Renovables; 1.4.3. Power Distribution: Endesa Red/ Supply Chain Chapter: 1.3. Sustainability requirements in contracts			
	102-11 Precautionary Principle or approach	Ch. Environmental sustainability: 1.2. Environmental objectives			
	102-12 External initiatives	Ch. Getting to know Endesa: 2.4. Commitment to the United Nations Agenda			
	102-13 Membership of associations	Ch. Getting to know Endesa: 2.5. Participation in sustainability forums and associations			
	Strategy				
	102-14 Statement from senior decision-maker	Letters from the Chairman and the Chief Executive Officer			
	Ethics and integrity				
	102-16 Values, principles, standards, and norms of behaviour	Ch. Getting to know Endesa: 5. Ethical conduct and compliance			
	Governance				
	102-18 Governance structure	Ch. Getting to know Endesa: 3.1. Governance and sustainability management system			

GRI Standard	Disclosure	Page number(s) and/or URL(s)	Omission		
			Part Omitted	Reason	Explanation
GRI 102: General Disclosures 2016	**Stakeholder engagement**				
	102-40 List of stakeholder groups	Ch. Defining Priorities: 2.1. Identification of stakeholders			
	102-41 Collective bargaining agreements	Ch. Our People: 5. Social dialogue			
	102-42 Identifying and selecting stakeholders	Ch. Defining Priorities: 2.1. Identification of stakeholders/ 2.3. Prioritisation of stakeholders			
	102-43 Approach to stakeholder engagement	Ch. Defining Priorities: 2.2. Endesa's communication channels with its stakeholders/ Ch. Getting to know Endesa: 7.4.5. Transparency and close relations with shareholders and investors; 7.4.6. Investor relations department; 7.4.7. Endesa's shareholders' office			
	102-44 Key topics and concerns raised	Ch. Defining Priorities: 3.2.2. Priority issues for each stakeholder group			
	Reporting practice				
	102-45 Entities included in the consolidated financial statements	Ch. Getting to know Endesa: 1.4. Organisational structure			
	102-46 Defining report content and topic Boundaries	Ch. Defining Priorities: 1. Identification process for priority issues			
	102-47 List of material topics	Ch. Defining Priorities: 3.2. Materiality study results			
	102-48 Restatements of information	There are no restatements of information in IS2017			
	102-49 Changes in reporting	There are no significant changes			
	102-50 Reporting period	Ch. Getting to know Endesa: 8. About this report			
	102-51 Date of most recent report	Ch. Getting to know Endesa: 8. About this report			
	102-52 Reporting cycle	Ch. Getting to know Endesa: 8. About this report			
	102-53 Contact point for questions regarding the report	Ch. Getting to know Endesa: 8. About this report/Appendix I			
	102-54 Claims of reporting in accordance with the GRI Standards	Ch. Getting to know Endesa: 8. About this report			
	102-55 GRI content index	Appendix III			
	102-56 External assurance	Appendix II			
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: 7.4.2. Dividend			
	103-2 The management approach and its components	Ch. Getting to know Endesa: 7.4.2. Dividend			
	103-3 Evaluation of the management approach	Ch. Getting to know Endesa: 7.4.2. Dividend			
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	Ch. Getting to know Endesa: 7.2. Generation of wealth in 2017			
	201-4 Financial assistance received from government	Ch. Getting to know Endesa: 7.2. Generation of wealth in 2017			
Market Presence					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Our People: 4.3. Remuneration policy			
	103-2 The management approach and its components	Ch. Our People: 4.3. Remuneration policy			
	103-3 Evaluation of the management approach	Ch. Our People: 4.3. Remuneration policy			

