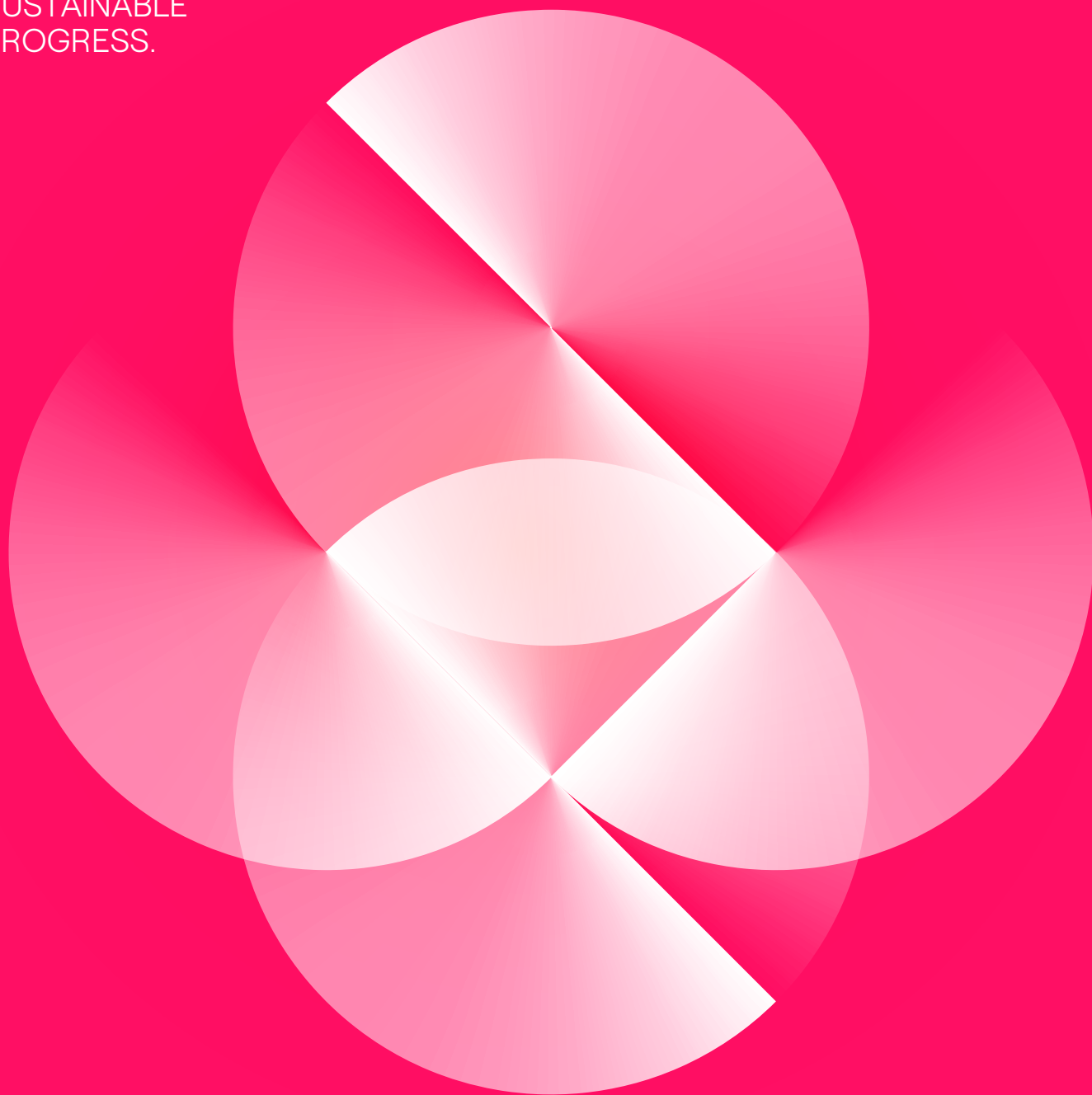


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POWER  
FOR A  
BRIGHTER  
FUTURE.**

WE EMPOWER  
SUSTAINABLE  
PROGRESS.



**Activity  
Report 2022**

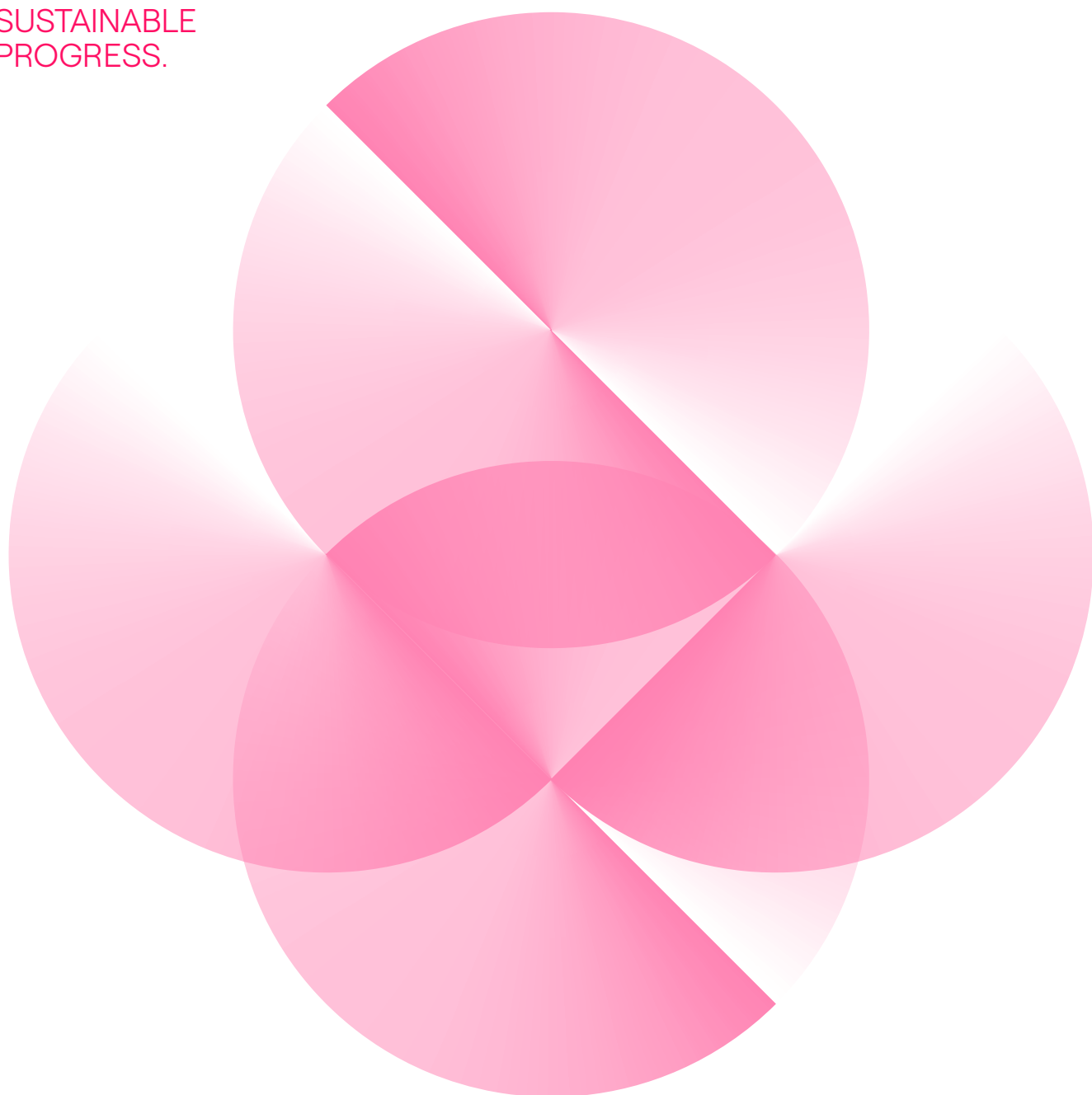
**endesa**



endesa

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WE EMPOWER  
SUSTAINABLE  
PROGRESS.



**Activity  
Report 2022**

# About Endesa

Endesa was incorporated in 1944 as Empresa Nacional de Electricidad, S.A. On 25 June 1997, the General Shareholders' Meeting changed the company's name to its current denomination: Endesa, S.A.

Endesa, S.A. is registered in Volume 323, Book 1, Page 143, Sheet M6405 of the Madrid Companies Register. The Company's registered office and headquarters are at Ribera del Loira, 60, 28042 Madrid and its corporate tax identification number (NIF) is A-28023430.

Endesa is the largest electricity company in Spain and the second largest in Portugal. The company is also the second largest gas operator in the Spanish market, with total assets of €49,960 million as at 31 December 2022.







Endesa operates an end-to-end generation, distribution and marketing business.

Through Endesa X it also offers value-added services aimed at the electrification of energy usage in homes, companies, industries and Public Administrations. A new business line has also been created, Endesa X Way, fully dedicated to electric mobility.

At 31 December 2022, Endesa, S.A. had share capital amounting to €1,270,502,540.40, represented by 1,058,752,117 shares with a par value of €1.2 each, fully subscribed and paid up and all admitted for trading on the Spanish Stock Exchanges.

IN 2022, Endesa posted total income of €32,896 million, gross operating income (EBITDA) of €5,565 million, profit from operations of €3,687 million and net income of €2,541 million.

At the end of 2022, the company directly employed 9,258 workers in Spain and Portugal.

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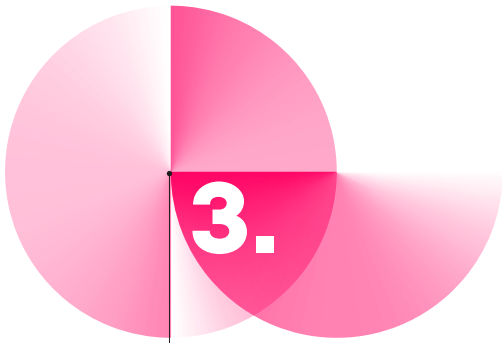
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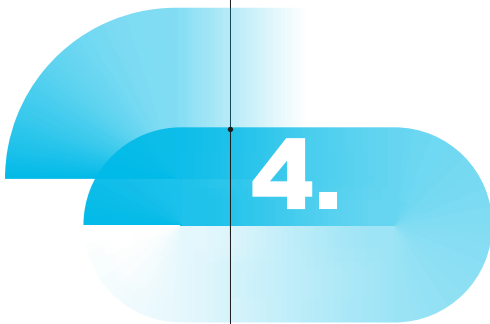


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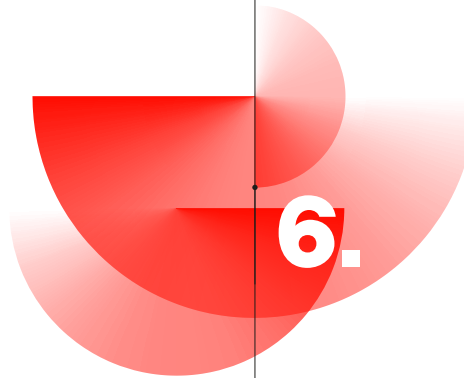
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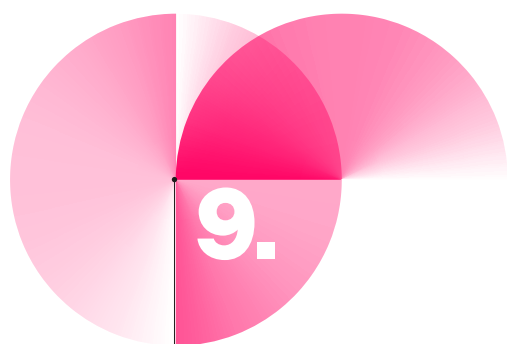
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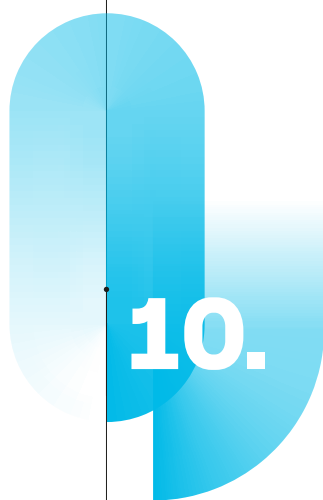
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10.

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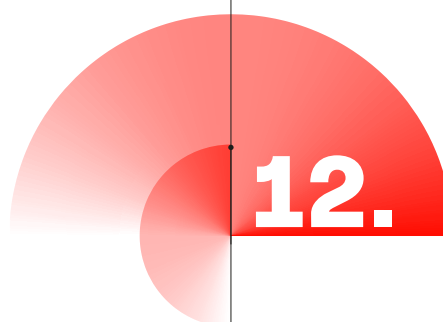
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# Endesa is Open Power



OUR PURPOSE

## OPEN POWER FOR A BRIGHTER FUTURE

WE EMPOWER  
SUSTAINABLE  
PROGRESS

## OUR OUTLOOK

Endesa combines the strength of a global organisation with the opportunities of an open connected world to make energy affordable and sustainable, and to ensure security of supply.

Endesa is aware of the significant change the industry is currently experiencing, operating in a new era for energy that is more open, participative and digital. This strategic positioning is summarised in the concept of "Open Power", which constitutes the Company's mission, outlook and values.







## OUR VALUES

Endesa's values are the pillars of its behaviour and reflect our commitment to people.

- **Responsibility:** All of our employees are responsible for Endesa's success, at all levels, always acting within the framework of our social responsibility strategy and complying with tax regulations.
- **Innovation:** The company works to open energy to new uses, technologies and people, learning from its successes and its failures.
- **Trust:** Endesa acts competently, honestly and transparently to earn the trust of its employees, customers and external partners, with value given to individual differences.
- **Proactivity:** Endesa continuously analyses global scenarios and challenges to anticipate change, redefining its priorities as the context requires.

## OUR AIM

"Open Power" means opening access to energy to more people, opening energy to new technologies, opening new ways of managing energy to the consumer, opening energy to new uses and opening up to more partnerships.

- **Opening energy up to more people:** Working to connect more people to safe and sustainable energy.
- **Opening energy to new technologies:** Playing a leading

role in the development and application of new technologies to generate and distribute more sustainable energy focussing especially on renewable energy sources and smart distribution grids.

- **Opening new ways of managing energy for the consumer:** Developing more tailor-made services for people to help them use energy more efficiently, concentrating especially on smart meters and digitalisation.

- **Opening energy to new uses:** Developing new services based on energy to meet global challenges, focussing particularly on connectivity and electric mobility.
- **Opening up to a greater number of partnerships:** Creating a network of collaborators in research, technology, product development and marketing to discover new solutions together.

# Letter to shareholders and other stakeholders

## Dear shareholder

Once again we render accounts after having closed 2022, that will remain in history as the year when there was again a war in Europe. An unnecessary war, like all wars; an unprecedented war, because it took place on European soil and a hybrid war, due to the use of elements not usual in other conflicts, especially the use of digital tools, disinformation and energy resources.

The tension generated in society and in the electricity sector as a result of using energy resources as a means of exerting pressure, either through scarcity, shortages or speculating on prices, are the key to understanding what 2022 signified. This reality had an impact on the entire energy sector and especially the electricity sector, mainly affected by the price of gas. So much so, that on 26 August the Dutch TTF, the index that sets the reference for the price of gas in Europe, reached a historical

record of €343/MWh, with an average price in 2022 of €123/MWh compared to €43/MWh in 2021. A clear example of the stress that the electricity market experienced and that illustrates the context in which companies such as Endesa had to work.

When 2022 started we were already immersed in a price escalation. We knew that this would be a year that was going to feature uncertainty, price volatility and regulatory stress. Russia's invasion of Ukraine exacerbated the problem and deepened the crisis. Even so, Endesa was clear about two things: We would need to continue with the energy transition plan that was already in place and we had to meet the established financial objectives.

This report that we have prepared for our shareholders is a detailed account of our financial performance and the operational milestones achieved within the sustainable development framework that defines us.





**Juan Sánchez-Calero Guilarte**

Chairman



**José D. Bogas Gálvez**

Chief Executive Officer

This commitment to sustainability has been acknowledged by leading sustainability *ratings* agencies and indexes worldwide. Endesa once again participated in the DJSI World for the 22nd consecutive year, achieving its best historical score, reaching fourth position in the ranking for electricity companies and was included in the DJSI Europe for the first time ever. Endesa is also the first in the list of the 15 Spanish companies in all sectors included in the DJSI World and has also consolidated its position as the leader in its sector in the Euronext Vigeo and FTSE4Good indexes. We also renewed the highest AAA rating in MSCI's assessment. All this places Endesa as one of the most highly rated companies worldwide with regard to social, environmental and good corporate governance criteria in the IBEX-35. The reasons for this broad range of acknowledgment will be found in the pages of this report.

Financially, we closed 2022 with a net ordinary income of €2,398 million, 26% more than in the previous year. EBITDA stood at €5,565 million, 30% more than in 2021. We closed a historic year with regard to customers, increasing to 12.3 million electricity and gas customers in Spain and Portugal. These are just a few of the figures that indicate that our strategy is solid, that it provides results

and enables us to offer a gross dividend of €1.5854 per share in 2023 (€1,679 million).

In any case, and reconnecting with the sustainability framework, in 2022 we also had the satisfaction of being recognised by the Portuguese and Spanish governments as the first and only company to be awarded the first two fair transition projects that have so far been awarded in the Iberian Peninsula: Pego in Portugal and Andorra in the province of Teruel in Spain.

Endesa has always acted with determination and does all it can to give continuity to our industrial activity in our main locations. When we decided to close our coal-fired plants, we were already working on energy transition plans with the aim of training and incorporating employees and local companies into a new way of working. And all this while complying with environmental and local development requirements to ensure high-quality employment during the demolition and construction phases and, finally, during maintenance and continuity phases.

With regard to our Strategic Plan, in November we launched an update with investments of €8,600 million

for the 2023–2025 period, 15% more than the previous plan for the 2022–2024 period, maintaining our commitment to decarbonisation, with the development of new renewable capacity, the electrification of demand, the development of the grid and digitalisation.

With regard to renewables, the Plan contemplates starting up 4.4 GW in 2023–2025, which will enable us to make 91% of our Spanish mainland production free of CO<sub>2</sub> emissions, compared to 73% in 2022.

With regard to customers, we aim to reach 7.3 million customers in the deregulated market by 2025 and for 95% of our fixed-price sales to be covered by non-CO<sub>2</sub> emitting energy.

With regard to distribution, regulation should encourage investments in the grid, as an essential element for transformation towards a zero-emission energy system. The Plan contemplates investments of €2,600 million in 2023–2025, of which 42% will be assigned to digitalisation, with the aim of improving quality and reducing losses.

Finally, we ratified our commitment to the Paris agreements regarding the objective of not exceeding a global temperature increase of 1.5 °C, as an essential

feature of the agreements of our parent company Enel. By 2030 we will reduce the total specific emission for generation to below 95 grams of CO<sub>2</sub> per kilowatt hour and scope 3 emissions, related to the sale of gas, to below 6.6 million tons of CO<sub>2</sub> compared to more than 12 million tons today, with the aim of reaching zero emissions by 2040.

This Plan will create value for shareholders and for society, since we will manage our business in an integrated manner and there will be suitable profitability. This will enable the energy consumption of our customers to be reduced, the share of non-emitting energy to be increased, circularity and biodiversity to be promoted and a significant contribution to be made to the growth of Spain's GDP. In short, a Sustainable Plan.

We may conclude by underlining once again the contrasting features of the business year. Firstly, we have the satisfaction of having followed our road map but then we should express concern about the events of the war in Ukraine that continues to be waged in the heart of Europe. We would like to express our wishes for peace and our love for all the people who are suffering the effects of war. Hopefully next year we will be able to celebrate peace.



# Key financial data

Million euros

	2019	2020	2021	2022
<b>Key Financial Position Data</b>				
Total Assets	31,981	32,062	39,968	49,960
Property, Plant and Equipment	21,329	21,354	22,097	22,338
Total Liabilities	24,144	24,597	34,424	44,199
Equity of the Parent	7,688	7,315	5,380	5,560
Net Equity Corresponding to Minority Shareholders	149	150	164	201
Net Financial Debt	6,377	6,853	8,806	10,869
<b>Key Income Statement Data</b>				
Operating Income	20,158	17,050	20,899	32,896
Gross Operating Income (EBITDA)	3,841	3,809	4,278	5,565
Profit from Operations (EBIT)	388	1,912	1,956	3,687
Net Income	171	1,394	1,435	2,541
Net Ordinary Income	1,562	2,132	1,902	2,398
<b>Key Economic Flows</b>				
cash flows from Operating Activities	3,181	2,951	2,621	1,672
Total Investment	2,202	1,846	2,432	2,370
Dividend Payments	1,511	1,562	2,132	1,521

# Key operating data

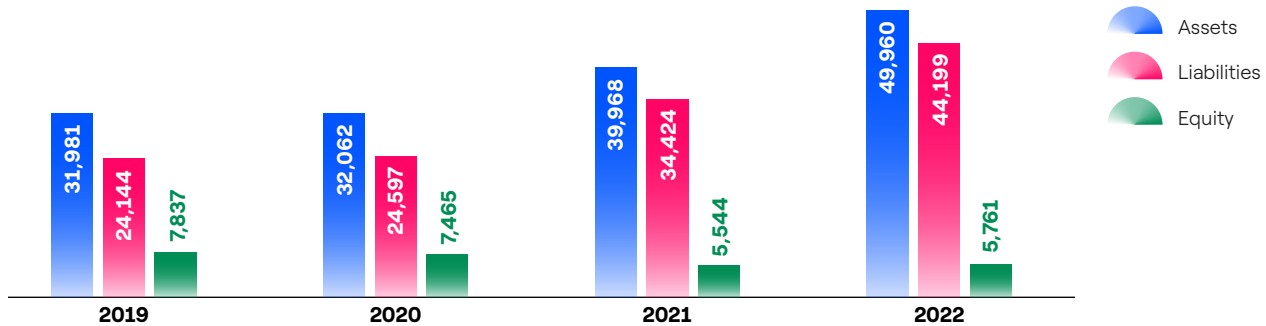
	2019	2020	2021	2022
<b>Workforce</b>				
<b>Spain and Portugal</b>	<b>9,952</b>	<b>9,591</b>	<b>9,258</b>	<b>9,258</b>
<b>Capacity (MW)</b>				
<b>Spain and Portugal</b>	<b>24,231</b>	<b>22,465</b>	<b>21,915</b>	<b>22,819</b>
Renewable	7,452	7,825	8,433	9,337
Hydroelectric	4,792	4,793	4,790	4,790
Wind	2,308	2,423	2,546	2,882
Photovoltaic	352	609	1,097	1,665
Nuclear plant	3,443	3,453	3,453	3,453
Combined Cycle	5,677	5,681	5,680	5,680
Conventional thermal	7,659	5,506	4,349	4,349
<b>Output (GWh)</b>				
<b>Spain and Portugal</b>	<b>61,402</b>	<b>56,269</b>	<b>57,592</b>	<b>64,716</b>
Renewable energy	10,090	13,415	12,794	12,041
Hydroelectric	5,861	7,681	6,122	4,477
Wind	4,127	5,235	5,605	5,709
Photovoltaic	101	498	1,066	1,854
Other	1	1	1	1
Nuclear plant	26,279	25,839	25,504	26,508
Combined Cycle	11,687	11,365	14,441	20,720
Conventional thermal	13,346	5,650	4,853	5,447
<b>Sales (GWh)</b>				
<b>Spain and Portugal</b>	<b>89,441</b>	<b>80,772</b>	<b>79,458</b>	<b>79,003</b>
Regulated price	11,385	11,342	10,705	8,210
Deregulated market	78,056	69,430	68,753	70,793
<b>Number of customers (thousands)*</b>				
<b>Spain and Portugal</b>	<b>10,635</b>	<b>10,420</b>	<b>10,251</b>	<b>10,545</b>
Regulated market	4,807	4,730	4,373	3,716
Deregulated market	5,828	5,690	5,878	6,829
<b>Energy distributed (GWh)**</b>				
<b>Spain and Portugal</b>	<b>126,454</b>	<b>124,658</b>	<b>131,090</b>	<b>131,813</b>

\* Supply points.

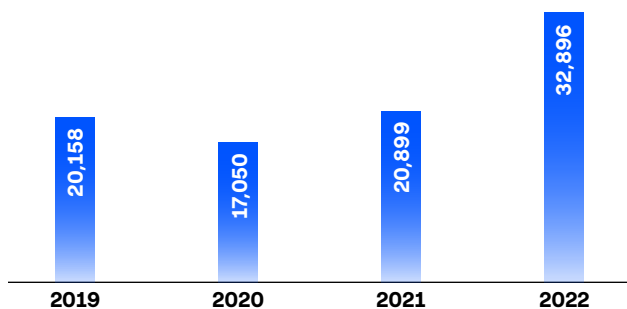
\*\* Energy supplied to customers, with or without a contract, auxiliary consumption from generators and outputs to other networks (transport and distribution).

# Economic dimensions

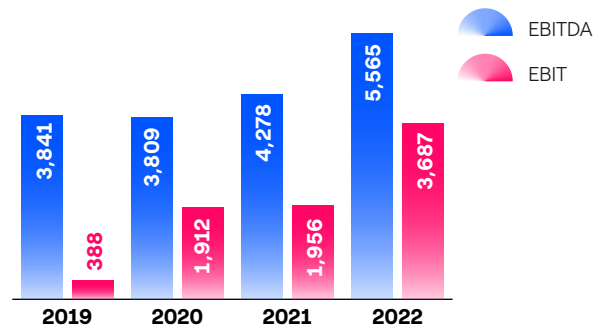
Assets, Liabilities and Equity (million euros)



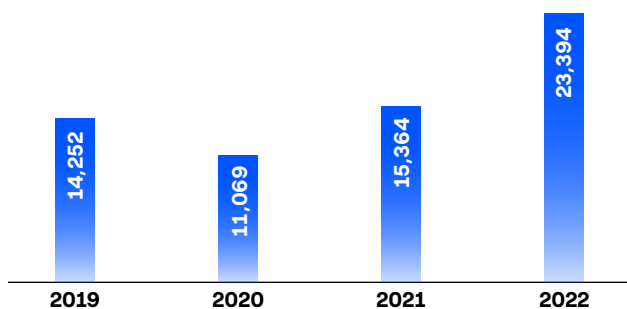
Operating income (million euros)



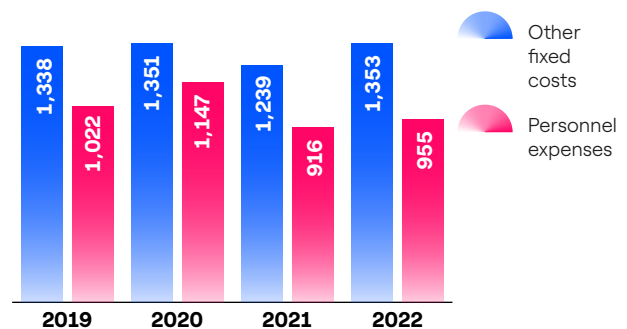
EBITDA and EBIT (million euros)



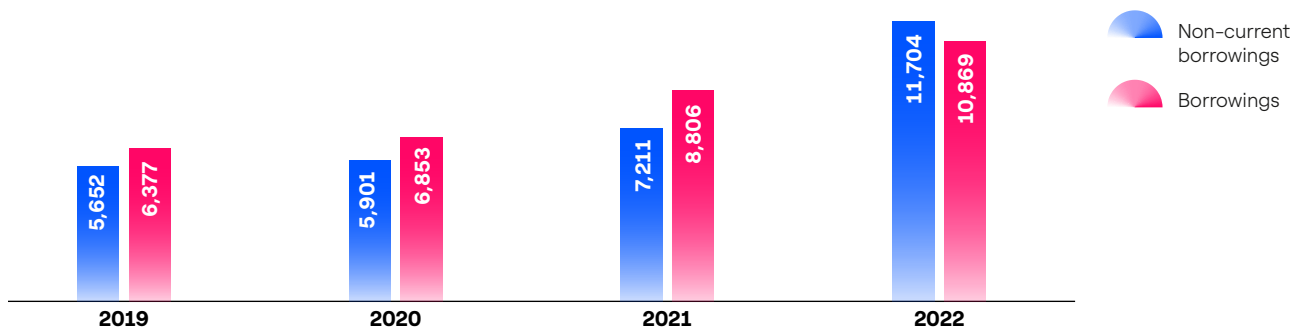
Procurement costs (million euros)



Other costs (million euros)

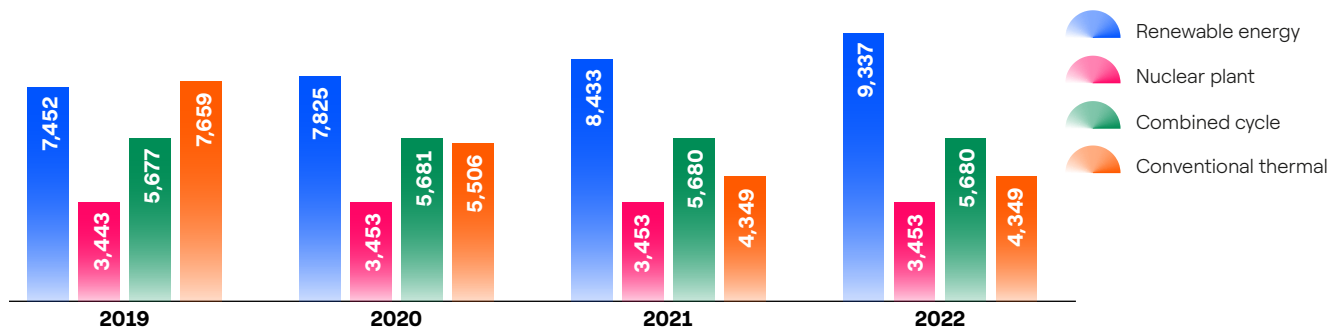


Borrowings and net financial debt (million euros)

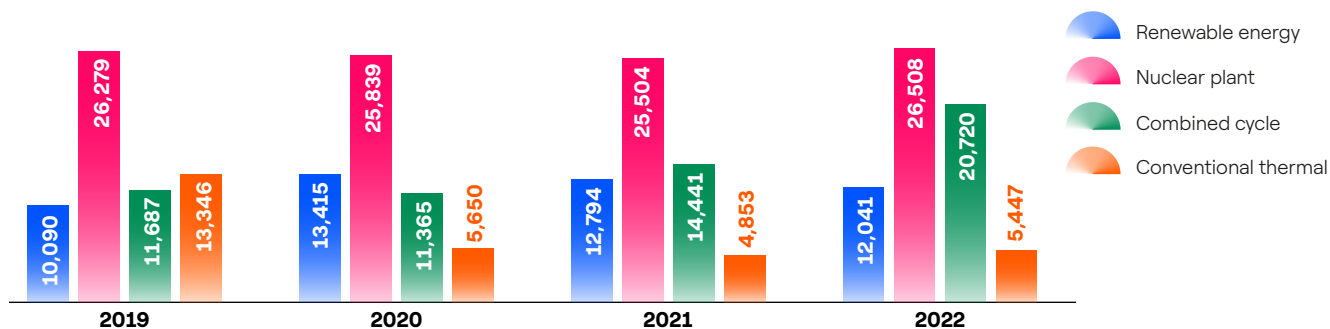


# Operating data

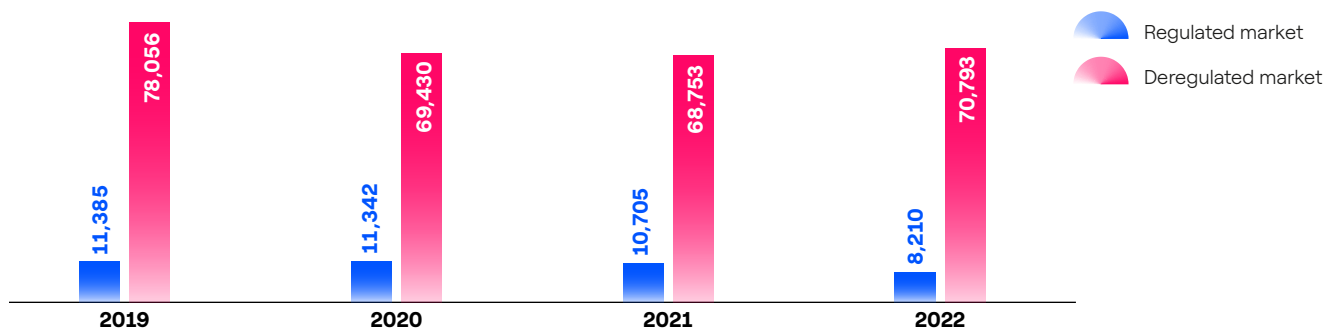
Capacity (MW)



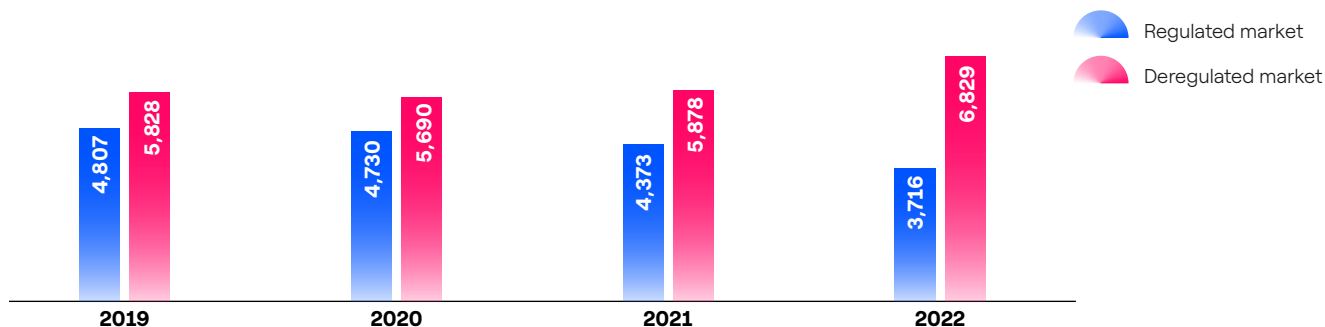
Output (GWh)



Sales to end customers (GWh)

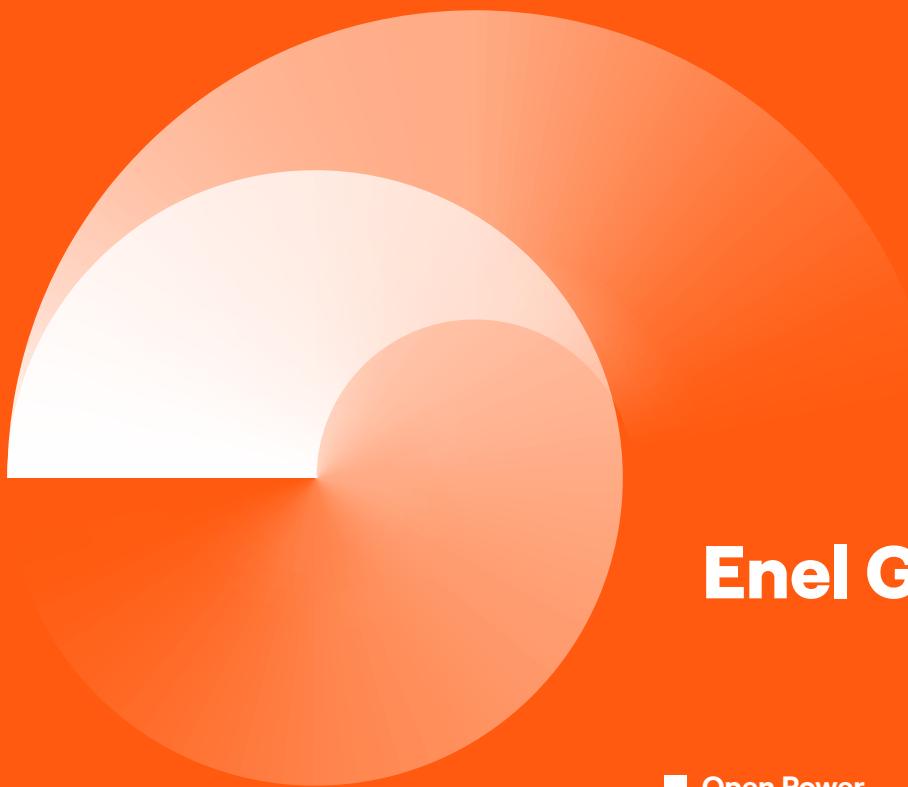


Number of customers (thousands)



# 1.





# Enel Group

## Open Power

Enel's proposal is Open Power, openness that ensures its services reach more people in more countries by boosting local economies, expanding access to energy and improving the future for everyone.

## Commitment to the SDGs

Enel participates in the United Nations Global Compact, with a commitment to making a tangible contribution to 4 of the 17 UN Sustainable Development Goals (SDGs).

## Open Innovability

Enel has created an ecosystem in which industrial partners, universities, research centres, *start-ups* and customers promote and drive innovative and sustainable solutions that respond to society's changing needs.

For more than half a century, Enel has been bringing progress to people around the world, adopting new technologies to make their energy more reliable, more affordable and more sustainable.

Enel is a multinational energy company that plays a leading role in the production, distribution and sale of electricity and gas. In its sector, it is the largest company in Europe with regard to EBITDA, with a presence in more than 30 countries worldwide and a net installed capacity of more than 90.1 GW<sup>1</sup>.

The ENEL Group's gross operating income (EBITDA) at 31 December 2022 amounted to €19,683 million, an increase of 2.5% compared to the previous year. Enel is the world's leading private international operator in electricity distribution networks. With a network of more than 2.2 million kilometres and 45.8 million smart meters, it aims to provide accessible and efficient energy for the benefit of 66.8 million customers worldwide.

**30**

**countries.**  
Active on five continents

**90.1**

**GW net installed capacity**

**72.7**

**millions of end users.**  
First network operator

Nearly

**66.8**

**million customers.**  
The world's largest customer base

## Sustainability

It is a pioneer in a series of renewable energy plants: Hydroelectric, solar and the first wind farm in Italy, Enel had a vision that clean energy would be really important in the future. In 2001 it designed and installed the world's first smart meters and, in 2004, it became the first private company in the renewable energy sector to be included in the Dow Jones Sustainability Index.

In line with Open Power's strategic approach, Enel places environmental, social and economic sustainability at the heart of its corporate culture. With this same outlook,

2008 saw the foundation of Enel Green Power, with an installed capacity of more than 53.6 GW in wind, solar, hydroelectric and geothermal plants in Europe, America, Africa, Asia and Oceania.

Enel is aligned to 4 of the 17 UN Sustainable Development Goals (SDGs): Access to clean and affordable energy; promoting innovation, sustainable industrialisation and resilient infrastructure; creation of sustainable cities and communities, and climate action.

## Open Innovability

Beyond the technology itself, the innovation focusses on a pervasive cultural shift that enables a new way of relating to the world. This led Enel to the development of the Open Innovability® concept: An ecosystem enabling industrial partners, universities, research centres, *start-ups*, employees and customers to devise innovative and

sustainable solutions that respond to the changing needs of society.