GRI Standard	Disclosure	Page number(s) and/or URL(s)	Omission		
			Part Omitted	Reason	Explanation
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			
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			
	103-2 The management approach and its components	Ch. Relationship with the communities: 1. Endesa's commitment to the communities			
	103-3 Evaluation of the management approach	Ch. Relationship with the communities: 1. Endesa's commitment to the communities			
GRI 203: Indirect Economic Impacts 2016	203-2 Significant indirect economic impacts	Ch. Relationship with the communities: 4. Quantification of Endesa's investment in the community			
Procurement Practices					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Supply chain: 1.2 Endesa's integrated procurement process			
	103-2 The management approach and its components	Ch. Supply chain: 1.2 Endesa's integrated procurement process			
	103-3 Evaluation of the management approach	Ch. Supply chain: 1.2 Endesa's integrated procurement process			
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	Ch. Supply chain: 1.1.1. Commitment to local suppliers			
Anti-corruption					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Getting to know Endesa: 5.1. Code of Ethics and zero tolerance for corruption plan			
	103-2 The management approach and its components	Ch. Getting to know Endesa: 5.1. Code of Ethics and zero tolerance for corruption plan			
	103-3 Evaluation of the management approach	Ch. Getting to know Endesa: 5.1. Code of Ethics and zero tolerance for corruption plan			
GRI 205: Anti-corruption 2016	205-3 Confirmed incidents of corruption and actions taken	Ch. Getting to know Endesa: 5.6. Ethics channel			
Anti-competitive Behaviour					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Getting to know Endesa: 5.1 Code of Ethics and zero tolerance for corruption plan			
	103-2 The management approach and its components	Ch. Getting to know Endesa: 5.1 Code of Ethics and zero tolerance for corruption plan			
	103-3 Evaluation of the management approach	Ch. Getting to know Endesa: 5.1 Code of Ethics and zero tolerance for corruption plan			
GRI 206: Anti-competitive Behaviour 2016	206-1 Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	Ch. Getting to know Endesa: 5.7. Sanctions received			
GRI 300 Environmental Standards Series					
Materials					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Environmental sustainability: 1. Environmental management; 1.1. Endesa's environmental policy			
	103-2 The management approach and its components	Ch. Environmental sustainability: 1. Environmental management; 1.1. Endesa's environmental policy			
	103-3 Evaluation of the management approach	Ch. Environmental sustainability: 1. Environmental management; 1.1. Endesa's environmental policy			
GRI 301: Materials 2016	301-1 Materials used by weight or volume	Ch. Environmental sustainability: 2.1.2. Fossil fuel consumption			
	301-2 Recycled input materials used	Ch. Environmental sustainability: 2.4.1. Water consumption/2.5 Waste			

GRI Standard	Disclosure	Page number(s) and/or URL(s)	Omission		
			Part Omitted	Reason	Explanation
Energy					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Environmental sustainability: 1. Environmental management; 1.1. Endesa's environmental policy			
	103-2 The management approach and its components	Ch. Environmental sustainability: 1. Environmental management; 1.1. Endesa's environmental policy			
	103-3 Evaluation of the management approach	Ch. Environmental sustainability: 1. Environmental management; 1.1. Endesa's environmental policy			
GRI 302: Energy 2016	302-1 Energy consumption within the organization	Ch. Environmental sustainability: 2.1.1. Electrical energy consumption; 2.1.2. Fossil fuel consumption			
	302-2 Energy consumption outside of the organization	Ch. Environmental sustainability: 2.1.2. Fossil fuel consumption			
	302-3 Energy intensity	Ch. Environmental sustainability: 2.1.5. Energy efficiency in internal processes			
	302-4 Reduction of energy consumption	Ch. Environmental sustainability: 2.1.5. Energy efficiency in internal processes			
	302-5 Reductions in energy requirements of products and services	Ch. Customer orientation: 5. Endesa's energy solutions			
Water					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Environmental sustainability: 2.4. Water resources			
	103-2 The management approach and its components	Ch. Environmental sustainability: 2.4. Water resources			
	103-3 Evaluation of the management approach	Ch. Environmental sustainability: 2.4. Water resources			
GRI 303: Water 2016	303-1 Water withdrawal by source	Ch. Environmental sustainability: 2.4.1. Water consumption			
	303-2 Water sources significantly affected by withdrawal of water	Ch. Environmental sustainability: 2.4.1. Water consumption			
	303-3 Water recycled and reused	Ch. Environmental sustainability: 2.4.1. Water consumption			
Biodiversity					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Environmental sustainability: 4.1. Biodiversity conservation plan			
	103-2 The management approach and its components	Ch. Environmental sustainability: 4.1. Biodiversity conservation plan			
	103-3 Evaluation of the management approach	Ch. Environmental sustainability: 4.1. Biodiversity conservation plan			
GRI 304: Biodiversity 2016	304-2 Significant impacts of activities, products, and services on biodiversity	Ch. Environmental sustainability: 4.2. Key actions			
	304-3 Habitats protected or restored	Ch. Environmental sustainability: 4.1. Biodiversity conservation plan; 4.3 Environmental restoration			
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Ch. Environmental sustainability: 4.2.3. Projects with socio-environmental component			

GRI Standard	Disclosure	Page number(s) and/or URL(s)	Omission		
			Part Omitted	Reason	Explanation
Emissions					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Environmental sustainability: 2.2. Air quality; 2.3.Emissions of ozone-depleting substances; Ch. Low-carbon business model: 3. Reduction of the Carbon Footprint			
	103-2 The management approach and its components	Ch. Environmental sustainability: 2.2. Air quality; 2.3.Emissions of ozone-depleting substances; Ch. Low-carbon business model: 3. Reduction of the Carbon Footprint			
	103-3 Evaluation of the management approach	Ch. Environmental sustainability: 2.2. Air quality; 2.3.Emissions of ozone-depleting substances; Ch. Low-carbon business model: 3. Reduction of the Carbon Footprint			
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Ch. Low-carbon business model: 3.2. Direct and indirect CO2 emissions			
	305-2 Energy indirect (Scope 2) GHG emissions	Ch. Low-carbon business model: 3.2. Direct and indirect CO2 emissions			
	305-3 Other indirect (Scope 3) GHG emissions	Ch. Low-carbon business model: 3.2. Direct and indirect CO2 emissions			
	305-4 GHG emissions intensity	Ch. Low-carbon business model: 3.2. Direct and indirect CO2 emissions			
	305-5 Reduction of GHG emissions	Ch. Low-carbon business model: 3.2. Direct and indirect CO2 emissions			
	305-6 Emissions of ozone-depleting substances (ODS)	Ch. Environmental sustainability: 2.3. Emissions of ozone-depleting substances			
	305-7 Nitrogen oxides (NOX), sulphur oxides (SOX), and other significant air emissions	Ch. Environmental sustainability: 2.2. Air quality			
Effluents and Waste					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Environmental sustainability: 2.4.2. Water discharge;2.5. Waste			
	103-2 The management approach and its components	Ch. Environmental sustainability: 2.4.2. Water discharge;2.5. Waste			
	103-3 Evaluation of the management approach	Ch. Environmental sustainability: 2.4.2. Water discharge;2.5. Waste			
GRI 306: Effluents and Waste 2016	306-1 Water discharge by quality and destination	Ch. Environmental sustainability: 2.4.2. Water discharge			
	306-2 Waste by type and disposal method	Ch.: Environmental Sustainability 2.5. Waste			
	306-4 Transport of hazardous waste	Ch. Environmental sustainability: 2.5. Waste			
	306-5 Water bodies affected by water discharges and/or run-off	Ch. Environmental sustainability: 2.4.1. Water consumption			
Environmental Compliance					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Environmental sustainability: 1. Environmental management; 1.1. Endesa's Environmental Policy			
	103-2 The management approach and its components	Ch. Environmental sustainability: 1. Environmental management; 1.1. Endesa's Environmental Policy			
	103-3 Evaluation of the management approach	Ch. Environmental sustainability: 1. Environmental management; 1.1. Endesa's Environmental Policy			

GRI Standard	Disclosure	Page number(s) and/or URL(s)	Omission		
			Part Omitted	Reason	Explanation
GRI 307: Environmental Compliance 2016	307-1 Non-compliance with environmental laws and regulations	Ch. Getting to know Endesa: 5.7. Sanctions received			
Supplier Environmental Assessment					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Supply chain: 1.3. Sustainability requirements in contracts			
	103-2 The management approach and its components	Ch. Supply chain: 1.3. Sustainability requirements in contracts			
	103-3 Evaluation of the management approach	Ch. Supply chain: 1.3. Sustainability requirements in contracts			
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	Ch. Supply chain: 1.3. Sustainability requirements in contracts			
	308-2 Negative environmental impacts in the supply chain and actions taken	Ch. Supply chain: 1.3. Sustainability requirements in contracts			
GRI 400 Social Standards Series					
Employment					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Our People: 7. Responsible people management at Endesa			
	103-2 The management approach and its components	Ch. Our People: 7. Responsible people management at Endesa			
	103-3 Evaluation of the management approach	Ch. Our People: 7. Responsible people management at Endesa			
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	Ch. Our People: 4. Attracting and retaining talent			
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Ch. Our people: 4.3. Remuneration policy			
	401-3 Parental leave	Ch. Our People: 7.2. Conciliation of professional, personal and family life			
Labour/Management Relations					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Our People: 5. Social dialogue			
	103-2 The management approach and its components	Ch. Our People: 5. Social dialogue			
	103-3 Evaluation of the management approach	Ch. Our People: 5. Social dialogue			
GRI 402: Labour/ Management Relations 2016	402-1 Minimum notice periods regarding operational changes	Ch. Our People: 5. Social dialogue			
Occupational Health and Safety					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Our People: A safe and healthy environment			
	103-2 The management approach and its components	Ch. Our People: A safe and healthy environment			
	103-3 Evaluation of the management approach	Ch. Our People: A safe and healthy environment			
GRI 403: Occupational Health and Safety 2016	403-1 Workers representation in formal joint management-worker health and safety committees	Ch. Our People: 8.4. Occupational health and safety committees			
	403-2 Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	Ch. Our People: 8.5. Drop in accident rate			
	403-4 Health and safety topics covered in formal agreements with trade unions	https://www.boe.es/diario_boe/txt.php?id=BOE-A-2014-1561			