The Enel Group is passionately committed to innovation and sustainability and this has led to the opening of ten<sup>2</sup> *innovation hubs* worldwide.

## Opening up to the world

As a truly global company, Enel is in an ideal position to deliver open energy around the world. Since 2014, Enel has held a 70.1% interest in Endesa's share capital, thus consolidating the group's presence in the Spanish and

Portuguese electricity and gas markets. Through Endesa, Enel also participates in the operation of a thermal power plant in Morocco.

<sup>1</sup> Installed capacity includes the Battery Energy Storage System (BESS).

<sup>2</sup> On 11 November 2022, Enel added the latest Innovation Hub to its global network: The Europe Innovation Hub, located in Barcelona.

## The client as the focal point

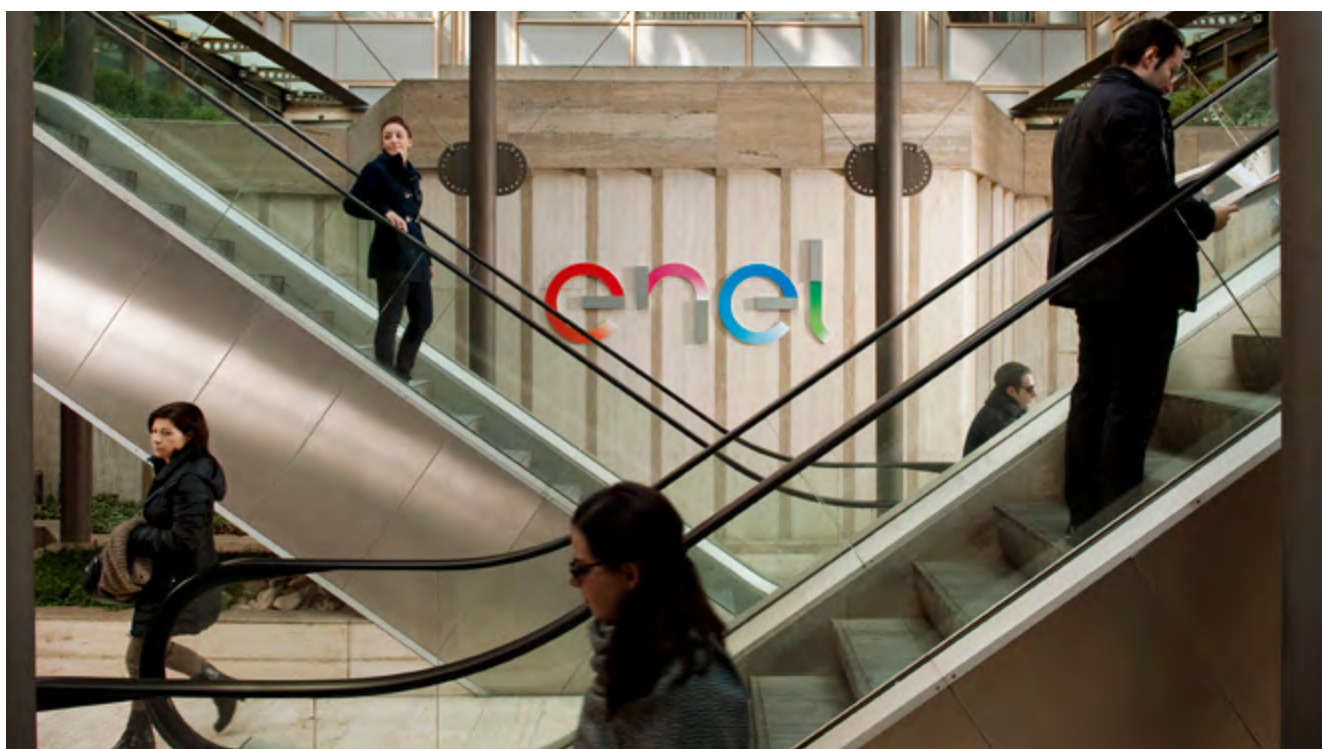
Enel interacts locally with millions of families, industries and companies and offers customised products and services to build a relationship based on trust, transparency and the rational and innovative use of energy. Focussing on

the customer is at the heart of Enel's development efforts, enabling customer participation in energy transition on a wide range of levels.

## Enel X

In 2017, Enel X was founded to transform energy into new opportunities. With a strategy focussing on digitalisation, sustainability and innovation, Enel X provides an ecosystem of closely interconnected solutions that turn energy into new opportunities in a number of sectors: Public and private energy efficiency, as well as artificial intelligence

and data analysis services, broadband connectivity, energy consulting and financial services. With a total capacity of approximately 8.5 GW, this division has installed 75 MW of storage capacity, as well as more than 22,600 charging stations for electric vehicles worldwide.



## Enel Grids

It is the world's leading private international operator of electricity distribution networks. With more than 2.2 million kilometres in 8 different countries between Europe and

Latin America, and more than 45.8 million smart meters, the target is to provide accessible, efficient and reliable energy for the benefit of 72.7 million end users worldwide.

## Enel X Way

2022 saw the launch of Enel X Way, the Enel Group's new global business line entirely dedicated to electric mobility. The aim is to expand electric vehicle charging infrastructure to respond to the rapid growth of the electric mobility market, while developing advanced charging technology

and flexible solutions to improve the customer experience and support the electrification of transport for consumers, businesses and cities. Enel X Way currently manages 380,000 charging stations, both directly and through interoperability agreements established around the world.

# 2.

# Background

## Slowdown in economic activity

Rising prices, Russia's invasion of Ukraine and the resurgence of COVID-19 in China slowed down global economic activity in 2022.

## Old and new measures

An increase in the price of gas led to the maintenance and extension of measures already in place during 2021, together with the implementation of new ones, to mitigate the impact of the price escalation on the retail gas and electricity markets and to protect consumers.

## Commitment to reducing emissions

The 2021-2030 National Integrated Energy and Climate Plan (PNIEC in Spanish), currently under review, includes a target for the penetration of renewables to reach 74% of total electricity generation by 2030. This is consistent with a trajectory towards a 100% renewable electricity sector by 2050.

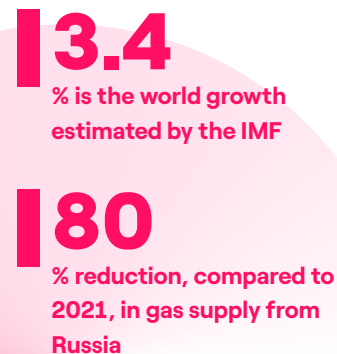
# Macroeconomic background

## Global developments

According to the International Monetary Fund (IMF), the global fight against inflation, Russia's invasion of Ukraine and the resurgence of Covid-19 in China were the main reasons for the slowdown in global economic activity in 2022. In January 2023, they estimated that the real annual variation in world GDP in 2022 would be 3.4%. Other sources were less optimistic; the Organisation for Economic Cooperation and Development (OECD) estimated that 2022 closed with global growth at about 3.2%.

The year began under the threat of an inflationary process, with very little optimism in financial markets and a slower growth rate. In this context, Russia's invasion of Ukraine in February 2022 led to a serious energy crisis in Europe. Gas prices in Europe rose sharply as Russia reduced its supply to less than 20% of 2021 levels, raising the cost of living and slowing economic activity. With Ukraine being one of the world's leading wheat producers, the conflict also led to an increase in food prices on world markets, despite the relief provided by an agreement to export grain across the Black Sea. In some Middle Eastern countries such as Egypt and Iran, especially dependent on Ukrainian wheat, the war led to severe shortages of essential products. The conflict brought severe hardship to lower-income households around the world, especially in low-income countries.

In China, frequent lockdowns resulting from the zero-Covid policy had a severe impact on the economy. According to IMF data, economic activity slowed down in the fourth quarter of the year amid multiple major outbreaks of Covid-19 in Beijing and other densely populated cities. With the outbreaks, lockdowns also resumed until, at the beginning of December 2022, the Chinese authorities abandoned the zero-Covid policy, which resulted in a rapid increase in infections and sharp falls in mobility, which according to the Bank of Spain (BE), led to a number of disruptions in production chains and a decrease in activity. The real estate sector, which accounts for about one-fifth of economic activity in China, also weakened rapidly, and restructuring of construction companies proceeded slowly, amid a persistent real estate crisis. Chinese authorities responded by further relaxing monetary and fiscal pressure, as well as introducing new vaccination targets for the elderly, and measures to enable pending real estate projects to be completed. The slowdown in China throughout 2022 affected global trade growth and led to an increase in international commodity prices.



Persistent and increasingly broad inflationary pressures, which had already been having an effect since 2021, led to most central banks deciding to reverse their monetary expansion policies, with the swift, synchronised tightening of monetary conditions. The US Federal Reserve played a leading role in this initiative that was accompanied by a strong appreciation of the dollar against most other currencies. These policies, which were intended to put pressure on prices, had mixed effects and inflation remained a major concern for the financial authorities at the end of the year.

According to the IMF, despite these negative influences real gross domestic product (GDP) was surprisingly strong in the third quarter of 2022 in many economies, including the United States, the euro area, and major emerging market and developing economies. The EB was in agreement, pointing out that the decline in momentum with regard to activity was generally less pronounced than most analysts' forecasts had anticipated. This greater degree of resilience of the world economy would have been one of the factors contributing to a relaxation of bottlenecks in global production chains and the different measures taken by the authorities to mitigate the effects of the inflationary upswing and the energy crisis on incomes and the consumption and investment decisions of private agents. Private consumption and investment were stronger than expected within a context of labour shortages and higher-than-expected fiscal support. Households spent more to meet repressed demand, especially in the service sector, drawing in part on their savings as economies began to re-open. Entrepreneurial investment increased to meet demand. On the supply side, pressures on the prices of consumables eased as bottlenecks were removed and transport costs fell, allowing

a revival of sectors such as the automotive industry that had previously faced restrictions.

Energy markets adapted earlier than expected to the shock of Russia's invasion of Ukraine. However, in most major economies this recovery faded in the fourth quarter of 2022. According to the OECD, growth was weak in the Asia-Pacific region in the final months of the year, with production stagnating in Japan, activity in China held back

by the pandemic, and a slowdown in the technology sector affecting production and exports in Korea. Growth was also weak in Europe, with a decrease in output in many Central and Eastern European economies, in a situation adversely affected by extremely high energy prices. The main positive surprise at the end of 2022 came from the United States, with continued labour market resilience outweighing the impact of higher interest rates on private investment.

### Latest growth projections from *World Economic Outlook*

Real GDP, annual percentage change

	Estimates	Forecasts	
	2022	2023	2024
<b>GLOBAL PRODUCT</b>	<b>3.4</b>	<b>2.9</b>	<b>3.1</b>
<b>Advanced economies</b>	<b>2.7</b>	<b>1.2</b>	<b>1.4</b>
United States	2.0	1.4	1.0
Euro area	3.5	0.7	1.6
Germany	1.9	0.1	1.4
France	2.6	0.7	1.6
Italy	3.9	0.6	0.9
Spain	5.2	1.1	2.4
Japan	1.4	1.8	0.9
United Kingdom	4.1	-0.6	0.9
Canada	3.5	1.5	1.5
Other advanced economies	2.8	2.0	2.4
<b>Emerging and developing economies</b>	<b>3.9</b>	<b>4.0</b>	<b>4.2</b>
Emerging and developing economies in Asia	4.3	5.3	5.2
China	3.0	5.2	4.5
India	6.8	6.1	6.8
Emerging and developing economies in Europe	0.7	1.5	2.6
Russia	-2.2	0.3	2.1
Latin America and the Caribbean	3.9	1.8	2.1
Brazil	3.1	1.2	1.5
Mexico	3.1	1.7	1.6
Middle East and Central Asia	5.3	3.2	3.7
Saudi Arabia	8.7	2.6	3.4
Sub-Saharan Africa	3.8	3.8	4.1
Nigeria	3.0	3.2	2.9
South Africa	2.6	1.2	1.3
<b>Information reports</b>			
Emerging and middle-income economies	3.8	4.0	4.1
Low-income developing countries	4.9	4.9	5.6

Source: IMF, World Economic Outlook update, January 2023.

In the case of India, data and forecasts are presented based on the business year, and the data in the column for 2022 are presented for business year 2022/2023 (which begins in April 2022). Forecasts for growth for India are 5.4% in 2023 and 6.8% in 2024 based on the calendar year.



## Developments in the eurozone

According to European Central Bank (ECB) data, economic growth in the euro area slowed down in the second half of 2022. Following buoyant economic developments in the first half of 2022, growth slowed down considerably to 0.1% in the last quarter of the year. While the strong growth seen at the beginning of the year was the result of the economic recovery that followed the lifting of pandemic-related restrictions, the escalation in energy prices began to restrict spending and production in the second half of the year. The euro zone was also affected by the impact of weakening global demand, together with tighter monetary policies in many economies.

According to an initial estimate for annual growth in 2022 based on seasonally adjusted and calendar-adjusted quarterly data, GDP grew by 3.5%. The IMF pointed out that economic growth in Europe in 2022 was more resilient than could have been expected given the significant negative terms-of-trade shock resulting from the war in Ukraine. This resilience could be seen in consumption and investment data for the third quarter and was partly due to public support equivalent to about 1.2% of GDP in the European Union (net budgetary cost) to households and businesses affected by the energy crisis, and also to the dynamism resulting from the re-opening of economies.

For the ECB, weak global activity and high geopolitical uncertainty were factors that affected growth in the euro zone, together with high inflation. However, by the end of



0.1

% was growth in the Eurozone in the last quarter of 2022

the year, supply bottlenecks had gradually eased, gas supplies had become more secure, companies had reduced their backlogs and there was an improvement in confidence indexes. Activity in the services sector also resisted, supported by the effects of the reopening of the economy and greater demand for leisure activities. Higher wages and the recent decline in energy inflation also mitigated the loss of purchasing power experienced by many people as a result of high inflation, which in turn supported consumption.

According to an advance estimate by Eurostat, inflation in the euro zone declined at the end of the year. The Harmonised Index of Consumer Prices (HICP) decreased in November and December for two consecutive months as a result of the slower pace of change in energy prices, reaching 9.2% by December 2022.

## Developments in Spain

Even though in January 2023 the IMF estimated that the Spanish economy had grown by 5.2% in 2022, in March the National Institute of Statistics (INE in Spanish) confirmed that the Spanish GDP had grown by 5.5% in the last year. According to this body, for the whole of 2022 GDP at current prices stood at €1,328,922 million, 10.1% higher than in 2021.

Whatever the final GDP, in 2022 the Spanish economy saw very positive growth after the increase of 5.5% recorded in 2021 and that meant a return to positive interest rates



5.5

% is the estimated growth of the Spanish economy according to the INE

after the historical decrease of 11.3% in GDP caused by the outbreak of the Coronavirus.

As explained by the EB, the main drivers of this growth with regard to composition were net foreign demand and private consumption, both linked to the end of mobility restrictions once the most acute phases of the pandemic had been overcome and a recovery in tourism and leisure activities.

In any case, in order to be able to analyse the development of growth in 2022 as a whole, we need to differentiate between the two six-month periods of the year. While GDP increased by 7.3% year-on-year in the first half of the year, growth slowed down to 3.7% in the second half. According to the EB, this slowdown in activity was mainly due to the confluence of a series of adverse factors, interrelated and eminently global in nature, which negatively influenced the decisions of economic agents both in Spain and in most of the surrounding countries. These factors notably included the energy crisis, persistently high inflation rates, the consequent tightening of monetary policy by the world's





major central banks, and a widespread decrease in confidence.

The EB confirmed that, in the last months of the year, the increase in market interest rates was passed on to the cost of new bank credit transactions in all segments. According to a Survey on Bank Lending, during the fourth quarter of 2022 lending criteria tightened across the board in Spain for the third consecutive quarter, although to a lesser extent than expected by banks a quarter earlier. Meanwhile, demand for credit decreased in the two household segments, purchase of housing, consumption and other purposes, while that from companies increased slightly, driven by a greater need to finance inventories and working capital.

The general rate of inflation decreased in the final months of the year, falling from a peak of 10.8% in July to 5.7% in

December. This was largely due to lower energy prices. But food prices continued to increase to reach a year-on-year growth rate of 15.7 percent in December, albeit at a slower rate.

Despite the above, Social Security affiliation data showed that there had been a growth in employment in the fourth quarter, with a growing preponderance of indefinite contracts within the total. So in 2022 the Spanish labour market created 278,900 jobs and unemployment decreased by 79,900, with an unemployment rate of 12.9%, according to an Active Population Survey (EPA in Spanish) published in January by the INE. By the end of the year, employment had exceeded 20.46 million, the highest figure since 2008. The negative data with regard to the previous year is that the number of unemployed continued to exceed 3 million.

## Trends in interest rates and exchange rates

In 2022, war broke out in Ukraine, just two years after the onset of the pandemic caused by Covid-19 and this followed 2021 that had been a year of recovery.

The impact of the war combined with the lingering effect of the virus had a severe economic impact and, as a consequence, a sharp increase in inflation, centred mainly on commodities and energy, increases in debt, especially public debt, and imbalance in supply chains as a result of geo-political tensions.

As a result, central banks around the world had to take firm action to curb inflation by raising interest rates with a speed and intensity unparalleled in recent times.

The central banks in the key countries and economic areas played a leading role throughout the year, radically changing their strategy and unambiguously opting for restrictive monetary policies in an attempt to curb widespread price increases that were more persistent than expected, as increases in energy and raw material prices were gradually passed on to food prices, wages and the services sector.

The conflict in Ukraine worsened a critical situation in the energy markets that had already been taking shape for months. Gas supply cuts from Russia together with high electricity demand caused prices to skyrocket, with a volatility never seen before. This created an atmosphere of caution among market operators which seriously affected liquidity and reduced activity. The increase in the price of gas was in addition to general price increases in raw materials which affected both agricultural products, metals

and energy. The price of Brent crude oil ended the year at USD 86 per barrel, an increase of 10% compared to the USD 78 per barrel at which it closed in 2021.

Central banks followed the lead of the US Federal Reserve (FED), which in March 2022 raised interest rates for the first time since 2018 by 25 basis points and ended up in the 0.25–0.50% range. Two months later, on 4 May, it applied a new increase of 50 basis points and under strong pressure from inflation that reached almost 10% in the United States, this then led to four consecutive increases of 75 basis points each in June, July, September and November 2022 and 50 basis points in December 2022, placing interest rates in the 4.25%–4.50% range at the end of the year, levels not reached since 2007.

The European Central Bank (ECB) opted for greater caution at the beginning of the year in view of the gradual deterioration of the economy, but runaway inflation, which was progressively approaching 10 % year-on-year, led to the announcement in March 2022 of the end of asset purchases. At a meeting on 21 July 2022, interest rates were raised by 50 basis points for the first time in 11 years, bringing to an end a long period of zero interest rates. In September and October 2022, the ECB made 2 further interest rate increases of 75 basis points each and in December of 50 basis points, to bring the base rate to 2.50%, its highest since 2008.

The year 2022 in the Eurozone will go down in history as the year of the end of the 0% interest rate era.

**86**

USD is the price at which Brent crude closed in 2022

**2.50**

% official interest rate in December 2022

**2022**

will go down in history as the year that saw the end of the 0% interest rate era in the eurozone

## Main indicators

In 2022, the yield on the Spanish 10-year bond increased from 0.56 % at the beginning of the year to 3.65 % at year-end, reaching its highest since 2015. As a result, Spain's country risk premium (spread against the German 10-year bond) increased by 33 basis points to stand at 108 basis points at the end of the 2022 reporting period. The Italian risk premium closed at 213 basis points at the close of 2022, an increase of 78 basis points compared to the previous year, while the Portuguese risk premium increased by 37 basis points to stand at 101 basis points at the end of the year.

In 2022, the long-term interest rate on the euro (10-year swap) rose 290 basis points to 3.20 % at year's end, having

reached its all-time high of 3.33 % for 2022 in October. The short-term interest rate (3-month EURIBOR) rose by 270 basis points, standing at (2.13%) by the end of the year. The long-term US dollar interest rate increased from 1.58% to 3.84% in 2022, while the 3-month US dollar interest rate (USD) increased further, rising by 456 basis points to end the year at 4.77%.

With regard to the exchange rate, in 2022 the euro depreciated by 6.1% against the US dollar (USD), with the EUR/USD exchange rate decreasing from 1.1370 at the start of the year to 1.0673 by the end of 2022.

The variations in 2022 for some of the indicators mentioned in the above paragraphs are shown below:

	31 December 2022	31 December 2021	Difference	% Var.
Closing exchange rate (Euro/US Dollar)	1.0673 <sup>(1)</sup>	1.137 <sup>(2)</sup>	(0.0697)	(6.1)
Long-Term Euro Interest Rate (10-Year Swap) (%) <sup>(1)</sup>	3.20	0.30	2.90	966.7
Short-Term Euro Interest Rate (3-month Euribor) (%) <sup>(1)</sup>	2.13	(0.57)	2.70	(473.7)
Long-Term US Dollar Interest Rate (USD) (10-Year Swap) (%) <sup>(1)</sup>	3.84	1.58	2.26	143.0
Short Term US dollar Interest Rate (USD) (3-Month Libor) (%) <sup>(1)</sup>	4.77	0.21	4.56	2,171.4
German 10-Year Bond (%) <sup>(1)</sup>	2.57	(0.18)	2.75	(1,527.8)
German 30-Year Bond (%) <sup>(1)</sup>	2.53	0.19	2.34	1,231.6
10-Year Spanish Bond (%) <sup>(1)</sup>	3.65	0.56	3.09	551.8
Spanish Risk Premium (bp) <sup>(1) (3)</sup>	108	75	33	44.0
Italian Risk Premium (bp) <sup>(1) (3)</sup>	213	135	78	57.8
Portuguese Risk Premium (bp) <sup>(1) (3)</sup>	101	64	37	57.8
European Central Bank (ECB) Reference Rates (%) <sup>(1)</sup>	2.50	0.00	2.5	—
European Central Bank (ECB) Deposit Facility (%) <sup>(1) (4)</sup>	2.00	(0.50)	2.50	(500.0)
US Federal Reserve (FED) Reference Rates (%) <sup>(1)</sup>	4.25-4.50	0.00-0.25	4.25	—

<sup>(1)</sup> Source: Bloomberg.

<sup>(2)</sup> Source: Thomson Reuters.

<sup>(3)</sup> Difference compared to German 10-year bond.

<sup>(4)</sup> Rate charged by the European Central Bank (ECB) to banks for their deposits.

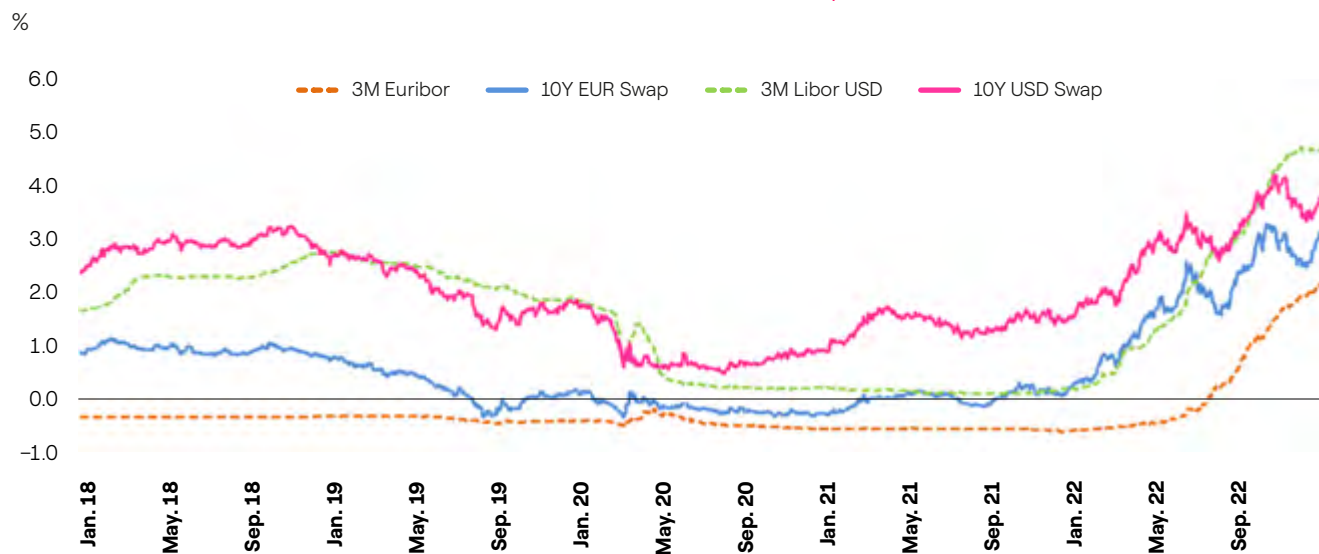
bp = Basis points.

**3.65**  
% was the yield on the Spanish 10-year bond at the end of 2022

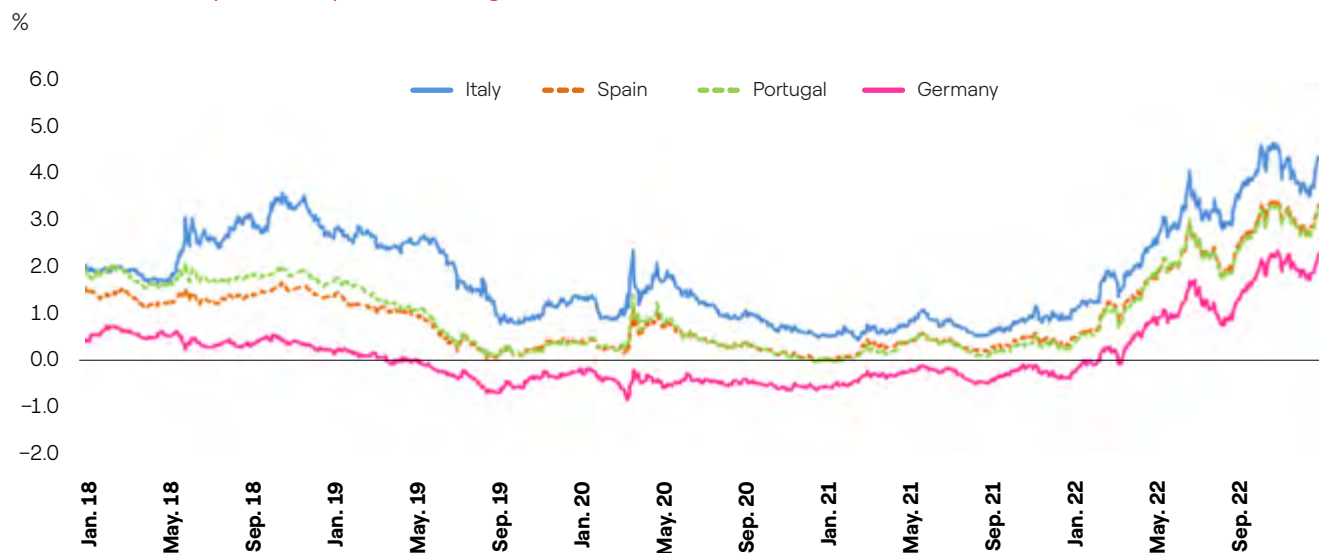
**108**  
basis points was the Spanish risk premium as at 31 December 2022

**6.1**  
% was the depreciation of the euro against the dollar in 2022

## Trends in interest rates for the euro and the dollar in the last 5 years



## Trends for European 10-year sovereign bonds



## Trends in the EUR/USD exchange rate







## Financial management

Endesa had net financial debt of €10,869 million at 31 December 2022, an increase of €2,063 million compared to the end of the reporting period for the previous year. The average cost of Endesa's debt was 1.4% in 2022. At the end of the year, 99% of gross debt was in euros. Gross debt at fixed interest rates accounted for 39% of total debt at 31 December 2022, while the remaining 61% was at floating rates. The average life of Endesa's gross debt reached 3.2 years as at December 2022.

**1.4**  
% average cost for Endesa debt

Liquidity rose to €9,185 million, of which €8,314 million corresponded to unconditional credit lines, with €4,950 million of this amount corresponding to a credit line arranged with ENEL Finance International, N.V. This level of liquidity allowed for coverage equivalent to 10 months with regard to debt maturities.

### Structure of Endesa's gross financial debt

Million euros				
	31 December 2022	31 December 2021	Difference	% Var
Euro	18,307	10,191	8,116	79.6
Dollar	181	201	(20)	(10)
<b>Total</b>	<b>18,488</b>	<b>10,392</b>	<b>8,096</b>	<b>77.9</b>
Fixed rate	7,190	5,490	1,700	31
Floating rate	11,298	4,902	6,396	130.5
<b>Total</b>	<b>18,488</b>	<b>10,392</b>	<b>8,096</b>	<b>77.9</b>
Average life (years)	3.2	4.4		
Average cost (%)	1.4	1.5		

In line with its Strategic Plan, Endesa develops innovative financial solutions with incentives for sustainability and competitive conditions and encourages its partners and stakeholders to share its long-term sustainable vision. So at 31 December 2022, sustainable financing accounted for 64% of all of Endesa's gross financial debt.

The main transactions in the 2022 business year were the following:

- Endesa, S.A. registered a new SDG7 Euro Commercial Paper (ECP) issuance programme for an amount of €5,000 million, with an outstanding balance as at 31 December 2022 equal to €4,988 million. This Programme incorporates sustainability objectives, in line with Endesa's Strategic Plan.
- The following financial transactions were also formalised, with most of them incorporating sustainability objectives:

Million euros

Transactions	Counterparty	Signature date	Maturity date	Amount
Loan <sup>(1) (2)</sup>	Instituto de Crédito Oficial	20 December 2021	20 December 2033	300
Loan <sup>(1) (2)</sup>	European Investment Bank	21 December 2021	28 March 2037	250
Loan <sup>(3)</sup>	CaixaBank, S.A.	25 March 2022	13 May 2027	500
Loan <sup>(3)</sup>	Bankinter, S.A.	31 March 2022	1 April 2027	75
Loan	BBVA, S.A.	31 March 2022	8 April 2023	100
Loan <sup>(3)</sup>	Banco Cooperativo Español, S.A.	8 April 2022	13 May 2027	50
Loan	Intesa San Paolo, S.P.A.	19 April 2022	19 April 2023	100
Loan <sup>(3)</sup>	ING Bank NV Branch in Spain	29 April 2022	13 May 2027	50
Loan <sup>(3)</sup>	Enel Finance International N.V.	13 May 2022	13 May 2027	1,650
Loan	Banco Santander, S.A.-Milan	29 July 2022	19 December 2022	500
Loan	Banco Santander, S.A.-Milan	1 September, 2022	19 December 2022	500
Loan <sup>(4)</sup>	Bankinter, S.A.	28 September, 2022	31 July 2024	25
Loan <sup>(4)</sup>	Ibercaja, S.A.	29 September 2022	31 July 2024	50
Loan <sup>(4)</sup>	Credit Agricole	29 September 2022	31 July 2024	100
Loan <sup>(4)</sup>	Banco Santander, S.A.	29 September 2022	31 July 2024	275
Loan <sup>(4)</sup>	Banco de Sabadell, S.A.	30 September 2022	31 July 2024	250
Loan <sup>(4)</sup>	CaixaBank, S.A.	30 September 2022	31 July 2024	400
Loan <sup>(4)</sup>	BBVA, S.A.	19 October 2022	31 July 2024	200
Loan <sup>(3)</sup>	European Investment Bank	7 November 2022	18 November 2037	250
Credit line <sup>(1) (5)</sup>	CaixaBank, S.A.	25 March 2022	25 March 2025	50
Credit line <sup>(5) (6)</sup>	Ibercaja, S.A.	30 March 2022	25 March 2025	20
Credit line <sup>(5) (6)</sup>	Banco de Sabadell, S.A.	31 March 2022	25 March 2025	25
Credit line <sup>(1)</sup>	Banco Santander, S.A.	31 March 2022	31 March 2025	25
Credit line <sup>(5) (6)</sup>	Kutxabank, S.A.	31 March 2022	25 March 2025	50
Credit line <sup>(1)</sup>	Intesa San Paolo, S.P.A.	19 April 2022	19 April 2025	100
Credit line <sup>(1)</sup>	Enel Finance International, N.V.	13 May 2022	13 May 2025	700
Credit line	Enel Finance International, N.V.	22 November 2022	22 November 2023	1,000
Credit line	Enel Finance International, N.V.	22 November 2022	22 November 2023	2,000
<b>Total</b>				<b>9,595</b>

<sup>(1)</sup> The credit conditions for these transactions are tied to the objective established in the company's Strategic Plan to reduce specific emission of Scope 1 carbon dioxide (CO<sub>2</sub>) equivalent to 150g CO<sub>2</sub>eq/kWh in 2023.

<sup>(2)</sup> The payments were made on 17 January 2022 and 28 March 2022, respectively. Both loans are destined to finance renewable energy production facilities.

<sup>(3)</sup> The credit conditions for these transactions are tied to the objective established in the company's Strategic Plan to reduce specific emission of Scope 1 carbon dioxide (CO<sub>2</sub>) equivalent to 145g CO<sub>2</sub>eq/kWh in 2024.

<sup>(4)</sup> Renewal of existing loans.

<sup>(5)</sup> Extension of existing credit facilities.

<sup>(6)</sup> Transactions described as sustainable as they include a performance indicator (KPI) relating to Endesa's commitment to ensuring that its net installed main-land capacity from renewable sources would be 55% of total net installed capacity at 31 December 2022.

# Energy policy background

The energy crisis caused by Russia's invasion of Ukraine got worse from the middle of the year, due to interruptions in the supply of Russian gas in response to sanctions imposed by the European Union. In August, this situation has pushed up energy prices to all-time highs, compelling all governments to intervene in the market in a bid to protect their populations from rampant energy prices.

In this context, and complementing the various packages of measures approved at the time (the *Toolbox for Action and Support* in October 2021, the *EU Repower plan* and the

*new EU Repower plan*, in 2022 the European Union invested considerable effort in building consensus about a range of actions to guarantee affordable prices for the public, security of supply and environmental sustainability.

At an extraordinary meeting on 30 September 2022, the Energy Ministers of the Member States agreed to implement a coordinated package of emergency measures to intervene in the energy market. This package was applied on 1 December 2022 and will remain in force until 31 December 2023.

## Extraordinary European Union Energy Council summit of 30 September 2022.

### Main measures

- Reduction of electricity consumption, with a voluntary target of a 10% reduction in total gross consumption and a mandatory 5% reduction at peak times, with each country to introduce appropriate measures to achieve both targets. This measure will remain in force until 31 March 2023.
- Market revenue for inframarginal technologies capped at €180/MWh, including renewables, nuclear and lignite, until 30 June 2023. The cap was stipulated to protect operator profitability while not discouraging investment in renewable energies.
- Temporary solidarity contribution from the fossil fuel sector through an extraordinary tax on companies operating in the crude oil, natural gas, coal and refinery sectors. The measure will tax windfall profits earned until 31 December 2023 that exceed the average profit for the 2018–2021 period by 20%, taxed at a percentage of at least 33%. This tax takes the form of a temporary contribution and the amount collected will go to vulnerable households, the most affected businesses and electricity intensive industries to mitigate the effects of high retail electricity prices.
- Retail measures for Small and Medium-Sized Enterprises (SMEs): Member states of the European Union may temporarily set a price for the supply of electricity to small- and medium-sized enterprises to enable them to cope with the high energy prices. Member states also agreed the possibility of setting an exceptional and temporary price for electricity supply that is below cost.





The agreement also provides for all these measures to be compatible with those implemented at national level by Member States provided they are equivalent in nature, compatible with the objectives of the Regulation, and generate at least comparable revenue.

On 19 December 2022, the Member States of the European Union reached political agreement on a Council Regulation establishing a market correction mechanism seeking to protect businesses and households from episodes of excessively high gas prices, whilst also guaranteeing security of energy supply and stability in the financial markets. This correction mechanism will be activated automatically if a "market correction event" of the following kind occurs:

### Market correction mechanism

#### Conditions for activation

- The month-ahead settlement price for the Title Transfer Facility (TTF) exceeds €180/MWh for three consecutive working days.
- The month-ahead price for the Title Transfer Facility is €35 above the reference price for liquefied natural gas (LNG) on global markets for the same three-day period.

Once activated, the dynamic bidding limit will apply for at least 20 working days. If the dynamic bidding limit falls below €180/MWh for the last three consecutive working days, it will be automatically deactivated.

The regulation also includes a suspension mechanism if risks to security of energy supply, financial stability, intra-EU flows of gas, or risks of increased gas demand are detected.

This temporary Regulation will come into force on 15 February 2023 and apply for one year. No later than 1 November 2023, the Commission will review the Regulation considering the general situation with regard to gas supplies, and may propose an extension of the measures based on this report.

The European Commission stipulated that all such interventions should preserve the basis of the internal energy market and cross-border trade, and be consistent with current efforts to reduce demand for gas. However, it also stated that in 2023 it would discuss the possibility of a structural reform of the electricity system to effectively disassociate the setting of electricity prices for inframarginal technologies from gas prices. This could result in the ending of the current marginal pricing system. This structural reform of the European electricity system is expected

to be discussed and agreed in 2023, for which the Commission requested proposals from the Member States.

The measures in these packages of initiatives in response to the energy crisis are likely to lead to an increase in the target for reducing emissions by 2030, which may increase from 55% to 57%, through increased development of renewable energies and energy efficiency.

Within this framework of measures introduced at European level, the Spanish government maintained its regulatory approach since June 2021 and continued to work on adopting further extraordinary measures in 2022 to protect consumers from rising energy prices.

Royal Decree-Law 6/2022, of 29 March, set a maximum reference price for the sale of inframarginal energy to end consumers. Royal Decree-Law 10/2022, of 13 May, established measures to cap the price of gas used to generate electricity. Royal Decree-Law 11/2022, of 25 June extended fiscal and market measures to protect consumers. Royal Decree-Law 14/2022, of 1 August, introduced economic sustainability measures with regard to transport, grants and aid for education, together with energy efficiency and saving measures, and measures to reduce dependency on natural gas. These measures will remain in effect until 1 November 2023.

The most important regulatory interventions in the final quarter of the year were introduced through the following: Royal Decree-Law 18/2022, which developed some of the measures in the government's +Energy Security Plan, increasing the protection for the public against the cost-of-living crisis caused by the war in Ukraine; and Royal Decree-Law 20/2022, which approved an additional package of measures in response to the economic and social consequences of the conflict, including maintaining lower rates for Value Added Tax (VAT) and Electricity Tax for energy supply, a lower rate of VAT for gas supply, and suspension of the Tax on the Value of Electricity Production (IVPEE in Spanish), until 31 December 2023.

Finally, on 27 December the Government approved Law 38/2022 for the establishment of temporary energy levies and for credit institutions and financial credit institutions, which came into force on 1 January 2023. The final wording for this regulation places a tax of 1.2% on the gross income of large business groups in the energy sector in 2023 and 2024, excluding income from regulated activities and subsidiaries located outside the country.



# Background to the international fuel and freight market

## Oil and oil derivatives

In 2022, Brent began at levels very similar to those reached at the end of the previous reporting year, in the region of \$80/bbl. However, prices did not show steady development. During the first half of the year, the war in Ukraine, which raised fears of possible supply problems from Russia, and the explicit willingness of OPEC+ to maintain the price, caused a continuous rise in the price of the main European benchmark, keeping the short term tense against the long term on the horizon of the curve as a result of the pressure borne on the supply side, reaching a price of \$120/bbl. In the middle of the year, despite the fact that sanctions were

already being established on the purchases of crude oil from Russia, fear of a global recession and, somewhat later, massive lockdowns in China as a result of its zero-Covid policy, many doubts arose in the market with regard to the capacity of demand to grow in the post-pandemic recovery in many countries. This started a downward trend that would last until the end of the year, with the price returning to the levels at which it began the year and the curve flattening with a noticeable reduction in the short-term premium compared to the long-term.

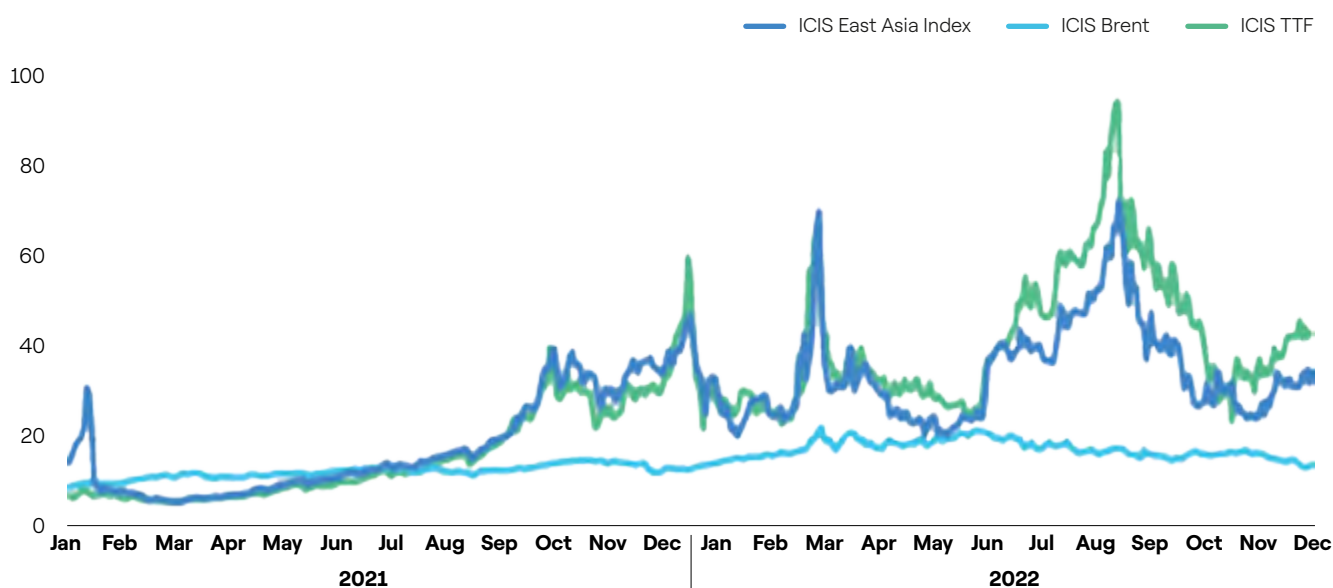
## Natural gas

During the months of January and February, gas prices in Europe and LNG prices in the world were less volatile and stabilised at about €70-80/MWh, until the outbreak of war in Ukraine on 24 February 2022. This war situation, together with uncertainty in Europe about security of supply due to low levels of storage, caused a volatility in prices on European gas markets never seen before. The

TTF, the European benchmark for gas, which started the year at about €85/MWh, reached levels exceeding €220/MWh in March. From then on, the market would be affected by the unavailability of supplies from Russia and European policies to placate price volatility and to protect the consumer.

### TTF index peaks in 2022

\$/MMBtu



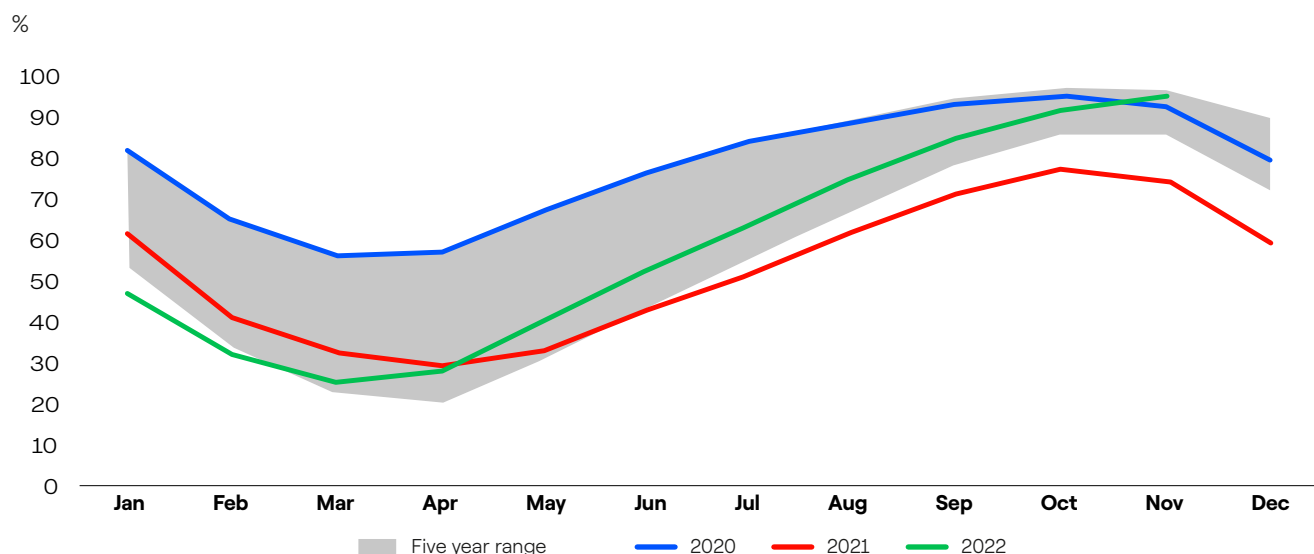
Source: ICIS.

In April and May, prices returned to levels of about €100/MWh, but by the summer and due to announcements of supply cuts through the gas pipelines connecting Europe with Russia, TTF prices reached the maximum of €320/MWh on 26 August, an all-time record. In September, flows through Nord Stream were definitively cut off at a time when there was high demand for gas. By regulatory order, it was ordered to inject gas into the storage facilities and for them to reach 85% of capacity by 1 November.

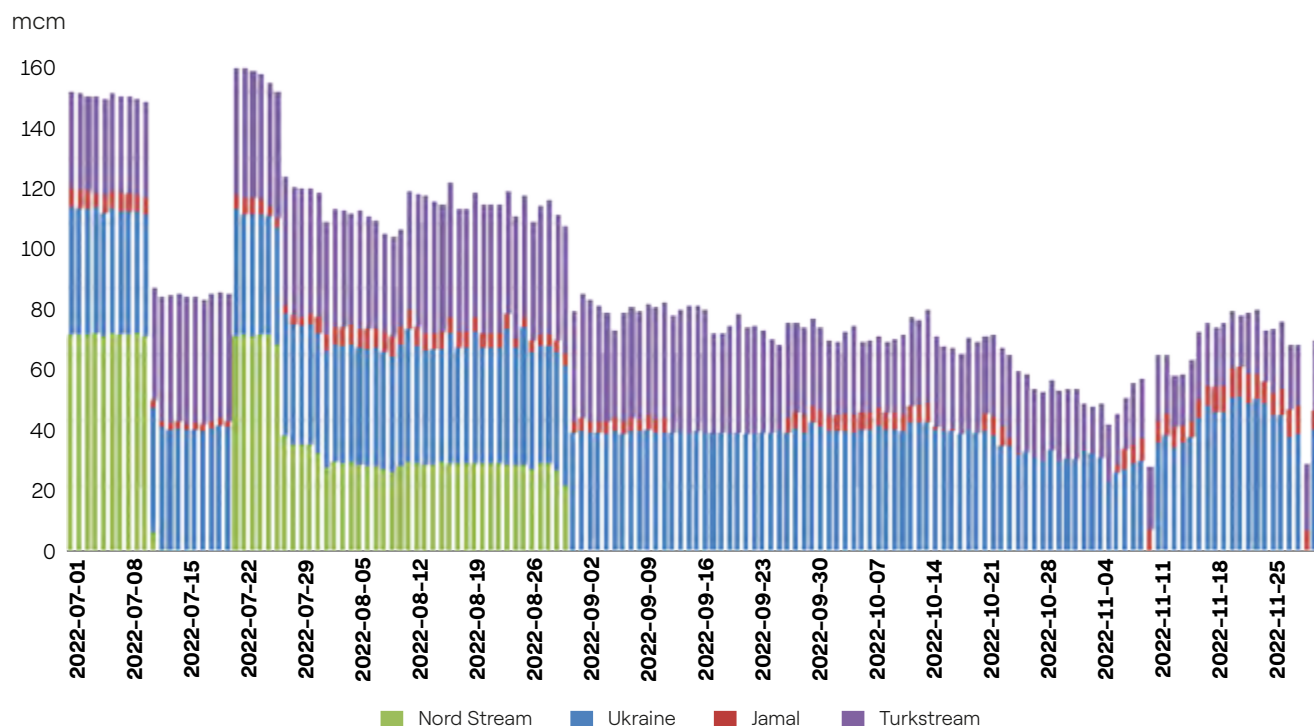
At the start of the fourth quarter, in response to supply cuts from Russia, Europe paid premiums for LNG supply compared to its main competitor, Asia, increasing imports by 89% compared to the previous year.

With regard to demand, price volatility and the high levels of storage achieved in Europe discouraged consumption in the conventional sector, resulting in a reduction of more than 10% compared to the previous year.

### Gas storage levels over the maximum level of storage capacity in the EU at mid-month



### Daily imports of Russian natural gas into the EU by supply route



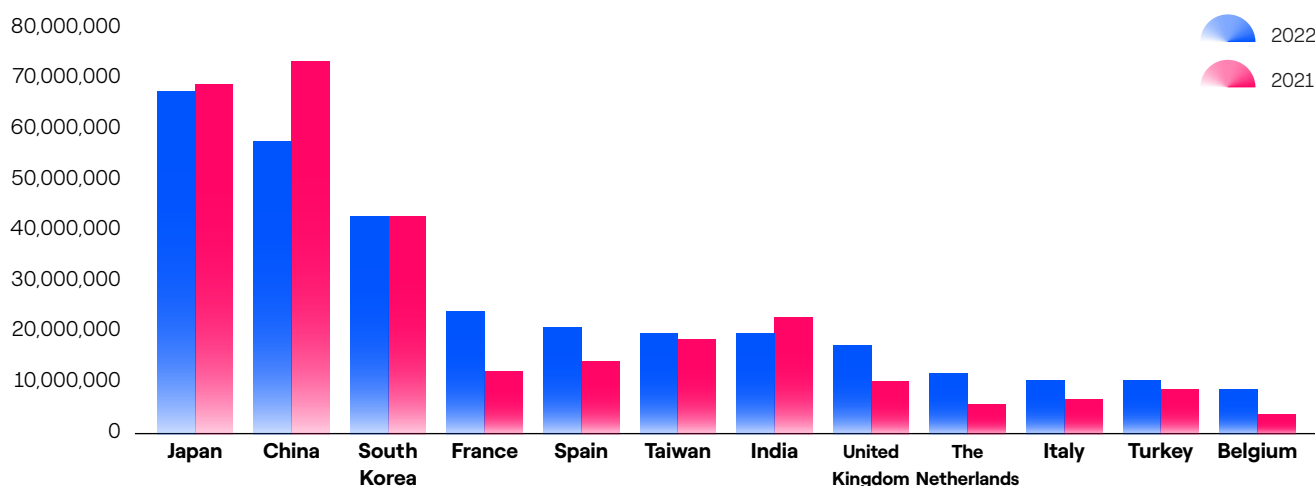
With regard to the LNG market, Asia remained inactive and LNG requirements were reduced as a result of its policies to contain Covid-19, mainly in China. So it was Europe that in 2022 reached record levels of LNG imports and began planning the expansion of regasification capacity, with the USA planning to expand its regasification capacity and becoming the party most interested in using its LNG

capacity to replace the Russian gas that stopped entering Europe.

With regard to the PVB, the good availability of LNG, the LNG import capacity of the Spanish gas system, the moderate temperatures and a decrease in gas demand in the conventional sector all meant that during the year it oscillated below the TTF.

## LNG demand in China decreases while increasing in the EU

Tonnes



Note: The data covers January to November.  
Source: ICIS Energy.

## Coal

In 2022, the price of coal registered average values substantially higher than in 2021.

Specifically, API 4 benchmark averages increased by 218% compared to 2021, while API 2 benchmark averages increased by 242%.

It should be mentioned that in 2022 the increase in the price of coal was strongly influenced by the conflict between Russia and Ukraine as a result of the sanctions imposed by the EU on Russia, the latter being one of the main suppliers of coal to the EU (third largest exporter in the world market).

## Port terminals

Endesa has three port terminals strategically located in the Iberian Peninsula (Bahía de Algeciras, Ferrol and Carboneras). Endesa's port terminals in Carboneras and Ferrol are licensed to handle solid and liquid bulk in the former and general merchandise in the latter, which makes it possible to find alternative businesses once the activity involving the unloading of coal for the associated thermal power plants has come to an end. In 2022 there was unloading, storage and loading of coal both for group plants and for third parties in Ferrol, as well loading coal for group plants in Carboneras. The terminal located in the

Bahía de Algeciras also has a multiple-use licence for activities other than coal which, in addition to its strategic location, will provide multiple business alternatives. In 2022, coal was unloaded for third parties, as well as loading and unloading operations of fibre-optic cable and electrical cables for third parties. Construction work also continued on the LNG bunker installation that will come into operation in 2023 together with commercial action in the three port terminals to give a second life to these terminals.

# Regulatory background

## Regulatory framework in 2022

### Main regulatory changes in Spain

2022 was especially affected by the effects of the crisis resulting from the war in Ukraine, which had a significant impact on international markets and especially on the price of natural gas, which led to the continuance and extension of the measures already implemented in 2021, together with the implementation of new ones to mitigate the impact of the increase of prices on retail gas and electricity markets and to protect consumers. Some of these measures actually involved an extension of others that were adopted as a result of the global pandemic resulting from Covid-19.

Special mention should be given to the following:

- With regard to the wholesale market, the payment obligation was extended for non-emitting generation installations in an amount proportional to the expected increased earnings obtained as a result of the inclusion in wholesale electricity prices of the value of natural gas prices, which occurred with Royal Decree Law 17/2021. This mechanism was modified through Royal Decree Law 6/2022, of 29 March, so that energy covered by forward and fixed-price contracts prior to 31 March 2022 is now exempt from the application of the mechanism, also establishing that, in the case of hedging instruments with a coverage term equal to or greater than one year and fixed price after 31 March 2022, will be excluded if the fixed price is equal to or less than €67/MWh; and in the case of bilateral contracts between Generation and Retailing in the same business group, the coverage price will be the price that the retailers pass on to final consumers and, in that case, the exempted fixed price will be determined by increasing the value of €67/MWh in the average marketing margin for the sector. Following Royal Decree Law 18/2022, this mechanism has now been extended until 31 December 2023.
- Alongside this, Royal Decree Law 10/2022, of 13 May introduced a mechanism for adjusting the cost of production for marginal fossil technologies, in order to achieve an equivalent reduction in the wholesale market matching price, until 31 May 2023. Under this mechanism, an adjustment is established based on the difference between a reference price for gas consumed

by thermal power plants (€40/MWh for 6 months, which increases by €5/MWh per month thereafter, ending at €70/MWh) and the spot price for gas in the Spanish Organised Gas Market (MIBGAS). The adjusted amount will be distributed among the components of the Iberian demand that benefits directly from it, either because it purchases power at a price directly referenced to the wholesale market value, or because it has signed or renewed a contract that already reflects the beneficial effect of the mechanism on wholesale prices. This mechanism came into force on 14 June 2022, following authorisation by the European Commission (to be appealed on 15 June 2022).

- With regard to the protection of vulnerable consumers, first of all the discounts for the electricity Social Bonus were extended, in a first phase from 25% to 60% for vulnerable consumers, and from 40% to 70% for the severely vulnerable consumers, and in a second phase from 60% to 65%, and from 70% to 80% respectively for vulnerable and severely vulnerable consumers. These discounts are currently applicable until 31 December 2023. Additionally, with the same time horizon, a new category of vulnerable customers was created with a discount of 40% for working households covered by the Voluntary Price for Small Consumers (PVPC) with incomes between 1.5 and 2 times the Public Indicator for Multiple Effect Income (IPREM in Spanish), increased by 0.3 for each additional member of legal age and 0.5 for each additional minor.
- In the same way, other existing aids to the thermal Social Bonus were extended, available to consumers who are recipients of the electricity Social Bonus.
- Following the sentences that had previously relapsed, Royal Decree Law 6/2022 approved a new system for financing the cost of the Social Bonus to which all subjects in the electricity sector (generation, transport, distribution, retailing and direct consumers) will contribute in accordance with the aggregate tax-free invoicing for each activity (energy acquired for direct consumers). The Royal Decree-Law likewise establishes that the financing of the Social Bonus, assumed by activities with regulated remuneration, will be included as a cost in the remuneration of the same.



- With regard to generation activity in non-mainland territories, on 30 December 2022, Order TED/1315/2022, of 23 December 23, was approved, which, in execution of Judgment 1337/2021 of the Supreme Court of 16 November 2021, establishes the procedure for conducting fuel auctions for these systems, which will be biennial and will address the product purchased for the plant (raw material in the case of gas for the Balearic Islands). These will be descending price auctions based on starting prices obtained by increasing the reference prices by 10% (3% for natural gas for the Balearic Islands), which will be those prices prevailing until the auctions are held and in the event that the auctions are abandoned or cancelled. The reference prices were applied from 27 January 2022, and in the case of natural gas it was the price on the Iberian Gas Market (MIBGAS), while for other fuels it was obtained on the basis of a series of international indices, to which a premium is added where applicable. The Order also acknowledges logistical costs, which may be reviewed every 3 years. The Order also incorporates the use of natural gas in the Canary Islands and Melilla as well as liquefied petroleum gases (LPG) in the Canary Islands, together with other less polluting fuels. Additionally, under the terms of Royal Decree 738/2015, of 31 July, in January the Ministry of Ecological Transition and the Demographic Challenge began the process of

hearing the proposal for a resolution of the Secretary of State for Energy to convene the competitive procedure for the granting of the favourable compatibility decision for entitlement to the additional remuneration regime. Under this process, the compatibility decision will be granted, among others, to applications able to cover the additional power needs that have come to light as a result of the coverage analyses undertaken by the System Operator.

- With regard to electricity distribution, during the business year Order TED/749/2022 was approved and which had begun to be processed in 2021. This order approves a number of aspects, including the remuneration of electricity distribution companies for 2017, 2018 and 2019, which does not include the remuneration of all investment items executed and previously authorised by the corresponding Administrations, which is why the corresponding appeal was filed with the Supreme Court. On 16 December 2022, the processing of the CNMC resolution proposal establishing the remuneration for 2020 also began. This does not include all the investments made by the Company and previously approved by the CNMC and the Secretary of State for Energy, within the multiannual plans that are sent to these institutions, a proposal that in any case is currently being processed.



- With regard to taxation, the Government extended and increased tax reductions and suspensions to mitigate the impact on consumers' invoices. This involved maintaining the reduction of VAT on the consumer's invoice from 21% to 10%, a reduction that was increased to 5%, also applicable to the supply of natural gas, and until 31 December 2023. The reduction of the excise duty on electricity to 0.5% and the temporary suspension of the tax on the value of electricity production were also extended with the same horizon. Certain extraordinary discounts were also introduced during the year on certain energy products such as petrol, liquefied petroleum gases, liquefied natural gas, biomethane and biodiesel.

Following a Bill presented on 30 August 2022 by the socialist parliamentary group and the parties that make up the Government, on 28 December 2022, Law 38/2022, of 27 December for the establishment of temporary energy levies and credit institutions and financial credit establishments, was published in the Official State Gazette (BOE). This created a temporary solidarity tax on large fortunes, and amended certain tax regulations. With regard to energy, this Law establishes a temporary tax in 2023 and 2024, of 1.2% of the net amount for the turnover arising from the activity undertaken in Spain in the calendar year prior to the one in which the payment obligation arises (which will arise on the first day of the calendar year), net amount for the turnover from which they are excluded, in addition to certain specific levies and taxes, the income corresponding to the regulated activities, understood as the supply at a regulated price (PVPC for electricity, LRT for gas, bottled LPG and piped LPG), the regulated revenues from the transmission and distribution networks for electricity and natural gas and, in the case of generation with regulated remuneration and additional remuneration in non-mainland territories, all revenues from the installations, including those received from the market and economic dispatch respectively. The levy will apply to the main operators in the energy sectors achieving a certain net amount of turnover, as well as to certain persons or entities that undertake activities including the production of crude oil or natural gas, coal mining or oil refining in Spain. This levy will have the legal status of a non-tributary public charge, and will not be considered a tax-deductible expense for the purposes of the taxable base for Income Tax, nor may it be passed on to third parties.

- From the point of view of administrative processing, improvements were introduced with regard to administrative streamlining and simplification, to facilitate the deployment of renewable energies and self-consumption as a means of promoting decarbonisation and accelerating progress in the substitution of fossil fuels.
- Finally, other measures were envisaged to make the conditions for contracting the supply of electricity and gas more flexible, as well as to increase or define certain information that should appear on consumers' invoices, in order to increase transparency and the protection of those consumers. Specific measures were also approved for electro-intensive and gas-intensive industries.

In 2022 other provisions were also approved that had an impact on the sector:

### **Other developments with regard to Spain's General Energy Policy**

In 2022, and in execution of the Recovery, Transformation and Resilience Plan (PRTR in Spanish), the publication by a number of Ministries of calls for the presentation of specific projects in certain areas of action of this Plan continued. Strategic Projects for Economic Recovery and Transformation (PERTE) continued to be approved, a global vehicle that includes the actions of a number of sectors, including the PERTE for the development of electric and connected vehicles, renewable energies, renewable hydrogen and storage, the Circular Economy and industrial Decarbonisation.

With regard to the National Integrated Energy and Climate Plan (PNIEC in Spanish) 2021-2030, in August 2022, the government launched a public consultation process for the proposed updates to the above-mentioned Plan in order to incorporate new developments at both national and European level. This updating process will enable Spain to meet the new EU objectives and will address prevailing circumstances and needs, especially the impact of the measures and objectives included in the Recovery, Transition and Resilience Plan (RTRP), which plans to use more than 40% of the funds to promote ecological transition.

Finally, on 11 October 2022, the Spanish Government presented a Contingency Plan, known as the +Energy Security Plan, to help protect the population against the price crisis caused by the war in Ukraine, reduce gas consumption, improve energy autonomy, become more competitive and increase energy exports as a measure

of solidarity with the rest of Spain's partners across the European Union. The Government estimates that the Plan will enable a reduction in primary natural gas consumption of between 5.1% and 13.5% during the coming winter, which together with other measures already implemented or in progress, will enable the EU commitments to be met. The Plan consists of 73 measures (some already approved or launched and others not yet finalised, for which legislation will be reviewed), structured in six main blocks:

1. Energy efficiency and saving.
2. Promoting energy transition.
3. Protection of vulnerable consumers, households and businesses.
4. Tax measures.
5. Strategic autonomy.
6. Solidarity with the rest of the European partners.

## Further developments with regard to electricity production activities

With regard to production from renewable energy sources, a number of Ministerial Orders were approved updating the remuneration of certain remuneration parameters for the installations, and processing began for the update of parameters for the regulatory half-period started in 2023. Two new auctions were also held, the third and the fourth, associated with the new remuneration scheme for future renewable energy developments, entitled Renewable Energy Economic Regime (REER), in which a total of 177 MW and 45.5 MW were respectively assigned in a complex economic context.

On 26 November 2022, Order TED/1146/2022, of 21 November was published in the Official State Gazette. This resolves the public tender for the concession of evacuation access capacity to the electricity transmission network for generation installations of renewable origin in the Mudejar 400 kV fair transition hub, held in accordance with Order TED/1182/2021, of 2 November. The Order approved the definitive award to Enel Green Power España, SL. by public tender of 1,202 MW of access capacity for evacuation access capacity to the electricity transmission grid for generation installations of renewable origin in the Mudejar 400 kV fair transition hub.

## Developments with regard to Energy Efficiency

On 23 March 2022, Order TED/220/2022, of 16 March, establishing the contribution to the Energy Efficiency

National Fund for 2022, was published in the Official State Gazette, with the assignment of €26 million to Endesa.

During the year, the proposed Order for contributions to the Energy Efficiency National Fund in 2023 also began to make its through parliament. The Order envisages for Endesa an equivalent amount of €49 million for 2023, of which it should contribute at least €30 million (40%) to the Fund, with the rest of its obligation to be met through the presentation of Energy Saving Certificates (ESCs).

With regard to this, on 25 January 2023, Royal Decree 36/2023 of 24 January was published, establishing a system of Energy Saving Certificates, and a proposal for an order to develop the system of certificates is also being processed.

## Royal Decree 184/2022, of 8 March, which regulates the provision of charging services for electric vehicles.

On 19 March 2022, Royal Decree 184/2022, of March 8, was published, which defines the 2 legal figures that may participate in the recharging activity with public access or companies for their fleets, specifically, the Operator of the Recharging Point, holder of the exploitation rights for the charging stations and responsible for their physical operation, and the Electric Mobility Service Provider, an intermediary between operators and users of electric vehicles, which may provide value-added services to those users. The obligatory nature of timely charging at public access stations has also been reinforced, eliminating barriers of a technical or contractual nature, and a mechanism for obtaining information has been established in order to have an official map of charging stations that provides data including their location, characteristics and price of the charge.

## Royal Decree 568/2022, of 11 July, establishing the general framework for a regulatory test bank to promote research and innovation in the electricity sector.

The objective of this Royal Decree is to establish controlled spaces in which to test potential regulatory improvements to facilitate the regulatory changes and to help the modifications to adapt better to sector needs. This is how the regulation enables the start-up of pilot projects to boost research and innovation, limited in volume, duration and geographical area, and which may require exemptions

from sectoral regulation. The promoters of the projects will need to sign a test protocol with the Secretary of State for Energy, in cooperation with the CNMC. The processing of a proposal for an Order convening access to the regulatory test bench was also initiated.

## 2022 electricity tariff

On 22 December 2021, a Resolution was published establishing the access tariffs to the electricity transmission and distribution networks applicable from 1 January 1, 2022. This represented an average reduction of 5.4% compared to the values for 1 June 2021.

On 30 December 2021, Order TED/1484/2021, of 28 December, was published in the Official State Gazette (BOE) establishing the prices of charges for the Electricity System applicable from 1 January 2022. These represented an average reduction of approximately 31% compared to the charges approved on 1 June 2021. Additionally, Royal Decree Law 6/2022, of 29 March, approved a 36% reduction in electricity charges compared to those in force on 1 January 2022.

## Main regulatory changes in Europe

### Measures to combat the high energy prices

The worsening situation as a result of the crisis caused by the conflict between Russia and Ukraine led the European Commission to issue two communications in March 2022:

- Communication entitled *REPowerEU: A joint European action for more affordable, secure and sustainable energy*, which focussed on the need to ensure sufficient gas reserves looking ahead to the coming winter and to reduce reliance on the supply of Russian gas by diversifying European Union supply and promoting renewable energy; it also indicated the measures that could be applied by the Member States to respond to high energy market prices and the conditions under which certain procedures had to be undertaken by Member States.
- Communication on *Security of supply and affordable energy prices: Options for immediate measures to be taken with regard to the following winter*, which detailed the different options available to member States to manage increased energy prices.

These two communications were detailed in a number of initiatives and plans:

## Natural gas tariff for 2022

On 25 December 2021, a Resolution was published with the Last Resort Tariff (LRT) for natural gas to be applied in the first quarter of 2022, and that, taking into account the provisions of Royal Decree Law 17/2021, of 14 September resulted in an increase of approximately 5.4%, 6.8% and 7.5% respectively for Last Resort Tariff 1 (LRT1), Last Resort Tariff 2 (LRT2) and Last Resort Tariff 3 (LRT3).

During the year, these resolutions were updated periodically, taking into account the limitations on the growth of the Last Resort Tariff (LRT) for natural gas that had been established by the Government.

- Firstly, in May the European Commission presented the "*Plan REPowerEU*", that established as number of measures to reduce Europe's dependence on Russian fossil fuels in the short term, brought forward ecological transition and energy saving, while increasing clean energy production and ensuring the resilience of an EU-wide energy system. It was supported by financial and legal measures to build the new energy infrastructure and energy system that Europe needs.
  - For the Renewable Energies Directive, the Commission proposes to increase the Union's 2030 target from the current 40% to 45%. The REPowerEU plan would increase total renewable energy generation capacity to 1,236 GW by 2030, compared to 1,067 GW envisaged in the "Objective 55" package of measures for the same year. The EU Solar Energy Strategy will promote the deployment of photovoltaics. Within the framework of the REPowerEU plan, the strategy aims to achieve over 320 GW of newly installed solar PV by 2025, more than double the current level, and almost 600 GW by 2030.
  - For the review of the Energy Efficiency Directive, the Commission proposes an increase of 9% in the European Union's target by 2030 and the REPowerEU plan raises it to 13%.



- A Communication entitled *Short-term energy market interventions and long-term improvements in the configuration of the electricity market. Line of action*, that details a number of additional short-term measures and several areas where the design of the electricity market can be optimised to accommodate the transition away from fossil fuels and to increase resilience to price shocks, as well as consumer protection and an affordable electricity supply.

Notwithstanding the above, further increases in energy prices prompted the European Council to publish, on 6 October 2022, a Regulation with time-bound measures for emergency intervention to mitigate the effects of these high prices, including the following main measures.

- Reducing gross monthly consumption by 10% and at least 5% of consumption in 10% of the peak hours, or 3% of peak hour consumption, from December 2022 to March 2023.
- Introducing a cap of €180/MWh on the market revenue for certain infra-marginal electricity producers and redistributing the surplus among end customers.
- Enabling Member States to apply public intervention measures when establishing supply prices for households and SMEs.
- Establishing a solidarity contribution from EU companies primarily active in the oil, natural gas, coal and refining sector, calculated on the basis of “excess” profits earned above and beyond previous years, to be applied in the 2022 and/or 2023 tax year.

The Regulation also addresses the liquidity difficulties that energy companies are experiencing as a result of rising prices and volatility and states that the Council is assessing, together with European regulators (European Securities and Markets Authority (ESMA) and European Banking Authority (EBA)), issues relating to collateral and guarantees, as well as possible ways to restrict excessive intraday volatility.

In parallel, further discussions were held on a new price cap mechanism for the wholesale gas market and a new design for the electricity market. In this regard, on 29 December 2022, Regulation 2022/2578 was published in the Official Journal of the European Union, establishing a so-called market correction mechanism, which is a temporary instrument that is activated to restrict episodes of excessively high gas prices in the European Union that do not reflect global market prices. This mechanism applies to natural gas transactions on the main derivatives markets for the Title Transfer Facility (TTF) and derivatives linked to other virtual exchange points, with maturities of between one month and one year. This mechanism came

into force on 1 February 2023, for a period of 1 year, and has been applicable since 15 February 2023.

Regulation 2022/2576 was also published on 29 December 2022. It seeks better coordination of gas purchases and introduces measures to avoid excessive gas prices and excessive intraday volatility in the energy derivatives markets.

With regard to the issue of collateral, in October, the European Commission approved Regulation 2022/2311, which amends Delegated Regulation 153/2013, which allows non-financial clearing members, for energy derivatives, to use non-collateralised bank guarantees against clearing houses for one year.

## Financial regulation

In October, the European Commission approved Delegated Regulation 2022/2310 increasing the value of the clearing threshold for positions held in OTC commodity derivative contracts and other OTC derivative contracts to €4,000 million.

## Sustainable finance

In March 2022, the European Commission approved the *Taxonomy Climate Complementary Delegated Act on climate change mitigation* and the adaptation of the same which envisages a series of activities relating to gas and nuclear energy, the text for which was approved by the European Parliament on 6 July 2022.

During the same month, the sustainable finance platform presented the European Commission with a report with recommendations, which will act as a base for the Commission to draft a delegated regulation on the technical criteria for the 4 remaining objectives for taxonomy, which are as follows: Sustainable use and the protection of water and marine resources, transition towards a circular economy, the prevention and control of pollution and the protection and recovery of biodiversity and ecosystems.

## State Aid

In March 2022, the European Commission issued a communication on the Temporary Framework for State aid measures to support the economy following Russia's aggression against Ukraine, specifying the criteria that will

guide the assessment of its compatibility with the internal market.

In 2023, the European Commission also adopted a number of amendments to the Temporary State Aid Crisis Framework, enabling Member States to continue to make use of the flexibility provided for in the State aid regulations to support the economy in the context of Russia's war against Ukraine and in line with the objectives of the REPowerEU Plan until 31 December 2023.

## Wholesale market

Since 10 May 2022, and following the review criteria established in Decision 4/2017 of the Agency for the Cooperation of Energy Regulators (ACER) of the European Union, the harmonised maximum limit price on the daily

market was increased from €3,000/MWh to €4,000/MWh. Decision 4/2017 stipulates that the upper limit should be increased by €1,000/MWh 5 weeks after 60% of the limit has been reached. Although the value of €4,000/MWh was reached in August 2022, which should have led to a new increase, this did not occur and in September 2022 the Agency for the Cooperation of Energy Regulators (ACER) initiated a review of the criteria for modifying the price limits. On 10 January 2023, ACER approved Decision 1/2023, with the new criteria.

Since 24 May 2022, in order to make further progress within Spain in implementing European Regulation 2017/2195 (the Balancing Regulation), the operation scheduling processes undertaken by Red Eléctrica (Spanish electricity system operator) were changed to 15 minutes, affecting the adjustment services.



# Sustainability context

## Commitment to climate change

The main objective of the Paris Agreement was to restrict the increase in global temperature to 2 °C, with the goal of not exceeding 1.5 °C more than in the pre-industrial period. The Agreement introduces the condition of carbon neutrality, which had to be achieved in the second half of the century.

COP26, held in November 2021, closed with the Glasgow Climate Pact which, based on the role of science and the inadequacy of the commitments presented, recognises the urgency of accelerating climate action.

The agreements reached in Glasgow represented a major milestone by updating the target for restricting temperature increases, which was unequivocally set at 1.5 °C compared to pre-industrial levels, in accordance with the objective of achieving climate neutrality by 2050.

# 2050

It is the year in which we would like to achieve climate neutrality

In 2022 international negotiations on climate change reached their high point at COP27 in Sharm el-Sheikh, which took place against the difficult backdrop of the conflict in Ukraine, inflation and the energy crisis. It achieved progress on the agenda relating to governance of the Paris agreement with regard to solidarity, with the signing of a number of alliances, but without showing more ambition with regard to mitigation.

It should be highlighted that the final decision, known as the Sharm el-Sheikh Implementation Plan, maintains the ambition of the Glasgow Climate Pact of restricting the temperature increase to 1.5 °C, and recognises the role of renewable energy in the fight against climate change.

At European level, the energy crisis unleashed in 2022, caused to a large extent by the war between Russia and Ukraine, added the need for energy independence as an additional reason to the emergency to abandon the use of fossil fuels as soon as possible, testing the coordination

and capacity for consensus of European energy policy, the operability of the measures implemented, solidarity, and the ambition and climate leadership of the European Union. It has generated a scenario for the coming year based on three premises: The first is that the price crisis is far from abating; the second is that the probability of a supply crisis in the countries most dependent on Russia will continue; and the third is that during the year many extraordinary energy policy measures will be taken at European and national level to deal with both crises.

In this regard, progress was made in 2022 in processing the legislative proposals for the "Fit for 55" package; and the EU RePower Plan was adopted, aiming to eliminate dependence on Russian gas as soon as possible.

The best summary of the progress made in climate regulation is that during COP27 the European Commission announced that climate ambition would be above the 55% initially expected, reaching 57%.

With regard to Spain, the 2021-2030 National Integrated Energy and Climate Plan (PNIEC), currently under review, establishes ambitious objectives aligned with the European emission reduction objectives, including a target for renewables to account for 74% of total electricity generation by 2030, consistent with the path towards a 100% renewable electricity sector by 2050, and complemented by increasing additional storage power. With regard to energy efficiency, which is one of the pillars of the PNIEC, an improved target of 39.5% by 2030 was also established.

# 39.5

% is the energy efficiency improvement target for 2030

Also at the Spanish level, the National Climate Change Adaptation Plan (PNACC) 2021-2030 is the basic planning tool to promote coordinated action against the effects of climate change in Spain.

# Background for investors

## Stock market performance and investor relations

### Endesa on the stock market

The main world markets ended 2022 with double-digit losses, affected by inflationary tensions that were aggravated by the war in Ukraine, and by the continuous interest rate hikes adopted by the central banks as a containment measure.

Among the main stock market indexes, only the British FTSE 100 ended the year in positive territory, although the increase was a slight 0.9%. Following this indicator, the Spanish IBEX-35 selection stood out by losing only 5.6 %, performing better than indexes such as the French CAC 40 and the German DAX, which fell by 9.5 % and 12.1 %, respectively. The main European stock market benchmark, the Eurostoxx 50, ended the year with a cumulative decline of 11.7%, lower in any case than that recorded by the U.S. indexes, where the S&P 500 fell by 19.4% and the Nasdaq technology index by 33%.

The Spanish IBEX-35 index reached its lowest level of the year in mid-October at 7,261.1 points, at which point it registered a loss of close to 17%, following the International Monetary Fund's downward revision of the country's economic forecasts. From that level, the Spanish index managed to climb 13 % in the last two months of the year to close 2022 at 8,229.1. This recovery was supported by the improvement recorded by the Banking Sector, encouraged by the rise in interest rates, and some energy companies, which bounced back strongly in the face of the increase in the price of fossil fuels.

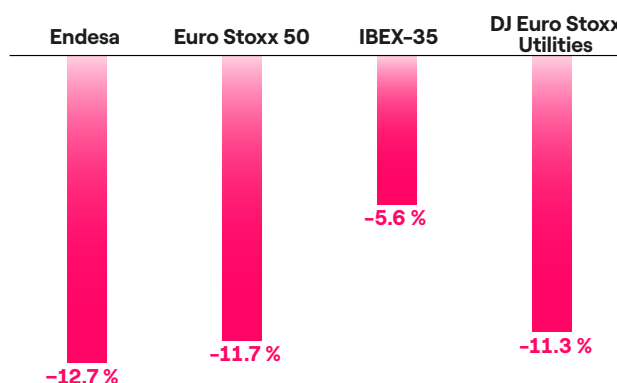
Electricity sector stocks were affected by investor uncertainty in the face of the unprecedented economic and social crisis caused by the war in Ukraine, which was reflected in high energy price volatility and rising inflation. During the year, this situation triggered the adoption of major regulatory measures with an impact on the sector, approved both at the EU level and by the Spanish government, in an attempt to mitigate the price pressure on the population.