GRI Standard	Disclosure	Page number(s) and/or URL(s)	Omission		
			Part Omitted	Reason	Explanation
Training and Education					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Our People: 2.1. Leadership Model; 3.2. Type and content of training			
	103-2 The management approach and its components	Ch. Our People: 2.1. Leadership Model; 3.2. Type and content of training			
	103-3 Evaluation of the management approach	Ch. Our People: 2.1. Leadership Model; 3.2. Type and content of training			
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	Ch. Our People: 3.1. Key figures and relevant aspects			
	404-2 Programs for upgrading employee skills and transition assistance programs	Ch. Our People: 3.2. Type and content of training; 2.2. Talent development			
	404-3 Percentage of employees receiving regular performance and career development reviews	Ch. Our People: 2.1. Leadership Model			
Diversity and Equal Opportunity					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Our People: 7.1. Endesa's commitment to diversity			
	103-2 The management approach and its components	Ch. Our People: 7.1. Endesa's commitment to diversity			
	103-3 Evaluation of the management approach	Ch. Our People: 7.1. Endesa's commitment to diversity			
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Ch. Getting to know Endesa: 3.3. Leadership of the Board of Directors			
	405-2 Ratio of basic salary and remuneration of women to men	Ch. Our People: 4.3. Remuneration Policy			
Non-discrimination					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Our People: 7.1. Endesa's commitment to diversity			
	103-2 The management approach and its components	Ch. Our People: 7.1. Endesa's commitment to diversity			
	103-3 Evaluation of the management approach	Ch. Our People: 7.1. Endesa's commitment to diversity			
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Ch. Our People: 7.1. Endesa's commitment to diversity; 7.1.1. Enel Group's Diversity and Inclusion Policy			
Child Labour					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Our People: 4.2. Personnel selection; Ch. Supply chain: 1.3. Sustainability requirements in contracts			
	103-2 The management approach and its components	Ch. Our People: 4.2. Personnel selection; Ch. Supply chain: 1.3. Sustainability requirements in contracts			
	103-3 Evaluation of the management approach	Ch. Our People: 4.2. Personnel selection; Ch. Supply chain: 1.3. Sustainability requirements in contracts			
GRI 408: Child Labour 2016	408-1 Operations and suppliers at significant risk for incidents of child labour	Ch. Supply chain: 1.3. Sustainability requirements in contracts			

GRI Standard	Disclosure	Page number(s) and/or URL(s)	Omission		
			Part Omitted	Reason	Explanation
Forced or Compulsory Labour					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Our People: 4.2. Personnel selection; Ch. Supply chain: 1.3. Sustainability requirements in contracts			
	103-2 The management approach and its components	Ch. Our People: 4.2. Personnel selection; Ch. Supply chain: 1.3. Sustainability requirements in contracts			
	103-3 Evaluation of the management approach	Ch. Our People: 4.2. Personnel selection; Ch. Supply chain: 1.3. Sustainability requirements in contracts			
GRI 409: Forced or Compulsory Labour 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labour	Ch. Supply chain: 1.3. Sustainability requirements in contracts			
Security Practices					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Our People: 3.2. Type and content of training			
	103-2 The management approach and its components	Ch. Our People: 3.2. Type and content of training			
	103-3 Evaluation of the management approach	Ch. Our People: 3.2. Type and content of training			
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	Ch. Our People: 3.2. Type and content of training			
Human Rights Assessment					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Getting to know Endesa: 6.1. Management focus: Endesa's Human Rights Policy			
	103-2 The management approach and its components	Ch. Getting to know Endesa: 6.1. Management focus: Endesa's Human Rights Policy			
	103-3 Evaluation of the management approach	Ch. Getting to know Endesa: 6.1. Management focus: Endesa's Human Rights Policy			
GRI 412: Human Rights Assessment 2016	412-1 Operations that have been subject to human rights reviews or impact assessments	Ch. Supply chain: 1.3. Sustainability requirements in contracts			
	412-2 Employee training on human rights policies or procedures	Ch. Our People: 3.2. Type and content of training			
	412-3 Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Ch. Supply chain: 1.3. Sustainability requirements in contracts			
Local Communities					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Responsible relationship with the communities: 1. Endesa's commitment to the communities			
	103-2 The management approach and its components	Ch. Responsible relationship with the communities: 1. Endesa's commitment to the communities			
	103-3 Evaluation of the management approach	Ch. Responsible relationship with the communities: 1. Endesa's commitment to the communities			
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	Ch. Responsible relationship with the communities: 1. Endesa's commitment to the communities			

GRI Standard	Disclosure	Page number(s) and/or URL(s)	Omission		
			Part Omitted	Reason	Explanation
Supplier Social Assessment					
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Ch. Supply chain: 1.3. Sustainability requirements in contracts			
	103-2 The management approach and its components	Ch. Supply chain: 1.3. Sustainability requirements in contracts			
	103-3 Evaluation of the management approach	Ch. Supply chain: 1.3. Sustainability requirements in contracts			
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