The high volatility of the market in 2022, characterised by sudden movements in share price, occurred with a cumulative trading volume that was somewhat lower than in the previous year. In Endesa, a total of 324.5 million shares were traded, corresponding to accumulated cash of €5.974 million. The figures were 20.1% and 29.7% lower than those for 2021, respectively. The average volume of shares traded during each session was 1.26 million, 20.5% down compared to the previous year.

#### Key statistical data for Endesa's shares in 2022

Spanish Stock Markets	Endesa (€/share)
Maximum	20.96
Minimum	14.27
Average	18.367
Closing price	17.635
Annual gain/loss (%)	-12.70 %
Total returns	-5.58 %
Volume of shares traded	324,484,195

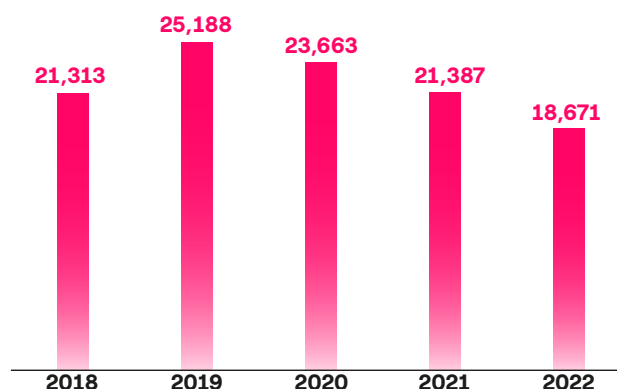
#### Endesa share price performance on the Madrid Stock Exchange compared to benchmark indexes. 2022



At the end of the year, ENDESA's market cap was €18,671 million, ranking as the twelfth highest capitalisation on the IBEX-35, two positions down on last year.

#### Developments in Endesa's market cap 2018-2022

€ Million





## Dividend

In line with the Dividend Policy announced for the 2021–2024 period at Endesa's Capital Market Day on 25 November 2021, Endesa's General Shareholders' Meeting held on 29 April 2022 approved the distribution of a total dividend charged to 2021 results for the gross amount of €1.4372 per share to its shareholders, representing a total of €1,521 million.

This dividend was paid out to shareholders in two cash payments made on 3 January 2022 for €0.5 gross per share (€529 million in total), and 1 July 2022, €0.9372 gross per share (€992 million in total).

Looking ahead, the Dividend Policy for 2022–2025, approved by the company's Board of Directors and disclosed on 23 November 2022, establishes that the Board of Directors will ensure that for 2022, the ordinary dividend per share approved for distribution for the year is equal to 70% of the ordinary net profit attributed to the parent company in the Group's consolidated financial statements, in the form of a single cash payment in July 2023.

For the 2023, 2024 and 2025 business years, the Board of Directors will attempt to ensure that the ordinary dividend

# 1.4372

€ per share was the dividend approved at the 2022 General Shareholders' Meeting

per share that is agreed to be distributed and charged to these financial year is equivalent to 70% of the ordinary net profit attributable to the Parent Company in accordance with the Group's Consolidated Financial Statements. The Board of Directors intends to pay this ordinary dividend exclusively in cash and in two payments (January and July) on the specific date to be confirmed for each month, which will be clearly announced.

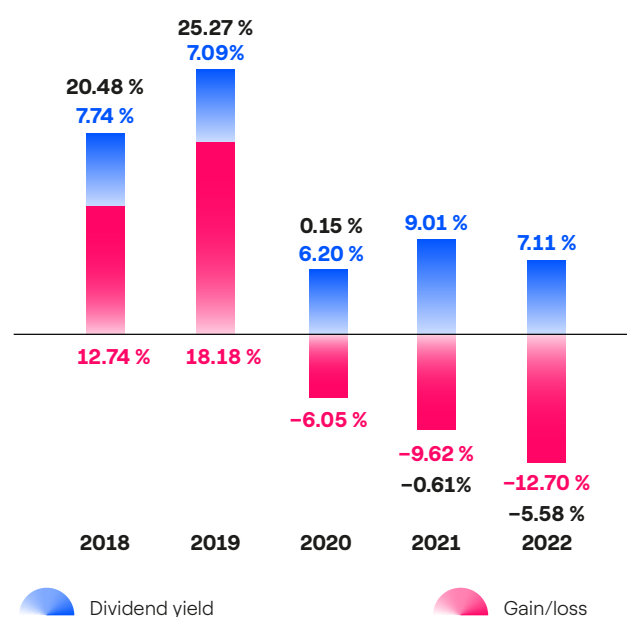
## Total returns for shareholders

In 2022, final returns to Endesa shareholders, calculated as the sum of the stock market return and the dividend return, was 5.58%, negative.

The performance of the share price on the stock market resulted in a negative return of 12.70 %, but a gross €1.4372 per share that the Company distributed as a dividend against 2021 results managed to offset part of this loss by providing shareholders with a positive dividend yield of 7.11%.

In the last five years, the average total return to Endesa shareholders has amounted to 7.94%.

### Trends in total return for Endesa shareholders 2018–2022



# 7.94

Is the average total return for Endesa's shares over the last 5 years

## Endesa in the IBEX-35

Since its return to the IBEX-35 in November 2014, Endesa weights a ratio of 40% of its capital on this stock market, as its *free float* is 29.9%, between the range of 20% and 30%.

## Liquidity

Taking into account Continuous Market trading and including block trades and special transactions, the average number of Endesa shares traded on a daily basis in 2022 amounted to 1,262,584, a decrease of 20.5% compared to 2021 (1,587,308 shares).

## Endesa's credit rating

The sovereign *rating* for the Kingdom of Spain remained unchanged throughout 2022 despite a gradual deterioration of the macroeconomic outlook. In the specific case of Standard & Poor's, the credit rating for the debt remained at "A", but its outlook was upgraded from Negative to Stable in a report published on 18 March 2022, in which it special mention was made of the expected investments from European funds and the recovery of labour market as positive aspects. Specifically, the agency pointed out that the long-term growth prospects for the Spanish economy were solid, favoured by the high level of public investment expected from the implementation of the Recovery Plan, accumulated household savings and the recovery of the tourism sector.

In June and July 2022, confirmations of Fitch (A-/Stable) and Moody's (Baa1/Stable) sovereign *ratings* were also announced. For Fitch, Spain's ratings were supported by a high value-added economy, strong governance indicators and human implementation ratings above the "A" average for its peers. In its report, Moody's highlighted the public support measures that, in its opinion, helped to contain the economic consequences of pandemic-related crises. Another factor it took into consideration was the "high debt and rising interest rates" and, finally, the government's reform agenda, although it also warned that the upcoming elections may pose "risks for implementation".

With regard to Endesa, the year began with a downward review of Fitch's *rating* on 4 February 2022 to "BBB+/stable outlook" from the previous "A-/stable outlook" rating to align it with the downgrade of its parent company Enel's rating, given the expectation of higher financial leverage in the medium term.

Taking this weighting into account, Endesa's shares ended 2022 in 15th place on the IBEX-35 with regard to capitalisation adjusted by *free-float*, one place lower than the previous year.

The total volume traded in 2022 was 0.31 times the company's capital. However, this figure increased to 1.03 times when only taking into account the actual number of shares in circulation at the end of the year, 29.9% of capital following the IPO undertaken in November 2014.

In the same report, Fitch reaffirmed Endesa's "Senior Unsecured" *rating* at "A-", noting that more than 50% of revenue come from regulated activities, and the "Standalone Credit Profile" (SACP) at "a-". It was pointed out that in the Strategic Plan presented until 2024, the Company's medium-term net financial debt/EBITDA target remained at 2.3 x, consistent with the maximum debt capacity that Fitch considers for that level of rating.

On 9 August 2022, Moody's took the decision to change the outlook from Stable to Negative for a total of 9 Italian electric utilities as a result of their exposure to the decision taken on 5 August 2022 on the outlook of the Italian sovereign *rating*, which was changed from "Baa3/ stable outlook" to "Baa3/ negative outlook". Enel, and Endesa as its main subsidiary, were included in the list of companies affected by this decision, with a long-term *rating* of "Baa1/ negative outlook".

In the "*Credit Opinion*" report Moody's published with regard to Endesa on 21 September 2022, the agency highlighted as the Company's main credit strengths the predictability of benefits provided by regulated activities, its solid financial profile and its essential position within the Enel Group. Against this, the most significant challenges are the concentration of its business in the Iberian market, a generous dividend policy, and the high investment plan to be addressed in the next 3 years.

Finally, on 14 December 2022, Standard & Poor's decided to review the outlook on Endesa's credit rating from "Stable" to "Negative", following the same action taken a week earlier on the *rating* for the Group's parent company, Enel, S.p.A. This action came as a result of continued pressure on Enel's credit metrics as a result of the impact





of negative regulatory interventions, especially in Italy and Spain, the deficit in hydro production and the risks of managing high open positions in the wholesale electricity market.

In the report published by Standard & Poor's, Endesa's corporate *rating* remained unchanged at "BBB+/A-2" and the *Stand Alone Credit Rating* (SACP) also unchanged at

"a-", although the agency drew attention to the risk for Endesa posed by the lower expected contribution of regulated activities in the business *mix* and liquidity pressures, despite the fact that, in its opinion, the Company has healthier credit metrics than those of its parent company.

To summarise, Endesa's *credit rating* in 2022 developed as follows:

	Credit rating						
	31 December 2022 <sup>(1)</sup>				31 December 2021 <sup>(1)</sup>		
	Long-term	Short-term	Outlook	Date of last report	Long-term	Short-term	Outlook
Standard & Poor's	[BBB+]	[A-2]	[Negative]	[14 December 2022]	BBB+	A-2	Stable
Moody's	[Baa1]	[P-2]	[Negative]	[21 September 2022]	Baa1	P-2	Stable
Fitch	[BBB+]	[F2]	[Stable]	[12 April 2022]	BBB+	F2	Stable

<sup>(1)</sup> On the respective presentation dates for the Consolidated Management Report.

Endesa's credit rating depends on the rating of its parent company, Enel, in accordance with the methods employed by *rating agencies* and on 31 December 2022 was classified as *investment grade* by all the rating agencies.

Endesa is working to maintain its *investment grade* credit rating to be able to efficiently access money markets and bank financing, and to obtain preferential terms from its main suppliers.

## Investor relations and Shareholders' Office activities

Endesa is in constant contact with its shareholders, private and institutional investors and the leading stock market analysts, regularly providing them with detailed information through the Investor Relations Department and the Shareholders' Office in Madrid.

In this regard, on 11 November 2015, the Endesa's Board of Directors, pursuant to the Code of Good Governance for Listed Companies, approved its "Policy for communication and contact with shareholders, institutional investors and voting advisors", which was reviewed on 21 December 2020. The objective of this Policy is to define and establish the principles and criteria that govern the actions of communication and contacts with shareholders, institutional investors, proxy advisors, and in general with the markets and public opinion, regarding financial, non-financial and corporate information (regulated or voluntary), as well as maximising its dissemination and ensuring the quality of the information transmitted through the media, social networks and other channels.

The general principles by which this policy is governed are transparency, immediacy, continuous information, equal treatment, affinity with the social interest and regulatory compliance.

The Board of Directors is regularly informed of any changes in shareholdings and of the opinion of significant

shareholders, investors and credit rating agencies with regard to the Company and its Group.

The Audit and Compliance Committee, the Sustainability and Corporate Governance Committee, and the Appointments and Remuneration Committee are the bodies responsible for supervising, within their respective remits and in line with the company's internal regulations, the company's communications with shareholders and investors, voting advisors and other stakeholders, and reporting on these factors to the Board of Directors.

In compliance with this policy, the three Committees supervised the Strategy for Communication and Relations with Shareholders, Investors and other Stakeholders for 2022 at their meetings held on 20 December 2022.

The conclusions indicated that Endesa's information dissemination channels function correctly and work in accordance with the general principles of Endesa's Policy and in accordance with best corporate governance practices.

The Sustainability and Corporate Governance Committee also receives information on the Company's communication strategies with different stakeholders, including employees, customers, suppliers and society in general.

## Investor relations

In 2022, normality was restored following the measures implemented to combat the Covid-19 health crisis. The return of in-person activities meant a reduction in the number of investors attending meetings when compared to the wider audience that could attend when held virtually. The activities undertaken by the Investor Relations Department in 2022 include making public presentations to analysts and investors on the company's quarterly results and updating the 2023-2025 Strategic Plan, which took place on 23 November 2022.

In 2022, Endesa made two *Non Deal Roadshows*. The first was organised in Europe, the United States and Canada in February and March, following the presentation of results for 2021. The second, organised in Europe and the United States, was held in November and December, following the

presentation of the update to the 2023-2025 Strategic Plan, with a view to providing in-depth information about the Plan to the company's major investors. At these two *Roadshows*, Endesa met with a total of 98 investors.

Endesa also participated in 7 *Reverse Roadshows* in Madrid, where meetings were held with 177 investors.

Endesa's Investor Relations Department also attended a total of 14 international conferences on the industry, where it had the opportunity to meet with 211 investors.

Also as part of its daily activity, the Investor Relations Department responded, by phone, by e-mail and in face-to-face and virtual meetings, to a total of 1,424 queries presented by analysts, investors and *rating companies*.

Finally, Endesa held two General Shareholders' Meetings in person and online. The Ordinary General Shareholders'

Meeting was held on 29 April 2022, with all the points on the Agenda approved at the meeting, with a quorum of 84.98% of the share capital. An Extraordinary General Shareholders' Meeting was held on 17 November 2022, with all the points on the Agenda approved at the meeting, with a quorum of 84.70% of the share capital.

## Shareholders' Office

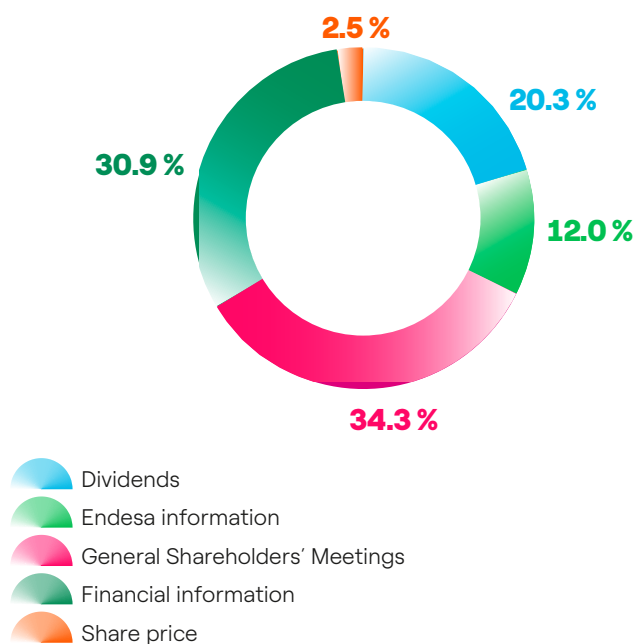
One of the main information channels for private shareholders is the "Information for Shareholders and Investors" section on the corporate website ([www.endesa.com](http://www.endesa.com)).

In 2022, Endesa's Shareholders' Office answered 1,599 telephone calls, 1,221 documentation submissions were made and 26 shareholder visits were organised.

**1,424**  
enquiries from analysts,  
investors and rating companies

The Shareholders' Office dealt with  
**2,846**  
requests from shareholders

### Information requested from the Shareholders' Office in 2022



# 3.

# Corporate governing bodies

## Board of Directors

A non-delegable power of the Board of Directors is the supervision of internal information and control systems.

## Distribution by gender

In 2022, the objective of having the number of female directors represent at least 40% of the total number of members of the Board of Directors was met, reaching 42% including the new appointments.

# Corporate governing bodies



## APPOINTMENTS AND REMUNERATION COMMITTEE

### Chairman

Ignacio Garralda Ruiz de Velasco

### Members

Pilar González de Frutos  
María Eugenia Bieto Caubet  
Antonio Cammisecra  
Francisco de Lacerda

### Non-director secretary

Francisco Borja Acha Besga



## BOARD OF DIRECTORS

### Chairman

Juan Sánchez-Calero Guilarte

### Vice Chairman

Francesco Starace

### Chief Executive Officer

José D. Bogas Gálvez

### Members

María Eugenia Bieto Caubet  
Antonio Cammisecra  
Ignacio Garralda Ruiz de Velasco  
Pilar González de Frutos  
Alicia Koplowitz y Romero de Juseu  
Francisco de Lacerda  
Alberto de Paoli  
Francesca Gostinelli  
Cristina de Parias Halcón

### Non-director secretary

Francisco Borja Acha Besga



## AUDIT AND COMPLIANCE COMMITTEE

### Chairman

Francisco de Lacerda

### Members

Pilar González de Frutos  
María Eugenia Bieto Caubet  
Alberto de Paoli  
Cristina de Parias Halcón

### Non-director secretary

Francisco Borja Acha Besga



## SUSTAINABILITY AND CORPORATE GOVERNANCE COMMITTEE

### Chairman

Juan Sánchez-Calero Guilarte

### Members

Ignacio Garralda Ruiz de Velasco

Francesca Gostinelli

Cristina de Parias Halcón

### Non-director secretary

Francisco Borja Acha Besga

## EXECUTIVE MANAGEMENT COMMITTEE

### General Manager – Communication

Ignacio Jiménez Soler

### General Manager – Energy Management

Juan María Moreno Mellado

### General Manager – People and Organisation

Paolo Bondi

### General Manager – Generation

Rafael González Sánchez

### General Manager – Infrastructure and Networks

José Manuel Revuelta Mediavilla

### General Secretary and Secretary to the Board of Directors and General Manager – Legal Department

Francisco Borja Acha Besga

### General Manager – Retailing

Javier Uriarte Monereo

### General Manager – Institutional Relations and Regulation

José Casas Marín

### General Manager – Media

Pablo Azcoitia Lorente

### General Manager – Endesa X

Davide Ciciliato

### General Manager – Nuclear Power

Gonzalo Carbó de Haya

### General Manager – Audit

Patricia Fernández Salís

### General Manager – ICT Digital Solutions

Manuel Marín Guzmán

### General Manager – Sustainability

María Malaxechevarría Grande

### General Manager – Procurements

Ignacio Mateo Montoya

### General Manager – Administration, Finance and Control

Luca Passa\*

\* On 1 January 2023, Marco Palermo was registered to replace Luca Passa as General Manager – Administration, Finance and Control, who ceased to hold office on 31 December 2022.

# 4.

# Strategy

## Strategic Plan 2023–2025

The Strategic Plan for 2023–2025 takes full account of the decarbonisation of the company's generating *mix*, the diversification of value-added products for deregulated customers, and the development of its distribution grid as an integrating element.

## Growth in emission-free generation capacity

Planned investment for the development of renewable power represents half of the total investment for the three-year period and will enable a total volume of renewable power of 13,900 MW to be achieved by 2025.

## Extension of the supply of value-added products and services

Endesa plans to invest €900 million by 2025 aimed at promoting the electrification of final demand.

## Digitalisation of the distribution network

Endesa will invest €2,600 million in the distribution network, of which 42% will be assigned to digitalisation.

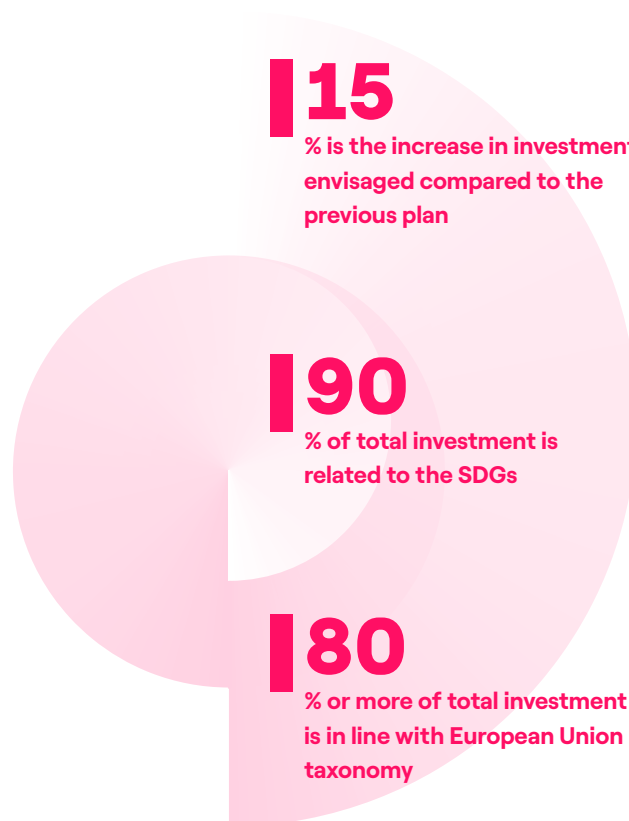
# Strategic Plan 2023–2025

On 23 November 2022, Endesa presented an update of its 2023–2025 Strategic Plan. This Plan accelerates the decarbonisation of the company's generating *mix*, the diversification of its value-added products for deregulated customers, and development of its distribution grid as an integrating element.

To reach these objectives, the investment envisaged in the new strategy features a 15% increase compared to the previous 2022–2024 Plan, reaching €8,600 million. This is due largely to increased funds for the development of wind and solar installations, which account for over half of this investment plan, with a total of €4,300 million, an increase of 39%.

About 90% of the planned investment is directly related to the United Nations Sustainable Development Goals (SDGs), and over 80% is aligned with European Union Taxonomy. In this regard, the percentage of corporate debt linked to sustainability objectives will increase to 87% by 2025.

The industrial plan that underpins Endesa's strategy until the end of 2025 maximises the value of the vertically integrated business model which will play a leading role in the path towards electrification, while creating value for all stakeholders involved with the company.



## Value created for stakeholders

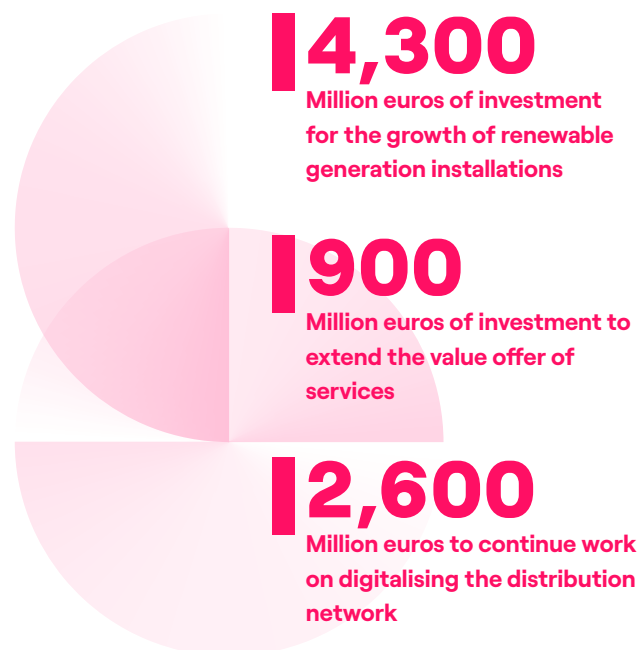


<sup>(1)</sup> 2025 compared to 2022.

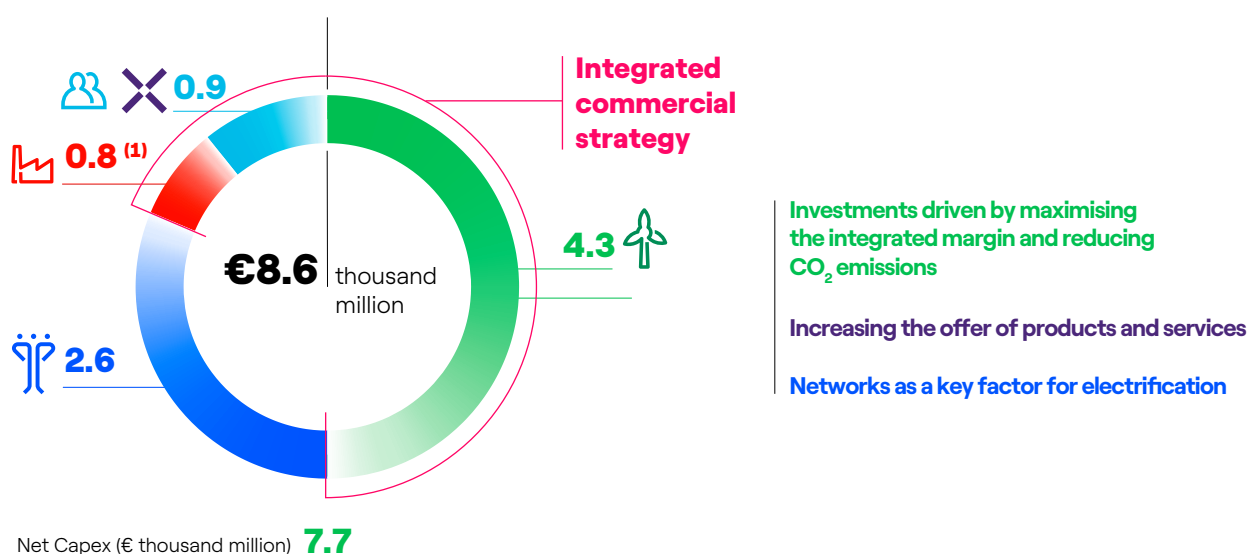
The update of the 2023–2025 Strategic Plan is adapted to the new energy environment and based on the following lines of action:

### Lines of action 2023–2025 Strategic Plan

<b>Increase in emission-free generation capacity.</b>	<ul style="list-style-type: none"> <li>Robust growth in renewable generation to reach a total installed capacity of 13,900 MW at the end of the period, with investment totalling €4,300 million.</li> </ul>
<b>Extension of the value offer for services and electricity supply for customers.</b>	<ul style="list-style-type: none"> <li>Extension of the value offer for services and electricity supply for customers, representing an investment of €900 million.</li> </ul>
<b>Digitalisation of the distribution network.</b>	<ul style="list-style-type: none"> <li>Continue efforts to digitalise the distribution network as a key asset to enable energy transition, with investment totalling €2,600 million.</li> </ul>



## 2023–2025 Gross Capex by activity



<sup>(1)</sup> Includes nuclear, combined cycle, non-mainland and others.

## Growth in emission-free generation capacity

The planned investment for the development of renewable power represents half of total investment for the three-year period and will enable the addition of 4,400 MW of capacity (3,000 MW solar and 1,400 MW wind) to reach a volume of emission-free power of 13,900 MW by 2025. This will make 91% of electricity production in the Iberian Peninsula emission-free, enabling us to achieve the target of 95% of all electricity sold at a fixed price being from zero-emission sources. For Endesa this represents an acceleration along the path towards net zero emissions, without the use of CO<sub>2</sub> capture technologies.

This growth in renewables is based on portfolios including some of the largest and most diversified projects in the sector, amounting to about 85 GW, of which 19 GW are considered to be projects at a mature stage of analysis

and planning, and just over 1,000 MW are already being built.

Solar projects account for 58% of the *pipeline*, with wind representing 16% and battery storage projects 20%.

The 2023–2025 Plan includes 200 MW of this type of storage. This is a new technology compared to the previous plan and relates to two large fair transition projects awarded in 2022, at Pego in Portugal and Andorra in Aragón.

**13,900**  
MW is the total volume  
of renewable capacity to  
be reached by 2025

## Extension of the supply of value-added products and services

In addition to its efforts to achieve a zero-emission energy mix, Endesa plans to invest €900 million by 2025 in promoting the electrification of demand by consumers, through active management of the customer portfolio, enabling the company to continue developing affordable offers and services with high added value.

The Plan includes increasing the portfolio of deregulated-market customers by 6%, to 7.3 million customers by 2025, which will enable the total volume of liberalised fixed-price electricity sales to grow by 2%, to 51 TWh (terawatt hours).



With regard to services, the number of public and private charging stations will increase to 66,000, while the focus on the promotion of E-home service contracts will result in a 12% increase, to 2.8 million.

## Digitalisation of the distribution network

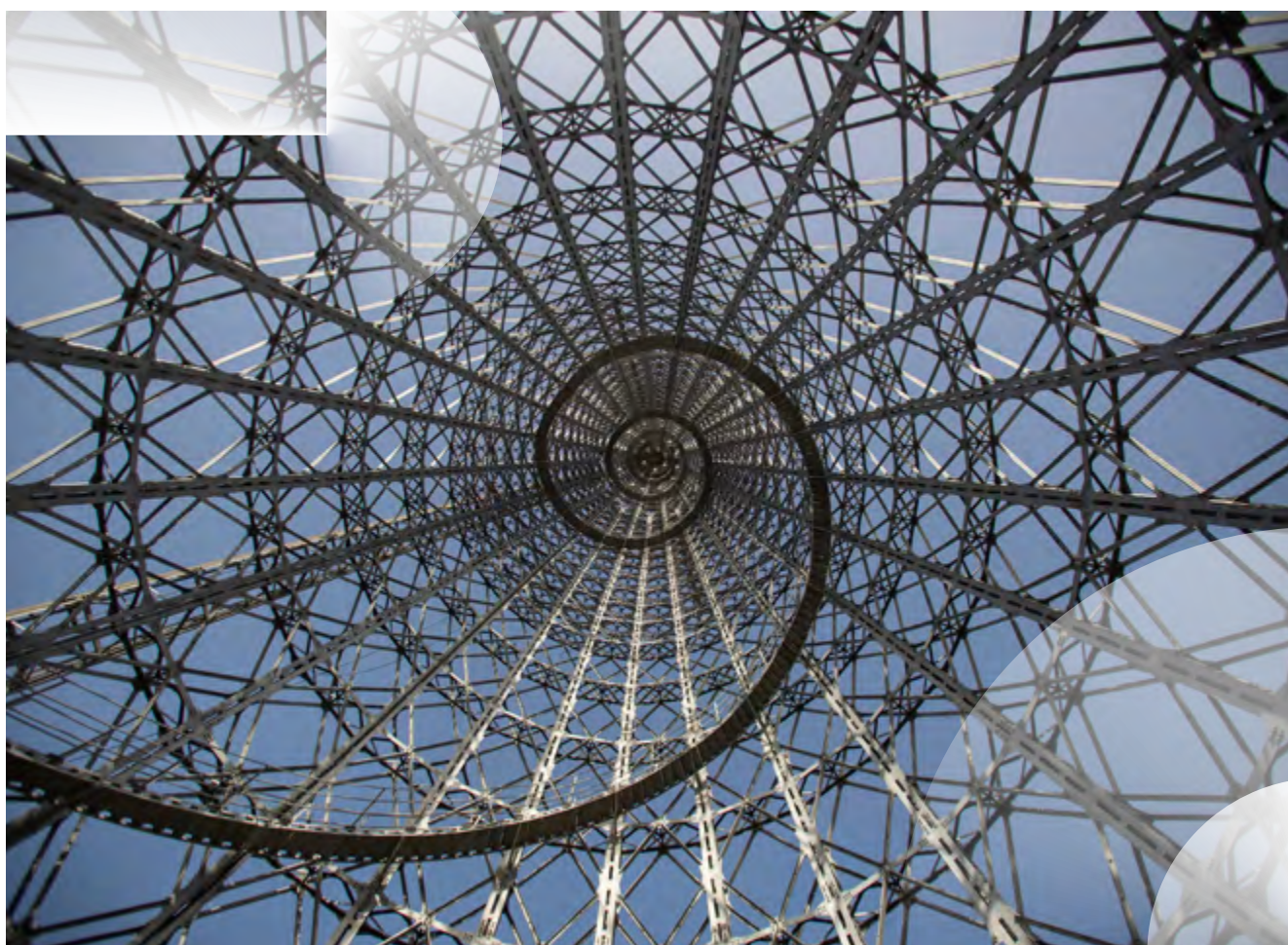
The other major area of investment in the new plan, in addition to renewables, is the distribution network, with a total of €2,600 million, slightly lower than that planned for 2022-2024, due to greater regulatory uncertainty.

This volume of investment is distributed in three areas: Digitalisation, which represents 42%; adaptation of the grid to the new needs of customers, including self-consumption and distributed generation, at 34%; and reinforcing the quality of service and resilience of the grid, 24%. All this will enable losses to be reduced by 0.2% and interruption times by 26%.

**900**  
Million investment by 2025 for the electrification of final demand

**66,000**  
public and private charging stations

**42**  
% is the percentage of investment in the distribution network that will be assigned to digitalisation



# Main financial indicators

The new Business Plan includes forecasts for economic indicators for the consolidated results, based on the current lines of action. In accordance with this, Endesa expects positive developments with regard to the following:

**18**  
% growth in Net Ordinary  
Income in the period

Economic indicator	Forecast
<b>Gross Operating Income (EBITDA)</b>	<ul style="list-style-type: none"> <li>This will increase by 8% in accumulated annual terms (CAGR) in 2023-2025, to between €5,200 million and €5,500 million in 2025, as a result of our investment and the foreseeable normalisation of market conditions.</li> </ul>
<b>Net Ordinary Income</b>	<ul style="list-style-type: none"> <li>This will be in the range €2,000 million to €2,100 million at the end of the three-year period, with compound annual growth of 18% over the plan horizon.</li> </ul>

In this regard and with a view to maintaining Endesa's risk profile and financial strength, the dividend policy approved by the Company maintains a 70% *pay out* on net ordinary income over the period to 2025.

Million euros

Financial objectives	Unit	2023	2024	2025
Gross Operating Income (EBITDA)	Million euros	4,400-4,700	4,900-5,200	5,200-5,500
Net Ordinary Income	Million euros	1,400-1,500	1,700-1,800	2,000-2,100
Gross Dividend Per Share	Euros	1.0	1.2	1.4





# Long-term outlook. Full decarbonisation by 2040

Endesa is fully committed to developing a sustainable business model in line with the objectives of the Paris Agreement. For Endesa, the fight against climate change is an unprecedented challenge. Ambitious targets have been set through the successive Strategic Plans that have been approved.

## Endesa proposes the complete decarbonisation of its activities by 2040

The Enel Group has signed up to the *Business Ambition for 1.5°C* campaign promoted by the United Nations and other institutions, based on a strategic shift towards renewable energy that has been implemented over recent years. Endesa aligned itself with its parent in its 2022–2024 Strategic Plan in the goal of bringing forward the complete decarbonisation of its activities from 2050 to 2040, setting a clear path with intermediate reduction goals. The 2023–2025 Strategic Plan presented on 23 November 2022 confirmed this long-term approach, based on Endesa's intention to be a leader in energy transition through these strategic lines of action.

In this regard, Endesa has set itself a long-term objective of achieving emission neutrality throughout its value chain by 2040, in both direct emissions (Scope 1), achieving complete decarbonisation of its generating mix, and indirect emissions (Scope 3), including stopping its sales of natural gas. This is in combination with the scientific objectives in all relevant areas, and in accordance with the criteria and recommendations of the Science Based Targets initiative (SBTi).

It will achieve this objective through the following three main areas of action:

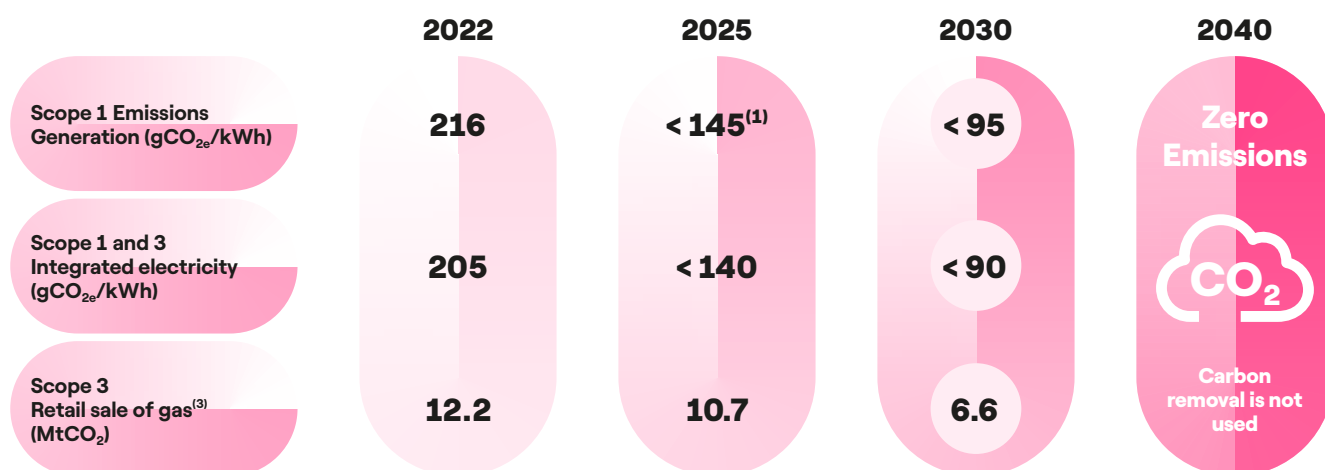
### Action plan

The deployment of new renewable capacity that makes all generation activity 100% emission-free (inside and outside the Iberian Peninsula).

Exiting the coal business by 2027, once the second mainland-Balearic Islands interconnection cable is operational, and the business of producing electricity from gas by 2040.

Exiting the retail gas trading business by offering a wide range of new products and services that incentivise the electrification of gas usage.

## Path to complete decarbonisation by 2040



**Decarbonisation pathway aligned with the 1.5 °C target covering major direct and indirect emissions<sup>(2)</sup> throughout the value chain**

<sup>(1)</sup> <50 grCO<sub>2e</sub>/kWh mainland.

<sup>(2)</sup> Endesa is committed to mitigating the remaining Scope 1+2+3 emissions in accordance with the 1.5°C pathway.

<sup>(3)</sup> The target does not include mergers and acquisitions.

# 5.

# Financial data

## Net income

Net income amounted to €2,541 million in 2022, a figure that represents an increase of 77.1% over the previous year.

## EBITDA

Gross operating income (EBITDA) for 2022 amounted to €5,565 million, representing an increase of 30.1% over the previous year.

## EBIT

Profit from operations (EBIT) in 2022 increased by 88.5% compared to the same period in the previous year, and amounted to €3,687 million.

# Consolidated key figures

## Net income

Net income attributed to the Parent amounted to €2,541 million in 2022 compared to €1,435 million in the previous year (+77.1%).

Net ordinary income for 2022 amounted to €2,398 million, an increase of 26.1% compared to the previous year.

The following is a breakdown of the most significant figures in Endesa's Consolidated Income Statement for 2022 and the variation compared to the previous year.

Million euros

	References <sup>(1)</sup>	Most significant figures			
		2022	2021	Difference	% Var.
<b>Revenue</b>	9	<b>32,896</b>	<b>20,899</b>	<b>11,997</b>	<b>57.4</b>
<b>Procurements and services</b>	10	<b>(23,394)</b>	<b>(15,364)</b>	<b>(8,030)</b>	<b>52.3</b>
<b>Revenue and Expenses from Energy Stocks Derivatives</b>	11	<b>(2,217)</b>	<b>543</b>	<b>(2,760)</b>	<b>(508.3)</b>
<b>Contribution margin</b>		<b>7,285</b>	<b>6,078</b>	<b>1,207</b>	<b>19.9</b>
Self-constructed assets	3.2b.1 and 3.2e.3	335	320	15	4.7
Personnel Expenses	12	(955)	(916)	(39)	4.3
Other Fixed Operating Expenses	13	(1,353)	(1,239)	(114)	9.2
Other Profits and Losses	14	253	35	218	622.9
<b>Gross Operating Income (EBITDA)</b>		<b>5,565</b>	<b>4,278</b>	<b>1,287</b>	<b>30.1</b>
Depreciation and Amortisation, and Impairment Losses on Non-Financial Assets	15.1	(1,716)	(2,197)	481	(21.9)
Losses for Impairment on Financial Assets	15.2	(162)	(125)	(37)	29.6
<b>Profit from Operations (EBIT)</b>		<b>3,687</b>	<b>1,956</b>	<b>1,731</b>	<b>88.5</b>
<b>Net Financial Profit/(Loss):</b>	16	<b>(215)</b>	<b>(31)</b>	<b>(184)</b>	<b>593.5</b>
<b>Profit/(loss) before tax</b>		<b>3,487</b>	<b>1,924</b>	<b>1,563</b>	<b>81.2</b>
<b>Net Income</b>		<b>2,541</b>	<b>1,435</b>	<b>1,106</b>	<b>77.1</b>
<b>Net Ordinary Income</b>		<b>2,398</b>	<b>1,902</b>	<b>496</b>	<b>26.1</b>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

**5,565**  
million euros Gross  
Operating Income  
(EBITDA)

**3,687**  
million euros Profit  
from Operations  
(EBITDA)

**2,398**  
million euros Net  
Ordinary Income



## Analysis of profit/(loss)

Gross Operating Income (EBITDA) in 2022 amounted to €5,565 million (+30.1%).

Profit from operations (EBIT) in 2022 increased by 88.5% compared to the same period in the previous year, and amounted to €3,687 million.

## Revenue

In 2022, revenue amounted to €32,896 million, €11,997 million (+57.4%) more than that obtained in 2021.

The following is a breakdown of "Revenue" in the 2022 Consolidated Income Statement and the variation compared to the previous year.

Million euros

	References <sup>(1)</sup>	Revenue			
		2022	2021	Difference	% Var.
Revenue from Sales and Provision of Services	9.1	32,545	20,527	12,018	58.5
Other Operating Income	9.2	351	372	(21)	(5.6)
<b>TOTAL</b>	<b>9</b>	<b>32,896</b>	<b>20,899</b>	<b>11,997</b>	<b>57.4</b>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

## Revenue from sales and services provided

The following is a breakdown of "Revenue from sales and the provision of services" in the 2022 Consolidated Income Statement and the variation compared to the previous year:

**32,896**  
million euros of revenue  
in 2022

Million euros

	References <sup>(1)</sup>	Revenue from Sales and Services Provided			
		2022	2021	Difference	% Var.
Electricity sales		23,511	14,423	9,088	63.0
Deregulated Market Sales		14,966	9,161	5,805	63.4
Sales to the Spanish deregulated market		13,305	7,962	5,343	67.1
Deregulated Market Sales outside Spain		1,661	1,199	462	38.5
Sales at Regulated Prices		2,985	2,608	377	14.5
Wholesale Market Sales		3,828	2,089	1,739	83.2
Non-Mainland Territories - Compensation		1,578	565	1,013	179.3
Remuneration for investment in Renewable Energies		154	(25)	179	N/A
Other Electricity Sales		—	25	(25)	(100.0)
Gas Sales		6,121	2,898	3,223	111.2
Deregulated Market Sales		5,964	2,816	3,148	111.8
Sales at Regulated Prices		157	82	75	91.5
Regulated Revenue from Electricity Distribution		1,879	2,059	(180)	(8.7)
Verifications and Hook-Ups		40	39	1	2.6
provision of services at Installations		33	26	7	26.9
Other Sales and Provision of Services		956	1,077	(121)	(11.2)
Sales relating to Value Added Services		403	327	76	23.2
Payments Collected by Capacity		17	17	—	—
Sales of other Energy Stocks		273	482	(209)	(43.4)
Provision of services and others		263	251	12	4.8
Revenue from Leases		5	5	—	—
<b>TOTAL</b>	<b>9.1</b>	<b>32,545<sup>(2)</sup></b>	<b>20,527<sup>(3)</sup></b>	<b>12,018</b>	<b>58.5</b>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

<sup>(2)</sup> Includes €32,326 million relating to revenue from ordinary activities from contracts with customers in 2022, of which €30,886 million correspond to execution obligations that Endesa satisfies over time and €1,440 million corresponding to execution obligations that Endesa satisfies at a given time.

<sup>(3)</sup> Includes €20,265 million relating to revenue from ordinary activities from contracts with customers in 2021, of which €19,659 million correspond to execution obligations that Endesa satisfies over time and €606 million corresponding to execution obligations that Endesa satisfies at a given time.

## Electricity sales to deregulated market customers.

In 2022, sales in the deregulated market amounted to €14,966 million (+63.4%), broken down as follows:

**14,966**  
million euros for sales on  
the deregulated market

Deregulated Market Sales	References <sup>(1)</sup>	Change	
Spain	6	▲ €5,343 million (+67.1 %)	<ul style="list-style-type: none"> <li>The variation between both periods was due to the increased unitary price, mainly from indexed "Business to Business" (B2B) customers, together with an increase in the physical units sold (+3.7%) and an increase in the number of customers (+14.7%).</li> <li>In 2022 this amount also included recognition by the retailers of the effect of the temporary adjustment for production costs to reduce electricity prices on the wholesale market, pursuant to Royal Decree Law 10/2022, of 13 May, amounting to €1,812 million.</li> </ul>
Outside Spain		▲ €462 million (+38.5 %)	<ul style="list-style-type: none"> <li>The increase in revenue from sales in financial terms was mainly due to changes in the unit price in the Portuguese market.</li> </ul>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

## Electricity sales at a regulated price

Despite the reduction in the number of regulated market customers (-15.0%) and of the physical units sold (-23.3 %) in 2022, these sales generated a revenue of €2,985 million, 14.5% higher than in 2021, due mainly to the price increase.

## Electricity sales in the wholesale market

Revenue from electricity sales in the wholesale market amounted to €3,828 million, €1,739 million more (+83.2%) than in 2021 according to the following breakdown:

Wholesale Market Sales	References <sup>(1)</sup>	Change	
Developments in Units Sold and Electricity Prices in 2022	6	▲ €1,925 million	<ul style="list-style-type: none"> <li>The variation between both periods was due to an increase in physical units sold (+42.2%) and developments in electricity prices during the period.</li> <li>In 2022 this amount also included recognition by the generating companies of the effect of the temporary adjustment for production costs to reduce electricity prices on the wholesale market, pursuant to Royal Decree Law 10/2022, of 13 May, amounting to €1,365 million.</li> </ul>
Late-Payment Interest on Compensation for Carbon Dioxide (CO <sub>2</sub> ) emission rights in 2006		▼ €186 million	<ul style="list-style-type: none"> <li>Revenue from wholesale market sales in 2021 included €186 million relating to the recognition of the right to be compensated for the amount of the internalisation of the CO<sub>2</sub> emission rights assigned free of charge under the National Emission Rights Allocation Plan (PNA in Spanish), which it did not have a legal obligation to bear (see Section 9.3.3 of this Consolidated Management Report).</li> </ul>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

**23,511**  
million euros from  
electricity sales

**6,121**  
million euros from  
gas sales

## Remuneration for investment in renewable energies

Remuneration for investment in renewable energies in 2022 represented a revenue of €154 million. In order to analyse this performance, the following effects should be taken into account:

**154**  
million euros of revenue from remuneration for investment in renewable energies

Remuneration for investment in renewable energies	References <sup>(1)</sup>	Change	
<b>Royal Decree Law 6/2022 of 29 March</b>	6	▼ €64 million	<ul style="list-style-type: none"> <li>Remuneration for investment corresponding to 2022 amounted to €31 million, affected by the impact of the publication of Royal Decree Law 6/2022, of 29 March, which approved the update of remuneration parameters for electricity production installations from renewable sources from 1 January 2022, updated by Order TED/1232/2022, of 2 December, which meant a reduction in this remuneration amounting to €64 million compared to the same period in 2021.</li> </ul>
<b>Adjustment for Changes in the Market Price</b>	6	▲ €243 million	<ul style="list-style-type: none"> <li>In 2022, a total revenue of €113 million was recorded as a result of the reversal of the liability for adjustments resulting from a deviation from the market price with regard to that type of installation (IT) that, as at 31 December 2022, recovered their Net Asset Value (NAV) and those installations that no longer received Investment Remuneration (Rinv) from 1 January 2023 in accordance with a Proposed Order updating the remuneration parameters applicable to certain electricity production installations for the following half-period 2023-2025.</li> <li>In 2021, due to high market prices, the adjustment for changes in market price (€120 million) fully compensated remuneration for the investment to be received for this period.</li> </ul>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

## Gas sales

Revenue from gas sales in 2022 amounted to €6,121 million, an increase of €3,223 million (+111.2%) compared to 2021, broken down as follows:

Gas Sales	Change	
<b>Deregulated market</b>	▲ €3,148 million (+111.8%)	<ul style="list-style-type: none"> <li>The variation between the two years was the result of a higher <i>Business to Business</i> (B2B) sales price.</li> </ul>
<b>Regulated Price</b>	▲ €75 million (+91.5%)	<ul style="list-style-type: none"> <li>Despite the decrease in physical units sold (-4.6%), changes in the unit price and the increase in the number of customers (+34.9%) led to an increase in these sales in financial terms.</li> </ul>

## Non-Mainland Territories - Compensation (TNP)

In 2022, compensation for Non-Mainland Territories (TNP) generation cost overruns amounted to €1,578 million, an increase of €1,013 million compared to the same period in

the previous year, due mainly to increased fuel prices in international markets and the publication of Order TED/1315/2022, of 23 December.

## Electricity distribution

In 2022, Endesa distributed 131,813 GWh in the Spanish market, 0.6% more than in 2021.

Regulated revenue from the distribution activity in 2022 amounted to €1,879 million, representing a reduction of €180 million (-8.7%) compared to the same period for the previous year as a result of recording an update of the remuneration for the distribution activity corresponding 2017, 2018 and 2019 in accordance with Order TED/749/2022, of 27 July (see Note 6 of the Notes to the Consolidated Financial Statements for the year ended 31 December 2022).

## Sales of other energy stocks

Sales of other energy stocks with physical settlement decreased by €209 million, mainly due to the developments

in the settlement of carbon dioxide (CO<sub>2</sub>) emission rights derivatives, which should be analysed together with the decrease in costs for carbon dioxide (CO<sub>2</sub>) emission rights amounting to €128 million.

Development in these areas was partially the result of purchases and sales in both periods made to cover the industrial risks caused by the variability of the market and the technologies that participate in it, as well as by

regulatory threats, and an increase in the average price for carbon dioxide (CO<sub>2</sub>) emission rights (+50.7%).

## Other operating income

Below are details of other operating income in 2022 and its year-on-year variation:

Million euros

	References <sup>(1)</sup>	Other Operating Income			
		2022	2021	Difference	% Var.
Charge to Profits from Ceded Customer Installations, Hook-Up Extension Rights and Other Liabilities from Contracts with Customers	272	171	167	4	2.4
Effect of Grants on Income		72	48	24	50.0
Guarantees of origin and other Environmental Certificates		33	6	27	450.0
Other allocations of Grants to profit/(loss) <sup>(2)</sup>		39	42	(3)	(7.1)
Third-party compensation		5 <sup>(3)</sup>	25	(20)	(80.0)
Others		103	132	(29)	(22.0)
<b>TOTAL<sup>(4)</sup></b>	<b>9.2</b>	<b>351</b>	<b>372</b>	<b>(21)</b>	<b>(5.6)</b>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

<sup>(2)</sup> €15 million correspond to capital grants and €24 million to operating subsidies in 2022 (€15 million and €27 million, respectively, in 2021).

<sup>(3)</sup> Includes settlement for the distribution activity recognised in 2021 amounting to €29 million

<sup>(4)</sup> Includes €193 million relating to revenue from ordinary contracts with customer in 2022 (€182 million in 2021).



## Revenue according to European Union Taxonomy

Endesa classifies the economic activities of its value chain into three categories – Eligible & Aligned, Eligible & Unaligned, and Ineligible – in accordance with European Union Taxonomy Regulations.

The table below presents the percentage of “Revenue” in the Consolidated Income Statement for 2022 and 2021 with regard to each category of activity:

Million euros

Revenue	2022 <sup>(1)</sup>		2021	
	Amount	Percentage (%)	Amount	Percentage (%)
● Eligible & Aligned Activities <sup>(2)</sup>	3,595	10.9	5,677	27.2
● Eligible Non-Aligned Activities	6,469	19.7	9,750	46.6
● Non-Eligible Activities	22,832	69.4	5,472	26.2
<b>TOTAL</b>	<b>32,896</b>	<b>100.0</b>	<b>20,899</b>	<b>100.0</b>

<sup>(1)</sup> In accordance with the Delegated Act on Climate Change and Complementary Delegated Act on Nuclear and Gas.

<sup>(2)</sup> In 2022 they correspond to Renewable Generation (2.8%), Energy Retailing (0.0%), Retailing of other Products and Services (1.0%) and Distribution (7.1%) (3.4%, 10.6%, 1.0% and 12.2%, respectively, in 2021).

## Operating expenses

Operating expenses in 2022 amounted to €29,209 million, an increase of 54.2% compared to the previous year. The table below is a breakdown of operating expenses in 2022 and their variations compared to the previous year:

**29,209**  
million euros for operating  
expenses in 2022

Million euros

	References <sup>(1)</sup>	Operating Expenses			
		2022	2021	Difference	% Var.
Procurements and services		23,394	15,364	8,030	52.3
Power Purchases	10.1	12,901	7,603	5,298	69.7
Fuel consumption	10.2	4,349	1,607	2,742	170.6
Transmission Costs		3,603	4,425	(822)	(18.6)
Other Variable Procurements and Services	10.3	2,541	1,729	812	47.0
Taxes and Charges		856	568	288	50.7
Tax on Electricity Production		6	151	(145)	(96.0)
Tax for the Processing of Radioactive Waste		218	210	8	3.8
Street Lighting / Public Works Licences		310	205	105	51.2
Nuclear Charges and Taxes		97	119	(22)	(18.5)
Catalonia Environmental Tax		140	109	31	28.4
Water Tax		2	(299)	301	N/A
Other Taxes and Charges		83	73	10	13.7
Social Bonus		(2)	80	(82)	N/A
Consumption of Carbon Dioxide (CO <sub>2</sub> ) Emission Rights		865	329	536	162.9
Guarantees of origin and other Environmental Certificates		109	12	97	808.3
Costs relating to Value Added Services		217	184	33	17.9
Purchases of other Energy Stocks		220	348	(128)	(36.8)
Others		276	208	68	32.7
Revenue and Expenses from Energy Stocks Derivatives	11	2,217	(543)	2,760	N/A
Self-constructed assets	3.2b.1 and 3.2e.3	(335)	(320)	(15)	4.7
Personnel Expenses	12	955	916	39	4.3
Other Fixed Operating Expenses	13	1,353	1,239	114	9.2
Other Profits and Losses	14	(253)	(35)	(218)	622.9
Depreciation and Amortisation, and Impairment Losses on Non-Financial Assets	15.1	1,716	2,197	(481)	(21.9)
Losses for Impairment on Financial Assets	15.2	162	125	37	29.6
<b>TOTAL</b>		<b>29,209</b>	<b>18,943</b>	<b>10,266</b>	<b>54.2</b>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.



## Procurements and services (variable costs)

Procurements and services (variable costs) totalled €23,394 million in 2022, 52.3% more than in the same period for the previous year.

The development of these costs in 2022 was as follows:

Procurements and Services	References <sup>(1)</sup>	Change	
<b>Power Purchases</b>	6	▲ €5,298 million (+69.7 %)	<ul style="list-style-type: none"> <li>Developments included an increase in the amount corresponding to electricity purchases, due to the increase in the average arithmetic price on the wholesale electricity market (€167.5/MWh, +49.7%) and the physical units purchased (58.7%), and the increase in the value of gas purchases, due mainly to an increase in the average price (€123.4/MWh, +164.8%).</li> <li>In 2022 this amount included the effect of a temporary adjustment for production costs to reduce electricity prices on the wholesale market, in accordance with Royal Decree Law 10/2022, of 13 May, amounting to €1,812 million.</li> </ul>
<b>Fuel Consumption</b>		▲ €2,742 million (+170.6 %)	<ul style="list-style-type: none"> <li>The increase was due to the performance of commodity prices and to the increased combined-cycle production on the mainland (+74.7%) and in the Non-mainland Territories (TNP) (+9.7%).</li> </ul>
<b>Other Variable Procurements and Services</b>		▲ €812 million (+47.0 %)	
Tax on Electricity Production	6	▼ €145 million	<ul style="list-style-type: none"> <li>The reduction was a consequence of an extension of the temporary suspension of the Tax on the Value of Production of Electricity, in accordance with Royal Decree Law 6/2022, of 29 March, and Royal Decree Law 11/2022, of 25 June, until 31 December 2022 (extended until 31 December 2023 by Royal Decree Law 20/2022, of 27 December).</li> </ul>
Street Lighting / Public Works Licences		▲ €105 million (+51.2 %)	<ul style="list-style-type: none"> <li>The increase was mainly the result of an increase in revenue from electricity sales (+63.0 %), which provided the basis for the calculation of this tax.</li> </ul>
Nuclear charges and taxes		▼ €22 million (-18.5 %)	<ul style="list-style-type: none"> <li>2022 included an expense reversal of €16 million as a result of the returns signed in compliance with the tax authorities with regard to the tax on the production of nuclear fuel used and radioactive waste from the Almaraz and Trillo nuclear power plants.</li> </ul>
Water Tax		▲ €301 million	<ul style="list-style-type: none"> <li>2021 included revenue of €300 million corresponding to the declaration of the unenforceability of the State Water Tax following a Ruling by the Supreme Court on 19 April 2021.</li> </ul>
Catalonia Environmental Tax		▲ €31 million (+28.4 %)	<ul style="list-style-type: none"> <li>Under the Decree Law 4/2022, of 5 April, of the Regional Government of Catalonia, since 1 April, the expense relating to this tax was increased, calculated in accordance with Law 5/2020, of 29 April, of the Regional Government of Catalonia.</li> </ul>
Social Bonus	6 and 51	▼ €82 million	<ul style="list-style-type: none"> <li>Ruling 202/2022, of 21 February 2022, extended by the Supreme Court in Appeal No. 687/2017 acknowledged the right of Endesa, S.A. to be compensated for the amounts borne to finance and co-finance the Social Bonus with the public administrations during the whole term that the third financing system of the Social Bonus remains in force, so all amounts paid in this regard should be refunded to the complainant by discounting the amounts that had been passed on to customers, where applicable. Endesa S.A. did pass on the financing cost to customers, directly or indirectly, so there are strong arguments to justify its entitlement to a full refund of all the amounts borne in this regard. In particular, with regard to the regulated segment of the supply activity, the reference suppliers cannot pass on that cost to customers since their remuneration regime does not allow it, hence the recovery of such amounts should be automatic. For this reason, a revenue of €152 million was registered with regard to this item in 2022.</li> <li>This heading includes the recognition of €18 million relating to the reversal of the unpaid amounts accrued corresponding to Settlement 12 of 2021 ultimately not issued by the Spanish Markets and Competition Commission (CNMC), with regard to the financing and co-financing of the Social Bonus with the public administrations as a result of Supreme Court Ruling 202/2022, of 21 February 2022, handed down in Appeal 687/2017, declaring the non-applicability of the Social Bonus financing system and the cost of supplying electricity to consumers at risk of social exclusion established in article 45.4 of Law 24/2013, of 26 December, since they are incompatible with Directive 2009/72/EC, of the European Parliament and of the Council, of 13 July 2009, on common rules for the internal electricity market.</li> <li>2022 also included the net accrual of the Social Bonus, in accordance with Royal Decree Law 6/2022, of 29 March, considering the financing percentages established in Order TED 733/2022, of 22 July, amounting to €160 million.</li> </ul>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.



Procurements and Services	References <sup>(1)</sup>	Change	
Consumption of Carbon Dioxide (CO <sub>2</sub> ) Emission Rights		▲ €536 million (+162.9 %)	• The variation between both periods was due to the average price of carbon dioxide (CO <sub>2</sub> ) emission rights (+50.7%), together with the increase in tonnage (+24.6%) due to increased production.
Guarantees of Origin and other Environmental Certificates		▲ €97 million	• The variation between the periods was due to changes in the average price of guarantees of origin (540%), together with increased consumption of these in line with the boost to the generation and supply of electricity from renewable energies.

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

## Revenue and expenses from energy stocks derivatives

Below are details of the revenue and expenses arising from energy stocks derivatives in 2022 and their changes compared to the previous year:

Million euros

	References <sup>(1)</sup>	2022	2021	Difference	% Var.
<b>Revenue</b>	41.5				
<b>Revenue for Derivatives Designated as Hedging Instruments</b>		<b>3,592</b>	<b>1,463</b>	<b>2,129</b>	<b>145.5</b>
Revenue from Cash Flow Hedging Derivatives <sup>(2)</sup>		3,592	1,463	2,129	145.5
<b>Revenue from Derivatives at Fair Value with Changes in Profit and Loss</b>		<b>5,773</b>	<b>6,230</b>	<b>(457)</b>	<b>(7.3)</b>
Revenue from Fair Value Derivatives Recognised in the Income Statement		5,773	6,230	(457)	(7.3)
<b>Total Revenue</b>		<b>9,365</b>	<b>7,693</b>	<b>1,672</b>	<b>21.7</b>
<b>Expenses</b>	41.5				
<b>Expenses from Derivatives Designated as Hedging Instruments</b>		<b>(5,058)</b>	<b>(908)</b>	<b>(4,150)</b>	<b>457.0</b>
Expenses from Cash Flow Hedging Derivatives <sup>(2)</sup>		(5,058)	(908)	(4,150)	457.0
<b>Expenses from Derivatives at Fair Value Changes in Profit and Loss</b>		<b>(6,524)</b>	<b>(6,242)</b>	<b>(282)</b>	<b>4.5</b>
Expenses on Fair Value Derivatives Recognised in the Income Statement		(6,524)	(6,242)	(282)	4.5
<b>Total Expenses</b>		<b>(11,582)</b>	<b>(7,150)</b>	<b>(4,432)</b>	<b>62.0</b>
<b>TOTAL</b>	11	<b>(2,217)</b>	<b>543</b>	<b>(2,760)</b>	<b>(508.3)</b>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

<sup>(2)</sup> As at 31 December 2022, this includes a negative impact of €293 million on the income statement due to inefficiencies (Net negative €35 million as at 31 December 2021).

In line with its General Risk Control and Management Policy, Endesa uses financial instruments (derivatives) to hedge the risks to which its activities are exposed. The use of derivatives is essential for Endesa to plan its operations, as they ensure the revenue to be obtained when delivering the products and the cost of the raw materials used in the production processes. This procedure therefore makes it possible to manage risk without exposing the business to short-term price developments (*spot prices*).

In 2022, total revenue and expenses arising from energy stocks derivatives amounted to -€2,217 million, compared to a gain of €543 million for the same period in the previous year, due to changes in the assessment and settlement of electricity derivatives and, mainly, gas derivatives as a result of the current climate in energy markets, the impact of the conflict between Russia and Ukraine on the main European gas market which in turn affected electricity prices very significantly.

## Fixed operating expenses

Below are details of other fixed operating expenses in 2022 and their year-on-year variation:

Million euros

	References <sup>(1)</sup>	Fixed operating expenses			
		2022	2021	Difference	% Var.
Self-constructed assets	3.2b.1 and 3.2e.3	(335)	(320)	(15)	4.7
Personnel Expenses	12	955	916	39	4.3
Other Fixed Operating Expenses	13	1,353	1,239	114	9.2
<b>TOTAL</b>		<b>1,973</b>	<b>1,835</b>	<b>138</b>	<b>7.5</b>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

In 2022, fixed operating costs amounted to €1,973 million, an increase of €138 million (+7.5%) compared to 2021, as a result, inter alia, of the following:

**1,973**  
million euros of fixed operating costs

Fixed Operating Expenses	References <sup>(1)</sup>	Change	
<b>Wages and salaries</b>	12	▲ €34 million (+5.0 %).	• Higher personnel costs mainly due to the effect of inflation and an improvement in the employee productivity ratio.
<b>Workforce Restructuring Plans</b>	37.2	▲ €2 million	• The changes were due to an update in provisions for workforce restructuring plans.
<b>Repair, Maintenance and Upkeep</b>	13	▲ €33 million (+12.0 %)	• The increase was mainly due to higher maintenance costs and breakdowns in medium- and low-voltage electrical distribution installations (€29 million).
<b>Disciplinary Proceedings</b>	13	▲ €33 million	• The reasons for this increase included the recognition of certain disciplinary proceedings relating to the Generation and Retailing business line (€18 million) and the Distribution Business Line (€15 million).
<b>Commercial Activity Services</b>	13	▲ €10 million (+11.5 %)	• The increase was due to higher costs in commercial activities, particularly <i>Business-to-Customer</i> (B2C).

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

## Other fixed operating expenses according to European Union Taxonomy

Endesa classifies the economic activities of its value chain into three categories – Eligible & Aligned, Eligible & Unaligned, and Ineligible – in accordance with European Union Taxonomy Regulations.

The following is a presentation of the percentage of costs included under the heading “Other Fixed Operating Expenses” in the Consolidated Income Statement for 2021 and 2022, considered susceptible to classification in the categories of activities in accordance with European Union Taxonomy Regulations. These costs correspond mainly to Repairs and Maintenance, as well as Insurance Premiums:

Million euros

Other Fixed Operating Expenses	2022 <sup>(1)</sup>		2021	
	Amount	Percentage (%)	Amount	Percentage (%)
● Eligible & Aligned Activities <sup>(2)</sup>	134	41.4	147	38.8
● Eligible Non-Aligned Activities	59	18.2	7	1.9
● Non-Eligible Activities	131	40.4	224	59.3
<b>TOTAL</b>	<b>324</b>	<b>100.0</b>	<b>378</b>	<b>100.0</b>

<sup>(1)</sup> In accordance with the Delegated Act on Climate Change and Complementary Delegated Act on Nuclear and Gas.

<sup>(2)</sup> In 2022 they correspond to Renewable Generation (12.0%), Energy Retailing (0.0%), Retailing of other Products and Services (0.6%) and Distribution (28.7%) (13.7%, 0.5%, 0.5% and 24.1%, respectively, in 2021).

## Depreciation and amortisation, and impairment losses on non-financial assets

In 2022 and 2021, the details under the Consolidated Income Statement heading were as follows:

Million euros

	References <sup>(1)</sup>	Depreciation and Amortisation, and Impairment Losses			
		2022	2021	Difference	% Var.
<b>DEPRECIATION AND AMORTISATION</b>	<b>8.2.1</b>	<b>1,653</b>	<b>1,529</b>	<b>124</b>	<b>8.1</b>
Provision for the Depreciation of Property, Plant and Equipment	20	1,334	1,266	68	5.4
Provision for the Amortisation of Intangible Assets	23	319	263	56	21.3
<b>IMPAIRMENT LOSSES ON NON-FINANCIAL ASSETS</b>		<b>63</b>	<b>668</b>	<b>(605)</b>	<b>(90.6)</b>
<b>Provision for Impairment Losses</b>	<b>8.2.1</b>	<b>98</b>	<b>668</b>	<b>(570)</b>	<b>(85.3)</b>
Provision for Impairment Losses on Property, Plant and Equipment and Investment in Property		95	667	(572)	(85.8)
Mainland Coal-Fired Thermal Power Plants <sup>(2)</sup>	3.2f.4 and 20	33	4	29	725.0
Cash-Generating Units (CGUs) in Non-Mainland Territories (TNP) <sup>(3)</sup>	3.2f.4 and 20	60	652	(592)	(90.8)
Other Property, Plant and Equipment and Investment in Property	20 and 22	2	11	(9)	(81.8)
Provision for Impairment Losses on Intangible Assets	8.2.1 and 23	3	1	2	200.0
<b>Reversal for Impairment Losses</b>	<b>8.2.1</b>	<b>(35)</b>	<b>—</b>	<b>(35)</b>	<b>N/A</b>
Reversal of Impairment Losses on Property, Plant and Equipment and Investment in Property		(35)	—	(35)	N/A
Mainland Coal-Fired Thermal Power Plants	3.2f.4 and 20	(5)	—	(5)	N/A
Cash-Generating Units (CGUs) in Non-Mainland Territories (TNP) <sup>(3)</sup>	3.2f.4 and 20	(24)	—	(24)	N/A
Other Property, Plant and Equipment and Investment in Property	22	(6)	—	(6)	N/A
Reversal of Impairment Losses on Intangible Assets	23	—	—	—	N/A
Reversal of Impairment Losses on Goodwill	24	—	—	—	N/A
<b>TOTAL</b>	<b>15.1</b>	<b>1,716</b>	<b>2,197</b>	<b>(481)</b>	<b>(21.9)</b>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

<sup>(2)</sup> It includes a provision for impairment of the Port Terminal of Los Barrios (Cádiz) amounting to €30 million and €1 million, respectively.

<sup>(3)</sup> Corresponds to provision for impairment on the Cash Generating Units (CGUs) for each of the Non-Mainland Territories (TNP in Spanish) of the Balearic Islands, Canary Islands, Ceuta and Melilla, for a net total of €36 million and €652 million respectively.

Depreciation and amortisation, and impairment losses on non-financial assets in 2022 amounted to €1,716 million, a decrease of €481 million (-21.9%) compared to the same period in the previous year, mainly as a result of the following aspects:

**1,653**  
million euros for depreciation

Depreciation and Amortisation, and Impairment Losses on Non-Financial Assets	References <sup>(1)</sup>	Change	
<b>Cash-Generating Units (CGUs) in each of the Non-Mainland Territories (TNP) of the Balearic Islands, Canary Islands, Ceuta and Melilla</b>	3.2f), 6 and 15.1	▼ €616 million (-94.5 %).	<ul style="list-style-type: none"> <li>In 2022 and 2021, the inclusion in the accounts of the impairment of the Cash Generating Units (CGUs) in each of the Non-Mainland Territories (TNP in Spanish) in the Balearic Islands, the Canary Islands, Ceuta and Melilla, totalling €36 million and €652 million, respectively, (€27 million and €489 million, net of the tax effect, respectively), in order to adapt the net carrying amount of these assets to their recoverable value.</li> </ul>
<b>Los Barrios Port Terminal (Cádiz)</b>	3.2f) and 15.1	▲ €29 million	<ul style="list-style-type: none"> <li>The registration in 2022 and 2021 of an impairment charge for the Los Barrios Port Terminal (Cádiz) amounting to €30 million (€22 million, net of tax effect) and €1 million, respectively, with the time horizon coinciding with the current concession for the terminal, which ends in 2032. A decision is currently pending on the request made to extend the concession until 2057, based on the investment made during the construction of the Liquefied Natural Gas (LNG) plant at the terminal.</li> </ul>
<b>Depreciation and Amortisation Expense</b>		▲ €124 million (+8.1 %)	<ul style="list-style-type: none"> <li>The increase in depreciation and amortisation resulted in part from the investment made in renewable electricity-production systems and installations and electricity distribution, in line with the Strategic Plan, as well as the commercial drive which increased the capitalisation of the incremental costs incurred in winning contracts with customers.</li> </ul>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

## Net financial profit/(loss)

Net financial profit/(loss) for 2022 and 2021 resulted in a loss of €215 million and €31 million, respectively.

The table below presents the details of net financial profit/(loss) in 2022 and its variations compared to the previous year:

Million euros

	References <sup>(1)</sup>	Net Financial Profit/(Loss):			
		2022	2021	Difference	% Var.
Net Financial Loss		(192)	(25)	(167)	668.0
Financial Income		236	163	73	44.8
Financial Expense		(343)	(177)	(166)	93.8
Revenue and Expenses on Derivative Financial Instruments		(85)	(11)	(74)	672.7
Net Exchange Differences		(23)	(6)	(17)	283.3
<b>TOTAL</b>	<b>16</b>	<b>(215)</b>	<b>(31)</b>	<b>(184)</b>	<b>593.5</b>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.



## Net financial loss

In 2022, net financial loss amounted to €192 million, an increase of €167 million over the same period in the previous year.

Million euros

	Net Financial Loss			
	2022	2021	Difference	% Var.
Net Expense for Financial Liabilities at Amortised Cost	(235)	(128)	(107)	83.6
Income from Financial Assets at Amortised Cost	2	1	1	—
Update of Provisions for Workforce Restructuring Costs, the Dismantling of Installations and the Impairment of Financial Assets in accordance with IFRS 9 "Financial instruments"	43	10	33	330.0
Late-Payment Interest on Compensation for Carbon Dioxide (CO <sub>2</sub> ) emission rights in 2006	5	73	(68)	(93.2)
State Water Tax	—	48	(48)	(100.0)
Late-Payment Interest for a Social Bonus Ruling	16	—	16	N/A
Factoring Transaction Fees	(41)	(27)	(14)	51.9
Others	18	(2)	20	—
<b>TOTAL</b>	<b>(192)</b>	<b>(25)</b>	<b>(167)</b>	<b>668.0</b>



The development of these costs in 2022 was as follows:

Net Financial Loss	References <sup>(1)</sup>	Change	
<b>Net Expense for Financial Liabilities at Amortised Cost</b>		▲ €107 million (+83.6 %)	<ul style="list-style-type: none"> <li>Average gross borrowings increased from €9,375 million in 2021 to €16,442 million in 2022. This was mainly due to an increase in financial deposits tied up as a result of trading on the organised markets that Endesa uses to contract its derivative financial instruments.</li> <li>The average cost of gross financial debt decreased from 1.5% in 2021 to 1.4% in 2022.</li> </ul>
<b>Provisions for Workforce Restructuring Costs, Dismantling and the Impairment of Financial Assets (IFRS 9)</b>		▼ €33 million (+330.0 %)	<ul style="list-style-type: none"> <li>The changes were due mainly to an update of provisions for workforce restructuring costs and for dismantling.</li> </ul>
<b>Late-Payment Interest on Compensation for Carbon Dioxide (CO<sub>2</sub>) Emission Rights in 2006</b>		▲ €68 million (-93.2 %)	<ul style="list-style-type: none"> <li>In 2022 and 2021, late-payment interest was included with regard to the entitlement to be compensated for the reduction of remuneration as a generating company by the amount of the internalisation of the carbon dioxide (CO<sub>2</sub>) emission rights allocated free of charge by the National Emissions Allocation Plan (PNA in Spanish), which it does not have a legal duty to bear, amounting to €5 million and €73 million, respectively.</li> </ul>
<b>State Water Tax</b>		▲ €48 million	<ul style="list-style-type: none"> <li>In 2021 late-payment interest accrued as income as a result of the declaration of the unenforceability of the state water tax under the Supreme Court ruling of 19 April 2021.</li> </ul>
<b>Late-Payment Interest under the Social Bonus Ruling</b>	6 and 51	▼ €16 million	<ul style="list-style-type: none"> <li>In 2022 the company recognised €16 million as late-payment interest as a result of the acknowledgement of the right of Endesa, S.A. to be compensated for the amounts borne to finance and co-finance the Social Bonus with the public administrations during the whole term that the third financing system for the Social Bonus is in force, so all amounts paid in this regard should be refunded to the complainant by discounting the amounts that had been passed on to customers, where applicable.</li> </ul>

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.





## Equity

Details for this heading in the Consolidated Statement of Financial Position as at 31 December 2022 and 2021 were as follows:

Million euros

	Notes	31 December 2022	31 December 2021
<b>Total Net Equity of the Parent</b>	<b>35.1</b>	<b>5,560</b>	<b>5,380</b>
Share Capital	35.1.1	1,271	1,271
Share Premium	35.1.2	89	89
Legal Reserve	35.1.3	254	254
Revaluation Reserve	35.1.4	404	404
Other Reserves	35.1.5	106	106
(Shares in Own Equity Instruments)	35.1.8	(5)	(3)
Retained Earnings	35.1.9	6,815	5,798
Interim Dividend	35.1.10	—	(529)
Other Equity Instruments		4	2
Reserve for Actuarial Gains and Losses	35.1.7	(190)	(455)
Valuation Adjustments		(3,188)	(1,557)
Conversion Differences		(1)	—
Reserve for the Restatement of Unrealised Assets and Liabilities	35.1.6	(3,187)	(1,557)
<b>Total Equity of Non-Controlling Interests</b>	<b>35.2</b>	<b>201</b>	<b>164</b>
<b>TOTAL EQUITY</b>		<b>5,761</b>	<b>5,544</b>



# 6.

# Businesses

## Generation business

In 2022, Endesa's generation installations reached a total production of 64,716 GWh, 12.4% higher than the previous year, mainly due to an increase in generation from combined cycles, as well as in nuclear, wind and solar production.

## Retailing business

In 2022, Endesa supplied 68.9 TWh to customers on the domestic electricity market through 9.9 million supply points, achieving a market share of 29.6% with regard to energy supplied, and retaining its position as a clear leader in the sector.

## Infrastructure and networks business

In 2022, Endesa distributed 131,813 GWh in the Spanish market, 0.6% more than in 2021. 12.5 million customers have contracts for access to the company's distribution networks.

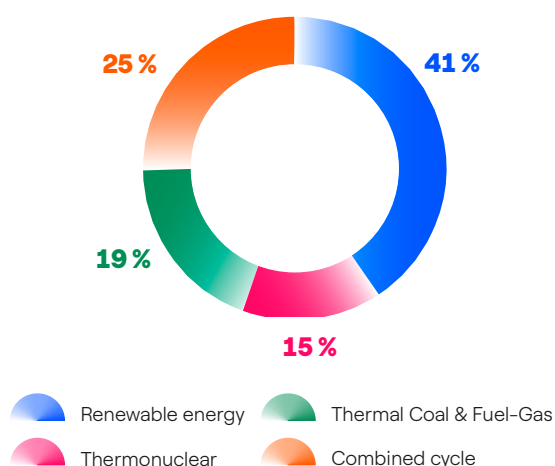
# Generation Business

Endesa's total gross installed capacity at the end of 2022 amounted to 22,819 MW. Of this quantity, 17,985 MW corresponded to the mainland electricity system and the remaining 4,834 MW to non-mainland systems (Balearic Islands, Canary Islands, Ceuta and Melilla). These figures include 9,240 MW of renewable energy on the mainland and 97 MW in the non-mainland electrical systems.

**22,819**  
MW was the total gross  
installed capacity in 2022

**59.6**  
% of total production is  
emission free

Structure of Endesa's installed capacity as at 31/12/2022



Combined cycle and wind are among the technologies that contributed the most to meeting demand, accounting for 23.1% and 22.8% respectively of the mix, followed by nuclear which contributed 21.4% and photovoltaic with 10.4% (Source: REE).

In this environment, in 2022 Endesa's generation installations reached a total production of 64,716 GWh, 12.4% higher than the previous year, mainly due to an increase in generation from combined cycles, as well as in nuclear, wind and solar production. Of the total production, 59.6% (38,549 GWh) corresponded to emission-free generation, 0.7% more than in 2021 in spite of lower hydraulic production, and 26,167 GWh to generation in coal, gas and fuel plants with an increase of 35.6% compared to the previous year.

With regard to production from conventional energy sources on the mainland, the +74.7% increase in combined-cycle production deserves special mention.

And with regard to production from renewable energy sources, the 13.4% increase in wind and solar energy production compared to the previous year deserves special mention.

In 2022, demand for electricity in Spain decreased by 3.9% year compared to 2021 (adjusted for working days and temperature), with a change in the trend compared to previous years.

To cover demand, there should be special mention for the contribution of renewable energy which stood at 43.7%, compared to thermal with 56.3%, due to the lower availability of hydraulic energy due to this year's drought.

## Endesa's electricity production in plant busbars

GWh				
	2022	2021	% var.	% of total
Hydraulic	4,477	6,122	-26.9 %	6.9 %
Solar and wind	7,563	6,671	13.4 %	11.7 %
Biomass	0.8	0.7	18.4 %	0.0 %
Nuclear	26,508	25,504	3.9 %	41.0 %
<b>Total emission-free</b>	<b>38,549</b>	<b>38,297</b>	<b>0.7 %</b>	<b>59.6 %</b>
Mainland domestic coal	0	0	0.0 %	0.0 %
Mainland imported coal	911	731	24.6 %	1.4 %
Mainland combined cycle	13,115	7,508	74.7 %	20.3 %
Non-mainland electricity systems (NMES)	12,141	11,056	9.8 %	18.8 %
<b>Total thermal</b>	<b>26,167</b>	<b>19,295</b>	<b>35.6 %</b>	<b>40.4 %</b>
<b>Total</b>	<b>64,716</b>	<b>57,592</b>	<b>12.4 %</b>	<b>100.0 %</b>

## Renewable generation

At the end of 2022, Endesa had 9,337 MW of renewable power, of which 4,790 MW corresponded to hydraulic, 2,882 MW to wind, 1,664 MW to photovoltaic and 0.5 MW to biomass plants.

Endesa generated 12,041 GWh using renewable energy sources. Of this amount, 4,477 GWh corresponded to hydraulic power, 5,709 GWh to wind power, 1,854 GWh to photovoltaic power and 0.8 GWh to biomass.

## Construction of renewable energy installations: Wind and solar

In 2022, 20 new plants were constructed, adding a total of 873 MW:

### Wind energy projects 2022

Project	Province	Capacity (MW)
Campillo I	Cuenca	75
ABO Campillo II	Cuenca	87.5
ABO Campillo III	Cuenca	87.5
Tico	Zaragoza	56.54
<b>Total</b>		<b>306.54</b>

### Solar projects 2022

Project	Province	Capacity (MW)
ABO PV Minglanilla I	Cuenca	49.87
ABO PV Minglanilla II	Cuenca	49.81
Calatrava	C. Real	49.87
Ibereléctrica	C. Real	7.27
Ninobe	C. Real	9.71
Can Lloreta	Mallorca	3.9
Son Orlandis	Mallorca	3.34
Son Reus	Mallorca	12.53
Sol de Casaquemada	Seville	49.9
Esparragal	Seville	50.4
Tico Solar II	Zaragoza	33.56
Torreçilla*	Cáceres	49.69
VIDCO-Agripa	Badajoz	49.07
VIDCO-Alaudae	Badajoz	48.98
VIDCO-Gemina	Badajoz	49.17
Tierra de Badajoz	Badajoz	50
<b>Total</b>		<b>567.07</b>

With regard to health and safety, work continued on awareness-raising campaigns, reinforcing prevention and joint commitment to safety, by means of regular events organised with contractors and subcontractors.

With regard to the measures taken against COVID-19, a de-escalation was undertaken in accordance with the regulations corresponding to the different administrations and additional measures demanded by the Enel Group.

With regard to digitalisation, progress continued in the digital transformation of our on-site construction processes. There was consolidation of the use of the documentary platform, which enables the digitalisation of a number of processes, and the application of drones to monitor the progress of our works in real time.

Other innovative solutions launched in 2022 included the following:

- Use of automatic pile drivers that save resources and increase safety during pile-driving work, as well as the installation of a GPS system in graders and excavators to reduce topographical work.
- Installation of Active Safety devices in machinery to increase safety on site and avoid accidents.
- First implementation in 2.5 MW of power for assembly between the structure and the panel without the need for rivets.
- Automatic management of the logistics for photovoltaic panels, via an RFID system, enabling us to know the exact location of each and every one of the panels from the moment they leave the factory until they arrive at the plants.

In addition to these 20 projects commissioned in 2022, construction began on the Trevago *cluster* (76 MW) in the province of Soria, the Puertollano *cluster* (72 MW) in Ciudad Real and Sedeis (47 MW) in the province of Teruel. All these installations are expected to be connected in 2023.

**20**  
new renewable energy  
plants in 2022

**307**  
MW was the total power in  
wind projects

**567**  
MW total power in solar  
projects

## Construction work with creation of shared value

The construction of this new solar and wind power (873 MW) was completed with a strong commitment to the local community, accompanying each construction project with a CSV (*Creating Shared Value*) Plan. This enabled training with regard to renewable energies for about 500

beneficiaries, the installation of self-consumption solutions in public and private buildings, as well as efficient lighting solutions in 13 municipalities, as well as the incorporation of 23 initiatives in the primary sector related to livestock, agriculture and beekeeping in hybridisation with the new installations that were put into operation. 114 actions were also implemented to conserve and promote biodiversity.

## Acquisitions in 2022

### Spain

1. On February 17, Enel Green Power España, SL, signed an agreement for the acquisition of 100% of the share capital of Stonewood Desarrollos, S.L.U., a company which has three photovoltaic projects to be developed and installed in Ciudad Real (Spain):

Project	Peak Power (MW)
Calatrava I	49.9
PV Ninobe 3	9.7
PV Iberelctrica I	7.3
	<b>66.9</b>

2. On June 10, Enel Green Power España, SL, signed an agreement for the acquisition of 100% of the share capital of Energía Polímero, S.L.U., a company which has 1 photovoltaic project (45 MW approx.) to be developed and installed in Teruel (Spain).

3. On 14 June, Enel Green Power España, S.L. signed an agreement for the acquisition of 100% of the share capital of Shark Power S.L.

### Additions to the portfolio

The growth in renewables envisaged in Strategic Plan for 2023–2025 and published in November 2022, is based on one of the broadest and most diversified project portfolios in the sector, with about 85 GW, of which 19 GW are at a mature administrative processing stage and more than 1 GW already in execution. 58% of the portfolio is solar, 16% wind and a further 20% corresponds to battery storage projects. The plan also includes 200MW of this type of storage, a technology that is incorporated as a new feature compared to the previous plan associated with the two Fair Transition projects awarded in 2022 in Pego (Portugal) and Andorra (Aragón).

**9,337**

MW installed  
renewable power at  
the close of 2022

**4,790**

MW corresponded to  
hydropower

**2,882**

MW to wind energy

**1,664**

MW corresponds to  
photovoltaic

**0.5**

MW  
corresponds  
to biomass  
plants



## Conventional generation

As at 31 December 2022, Endesa had an installed capacity of 13,482 MW of conventional power, of which 3,453 MW corresponded to nuclear generation installations, 1,729 MW to coal-fired thermal generation installations and the

remaining 8,300 MW to combined cycle, fuel oil and gas oil installations. These figures include the 855 MW Elecgas combined cycle plant located in Portugal.

## New installations and operational upgrades

In 2022, the following were the main electricity infrastructure projects started, developed, or completed in Spain:

### Mainland system

- Execution of a major inspection of the gas turbine, steam turbine and alternators at the Cristóbal Colón combined cycle power plant.
- Intervention in the Besós 5 steam turbine, incorporating internal components of new design to improve the reliability of the generator in the market scenario described.

### Non-mainland system

- Completion of the assembly for the start up of a pioneering 4 MW energy storage system, with second-life batteries from electric cars in the Diesel plant in Melilla, which will contribute to support and security for the electricity supply in this autonomous city.
- Installation and implementation of a water injection system for the TG1 gas turbine in Mahón, which will reduce NO<sub>x</sub> emissions and no longer be considered an

emergency generator (operation restricted to 500h/year).

- Implementation and granting of administrative authorisation for the installation of a flywheel at the El Palmar plant in La Gomera, which will improve frequency stability on the island.
- Implementation of two emergency power plants on the island of La Palma (13 MW) to reinforce supply security while rebuilding the distribution network affected by the volcano.
- Obtaining administrative authorisation for and the first unloading of a new 4,000 m<sup>3</sup> fuel oil tank at the Los Guinchos Diesel Power Plant, enabling the expansion of the strategic fuel reserve.
- Change of fuel from fuel oil to diesel in the engines in Punta Grande, Salinas and Guinchos, reducing the emission of particles and SO<sub>2</sub>.
- Plan to maintain and modernise the engines at the Las Salinas and Punta Grande power plants.
- Completion of a pilot test for a combustion optimisation system in the steam generation boiler for one of the turbines in Granadilla, enabling emissions to be optimised.
- Modification of the water injection system for the 6FA turbines in the combined cycles II at Barranco and Granadilla, providing them with greater operational flexibility throughout the load range.

## Decarbonisation

### Dismantling and circular economy activity

Endesa continued with the closure and dismantling process at its coal-fired plants as an integral part of the Fair Transition process and with a view to replacing the generation capacity at its thermal power plants with clean and renewable technologies throughout Spain, as well as creating wealth and employment in the areas affected by the closure of installations by developing industrial projects on the land where the plants once stood and which meet social and environmental sustainability criteria.

In 2022, the company continued to progress in the dismantling projects at Compostilla and Andorra, with

training organised for 294 and 166 people respectively since the projects began.

Meanwhile in Litoral, once authorisation for closure was obtained at the end of 2021, the dismantling project was implemented and training in Workplace Risk Prevention was given at a local level, with a total of 106 people receiving certificates.

Currently, we are awaiting definitive authorisation for the closure of the As Pontes thermal power plant.

The commitment to circular economy envisages maximum re-use and recovery of the waste generated. This resulted in the classification of 114,147.85 tons of non-hazardous waste from the dismantling of the plants.

During dismantling work, Endesa also proposes to re-use some of the equipment from other Enel Group installations or belonging to third parties in order to give it a "second life".

## Plans for the future, employability and training

As part of its commitment to local communities, Endesa voluntarily submitted Future Plans that contribute to mitigating the negative impacts derived from the closure in the affected areas.

In 2022, these initiatives resulted in the following activities:

- Promotion of economic activity in the area surrounding the closures through investment in renewable generation:

In Compostilla:

- Novolitio, a new company owned by Endesa and Urbaser, will be the first company to undertake the task of recovering and recycling lithium batteries from electric vehicles in the Iberian Peninsula, at the old thermal plant in Cubillos del Sil. 8,000 tons per year of batteries will be recycled, generating about 50 jobs.
- The Blades2Built consortium, led by Endesa and PreZero, for the construction of a wind blade recycling plant, was acknowledged by the European Union, within the Horizon Europe Framework

Programme, and received a grant of €2.3 million. About 30 direct jobs will be created.

- An agreement was also signed with the administrations and Tivtec in which Endesa will be the energy partner in the project to build a glass blast furnace, powered by renewable energies.

In As Pontes:

- Sentury Tire will build a factory for the production of car and aviation tyres on land owned by Endesa, with an investment of €531 million and this will create 750 direct jobs. Endesa will also supply green energy through new wind farms that will add a further 191 MW of power and require an investment of €229 million.
- And an agreement was signed with ENCE for the development of a bioplant for the recovery, development and production of advanced forest biomaterials. Endesa plans to transfer 45 hectares in the area around the coal-fired plant, with an investment of €350 million and the creation of 150 jobs.

In Litoral:

- Progress was made in the selection of projects through the Futur-e Assessment Table. These are now in the negotiation phase and being adjusted both to the areas occupied by the plant and the dismantling project.
- Proactive search for employment for the employees directly affected by the closure. With a policy of zero dismissals for in-house workers, relocation plans are





being launched in agreement with union representatives for the relocation in the company's employment vacancies as they arise, with criteria that minimise geographical mobility with change of address and with training measures to improve their technical training and professional retraining. Contract workers are given priority in training and recruiting linked to the projects planned in the area.

- Training plans for the professional recycling of the local population, both for dismantling and construction of renewable installations. 14 courses were organised in Compostilla and Andorra, with training for about 600 people in dismantling and renewable energies. 30 additional courses are envisaged that will benefit 1,500 people.
- Finally, measures for sustainability in the municipality where the plant to be closed down is located, involving energy efficiency plans and self-consumption programmes.

## Fair Transition Tenders

In 2022 Endesa was the only successful bidder for the first two Fair Transition Tenders held so far in Spain and Portugal. The tender was for the network capacity that remained available after the closure of these coal-fired power plants.

- In the case of Mudéjar, the tender was for up to 1,202 MW. 55% of the score was assigned to the social-economic plans, focussing mainly on the promotion of employment, training, opportunities for the local/regional industrial value chain, the creation of energy communities and the participation of local capital in the investment for the project.
- In the case of Pego, Endesa was awarded a connection right of 224 MVA. The basis for assessment was the strength of Endesa's proposal and the contribution of social-economic plans representing more than 40% of the score, with a focus on job creation, training, advantageous supply conditions for the municipality and electric mobility.

The Andorra-Mudéjar project will be a benchmark model for Fair Energy Transition, with a total of €1,540 million in investment. 6,300 jobs will be created in the construction and operation phases of the installations, generating more than 370 direct permanent jobs in the area for the operation of these installations.

In the Pego project, located in the Abrantes Region, Endesa will invest €600 million, create 75 permanent jobs and contribute €1 million to training plans and SMEs to integrate their projects in the area.



# Endesa in the wholesale market

## The Spanish wholesale market

In 2022, in the mainland electricity system, the energy destined for sale to final customers, exports and to cover the system's own consumption (network losses, auxiliary consumption for the plants and consumption for pumps), amounted to 235.5 TWh, 2.9% lower than in 2021 and 0.5% lower than in 2020. Consumption for pumps, the export balance and the Mainland-Balearic Islands link totalled 26 TWh in the year.

In 2022, 74% of demand was covered by non-emitting energies and the remaining 26% by emitting energies. In the year as a whole, combined cycles were the source that contributed most to electricity generation with 23.1% of the *mix*, followed by wind with 22.8%, nuclear with 21.4% and photovoltaic with 7.2%. Hydraulic power closed with its lowest electricity production in the last three decades due to a severe lack of rainfall.

With regard to international trade, in 2022 the Spanish electricity system broke the import trend and recorded a balance in favour of exports amounting to 19.8 TWh.

In 2022, liquidity decreased significantly in the electricity forward markets, trading a volume of approximately 124 TWh, much lower than that for 2021 (248 TWh). Of the total volume traded, 5 TWh were on the Organised Markets (OMIP and EEX) and the rest on OTC. The percentage of the total volume liquidated in the clearing house (both by continuous market and *clearing*) has presented an upward trend in recent years, increasing to 99.5% in 2022 from 97% in 2021 and in 2020, 89% in 2019, 81% in 2018 and 69% in 2017. Of the total traded, 4 TWh corresponded to long-term products, reaching year +9 (2031), with a volume

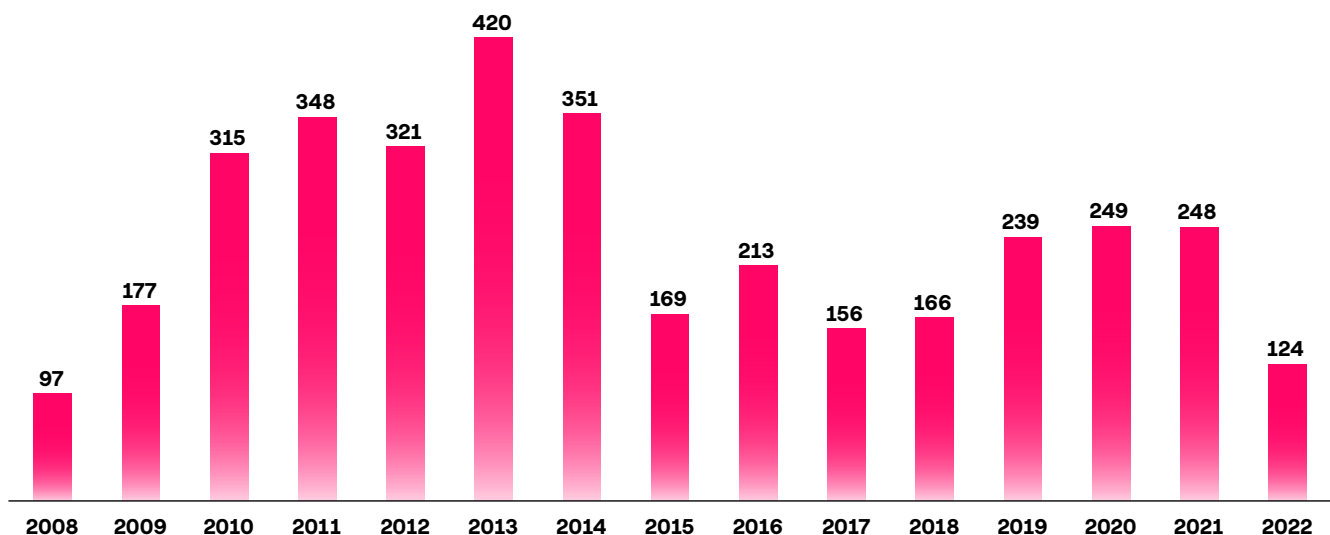
much lower than in 2021 (21 TWh). The trend in the forward markets was linked to gas prices, with an upward trend until August, when the price for 2023 exceeded €330/MWh (up from €130/MWh in January) to later correct to €180/MWh where it remained from September to December. In the *pool*, the trend was downwards from March onwards, when a peak of €283/MWh was reached, ending December at €100/MWh and no longer linked to the price of gas since June before the regulatory measure introduced by the Government.

In Spain, gas demand in 2022 amounted to 364.4 TWh, higher than that in 2021 (+4.4%). The conventional sector was very affected by the volatility of the markets and by the increase in prices and demand decreased by 21.4%. In the electricity sector it increased by 52.7%, due to the effect on the wholesale electricity market of the cap on gas prices in the Iberian system imposed by the Spanish Government. This led to greater exports of electricity to France (and more production with the CCGT), and a decrease in hydroelectric production and electricity production with cogeneration (offset by more production from combined cycles).

In the organised gas market in Spain (MIBGAS), approximately 129.4 TWh was traded in 2022, a figure that represented an increase of 67% compared to the previous year, marked by stress and volatilities in the European energy markets as a result of the invasion of Ukraine by Russia.

### Volume traded on forward markets-Spain

TWh



## Average daily price

The arithmetic average price in the electricity market was €168/MWh, 50% higher than in 2021 (€111/MWh).

2022 was largely affected by the military conflict in Ukraine, which increased a crisis in the gas markets which had already begun in 2021 as a result of the measures adopted by governments to try to mitigate its effects on the markets, by the increase in CO<sub>2</sub> prices that had already begun at the end of 2021 (in the USA it was 51% more expensive than in 2021) and by the low hydroelectric production that was one of the reasons for a significant increase in the thermal gap (production from combined cycle gas and coal plants).

The average price of gas in Spain in 2022 remained at extraordinarily high levels, which had already been observed in the fourth quarter of 2021, doubling the average value for the whole of 2021 and reaching maximums in August 2022. Until 15 June 2022, electricity prices were greatly influenced by the price of gas. This was when the Government introduced the well-known Iberian exception, an intervention mechanism by which combined cycle plants in the MIBEL did not transfer the market price of

natural gas to their offers but instead applied a regulated fixed gas price gas for each month and that developed in accordance with a previously defined monthly path. From that moment, electricity prices showed a downward trend (except August), now practically unlinked from gas market prices. The maximum value for the monthly average price in 2022 was reached in March (€283.3/MWh) coinciding with a sharp increase in gas prices, the result of the beginning of the war in Ukraine at the end of February.

The MIBEL thermal gap increased by 28 TWh in 2022 compared to the previous year (+52%), despite a 2.1% decrease in electricity demand (–6 TWh) and a significant increase in solar energy production (+7 TWh). The increase in the thermal gap was mainly due to lower hydroelectric production (–16 TWh), an increase in net exports (+16 TWh), especially to France (as a result of their lower nuclear production and also of the Iberian exception) and lower production from cogeneration plants (–9.5 TWh).

In 2022, Endesa sold 44,750 GWh on the wholesale market, representing 37% of the total supply with regard to the Ordinary Regime and Imports.

## Sales and purchases on the wholesale gas market

In 2022, Endesa purchased a total of 34.4 TWh of gas on the short-term wholesale natural gas market to meet demand in Spain and Portugal. During the same period, sales of natural gas on the wholesale market amounted to 5.6 TWh.

## CO<sub>2</sub> Market

All through 2022, the war in Ukraine and negotiations within the EU on the different alternatives for the use of emission rights revenues as a source of financing for the implementation of measures to reduce energy dependence on Russia, represented a distortion in the natural development of the CO<sub>2</sub> market, causing strong volatility and a number of episodes of lack of liquidity as a result of regulatory uncertainty.

With regard to market developments, severe volatility was a constant in the price of CO<sub>2</sub> throughout 2022, with

variation ranging between a maximum of almost €100/t and a minimum of about €55/t. The upward trend with which the year had begun came to a halt with the war in Ukraine, registering a first decrease of more than €40/t and, after a subsequent recovery, reaching maximums in August, negotiations within the EU relating to this market caused the second significant decrease of the year, which ended at about €84/t, not far from where it started.

# Fuel procurement

2022 was affected by the war in Ukraine and its impact on the *commodities* and electricity markets.

Against this backdrop, Endesa continued to participate in the financial and physical wholesale markets.

## Fuel supplies to Endesa

	Total 2022	Total 2021	Diff.
Domestic coal (Kt)	—	—	—
Imported coal (Kt)	881.9	745.3	18 %
Liquid fuel (Kt)	1,720.2	1,627.2	6 %
Natural gas CCP (bcm)	3.5	2.3	50 %
Natural gas retailing (bcm)	6.2	6.1	2 %

Note: Including non-mainland sales.

Endesa contracted 882 Kt of imported coal during the year, 18% more than in 2021. This increase was due to the rise in the cost of gas, which together with oil suffered the highest impact from the war in Ukraine, all this despite the gradual closure of coal-fired plants. With regard to liquid fuels,

1,720 Kt were managed with an increase of 6% compared to 2021, as a result of an increase in demand in the islands. The volume of gas managed for in-house consumption was 3.5 bcm, while the volume managed for retailing was 6.2 bcm.

# Risk management in the electricity business

The results of Endesa's deregulated business are subject to a number of risk factors, including changes in the price of *commodities* (electricity, gas, freight, CO<sub>2</sub> emission rights) and the euro/dollar exchange rate (market risk), potential contractual breaches by counterparties (credit risk), regulatory changes and other factors associated with business operations (operational risk).

The 2022 market hedging strategy successfully met the challenge presented by a renewed wave of sharp increases in the prices of *commodities* as a result of the conflict in Ukraine, as well as a series of regulatory actions with regard to free market prices. This was achieved by optimally managing the impact on the business of a company that sells volumes of electricity that exceed its own production. This strategy improved the value of the business by optimising market times based on valuable analysis as a result of our participation in physical and financial energy markets and using related hedging instruments with their own value for the business. This strategy also takes

advantage of a joint outlook for the business portfolio that enables the options in the portfolio to be assessed. These include the ability to react to cyclical price increases, the flexibility of LNG gas contracts, the value of the client portfolio and in-house capabilities for moving and storing energy.

Even though the electricity and gas portfolio may involve specific risk management processes, the current status enables advantage to be taken of synergies and natural coverage between the two.

With regard to CO<sub>2</sub> emission rights markets, Endesa's firm commitment to this market and the sustainability of its activity constituted both a value lever and coverage within the strategy.

The application of all the described hedging and commercial strategies enabled a level of risk to be maintained that is in line with the company's strategic objectives.





## Energy management and participation in European wholesale markets

Electricity prices in Europe were affected by the rise in gas prices and maintained an upward trend until practically the end of the year, when it changed direction to end at levels far from maximums, but that doubled in many markets the values with which they had begun 2022. Severe price tension, especially in France, was the dominant feature for much of the year, with prices for deliveries in November and December above €1,000/MWh for long periods. The greatest stress was experienced at the end of August when prices for the fourth quarter in France reached €1,600 €/MWh, and €1,200 and €1,000 €/MWh in the price for 2023 for France and Germany.

Endesa executed its hedges, both for interconnection with France and Portugal and for its positions in Europe, with the utmost rigour in those markets where it operates, mainly France and Germany, in order to minimise the impact of volatility and the price peaks that occurred

throughout the year. It should be mentioned that the Iberian exception implemented in Spain promoted a much higher use of the interconnection in favour of exports from Spain to France, with each auction experiencing an increase in the export capacity contracted between the two countries.

It should also be mentioned that the increase in the price for Guarantees of Origin associated with renewable energy production in Europe, increasing throughout 2022 from values of about €1/GdO to over €7/GdO, occasionally exceeding €10/GdO. In a market that was still very incipient, Endesa managed all the requirements for its renewable production plants and customers, both domestically and in import and export activities, participating in the different auctions that were launched in 2022, including EEX, EPEX and OMIP.

# Retailing business

In 2022, Endesa supplied 68.9 TWh to customers on the domestic electricity market through 9.9 million supply points, achieving a market share of 29.6% with regard to energy supplied, and retaining its position as a clear leader in the sector. The company's average market share for

retailing in areas not covered by its distribution grid was almost 29%.

Endesa remained one of the main operators on the Portuguese deregulated electricity market, with a share of 16.8%. At the end of the year, Endesa had supplied 7.8 TWh through more than 611,000 supply points.



## Customer Services Excellence Plan

For Endesa, customer service excellence is one of the main pillars in its relations with customers. The Company constantly seeks maximum efficiency in the operation of its customer services channels, tools and platforms through innovation and continuous improvement.

With this in mind, it focusses its efforts on improving the main customer satisfaction indicators, monitoring key indicators to see how they are helping to improve ENDESA's business quality.

### In-person customer service

Endesa's in-person customer service is organised in accordance with the customer segment in question, adjusting to the needs for each segment:

#### Large customers and companies (B2B)

Endesa has a team of highly-qualified sales managers who understand and respond competitively to the demanding needs of this type of customer, in a personal manner. This means that we individually study the energy needs of our customers, trying to anticipate them, offering tailor-made products, advising them and supporting them in their decisions.

The current structure has a network consisting of more than 300 agents, organised by volume of energy demand and geographical distribution (with a presence in Spain, Portugal, France and Germany).

Our coverage also consists of Call Centres and Digital Website Services.

#### General public (B2C)

In 2022, Endesa had 11 sales offices in Spain and 2 in Portugal, in addition to 240 service points distributed throughout Spain.

	Service points	Sales offices
Andalusia-Extremadura	84	3
Aragón	23	1
Balearic Islands	18	1
Canary Islands	20	2
Catalonia	54	3
Rest of Spain	41	1
Portugal	—	2
<b>Endesa</b>	<b>240</b>	<b>13</b>

There was also an increase in appointment and video call services, that represented a new service providing value for the customer.

## Call Centre

Throughout 2022, Endesa's Call Centre managed 17.8 million interactions in Spain, 17% fewer than in the previous year.

This figure reversed the upward trend in the previous year, mainly due to the following two reasons:

- Increase in customer digitalisation activity, with greater use of self-service channels.
- Decrease in extraordinary activity linked to the regulatory impacts that occurred in 2021 (including the implementation of the new Circular on Access Tariffs).

With regard to the reasons for use, 53% of the telephone calls were for reasons relating to the business cycle (invoices and payments), 29% regarding matters concerning the contracting of new services or the management of existing contracts, and 4% of calls as a result of unavailability of supply, with the Customer Service Call Centre remaining as one of the company's main sales channels.

Progress with the incorporation of virtual voice assistants enabled us to attend more than 2 million interactions through our Artificial Intelligence (AI) systems, positioning the channel as a market leader in the development of voice assistants.

From a strategic point of view, the channel continued with the transformation initiated in 2020, becoming one of the company's largest value generators, through an increase of more than 29% in commercial activity compared to 2021.

The high level of performance by the Call Centre meant that in 2022 it was acknowledged in the Customer Relationship Excellence awards as the best B2C Call Service in companies with more than 3 million contacts per year. It was also awarded a prize for the Best Commercial Management Strategic Project, thus corroborating the amazing effort made in transforming commercial activity.

To achieve these recognitions and with the objective of continuous improvement of the technological platform and/or operational processes, 2022 featured progress in the following lines of work:

- Digitisation of the Contact Centre: In 2022, the potential use of AI as a basic pillar of Endesa's hybrid service model continued to develop, with IBM Watson AI integrated as another agent of the Contact Centre, ensuring customer service even during the months when there is greatest variation in activity.
- Information Security and Operational Efficiency: In 2022, a voice biometrics solution continued to be implemented, making it possible to identify the customer through their voice fingerprint, thus enabling the customer's access to the Contact Centre and increasing security in the customer identification process.

In 2022, in the Portuguese market more than 1.8 million calls were answered, which represented a slight increase of 5% compared to 2021.

In 2022 the most noteworthy projects with regard to the telephone service in Portugal included the following:

- The integration and effective deployment of an interactive response system (IVR), which encourages self-service due to greater functionality and better quality customer service.
- The increase in the types of customer requests in First Call Resolution, making it possible to resolve more types more quickly and efficiently.

To summarise, the Telephone Channel maintained a high level of performance, continuing with the ongoing process of cost optimisation, quality improvement and commercial development always at the service of customer needs.

## Online customer service

In 2022, there was further progress with regard to the digitalisation of Endesa's contact and customer service. Endesa's commercial website, [www.endesa.com](http://www.endesa.com), had 3.4 million registered customers, who managed more than 3.7 million contracts. These users made more than 92 million interactions, 64% of them through the App.

In the regulated market, the supplier Energía XXI, [www.energiaxxi.com](http://www.energiaxxi.com), provided service for more than 1 million customers who made more than 19 million interactions, 86% of them through the App.

**3.4**  
million customers registered on  
the Endesa website

At the end of the year 47% of contracts used electronic invoicing, which meant that more than 48 million invoices were sent by e-mail, meaning they did not need to be printed and sent on paper.

In the case of Endesa in Portugal, the most significant indicators for 2022 were as follows:



- Endesa's commercial website in Portugal, [www.endesa.pt](http://www.endesa.pt), received 5 million visits from a total of almost 210,000 registered customers, reaching 42% of digitalised customers. The most used operations within the client area included viewing invoices and sending meter readings.
- 65% of the contracts used electronic invoicing, with a total of 4.9 million electronic invoices issued.

In 2022, the main new functional features incorporated into the Spanish market were the following:

- Development of a new Full Digital *app* for customers in the deregulated market that responds to the services required by customers with a design and usability with improved navigation and greater satisfaction.
- New notice regarding the availability of electronic invoicing for customers with digital invoicing.
- Reinforcement of agent-assisted digital channels. In 2022, teams were strengthened in order to be able to provide support for a growing volume of procedures via *chat*, *whatsapp*, social networks and *e-mail*, with more than 2.1 million contacts maintained.

The programme involving the automation of procedure management continued on the most used channels (*chat* and *WhatsApp*) with the incorporation of Artificial Intelligence into the main service processes.

## Sales to customers on the deregulated market

As at 31 December 2022, Endesa had 6,829,000 customers on the deregulated market and these were distributed as follows:

- 5,245,000 customers (+15.01%) on the Spanish mainland market.
- 972,000 customers (+13.3%) on the Non-Mainland Territories (TNP in Spanish) market.
- 612,000 customers (+33.3%) on deregulated European markets outside Spain.

In financial terms, sales on the deregulated market in 2022 amounted to €14,966 million (+63.4%):

- Sales on the Spanish deregulated market totalled €13,305 million, an increase of €5.343 million (+67.1%), compared to 2021, mainly due to developments in unit prices.
- Outside Spain, revenue from sales to customers on deregulated markets amounted to €1,661 million (+38.5%), an increase of €462 million compared to the same period in the previous year, mainly due to developments in unit prices

In 2022 this amount also included recognition by the retailers of the effect of the temporary adjustment for production costs to reduce electricity prices on the wholesale market, in accordance with Royal Decree Law 10/2022, of 13 May, amounting to €1,812 million.

## Sales at regulated prices

In 2022, Endesa sold 8.78 TWh through its Reference Retailing Company, of which 8.2 TWh went to customers to whom a regulated price (PVPC) applies, lower the volume supplied in 2021.

These sales generated revenue of €2,985 million, an increase of 14.5% compared to 2021, mainly as a result of developments in unit prices.



## The Spanish natural gas market

Natural gas consumption in Spain amounted to more than 364 TWh, a decrease of 3.7% compared to 2021. Excluding electricity generation plant consumption (38% of the total), conventional end-customer demand decreased by 21.4% compared to the demand recorded in 2021.

### Endesa in the Spanish natural gas market

#### Gas retailing

Endesa sold a total of 57.1 TWh of natural gas to customers in 2022 (excluding generation and wholesale sales), which represented a decrease of 5.23% compared to 2021.

In financial terms, revenue from gas sales in 2022 amounted to €6,121 million, an increase of €3,223 million (+111.2%) compared to 2021, which may be broken down as follows:

- Gas sales on the Spanish deregulated market totalled €5,964 million, an increase of €3,148 million (+111.8%), compared to 2021, mainly due to developments in unit prices.
- Revenue from gas sales to customers at a regulated price amounted to €157 million, an increase of €75 million (+91.5%) compared to the previous year, mainly due to developments in unit prices.

## Endesa X

Endesa X has become the main driving force to accelerate innovative, digital and sustainable growth, with digitalisation and "platformisation" being the key factors to improving customer experience and energy efficiency.

Endesa X has created an integrated, digital and made-to-measure ecosystem, structured around the needs of customers (based on digital platforms) and has launched solutions that transform energy into services.

2022 featured the following lines of action:

### B2B

A benchmark energy partner in Spain and Portugal for companies to advise, guide and help them in the decarbonisation process, enabling them to make sustainable progress by using energy more efficiently, increasing the competitiveness of their businesses and at the same time reducing the cost of their energy bill. This is achieved using solutions such as energy assessment for decarbonisation,

### Conventional market

Endesa's customer portfolio in the conventional natural gas market as at 31 December 2022, excluding electricity generation sales, consisted of approximately 1.8 million customers, an increase of 6.8% on the number of customers recorded as at 31 December 2022.

Endesa is the second largest gas retailer in Spain, with a 18.4% share of the conventional market.

In terms of the Portuguese gas market, Endesa supplied more than 4.7 TWh to end customers, a decrease of 20.9% compared to 2021.

### Electricity generation market

Natural gas sales to electricity generation plants amounted to 35.5 TWh in 2022, an increase of 42.5% compared to 2021.

### International market

A volume of 15.4 TWh of natural gas was retailed in France, Portugal, the Netherlands and Germany, a decrease of 13.3% compared to 2021, mainly due to a decrease in sales in Portugal.

solar power self-consumption, efficient climate systems, monitoring systems and the management of energy consumption, as well as all the energy infrastructure needed to undertake electrification actions.

In 2022, there was further enhancement of the long-term sustainable energy model with the provision of energy assessment on decarbonisation; leadership in the solar self-consumption market in the industrial and business segment, enabling companies to consume renewable self-produced energy, with the consequent energy savings in a context of rising energy prices; design and execution of the best HVAC climate equipment solutions; and providing our customers with detailed information on the consumption and energy performance of their installations through the energy management service.

All these solutions and business models enable Endesa X to collaborate with the business sector to contribute to meeting Spain's climate objectives.

## B2G

Endesa X supports energy transition in cities through digital platforms that make it possible to promote energy efficiency in buildings, public lighting and electric mobility, with the promotion of *Smart Cities*. As the basis of the smart city is public lighting, they manage about 100,000 lighting installations in a number of municipalities in Spain in the form of an energy service company, enabling energy savings of nearly 70%.

Decarbonisation in cities also involves the electrification of public transport. Endesa X is promoting the deployment of electric buses, both public and private. In 2022, about 300 electric buses were deployed. There is also a series of projects underway in Zaragoza (76 chargers in the depots and a 20 MW sub-station for subscribers), in Barcelona (37 charging stations and the electrification of a number of lines belonging to the transport network), in Seville (10 chargers) and in Madrid (supply and installation of multi-brand chargers for 20 *eBuses* using an inverted pantograph). In 2022, Endesa X was selected to provide electricity supply services to cruise ships in the Port of Cádiz, through an OPS (On-shore Power Supply) connection installation.

## B2C

Endesa X provides residential consumers with energy products and services for the home, creating a sustainable ecosystem through connectivity, energy optimisation and savings. Endesa X offers a wide range of energy equipment for the home, with condensing boilers, gas fires, heat pumps and electric water heaters from leading brands and with the highest levels of energy efficiency. There is also the Homix smart thermostat —technology developed by the Enel Group—, which maximises energy savings through automation and learning about usage habits in the home. Endesa X is firmly committed to the self-consumption of energy produced by photovoltaic solar panels in the home,



offering turnkey solutions to its customers, with the customised study, management and processing of authorisations and subsidies and with extended guarantees for the equipment of up to 12 years. There is also Endesa's solar tariff with exclusive discounts for Endesa X customers. Another essential feature for building a sustainable ecosystem consists of maintenance and repair services, which provide security to the home by including an annual inspection of the electrical, gas and air conditioning installation. Repair services 365 days a year are also included, with assistance within three hours of the customer's call if the breakdown is urgent. Quality of service and customer service are also a strategic priority, so in 2022 a new technical service with Video Assistance with sign language was launched, provided by a Spanish Sign Language (LSE) interpreter.

## Endesa X Way

Created in 2022 as a spin off from Endesa X, Endesa X Way is a new business line dedicated exclusively to electric mobility to continue extending the existing electric vehicle charging infrastructure in order to meet all customer requirements. In this regard, Endesa X Way is promoting the development of electric vehicles as one of the main means of combatting climate change and is promoting electric mobility as an instrument for enabling a zero-emission energy model.

It is developing and marketing electric mobility solutions and services for residential, industrial, commercial and public administration customers, playing an active role in this segment and positioning itself as the sector leader in electric mobility. You will find more information on the <https://endesaxway.com> website.



## Public charging

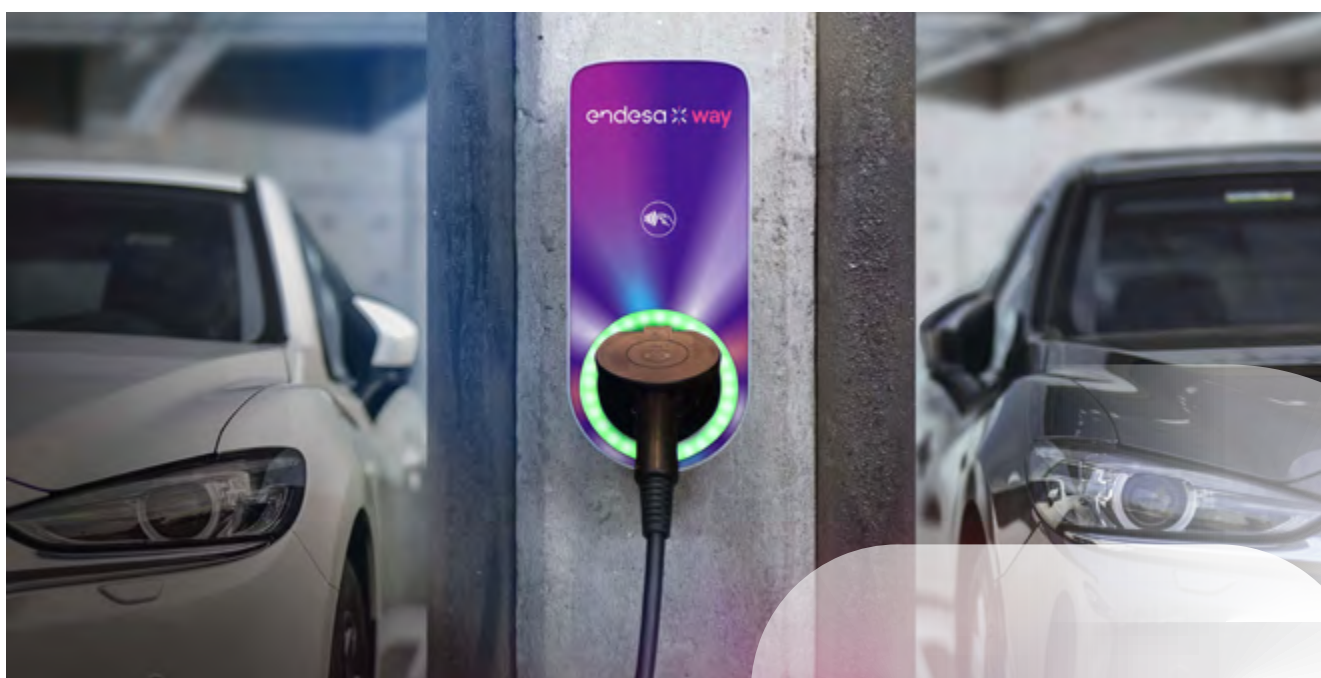
- In 2022 Endesa X Way continued with the plan to deploy public charging infrastructure in Spain that they had started in 2020, having exceeded the initial objective of 2,000 charging stations. The objective continues to be to enable electric vehicles to travel anywhere in Spain, by installing new public access charging stations in different types of businesses and incorporating "HPC" technology that continues to expand.
- The JuicePass application, launched in 2019, is being continuously improved, enabling users not only to manage electric vehicle charging directly from their mobile phone, but also to access detailed information with regard to the charging station, prices and access schedules, to book a charging station and to monitor charging details in real time. There are more than 4,000 charging stations installed in metropolitan areas, on main roads and in rural areas, with a high percentage of fast or ultra-fast charging.
- In 2022 through the largest charging station in Spain was inaugurated in Ciudad de la Imagen (Madrid), where 46 electric vehicles can be charged simultaneously at the ultra-fast and semi-fast charging stations.

## Private recharging

- Endesa X Way also continues to market electric mobility services and charging solutions at a private level for residential, business, commercial and public administration customers. The most differential feature





of this deployment of infrastructure is its connection to a charging station management platform called "JuiceNet" which enables remote control and assistance for the entire range of Endesa X Way "Juice" equipment: JuiceBox, JuiceMeter, JuicePole, JuicePump and HPC.

- JuiceBox is an electric vehicle charger developed by Endesa X Way for domestic use. Together with the JuicePole, it was awarded the Compasso d'Oro for its functional and aesthetic design in 2020. The JuiceBox equipment together with the JuiceMeter enables maximum use of energy at home without exceeding the contracted power.
- For companies and public administrations, Endesa X Way provides a global and customised service, which includes initial assessment, supply of JuicePole, JuicePump and HPC charging equipment, together with installation, implementation and the associated maintenance. As part of its JuiceNet Manager platform, Endesa X Way offers fleet managers the option of being able to manage all the information and details for each charging session that users complete using their own charging infrastructure.
- In 2020, Endesa X Way, together with Athlon, launched the first all-in-one electric car hire for companies, called OneElectric. This service enables you to hire a standard electric or plug-in hybrid vehicle of any make. It also includes insurance, maintenance and tyres, as well as the installation and maintenance of the charging station and even the possibility of adding a monthly kWh voucher to recharge anywhere on the Endesa X Way public network.



# Income from generation and retailing

The main dimensions in 2022 and their variations compared to the same period in the previous year were as follows:

Million euros						
Dimensions	2022	2021	Difference	% Var.	References <sup>(1)</sup>	
   	<b>Gross Margin</b>	4,940	3,681	1,259	+34.2	6
						<ul style="list-style-type: none"><li>Includes an increase of €5,805 million (+63.4 %) in electricity sales and €3,148 million (+111.8 %) in gas sales, both in the deregulated market, as a result of the behaviour of the arithmetic average price in the wholesale electricity market (€167.5/MWh; +49.7 %) and the behaviour of <i>commodity prices</i>. This development also led to an increase of €5,298 million (+69.7%) in the cost of power purchases in 2022. Total revenue and expenses from commodity derivatives also decreased by €2,760 million due to developments in the assessment of and settlement for electricity and gas derivatives relating to the effects described above and the current situation in the energy markets.</li><li>It includes an increase in revenue from compensation for the extra costs of generation in Non-Mainland Territories (TNP in Spanish) amounting to €1,013 million, essentially as a result of a rise in fuel prices in international markets, as indicated above, also taking into account the publication of Order TED/1315/2022, of 23 December.</li><li>It includes an increase of €536 million (+162.9%) in the cost of consumption of carbon dioxide (CO<sub>2</sub>) emission rights as a result of an increase in the number of tonnes and the increase in the average price.</li><li>It includes the effect of the extension of the temporary suspension of the Tax on the value of the production of electricity in accordance with Royal Decree Law 6/2022, of 29 March, and Royal Decree Law 11/2022, of 25 June, until 31 December 2022 (extended until 31 December 2023 by Royal Decree Law 20/2022, of 27 December) (€145 million).</li><li>In 2021 it included recognition of the right to be compensated for the reduced remuneration as a generating company in the amount for the internalisation of carbon dioxide (CO<sub>2</sub>) emission rights assigned free of charge under the National Emission Rights Allocation Plan (PNA), which it did not have a legal duty to bear (€186 million).</li><li>In 2021, it included revenue of €300 million corresponding to Water Taxes and the declaration of the unenforceability of the State Water Tax under a Supreme Court ruling on 19 April 2021.</li></ul>
	<b>Gross Operating Income (EBITDA)</b>	3,709	2,295	1,414	+61.6	12, 13, 26.1 and 37
						<ul style="list-style-type: none"><li>Includes the gross profit generated by the sale of the 51% stake in Endesa X Way, S.L. and the loss of control over this company for a total of €238 million (see Section 6.2.2 of this Consolidated Management Report).</li><li>Includes higher personnel expenses due to the effect of inflation and an improvement in employee productivity ratio for a total amount of €25 million.</li><li>Includes an update in the provisions for workforce restructuring plans (€2 million, negative).</li><li>Includes an increase in expenditure due to the recognition of certain disciplinary proceedings (€18 million), customer service and payment received for the retailing activity (€11 million).</li></ul>
	<b>Operating Income (EBIT)</b>	2,564	689	1,875	+272.1	15.1, 20.1, 23.1 and 32.1
					<ul style="list-style-type: none"><li>Includes a provision for impairment on the Cash Generating Units (CGUs) for each of the Non-mainland Territories (TNP in Spanish) of the Balearic Islands, Canary Islands, Ceuta and Melilla, for a total of €36 million (€652 million in 2021).</li><li>Includes an increase in depreciation and amortisation expense (€103 million), mainly as a result of the investment effort in electricity generation installations from renewable sources and a commercial drive to sign more contracts with customers.</li><li>Includes a higher impairment charge on receivables from customer contracts (€33 million) due in part to a deterioration in payment behaviour among <i>Business to Customer</i> (B2C) customers, especially the most vulnerable customers operating in the regulated market.</li></ul>	

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.

# Infrastructure and networks business

Endesa considers ensuring access to the supply of electricity as a priority, in addition to its continued supply, safety, efficiency and quality; the development of the necessary infrastructures to make this possible is of the utmost importance.

The number of distribution customers increased to 12.5 million in 2022, an increase of 0.8% during the year.

Endesa distributes electricity in 24 Spanish provinces in 8 autonomous communities (Andalusia, Aragón, the Balearic Islands, the Canary Islands, Castile-León, Catalonia, Extremadura and Galicia) and in the Autonomous City of Ceuta, covering a total area of 195,881 km<sup>2</sup> and a population of more than 21 million inhabitants.

Through its distribution company, e-distribución, in 2022 Endesa distributed, 131,813 GWh in the Spanish market, 0.5% more than in 2021.

**12.5**  
million customers  
with contracts to  
access the  
distribution networks

**131,813**  
GWh distributed on the  
Spanish market

Regulated revenue from distribution activity in 2022 amounted to €1,879 million, representing a reduction of €180 million (–8.7%) compared to the same period for the previous year, as a result of recording an update for remuneration in the distribution activity corresponding to 2017, 2018 and 2019 in accordance with Order TED/749/2022, of 27 July.

## Development of distribution infrastructure

To ensure the correct supply of energy to its customers, the infrastructures in Endesa's distribution network are planned, constructed and operated in such a way that they continuously adapt to the capacity demanded by existing customers, network expansions requested by new customers, and correct attention to regulatory and legal actions.

The increasing incorporation of new renewable capacity, the advance of electric mobility, the development of self-consumption and distributed generation make distribution networks an essential element for the energy transition process and require continuous improvement and digitalisation in our infrastructures.

To meet these challenges, e-distribución invested €882 million in 2022.

Endesa's distribution network lines in Spain spanned 317,829 kilometres, of which 40.9% corresponded to underground lines.

There are 19,763 km of high voltage lines (4% of which are underground). Medium-voltage lines total 114,673 km, 36% of which are underground. Low-voltage lines total 183,392 km, 48% of which are underground.

At the end of the reporting period there were 1,331 substations with an installed capacity of 90,713 MVA. These installations transform energy from the High Voltage lines into Medium Voltage, so it can be distributed to the transformers.



The company has 130,966 transformers that are responsible for transforming the energy into Low Voltage for delivery the end-consumer.

In addition to extending this infrastructure, in 2022 a large number of initiatives were also undertaken to improve quality of supply. These included maintenance work, upgrading installations and improving the digitalisation of the High-, Medium- and Low-Voltage networks.

## Investment in digitalisation and network automation

The digitalisation of distribution networks is essential to guarantee energy transition and decarbonisation of the economy, while also improving the quality of supply. This enables processes such as the following to be undertaken:

- Implementation of predictive maintenance techniques for electrical assets.
- More efficient operation of the network to include greater renewable capacity and electric vehicle charging stations, with 22% more charging stations connected than in 2021.
- Implementation of solutions to improve the information available to the consumer and making new communication channels available.
- Development of future flexibility services in distribution networks.

Investments in the automation and digitalisation of Endesa's network in 2022 amounted to €417 million, which can be divided into two main items:

- Digitalisation of the network to make improvements in items such as the advanced monitoring and sensorisation of transformers, reaching 47.3% by the end of 2022.
- Network automation to advance in the installation of new remote control equipment, the modernisation of remote control and communication systems, as well as in new systems to automate the operation of the network and the replenishment of supply. In 2022, e-distribución installed 4,236 new remote controls in the distribution network and 45% of remote manoeuvres were executed through our medium-voltage network operation devices to maintain the security and quality of the electricity supply, through continuous shifts 24 hours a day, 365 days a year.

## Continuity of supply

The continuity of supply in Spain is measured through two main indexes, TIEPI and NIEPI, which measure, respectively, the time and number of supply interruptions (in terms of equivalent power interrupted). The calculation procedure for these indexes is regulated by Royal Decree 1955/2000. The results for TIEPI and NIEPI levels are audited annually by an independent company.

In 2022, TIEPI in markets supplied by Endesa in Spain stood at 42 minutes, making the service 99.99% reliable for the total hours during the year.

The number of equivalent interruptions in own installed capacity (NIEPI in Spanish) stood at 0.74 in 2022.

The index of own TIEPI throughout 2022 was lower than in 2021 in all the territories where Endesa operates networks, reflecting the positive effect of the heavy investments in the improvement of the quality of supply and automation in recent years. With an average reduction of 16%, the reduction in Andalusia (-24%), the Canary Islands (-19%) and the Balearic Islands (-18%) deserves special mention.

The table below shows the continuity of supply indicators for the main autonomous regions where Endesa provides services.

### Average equivalent interruption time in Endesa's own installed power (TIEPI)

Minutes				
Own TIEPI	2020	2021	2022	Change 2022-2021
Andalusia	58	58	44	-24 %
Aragón	60	42	42	-2 %
Balearic Islands	37	39	32	-18 %
Canary Islands	42	43	35	-19 %
Catalonia	41	45	41	-9 %
Extremadura	58	63	60	-5 %
<b>Endesa</b>	<b>50</b>	<b>50</b>	<b>42</b>	<b>-16 %</b>

Note: Data for 2022 not audited.

## Losses in the grid

With regard to losses in the grid, Endesa is taking effective action to reduce the volume of technical and non-technical losses, with support from multidisciplinary and specialist teams.

The application of technological advances, using and processing the mass data obtained automatically from

low- and medium-voltage networks, combined with the use of predictive machine learning models based on *Big Data* technology, have led to a significant decrease in non-technical losses that have, in turn, improved the volume of total losses in Endesa's networks.



## Environmental protection

Endesa continues to strengthen its commitment to the protection and conservation of the environment. The basic strategic principles include the monitoring, control and, as far as possible, the reduction of environmental impacts associated with its activity and its installations.

All the company's infrastructures are included within the scope of a certified Integrated Management System that includes ISO 14001 standards for environmental management, ISO 9001 for quality management and ISO 50001 for energy management. Having a management system audited annually by an official entity ensures that the identification, assessment, control and measurement of the environmental impacts generated by its installations and activities is undertaken periodically and systematically, and confirms the involvement of the entire organisation in meeting the environmental objectives and targets established in line with the business strategy. Integration with other regulations strengthens the coordination of environmental management with all business processes.

The monitoring and analysis of projects for new environmental legislation, both at European, national and local level, is undertaken systematically so as to ensure the correct identification of the legal requirements applicable to the activity undertaken in each geographical area, as well as annual assessment of compliance.

In 2022, the PCB 2025 Plan was continued for the organisation, execution and monitoring of the replacement of all the equipment in service that contains oil contaminated with Polychlorinated Biphenyl (PCB).

In 2022, environmental assessment was undertaken on a series of service providers with environmental risk, including generators and engineering companies.

In 2022, Endesa maintained the commitment agreed within the framework of the new 2021-2023 Voluntary Agreement, signed by the Ministry of Ecological Transition and Demographic Challenge and the main players in the Spanish energy sector, for more environmentally friendly integral management for the use of Sulphur Hexafluoride (SF<sub>6</sub>) in the electricity industry.

The approval of the review of Regulation (EU) 517/2014 on fluorinated greenhouse gases may lead to a review of this agreement to adapt it to the new regulation.

In 2022, the company promoted environmental inspection activity in field work and auxiliary installations (warehouses), thus strengthening control over environmental performance by service providers.

Progress was also made in the process of digitalising the information associated with business processes and training courses and awareness talks were given to our own staff on a number of environmental issues.





## Research and development activities

The aim of these activities is to incorporate innovations into the company's current processes to improve operational and personal safety, strengthen the quality of service, improve the levels of automation and develop smart grids. The areas of action in 2022 were as follows:

- Network flexibility projects:
  - Coordinet Project: To improve collaboration between transmission and distribution grid operators and electricity consumers to contribute to the development of a smart, secure and more resilient energy system. It was developed in Cádiz, Málaga, Murcia, Alicante and Albacete.
  - Flow Project: Initiated in 2022, it seeks to test new services for the distribution company making use of the mass implementation of electric mobility and to provide flexibility services through a number of electric vehicle charging stations connected to the distribution networks on the island of Minorca.
  - BeFlexible Project: Initiated in 2022, it aims to overcome existing limitations by applying versatile solutions that will enable distribution networks to adapt to future scenarios.
- Development of technologies and their application in distribution network environments:
  - Aerial-Core project: It involves the development of an integrated aerial cognitive robotic system (a drone) that will have capabilities within the range of the operation, handling grid elements with a robotic arm and safety in the interaction with people.
  - Smart5Grid project: This Spanish demo project is in a HV/MV sub-station in the Garraf Nature Reserve in Barcelona. The aim is to establish a safe area in volumetric terms, so that field technicians will be monitored by a real-time tracking system that will use a private 5G network.
  - Resisto Project: The aim is to minimise the impact of weather and other risks by increasing the resilience of the power grid using sensors, prevention algorithms and autonomous drones in the Doñana National Park.

Endesa also undertook a number of concept tests to enable the incorporation of new technologies and new concepts into the distribution network.



## Other significant events in 2022

- The recovery plan continued after the volcanic eruption on the island of La Palma with the completion this year of the first reconstruction circuit to ensure food for the "64 houses" in La Laguna.
- A new Canary Islands MV Network Control Centre was inaugurated in the Woermann building and a new Back-up Control Centre in Las Palmas de Gran Canaria.
- The cables for the towers in Cádiz were replaced. There were 15 km of cables at a height of 150 metres which will enable the quality of supply for the city to be ensured.

## Investment trends

The 2023–25 strategic plan envisages investments of €2,600 million for the development of new networks and the reinforcement of existing ones, which will enable the vegetative growth of demand to be met, building an increasingly resilient distribution network that favours the improvement of the quality indexes for services provided for customers.

The plan also includes a significant package of investments in infrastructure and digitalisation associated with the new demand, which is expected to grow very significantly together with the installation of renewable generation and the installation of electric vehicle charging stations.

In line with the above, the plan responds to the requirement established in RDL 6/2022, which involves adopting urgent measures within the framework of the National Plan for Response to the Economic and Social Consequences of the War in Ukraine. This requires the investment plans of electricity distribution companies to include a minimum of 10% of the investment volume entitled to remuneration from the system dedicated to undertaking actions to increase access capacity for new renewable generation and self-consumption.

Finally, the plan includes significant investment in the digitalisation of both existing installations and all business processes, which will enable increased operational efficiency by improving the quality of commercial services, enhanced by the inclusion of European funds associated with the Recovery, Transformation and Efficiency Plan.

Within the strategic plan and in accordance with the requirements of the regulatory framework defined by Royal Decree 1125/2021, Endesa defined a series of investments that it considers essential for the digitalisation of the electricity system, and especially of the electricity networks it operates.

The main objective of these initiatives is to contribute with these investments to achieving a progressive decarbonisation of the Spanish electricity system, making it easier to integrate clean electricity generation technologies, provide greater support for distributed generation, and provide a significant boost for sustainable, electric mobility. Endesa's investments revolve around the following basic issues:

### Aspects contemplated by e-distribución when planning its investments with regard to the digitalisation of electricity networks



**Promoting the integration of renewable generation technologies into the Spanish electricity system.**



**Increasing the quality of supply and customer service for consumers on the e-distribución electricity networks.**



**Support for a progressive decarbonisation of the electricity system, with the aim of achieving a climate-neutral system.**



**Promoting sustainable electric mobility by strengthening the networks and deploying charging stations.**



**Promoting the technical and operational efficiency of the system by reducing technical losses in the networks and optimising maintenance schedules.**

With regard to the above, it should be noted that Endesa planned these investments with the intention of having a positive impact on customers in the electricity networks, from its principles and commitments to seeking improvement in the technical and operational efficiency of its networks, to its intention of responding to the system's growing technological requirements.

The following are the most significant projects initiated in 2022, and that will be executed in 2023:

- **Digitalisation of sub-stations.** This makes it possible to automate the operation and to provide intelligent communication between the network's different elements. This makes the operating systems more reliable and increases the productivity of the installations, which in turn favours the massive integration of renewable energies in those substations that have significant renewable resources in the surrounding area, without having to make significant investments in the improvement of the operating

capacity by increasing the infrastructure, but rather by optimising the existing one using these digital systems.


- **Sensorisation and digitalisation of distribution centres.** Sensorisation contributes significantly to creating an interconnected, controlled network in real time with the ability to dispose of a large volume of data that increases flexibility in the operation of networks. Indirectly, this will make it possible to have a more connected network with better operating parameters, in such a way that it will make it possible to increase the input power for new renewable, distributed generation capacity.
- **Digitalisation of low-voltage.** Replacement of LV panels and switches. This development is expected to include the following:
  - Increased user capacity for selecting consumption and *on time* demand.

- Flexibility in the access to energy markets and optimisation of the electricity bill.
- An easier client-network connection by encouraging the participation of people, SMEs and local entities in the energy transition.
- Enabling the production, consumption, storage and sale of renewable energies.
- **Digital Twin Network Project.** Digital capture of the entire electricity network, through the use of 3D modelling devices, virtual and augmented reality of the network infrastructure by means of aerial and terrestrial mapping.
- **High-quality customer service** and other digital systems. Remote management systems mainly contribute to monitoring demand in real-time. This point is essential when it comes to incorporating renewable generation into the electricity system, given the variability and intermittency of these technologies.

## Distribution of profit

The main dimensions in 2022 and their variations compared to the same period in the previous year were as follows:

Million euros

Dimensions	2022	2021	Difference	% Var.	References <sup>(1)</sup>
<b>Gross Margin</b>	2,209	2,429	(220)	(9.1)	6
 <b>Gross Operating Income (EBITDA)</b>	1,703	1,965	(262)	(13.3)	13, 37 and 51
<b>Operating Income (EBIT)</b>	1,018	1,298	(280)	(21.6)	

- It includes lower regulated revenue from the distribution activity mainly as a result of the registration of an update for the remuneration of the distribution activity corresponding to 2017, 2018 and 2019 in accordance with Order TED/749/2022, of 27 July amounting to €180 million.
- Includes lower personnel costs mainly due to the updating of provisions for workforce restructuring plans (€34 million, positive).
- Includes an increase in repair and maintenance expenses (€29 million) due to higher maintenance costs and breakdowns in medium- and low-voltage electrical distribution installations.
- Includes acknowledgment of certain disciplinary proceedings amounting to €15 million.
- Includes an increase in amortisation costs (€22 million), mainly as a result of investment made in electricity distribution systems and installations.
- Includes a higher provision for impairment losses on receivables from contracts with customers (€4 million), as a result of deteriorating payment behaviour by small energy retailers.

<sup>(1)</sup> Notes to the Consolidated Financial Statements for the year ended 31 December 2022.



# 7.





# Internal control systems

## The entity's control environment

A series of bodies and/or functions are responsible for the existence and maintenance of a suitable control system for the entity, its implementation and supervision.

## Transparency committee

Its purpose is to ensure compliance with and correct application of the General Principles of Financial and Non-Financial Information, by assessing events, transactions, reports and other significant issues that are externally disclosed, determining the manner and timing for making these public disclosures.

## Code of Ethics

Approved by the Board of Directors, this code details the ethical commitments and responsibilities to which professionals working for Endesa and its subsidiaries, be they directors or staff, no matter their positions, are bound in the course of managing these companies' business and corporate activities.

# Internal control systems

## Board of Directors

One of the responsibilities of the Board of Directors that may not be delegated is the supervision of internal information and control systems and, pursuant to the Corporate Enterprises Act, the Audit and Compliance Committee is responsible for monitoring the effectiveness of internal control at the Company, as established in the "Code of Good Governance for Listed Companies" (revised by the CNMV in June 2020).

The Board of Directors, which has extensive powers in the management, administration and representation of the company, as a general rule, entrusts the ordinary management of the company to the delegated

management bodies and focusses its activities on general supervision, considering matters of particular importance to the company and its group of companies.

The Board is also responsible for establishing the basis for the suitable and efficient coordination of the Company and the companies that belong to its Group, of which the company is the Parent as provided for by Law, with respect for the autonomy of their administrative bodies and directors when it comes to making decisions pursuant to the social interest of the Company and each of these companies.

## Audit and Compliance Committee

Endesa's Audit and Compliance Committee Regulations stipulate that the main functions of the Audit and Compliance Committee are to assess the Board of Directors and to supervise and control the preparation and presentation of financial and non-financial information, the independence of the auditor and the effectiveness of internal risk control and management systems, in addition to reporting to the Board of Directors on related-party transactions as provided for by the legislation in force. It is responsible for overseeing the effectiveness of the internal control over the Company's financial and non-financial information and reporting this to the Board of Directors, as

well as discussing any significant weaknesses in the internal control system detected by the external auditor during the audit process.

It is also responsible for supervising internal audit services, ensuring their independence and effectiveness. In this regard, it makes an annual assessment of the operations of the Internal Audit and the performance of the person responsible. The appointment of members of the Audit and Compliance Committee takes into account their knowledge and background in accounting, auditing and financial and non-financial risk management matters.

## Transparency Committee

The Transparency Committee was established in 2004, chaired by the Chief Executive Officer and consists of Endesa's main directors, including all members of the Executive Management Committee together with other members of management at Endesa directly related to the preparation, verification and dissemination of financial and non-financial information.

This Committee's main purpose is to ensure compliance with and the correct application of general financial and non-financial reporting principles (confidentiality, transparency, consistency and responsibility) by evaluating the events, transactions, reports and other matters of relevance

disclosed and determining the manner and deadlines for making these disclosures.

The functions of the Transparency Committee also include assessing the findings submitted to it by Endesa's Administration, Finance and Control Department, based on a report drawn up by Endesa's Internal Control unit, with regard to compliance with and the effectiveness of internal information controls and the internal controls and procedures with regard to market disclosures, taking corrective and/or preventative action and reporting to the Board of Directors' Audit and Compliance Committee in this regard.

## Internal control of financial reporting

In supporting the Transparency Committee, the Endesa Group General Administration, Finance and Control Department has the following functions with regard to the internal control of financial reporting:

- Proposing financial reporting policies to the Transparency Committee for approval.
- Assessing the effectiveness of ICFR and reporting its conclusions and any possible breaches of the approved internal control policies to the Transparency Committee.

## Internal Control Unit

Endesa's Administration, Finance and Control Department has a dedicated Internal Control Unit with the following functions:

- Communicating approval of ICFR policies and procedures to Endesa's various subsidiaries and business units.
- Maintaining, updating and providing the company with the ICFR model and the process and control-related documentation.
- Defining the flow charts for certifying the evaluation of the effectiveness of the controls and procedures defined in the ICFR model.
- Supervising the process for certifying Internal Control over Financial Reporting and the internal disclosure controls and procedures, issuing regular reports on its conclusions with regard to the system's effectiveness.

All aspects relating to Internal Control over Financial Reporting are regulated in organisational procedure No. 2407 "Internal Control over Financial Reporting", which seeks to establish the operating principles and bodies responsible for establishing and maintaining internal controls over Financial Reporting, with a view to ensuring its reliability and that reports, facts, transactions, as well as other relevant aspects are communicated internally and externally in the correct form and within the corresponding deadline. The Internal Control over Financial Reporting System is assessed and certified every six months.

# Codes of conduct

## Code of Ethics

Endesa has a Code of Ethics approved by the Board of Directors which itemises the ethical commitments and responsibilities to which the professionals working for Endesa, S.A. and its subsidiaries, be they directors or staff, no matter their positions, are bound in the course of managing these companies' business and corporate activities.

The Code of Ethics consists of the following:

- The general principles governing relations with stakeholders that define Endesa's benchmark business principles in an abstract manner.
- Criteria for behaviour with regard to dealing with all stakeholders which provide guidelines and regulations which Endesa's employees are required to adhere to in

order to uphold the Company's general principles and avoid unethical behaviour.

- Implementation mechanisms which describe the system for monitoring and enforcing compliance with the Code of Ethics as well as facilitating ongoing improvement.

The principles and provisions of this Code of Ethics are applicable to the members of the Board of Directors, the Audit and Compliance Committee and other governing bodies of Endesa S.A. and its Group companies, as well as these entities' executives, employees and any other professionals related to the Group via contractual relationships of any kind, including those working for or with them on an occasional or temporary basis.

**The 17 principles defined in the Endesa Code of Ethics are the following:**

- Impartiality and non-discrimination
- Honesty
- Appropriate conduct in the event of conflicts of interest
- Confidentiality
- Relationships with shareholders
- Protection of shareholders' investments
- Value of people
- Management fairness
- Personal integrity
- Information transparency and integrity
- Due diligence and precision in executing tasks and fulfilling contracts
- Propriety and fairness in managing and possibly renegotiating contracts
- Supply and product quality
- Fair competition
- Social responsibility
- Environmental protection.
- Personal data protection.

## Zero Tolerance Plan Against Corruption

The Zero Tolerance Plan Against Corruption approved by the Board of Directors requires all Endesa employees to be honest, transparent and fair in the performance of their work. The same commitments are expected of related parties, i.e. people, groups and institutions that help Endesa meet its objectives or that are involved in the activities it undertakes to achieve its goals.

In compliance with the tenth principle of the Global Compact, of which Endesa is a signatory, "companies are committed to combating corruption in all its forms, including extortion and bribery". Endesa rejects all forms of corruption, both direct and indirect, and has a programme of commitments in the performance of its activities to combat it.

## Criminal and Anti-Bribery Risk Prevention Model

Endesa's Criminal and Anti-Bribery Risk Prevention Model consists of a structured and organic system of procedures and surveillance and control activities to prevent crimes being committed that are within its scope, that is, those from which criminal liability could arise for legal persons within the business group. Endesa's current Criminal Risk Prevention and Anti-Bribery Model was adopted by the Board of Directors at a meeting on 25 January 2016, and it was updated in November 2018 and May 2020.

The Model consists of five elements that jointly guarantee a suitable control system for criminal risk prevention: Control Environment, Risk Assessment and Control Activities, Supervisory Activities, Information and Communication, and a Disciplinary System.

The Code of Ethics and the Zero Tolerance Plan Against Corruption are available for consultation on the company's website:

<https://www.endesa.com/es/accionistas-e-inversores/gobierno-corporativo/conducta-etica>

## Whistleblowing channel

Since 2005, Endesa has had a Whistleblowing Channel, accessible via its website and on its intranet, so that all stakeholders may securely and anonymously report any irregular, unethical or illegal conduct which in their opinion has occurred in the course of Endesa's activities.

The procedure established ensures the confidentiality of this system, as it is managed by an external, independent company, which processes all complaints and communications.

Complaints made via channels other than the Ethics Channel are forwarded to the Internal Audit Department, in accordance with Endesa's internal procedures.

The Audit Department is responsible for ensuring all complaints received are processed correctly. This department

acts independently of the opinions of all other departments within the organisation. It has access to all the corporate documents necessary to carry out its functions and monitors the implementation of the recommendations included in its audit reports.

The Audit Department reports to the Board of Directors through the Audit and Compliance Committee which in turn centralises and channels all significant complaints before reporting on them to the Board.

In 2022, Endesa received, either through the Whistleblowing Channel or other means, a total of 12 complaints that differed in nature, all of which have been resolved.

## Risk assessment in financial reporting

The Internal Control Over Financial Information System forms part of the company's internal controls and represents the company's complete set of processes that provide reasonable security as regards the reliability of both internal and external financial information.

Endesa's Internal Control Unit is responsible for identifying the most relevant processes, activities, risks and controls with regard to the Internal Control Over Financial Reporting System that are considered essential to reasonably ensure that any information disclosed externally is reliable and appropriate.

To this end, the company's processes have been documented with the following basic aims in mind:

- Identification of the critical processes related directly and indirectly to the generation of financial information.
- Identification of the risks intrinsic to these processes which could give rise to substantial financial reporting errors (typically related to completeness,

validity, recognition, cut-off, measurement and presentation).

- Identification and categorisation of the controls in place to mitigate these risks.

Every six months, the control system is subject to an assessment process, as part of which each control manager assesses both its design and its effectiveness. A continuous verification process is also undertaken by an independent expert.

The findings of both processes are reported as follows:

- To the Board of Directors, which, in accordance with the Corporate Enterprises Act, has the non-delegable power to supervise the internal reporting and control systems; and
- To the Audit and Compliance Committee (CAC) which, in accordance with the Corporate Enterprises Act, includes among its functions, supervision of the effectiveness of the company's internal control.



# Internal control and risk management system

## General Risk Control and Management Policy

The General Risk Control and Management Policy lays down the basic principles and the general framework to control and manage risks of any kind that could affect the attainment of targets, ensuring that they are systematically identified, analysed, assessed, managed and controlled within the risk levels set. The General Risk Control and Management Policy identifies the different types of risks, financial and non-financial (including operational, technological, legal, social, environmental, political and reputational, including those related to corruption) faced by the Company, including among financial or economic risks any contingent liabilities and other risks not included in the statement of financial position.

The aim of the General Risk Control and Management Policy is to guide and direct the series of strategic, organisational and operational actions that allow the Board of Directors at Endesa to accurately define the acceptable level of risk, permitting managers in the different lines of business, staff and service functions to maximise the Company's profitability, preserve or increase its equity and guarantee that this is achieved above certain levels, preventing uncertain and future events from adversely affecting the achievement of the profitability targets defined, or the corresponding operations, sustainability, resilience or reputation in a sustained way over time, providing shareholders with adequate guarantees and safeguarding their interests, in addition to the interests of customers and other stakeholders.

The General Risk Control and Management Policy is prepared and approved with other risk policies specific to the lines of business, staff and service functions, as well as with the limits established for the optimal risk management of each of them.

The General Risk Control and Management Policy is implemented through an Internal Risk Control and Management System (SCIGR), that consists of an organisation process, principles, a regulatory system and a risk control and management process.

The Internal Risk Control and Management System follows a model that is based, firstly, on the ongoing study of the risk profile, applying current best practices in the energy or reference sector in relation to risk management, based on the criteria of the uniformity of

measurements for the same type of risk, on the separation of risk *controllers* and managers, and, secondly, ensuring the connection between risks assumed and the resources required to operate the business while ensuring respect for an adequate balance between the risk assumed and the targets defined by the Board of Directors at Endesa.

The risk control and management model implemented in the Company is aligned with international standards following a methodology based on the three lines of defence model, as described in the General Risk Management and Control Policy published on the company's website, [www.endesa.com](http://www.endesa.com). The organisation of the Internal Risk Control and Management System is carried out through the risk control and risk management functions, which are independent of each other, thereby showing an adequate separation of functions.

The General Risk Control and Management Policy defines the Internal Risk Control and Management System as an interwoven system of rules, processes, controls and information systems, as part of which global risk is defined as the risk resulting from the full view of all the risks to which Endesa is exposed, having regard to the effects of mitigating the various exposures to and categories of risk, which makes it possible to consolidate and evaluate the risk exposure of the different units at the Company, as well as prepare the corresponding management information for making decisions on risk and the adequate use of capital.

The risk control and management process consists of identifying, assessing, monitoring and managing risks over time, addressing the different risks to which the company is exposed, whether endogenous (due to internal factors) or exogenous (due to external factors):

- **Identification:** The risk identification process aims to generate a risk inventory based on events that could prevent, impair or delay the meeting of targets. This identification should include risks both if their origin is under the control of the organisation and when it is due to unmanageable external causes.
- **Assessment:** The objective is to obtain parameters that may be used to measure the economic and reputational

impact of all risks so they may then be prioritised. This assessment includes various methodologies in line with the risk characteristics such as, for example, assessment of scenarios and estimation of potential losses from the evaluation of the distributions of impacts and probability.

- **Monitoring:** The objective is to monitor risks and establish management mechanisms that enable the risks to be kept within the established limits, and to take the appropriate management actions.
- **Management:** The objective is to implement actions aimed at adjusting risk levels to their optimum levels, respecting the limits established in all cases.

The Risk Control and Management Policy, which is established and approved by Endesa's Board of Directors, is the core element of the system, from which other specific

documents and policies derive, such as the Tax Risk Control and Management Policy and the Criminal and Anti-Bribery Risk Prevention Policy, which are also approved by Endesa's Board of Directors and which define the risk and control catalogues.

Furthermore, in light of the increased interest in the management and control of risks to which companies are exposed and given the complex nature of identifying them from a comprehensive perspective, it is important that employees are involved at all levels of this process. In this regard, a risk mailbox has now been created for employees to help identify market risks and suggest measures to mitigate them, complementing the existing top-down risk management and control systems and mailboxes and specific procedures for sending communications in connection with breaches of ethical conduct and criminal, tax and employment risks.

## Endesa's Criminal and Anti-Bribery Risk Prevention Model

Endesa is aware that sustainable compliance with its corporate responsibilities should also include constantly striving for excellence in terms of business ethics in all decision-making processes. This must be understood in a corporate environment that strictly complies with the most-advanced national and international standards, practices and principles in this area, as a basic pillar of company operations.

With regard to the prevention of criminal conduct, Organic Law 5/2010, of 22 June, amending Organic Law 10/1995, of 23 November, of the Criminal Code not only included offences applicable to legal persons, but also referred to the need to establish surveillance and control measures to prevent and detect them. This legal system was reformed by Organic Law 1/2015, of 30 March, which details the requirements for management and control systems that allow legal persons to prove their diligence in the field of criminal prevention and detection. Organic Law 1/2019, of 20 February, further amended Organic Law 10/1995, of 23 November, on the Criminal Code, to transpose European Union Directives in the areas of finance and terrorism and to address international matters. More recently, Organic Law 10/2022, of 6 September, on the comprehensive guarantee of sexual freedom, further modified certain aspects of the criminal liability of legal persons.

In line with these legal requirements, Endesa, S.A. has internal rules that meet the need for adequate control and management systems for the detection and prevention of criminal behaviour.

This system mainly consists of the following standards applicable to Endesa:

- Criminal and Anti-Bribery Risk Prevention Model: A document that provides Endesa with a control system designed to prevent criminal offences within the company, complying with the provisions of the applicable regulations on the criminal liability of legal persons.
- Protocol in the case of an Action by an Authority under article 31 Bis of the Criminal Code: Procedure for suitable response in the event of a risk of criminal liability for any Endesa company.
- Code of Ethics: A document establishing the ethical commitments and responsibilities in the management of businesses and business activities assumed by Endesa's employees, be they directors or employees of any kind, in these companies.
- Zero Tolerance Plan Against Corruption: A document that represents Endesa's firm commitment to the fight against corruption, which is the result of being a signatory to the United Nations Global Compact.
- Corporate Integrity Protocols:

- Action protocol with regard to conflicts of interest, exclusive dedication and commercial concurrence.
- Protocol for accepting and offering presents, gifts and favours.
- Action protocol for dealing with public servants and the authorities.

These internal rules are supplemented, among others, by the Criminal Risk and Anti-Bribery Compliance Policy, which, together with those we have already mentioned, make up Endesa's Criminal and Anti-Bribery Compliance Management System. This is an integrated body of provisions that not only respects Spanish legal requirements in this area, but is also sufficient to meet the expectations reasonably placed on organisations that operate with the highest levels of commitment in advanced markets, as is the case with Endesa.

Since October 2017, Endesa's Criminal and Antibribery Compliance Management System has been accredited by AENOR, in accordance with UNE 19601 (*Compliance Management*) and UNE-ISO 37001 (Anti-bribery Management) Regulations, which have been regularly successfully renewed since that date, and which were in force at the date of preparation of this report.

The Audit and Compliance Committee is responsible for ensuring the correct application of the Criminal and Anti-Bribery Risk Prevention Compliance System, in which it is supported by the Supervision Committee, which is a collegiate body with autonomous powers of initiative and control, and independence in the exercise of its functions, whose powers and principles of action are established in its Regulations. The Supervision Committee reports solely and exclusively to the Audit and Compliance Committee, whose specific functions include criminal risk prevention under its Operating Regulations.

## Internal Control Over Financial Reporting System

The quality and reliability of the financial and non-financial information that listed companies disclose to the market is an essential element for the company's credibility, which significantly affects the value that the market assigns it. Any dissemination of incorrect or low-quality financial or non-financial information could provoke a significant decrease in the company's value, with the consequential detriment to shareholders.

The Internal Control over Reporting System (ICRFS) for financial and non-financial information is a part of the Company's internal control, comprising a comprehensive set of processes through which the company provides reasonable assurance with respect to the reliability of its internal and external financial and non-financial information. Endesa's Internal Control Unit is responsible for identifying the most relevant processes, activities, risks and controls of the Internal Control over Reporting System considered material to provide reasonable assurance that the financial and non-financial information disclosed by Endesa, S.A. to the market is reliable and adequate.

The documentation of the processes that form part of Endesa's Internal Control over Reporting System (ICRS) includes detailed descriptions of the activities relating to the financial and non-financial reporting process and subsequent disclosure, including authorisation and processing, with the following essential objectives:

- Identification of the critical processes related directly and indirectly to generation of the information
- Identification of the risks intrinsic to these processes that could give rise to material financial reporting errors (typically related to completeness, validity, recognition, cut-off, measurement and presentation) or significant errors in non-financial information.
- Identification and categorisation of the controls in place to mitigate these risks

Every six months, the Internal Control Over Financial Reporting System (SCII) is subject to an assessment process at Endesa, S.A., as part of which each control manager assesses both its design and its effectiveness. Within the model, an on-going verification process is additionally performed of the Internal Control over Reporting System (ICRS) by an independent expert. The findings of both processes are reported to the following:

- a) The Board of Directors, which, in accordance with the Corporate Enterprises Act, has the non-delegable power to supervise the internal reporting and control systems; and
- b) The Audit and Compliance Committee (CAC) which, in accordance with the Corporate Enterprises Act, includes among its functions, the supervision of the effectiveness of the company's internal control.



Endesa has been developing its Internal Control Over Financial Reporting System (ICFRS) methodology since 2020 to include sustainability and non-financial information, to have a single Internal Control Over

Reporting System (ICRS). This ensures supervision of all processes and systems, risk identification and the design and implementation of suitable controls for reporting the company's financial and non-financial information.

## Risk control and management

Endesa has established a Risk Control and Management Process that enables it to obtain a complete vision of all the risks to which it is exposed, taking into account the mitigating effects amongst the various risk exposures and risk categories, and the corresponding management information to be prepared for decision-making with regard to risk and the appropriate use of capital.

The Risk Committee supervises the management and monitoring of all risks, specifically including tax risks and excluding those of a criminal nature and those related to internal control of financial and non-financial reporting, referring the results of its deliberations and conclusions to the Audit and Compliance Committee (CAC) of Endesa's Board of Directors.

Risk Control is the area delegated by the Risk Committee to define the procedures and norms of the internal control and risk management system, to ensure that all the risks are homogeneously and periodically identified,

characterised, quantified and properly managed in the area of responsibility that affects the entity, including off-balance sheet, monitoring risk exposure and the control activities implemented. In the performance of its duties, Risk Control receives support from other areas and committees with specific and complementary risk management and control models and policies.

Endesa is one of the listed companies and companies in the electricity sector most closely aligned with applicable best practices, according to a report by PwC following assessment of the performance of its internal risk control and management function at the end of 2021. This complies with the regulation of the Audit and Compliance Committee (CAC), which indicates that regular assessment of the internal risk control and management function is to be performed by an independent external auditor selected by the Audit and Compliance Committee.



# 8.



# Sustainability

## 2022–2024 Sustainability Plan

Endesa responded to this Plan with more than 130 quantitative objectives and achieved an overall compliance of 97%.

## 2023–2025 Sustainability Plan

Endesa increased its ambition to achieve zero emissions by 2040 through solid growth in its renewable generation assets.

## Renewable generation

In 2022, Endesa connected 873.96 MW corresponding to 20 new wind farms and photovoltaic plants to the grid. These new projects were developed in the Autonomous Communities of Aragón, Extremadura, Castile–La Mancha, Andalusia and the Balearic Islands:

## Excellence in environmental sustainability

In 2022, Endesa maintained a commitment to excellence in environmental sustainability which enabled a reduction of 3.5% in the value of the environmental footprint compared to 2021.

# Our strategy for sustainable progress

Endesa has a strategy that is focussed on sustainable progress, structured around three core pillars: The transition to a low-carbon economy, sustainable development in the communities in which it operates and the promotion of responsible energy use.

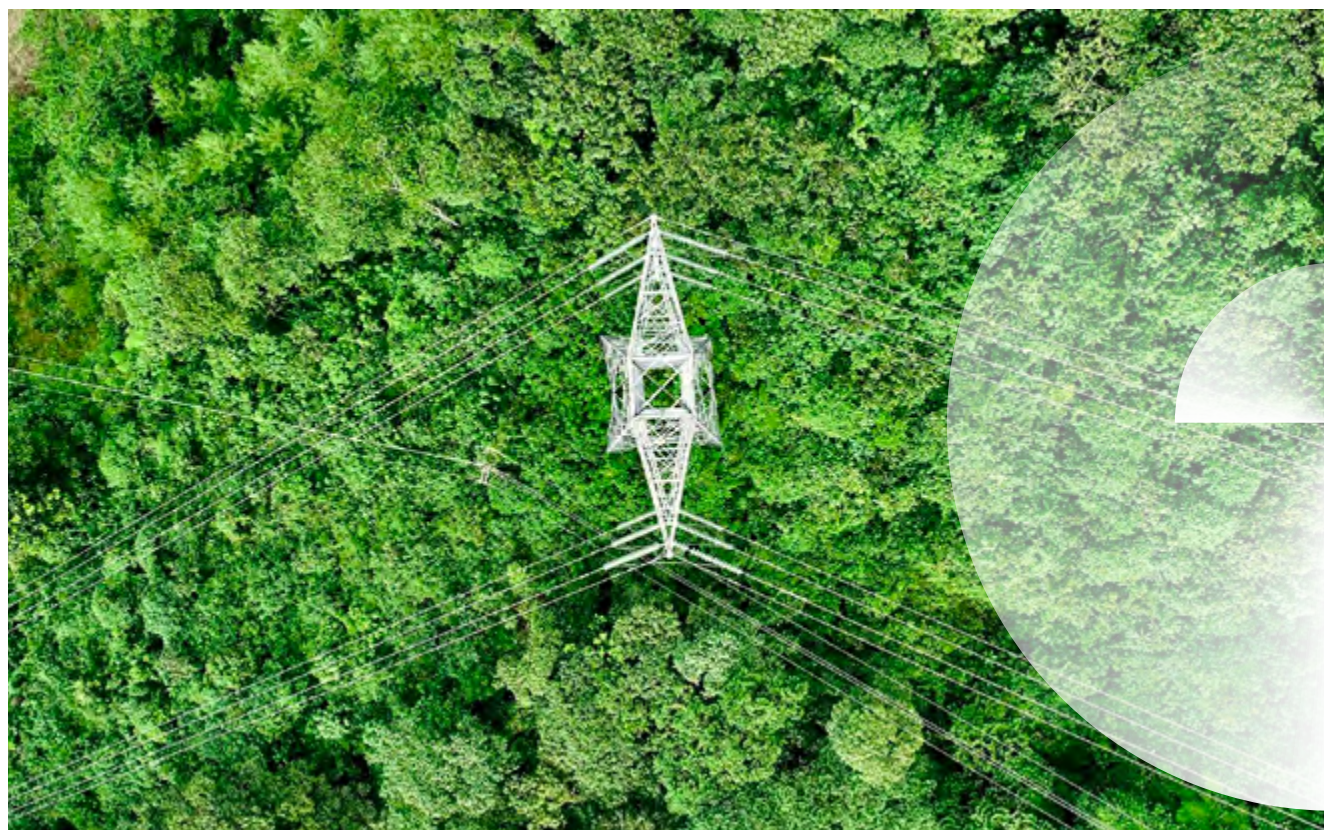
To promote the transition to a low-carbon economy, Endesa is investing in renewable energy technologies, with a view to reducing its greenhouse gas emissions and becoming a 100% renewable company by 2040, as well as improving its energy efficiency. The company is also working on innovative projects for the storage and distribution of energy more efficiently, while boasting an extensive catalogue of products and services to promote the electrification, using renewable energy, of other sectors to help their decarbonisation.

Endesa's aim is to proceed with this energy transition in a fair way without leaving anyone behind. To do this, all the renewable development being undertaken by the company is accompanied by social-economic plans that seek the sustainable development of the communities in which it operates. Endesa is committed to collaborating with local organisations and supporting social-economic,

educational and cultural projects that promote the development of local environments paying particular attention to the environments affected by the closure of its thermal power plants.





The company also promotes education and awareness about the responsible use of energy, organising programmes and services to help its customers reduce their energy consumption and optimise their energy costs. The foregoing reflects Endesa's clear strategy and commitment to the decarbonisation of the economy, as part of an emissions-free energy *mix* and its contribution to society and its customers.

The integration of financial and non-financial information enables the business model to be effectively communicated the value creation process summarised therein, showing the main figures for stakeholders through Endesa's organisation and business model, which are characterised by robust, transparent corporate governance and a sustainable strategy that prioritises aspects that include achieving the Sustainable Development Goals (SDGs), particularly Goals 7, 9, 11 and 13.







# Commitment to the United Nations Agenda

Endesa would like to be an active agent in this transformative vision towards sustainability so, since announcing its specific contribution to the 2030 Agenda in 2016, the Company has continued to progress with regard to the commitment to goal 13 of climate action to which it also contributes with specific actions with regard to SDGs 7, 9 and 11:

	<b>SDG 13</b> (Climate Action)	Bringing forward the decarbonisation of the energy <i>mix</i> by 2040, setting ambitious targets for the reduction of Scope 1 specific GHG emissions (CO <sub>2</sub> eq) compared to 2017 of about 80% by 2030 and 100% by 2040.
	<b>SDG 9</b> (Industry, innovation and infrastructure)	Investment of approximately €1,400 million in digitalisation to transform the energy of the future and a plan to deploy 66,000 charging stations by 2025.
	<b>SDG 11</b> (Sustainable communities and cities)	
	<b>SDG 7</b> (Affordable and clean energy)	More than 4.0 GW of growth in renewable energy in the 2022-2024 period. Endesa also indirectly contributes to training and education programmes focussing on energy, accessibility and the promotion of energy efficiency which will reach 4.1 million beneficiaries between 2015 and 2030.

Endesa also contributes indirectly to the following:

	<b>SDG 4</b> (Quality education)	A public commitment to reach 0.9 million beneficiaries in the 2015-2030 period.
	<b>SDG 8</b> (Decent work and economic growth)	The company made a public commitment to reach 2.1 million beneficiaries by 2030 in the same period through the social initiatives undertaken by the Company.
	<b>SDG 12</b> (Responsible production and consumption)	This objective has great significance for the company, especially when coupled with innovation and introduced into the value chain from the design phase. Under Endesa's strategy, 91% of the generation fleet is expected to be circular by 2030 (measured as a reduction in materials and fuel consumption over the life cycle compared to 2015 excluding nuclear technology) having achieved almost 70% by the end of 2022.
	<b>SDG 17</b> (Partnerships to reach the goals)	Changing the energy model is not a path that Endesa can travel alone, and with this in mind, partnerships are now more important than ever. This is what has traditionally been done, contributing to continue to play a leading role in the decarbonisation challenge for the sector.

These SDGs are considered a priority for Endesa; therefore, it places greater emphasis on achieving them, although it also takes decisive action with regard to all SDGs, setting targets and reporting on them since they were introduced.

To this end, Endesa's 2023-2025 Sustainability Plan sets out a roadmap for the coming 3 years for contributing to the 2030 Agenda, thus bringing its sustainability strategy in line with this universal framework.

# Strategic sustainability planning

## Main sustainability risks

Endesa has established a Risk Control and Management Process that enables it to obtain a complete vision of all the risks to which it is exposed, taking into account the mitigating effects amongst the various risk exposures and risk categories, and the corresponding management information to be prepared for decision-making with regard to risk and the appropriate use of capital.

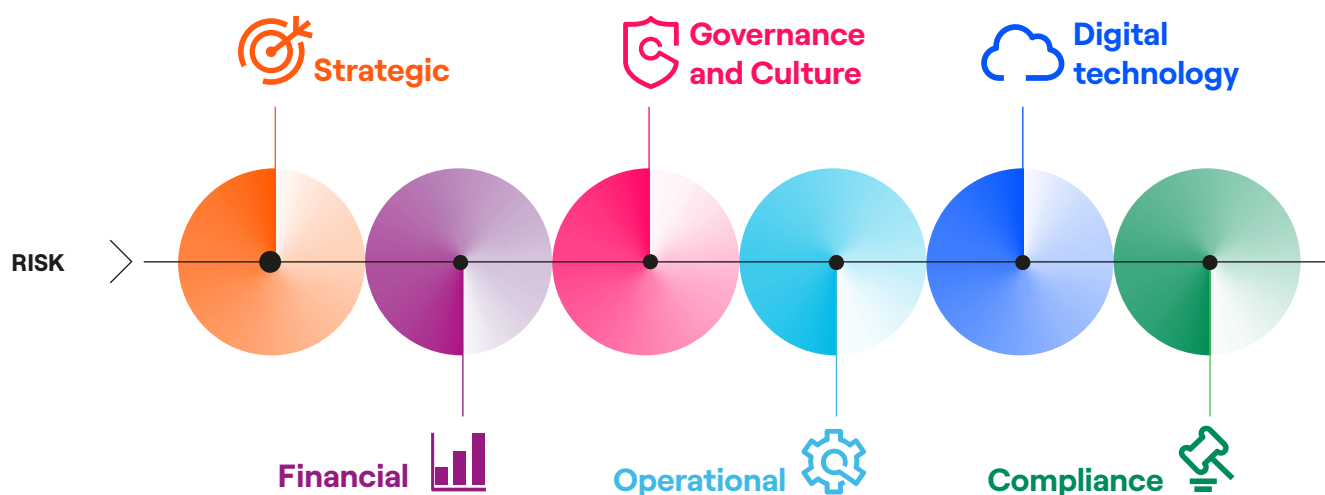
The Risk Committee supervises the management and monitoring of all risks, specifically including tax risks and excluding those of a criminal nature and those related to internal control of financial and non-financial reporting, referring the results of its deliberations and conclusions to the Audit and Compliance Committee of Endesa's Board of Directors.

Given the nature of its business and the sustainability context in which Endesa operates, the company is exposed to different types of environmental, social and governance risks that it must manage and mitigate.

The identification of these ESG risks is based on a methodology applied by Endesa that each year identifies emerging risks with a medium- and long-term impact with a view to analysing, controlling and preventing any possible impact that the business may suffer. To achieve this, Endesa uses the identification of global risks prepared by the World Economic Forum about the perception of more than one thousand experts on global risks over a ten year time horizon, using the company's materiality study and human rights due diligence as a reference. This combination provides a list of risks in line with the context of Endesa's operations.

This analysis is rounded off with an analysis of the company's exposure to each of the risks, performed taking into consideration the MSCI and Sustainabilitycs analyses, as well as incorporating an analysis of information from public sources and stakeholders undertaken by REPRISK.

The result of this analysis helps to identify and prioritise, in order of relevance, eleven ESG risks with a potential impact on the company divided into the following categories:



The ESG risks identified feature the risk of climate change given its strategic impact on the company's activity, followed by the risk of loss of biodiversity and availability of resources as well as an increase in the significance of social and technological risks. This analysis places the emphasis on risks such as the intensification of geoeconomic conflicts,

as has been seen over the past year in the conflict between Russia and Ukraine.

To ensure proper risk management, Endesa analyses the potential impact of each one, establishing management and mitigation measures for the eleven risks identified.



## Methodology for materiality analysis

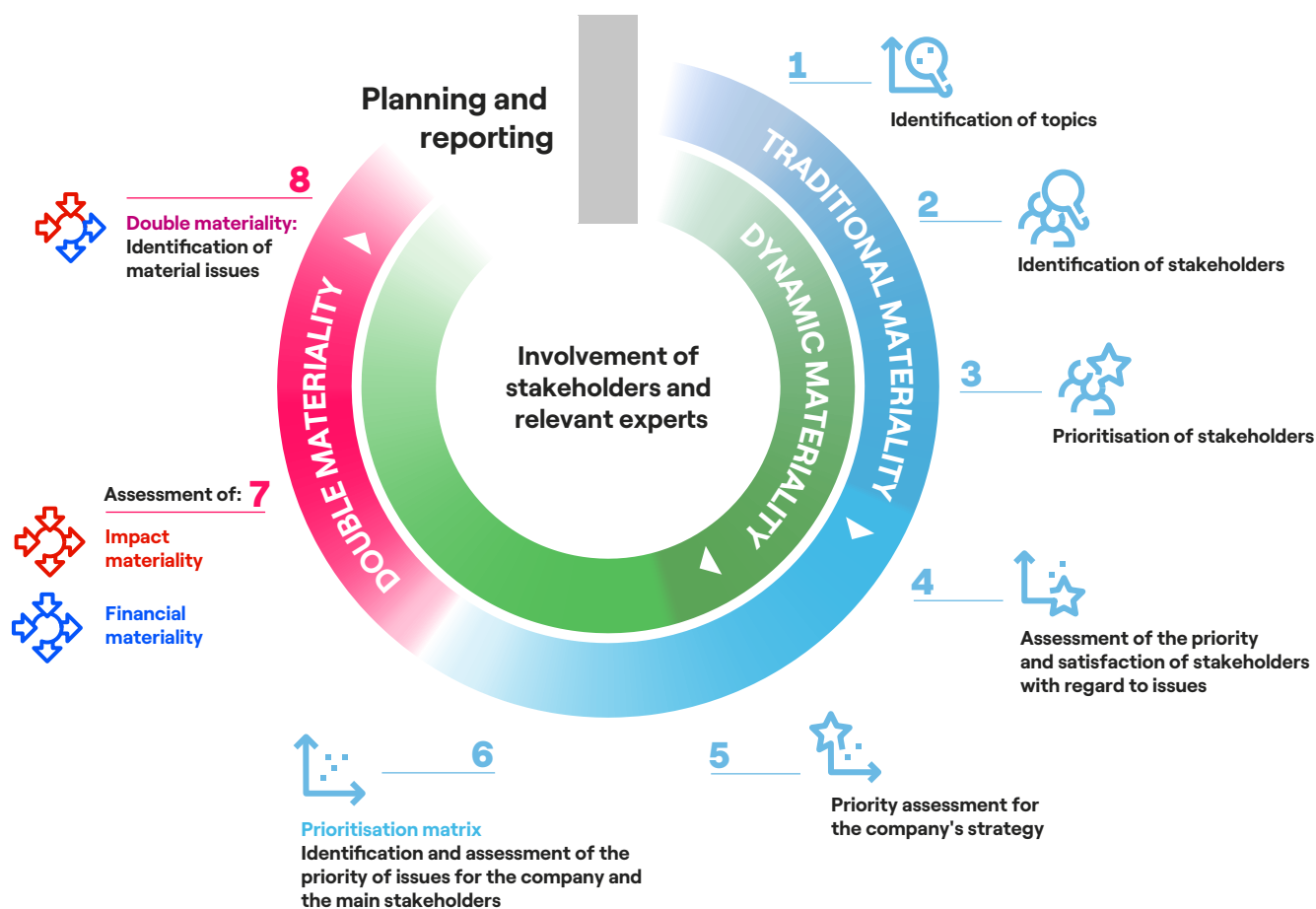
A materiality analysis makes it possible to identify the most significant aspects relating to the sustainable business model for Endesa and its stakeholders. As part of an ongoing dialogue through the different communication channels and monitoring the expectations of the company's stakeholders, Endesa understands developments with regard to the main sustainability issues and identifies objectives aimed at creating long-term value, anticipating risks and transforming them into opportunities. This ongoing process is defined as dynamic materiality and enables the comprehensive analysis of the following:

- Traditional materiality: Analysis of the significance of issues for stakeholders and their perception of the company's performance, as well as the significance of the issue with regard to the company's strategy, represented through the prioritisation matrix.

- Double materiality: A combination of two perspectives:
  - Impact materiality: Assessment of the current and/or potential impacts of the company on people or the environment in the short-, medium- and long-term.
  - Financial materiality: The impact, from a financial perspective, that social, environmental and governance aspects have or could have on the company's value in the short-, medium- and long-term.

A materiality analysis is reviewed and approved by the Sustainability and Corporate Governance Committee.

The eight main phases, summarised in the diagram below, were developed taking into account the most recent publications by international and European reference standards: European Financial Reporting Advisory Group (EFRAG), Global Reporting Initiative (GRI), AccountAbility AA1000APS, Sustainability Accounting Standards Board (SASB) and SDG Compass.





## Compliance with the 2022-2024 Sustainability Plan

As Endesa is aware of the importance of its stakeholders and with a view to placing an emphasis on the veracity of the company's efforts, it aims to ensure that its financial and non-financial performance are equal through its Sustainability Plan (PES) in favour of the Sustainable Development Goals, with special a particular focus on SDG 13 on Climate Action, SDG 7 on Affordable and Clean

Energy, SDG 9 on Innovation and Infrastructure and SDG 11 on Sustainable Cities and Communities.

Endesa has addressed each of the priorities and strategic pillars defined in the 2022-2024 Sustainability Plan, through more than 130 quantitative management targets, securing an overall rate of compliance of 97%.



# The new Endesa 2023–2025 Sustainability Plan

Endesa uses the results of the materiality analysis, combined with the company's business model, to define its Sustainability Plan for a three-year period.

This Plan responds to the Company's sustainable business model, aimed at leading the energy transition through an inclusive approach to ensure nobody is left behind and creating value for all stakeholders. Furthermore, aware of its role in environmental, social and corporate governance aspects as key factors in emphasising its position as a responsible company, Endesa continues to invest in areas related to human rights, human capital, occupational health and safety, environmental management, cybersecurity and sustainability throughout its supply chain.

Endesa's 2023–2025 Sustainability Plan pursues long-term value creation, based on the following strategic priorities that serve as the foundation of its objectives:

## Zero emissions ambition and clean electrification

Endesa increased its ambition to achieve zero emissions by 2040 through solid growth in its renewable generation assets. The company has assigned €4,300 million, half of the investment envisaged in the 2023–2025 strategic plan, to add 4,400 MW of new solar and wind power to ensure 91% of mainland production is emission free by 2025. This investment is 90% aligned with the SDGs and more than 80% with European Union Taxonomy.

# 4,300

million euros of investment to achieve  
91% emission-free mainland  
production by 2025

It is also accelerating along the path towards zero emissions, establishing a roadmap that significantly reduces specific scope 1, scope 1 and 3, and scope 3 emissions linked to the sale of gas to end customers by 2025 and 2030, to reach zero emissions by 2040. It also includes the increase of storage capacity through the hybridisation of batteries with renewable technology. The company continues to digitalise the distribution network as a key asset in promoting energy transition and an extension of the value offer for services and electricity supply for customers.

## People

Endesa accepts the challenge of becoming a more inclusive company by enhancing its commitment to diversity, development and striking a work-life balance to generate long-term value. This commitment is transferred to the supply chain and the communities in which it operates through sustainable initiatives.

## Nature

Endesa reflects its staunch commitment to the protection of biodiversity, correct environmental management and the reduction of its consumption and pollutants through a number of objectives.

## Growth accelerators

Innovation, digitalisation, circular economy and sustainable finance are considered key elements in ensuring the sustainable growth of the company, which sets ambitious targets for these accelerators.

## ESG Pillars

Occupational health and safety is one of the core pillars in the company's strategy, together with the promotion of best practices in Good Governance and a guarantee of respect for human rights.

# Our performance

## Our ambition: Zero emissions

By always being up to date with the intense international negotiations, Endesa is able to align its business strategy with the global commitments and targets currently being considered in the fight against climate change. In recent years Endesa has geared its strategy in line with the context of climate emergency and the call to be more ambitious, establishing ambitious targets through the successive Strategic Plans prepared since the Paris Agreement was adopted. The results obtained by the company and the roadmap towards decarbonisation in recent years provides us with an indication of its ambition with regard to decarbonisation and of its efforts to surpass its committed objectives year after year. In 2021, as part of its Strategic Plan, Endesa made a commitment to become a completely decarbonised generation company by 2040, bringing forward its previous objective by ten years. In this way, Endesa was contributing to the goal established at Group

level by the parent company, Enel. The company accelerated the exit from its generation business based on fossil fuels, such as the sale of gas, to become a 100% renewable electricity company with no links to emitting production technologies or fossil fuels.

This year with the definition of the 2023-2025 Strategic Plan, the company increased its ambition by additionally establishing an integrated objective for the generation and retailing of electricity, so that by 2040 all electricity retailed should also be emission-free. 90% of the investment included in the Plan is directly related to the UN Sustainable Development Goals, and more than 80% is in line with European Union taxonomy.

Since the Paris Agreement was adopted in 2015, Endesa has reduced its emissions by 60% in 7 years (by 76% since 2005, when the Kyoto Protocol came into force).



## Fair transition

Endesa remains committed to contributing to fair transition, leaving no one behind, promoting the creation of sustainable, decent jobs. For Endesa, collaboration between governments, the private sector, civil society and other stakeholders is critical to achieving the climate targets following an inclusive approach. In this context, Endesa considers fair transition to be part of its business model and, at the end of 2019, joined the United Nations commitment to Fair Transition under the "Climate Action for Employment" initiative.

For each plant, Endesa has voluntarily prepared and submitted a project with actions to mitigate the impact caused by the decrease in activity. The Futur-e Plan is intended to promote the development of economic activities and job creation in the areas where the plants are located, from a Fair Transition approach.

The commitment to the complete decarbonisation of the *mix* involves the total closure of the coal-fired thermal generation plants, which in Endesa consists of five plants, and represents 39% of its total thermal generation fleet in Spain, together with the Pego plant in Portugal. They are all



currently in the process of closing down, although there are different degrees of progress. These closures affect an estimated total of about 1,500 workers (direct and indirect), and also represent a decrease in economic activity in the area. Closing down activity at these plants will have a direct impact on the local communities that Endesa, in its commitment to these territories, aims to mitigate through Future Plans.

Alongside the closure of the main greenhouse gas (GHG) emitting plants, a significant growth in renewable generation is taking place. In 2022, Endesa connected 873.96 MW corresponding to 20 new wind farms and

photovoltaic plants to the grid. These new projects were implemented in the Autonomous Communities of Aragón, Extremadura, Castile-La Mancha, Andalusia and the Balearic Islands.

**873.96**  
MW in 20 new wind farms and  
photovoltaic plants  
connected to the grid in 2022

## Clean electrification

To ensure the correct supply of energy to its customers, the infrastructures in Endesa's distribution network are planned and operated in such a way that they continuously adapt to the capacity demanded by existing customers, network expansions requested by new customers, and correct attention to regulatory and legal actions and those subject to agreements.

Endesa's own installations that it dedicates to its customers comply with all the legal requirements and mandatory reviews are planned for each of them at the intervals applicable in each case: Weekly, monthly, quarterly, yearly, etc. These efforts have been rewarded in the form of the

ISO 45001 certification for our Health and Safety Management System for the sale, installation and maintenance of products and services with regard to the supply of electrical power, thermal installations, gas and/or hot water for sanitation, electric vehicle charging stations, in-person technical maintenance and repair services associated with the supply of electricity and gas, and the supply of energy products and value-added services to customers.

For Endesa, customer service excellence is a key value in its relations with customers. The Company constantly seeks maximum efficiency in the operation of its customer



services channels, tools and platforms through innovation and continuous improvement.

As part of an ongoing commitment to society, Endesa works and collaborates so that the most vulnerable people and groups have access to energy as a basic and necessary element, with one of the priorities for all the companies in the Endesa Group being to undertake and promote a number of projects, initiatives and actions.

## Growth accelerators

### Digitalisation

Endesa is investing in digital transformation to become an organisation that is fully connected to the digital ecosystem, automating tasks and achieving the smart, agile optimisation of customer-centred efficiency. The integration of new technologies enables interconnection between people and objects, providing new access to both traditional and innovative products and services.

The promotion of digitalisation in Endesa's different business lines acts as an engine to accelerate energy transition.

New digital technologies enable the integration of services such as real-time monitoring and control of energy production and consumption, which will give access to adjusting supply and demand more efficiently, as well as integrating renewable energy sources, which will lead to greater diversification and optimisation of the electricity infrastructure, a reduction in costs and improved efficiency. Endesa is very aware of this reality and of the opportunities it presents and, therefore, digital transformation is an essential feature of its sustainability plan. The plan's strategic lines of action coincide with Endesa's strong

Endesa adapts to society's demands with a vision structured around the three main patterns of development (decarbonisation, electrification and digitalisation), which can be summarised in the formula "sustainability = value". In this regard, we are staying ahead of the game by developing innovative products and solutions in fields where energy is currently making the greatest transformations possible: City, housing, industry and electric mobility.

commitment to the pursuit of continuous efficiency through the digitalisation of its businesses. Endesa plans to develop digitalisation investment plans across all its businesses amounting to €1,400 million between 2023 and 2025. The most significant investment will be in Distribution, with over €1,000 million allocated to the digitalisation of the business, accounting for more than 71% of the investments proposed during this period.

**1,400**  
million euros of investment in digitalisation  
plans between 2023 and 2025

**More than  
1,000**  
million euros will be invested in the  
digitalisation of the distribution business

### Innovation

Endesa has an open innovation model for the purpose of finding top-quality ideas for the development of innovative solutions to transform the current energy model. Open innovation is a new model used by companies to relate to external players (universities, *start-ups*, research centres, other companies in the same or a different sector, etc.) to promote collaboration and the sharing of ideas and expertise. Within the Generation business, and in line with the dynamics of recent years, innovation is managed under an open innovation model. This model promotes innovation as a key tool in incremental improvement and the development of the entire business value chain in the medium term. This year we can highlight the following

strategic areas where a very important part of the main innovation projects for the generation business line has been developed: Energy storage, robotic solutions, construction of new renewable plants, improvement of the end of life for equipment and systems with a circular economy approach, and a reduction of the environmental impact from Generation activities.

Endesa understands that innovation is a key element in the electricity distribution network, with a two-fold objective, to provide a response to the demands of its customers, increasing the participation of customers, and to improve energy efficiency and integrate renewable generation into the grid. The company is developing a number of projects



with these objectives, which can be classified according to their scope of action: Projects for Smart Grids/Smartcities and Flexibility projects.

The Retailing business conducts proofs of concept and pilot projects with the validation of basic ideas for new technology tests in real environments, new work approaches looking for

areas of improvement and the optimisation of processes, focussing on the improvement of the value proposition for our customers. Innovation projects in cities aim to improve access to better and faster services, creating a cleaner and more sustainable urban environment, in short, improving citizens' quality of life.

## Circular economy

Some years ago, Endesa started on the path towards the consolidation of the circular economy and this is now a key strategic, driving agent within the business, as well as a growth accelerator across the entire value chain. Endesa has implemented policies and actions to achieve the following:

- Disassociate economic activity from the extraction of non-renewable resources, mainly based on reducing consumption and asset use habits:
  - Reducing the consumption of raw materials through eco-design, the re-use and reconditioning of materials, equipment and installations.
  - Keeping assets in use, improving predictive and corrective maintenance, and prioritising repair over replacing equipment and components.

- Recycling equipment, components and materials to recover their value and introduce them back into the production system.
- Regenerating renewable resources and ecosystems through the following:
  - Agrovoltaic practices, especially in the construction of photovoltaic farms, which help the sector to actively rebuild biodiversity and safeguard the health of ecosystems.
  - The application of circular economy principles to reduce the consumption of raw materials, because more land area can be indirectly returned to nature and regenerate the ecosystem.

## Nature

Endesa is committed to achieving excellence in the environmental management of its business activity as an essential pillar of its sustainable development strategy. The aim is to achieve the sustainable use of natural resources and energy, with a commitment to the protection of biodiversity and ecosystems in the areas in which it operates so as to promote their natural capital. To guarantee this, it involves managing aspects of the fight against climate change, including the responsible use of water resources, waste management, the protection of biodiversity and the minimisation of emissions into the atmosphere.

In 2022, a commitment was made to excellence in environmental sustainability which enabled a reduction of 3.5% in the value of the environmental footprint compared to 2021.

Integral management of water is managed by improving efficient consumption, improving water quality in catchment water bodies by controlling spillages and waste water, and reservoir management, assessing the ecological potential to provide shelter for birdlife, the possibilities to control invasive species and their permanent monitoring to prevent the existence of dried up sections of regulated rivers.

Waste is managed in accordance with the waste hierarchy (prevention, preparation for re-use, recycling, other types of recovery, including energy, and final disposal), always starting from prevention, and when that is not possible, prioritising the processes for recovery and recycling of the waste it generates, especially inert waste, as well as processing for the re-use of those hazardous wastes where this is possible, for example, used oils and cleaning solvents.

To guarantee the mitigation of potential impacts on biodiversity and ecosystem services throughout the life cycle of its activities, and with the aim of considering new approaches and commitments in this area, in 2020 Endesa's Board of Directors approved a Biodiversity Policy which includes the commitments made by the company in this area.

# 3.5

% was the reduction in the value of the carbon footprint compared to 2021

# People

## Empowering our people

Endesa is committed to a sustainable approach to people management, promoting good practices with regard to recruitment, remuneration, labour relations, training and selection. It also encourages initiatives that promote a healthy and safe work environment, well-being, work-life balance, equal opportunities and that reinforce diversity and inclusion.

Diversity among employees is a rewarding internal element. Endesa's respect for the approaches in its Diversity and Inclusion Policy (age, gender, culture and disability) is reflected in a progressive increase in the number of women in the workforce, the incorporation of people of other nationalities and young people to rejuvenate the workforce, the recognition of people with the most experience and the integration of people with disabilities.

The development of talent and personal and professional growth is one of the company's strategic objectives, focussing on the sustainability of human capital, which it promotes through ongoing training that contributes to making the company excellent. Training actions organised in 2022 responded to the needs detected in different processes for determining training requirements, which ensure continuous, updated learning in the different skill types defined and classified as *upskilling* and *reskilling*. The company's remuneration policy is also aligned with the recommendations of Spanish and international regulations on Corporate Governance. The main objective is to retain, attract and motivate the best talent, prioritising internal equality, external competitiveness and establishing remuneration in line with the best practices used on the market.

## Commitment to local and global communities

Endesa's commitment to the development of the communities is part of the Company's Creating Shared Value (CSV) Policy, which establishes the general principles and the methodology for implementing actions that maximise the value that business assets and projects can contribute to local communities. In order for the nature of the business to be aligned with the Sustainable Development Goals, the projects are classified in 4 broad categories: Access to Energy, Social-Economic Development, Education and Support for local

communities. This perspective makes it possible to combine company's objectives with the priorities of local stakeholders, with a commitment to local projects and assets through support and acceptance to enable the long-term sustainability of the business. It therefore builds a business model that is integrated with society, creating profitable solutions, addressing social needs and fostering mutually beneficial relationships with social agents, making sure no one is left behind.

## Promoting a sustainable supply chain

Endesa complies with sustainability best practices throughout the value chain. To promote responsible management in the supply chain, Endesa includes sustainability criteria in a comprehensive procurement process that requires a rating for all suppliers (assessing compliance with economic, legal, environmental, social and ethical aspects), but not just for the suppliers it intends to contract, but also those invited to participate in tenders. During the supplier selection phase, Endesa includes certain sustainability indicators when evaluating bids. Moreover, all supplier contracts include specific clauses in

the General Terms and Conditions relating to the counterparties' commitment to human rights, personal safety, the environment and corruption.

While the work is being done and after it has been completed by the supplier, Endesa monitors the performance in order to manage the relationship and the contract in accordance with the established requirements. Depending on how the supplier performs, management actions applicable to the contract are implemented, aimed at promoting excellent performance.

## ESG Pillars

### Human Rights

There was pioneering approval of Endesa's Human Rights Policy in 2013. It was updated and again approved by the Board of Directors on 21 December 2021. This Policy complies with the United Nations Guiding Principles on Business and Human Rights and is focussed on the creation of sustainable value throughout the entire value chain, on its business activity and the operations undertaken by those working for Endesa, both managers and employees.

The policy consists of twelve principles covering two major areas: Employment practices, and communities and society. These principles were inspired by the Universal Declaration of Human Rights and the conventions of the International Labour Organization with regard to human and social rights and were corroborated by independent experts.

To ensure compliance, the supervision of the principles was undertaken by means of a due diligence procedure. This due diligence methodology reviews the alignment of

Endesa's activities with its Human Rights Policy principles, and includes stakeholders including employees, trade unions, women, migrant workers, minors, people with disabilities, suppliers, contractors and local communities. Endesa undertook an initial human rights due diligence process in 2017 to assess the level of compliance of its policies and Guiding Principles. The process was repeated in 2020 to maintain a commitment to ongoing assessment. All activities in Spain and Portugal were assessed, including the generation, distribution and retailing of electricity, supply chain management, asset purchase and corporate functions. In order to measure the effectiveness of human rights management systems and governance structure in all operations, and following some of the actions included in the improvement plan implemented during the due diligence cycle in the human rights management system for 2020-2022, in 2022 Endesa conducted an installation-level due diligence pilot programme.

### Corporate governance and ethical conduct

With a view to ensuring its commitment to Sustainability, Endesa has a sustainability management and governance system in place that applies to all areas of the company; in 2020, this was reflected in the creation of a Sustainability and Corporate Governance Committee.

Endesa's Sustainability and Corporate Governance Committee is responsible for assessing the Board of Directors and supervising aspects relating to sustainability, including human rights, diversity, the strategy for social action, the company's corporate governance strategy and climate change.

In order to guarantee compliance with ethical standards and principles, as well as with current legislation, both internally and in its external relations, the company also has a Code of Ethics and a Zero Tolerance Plan Against Corruption, which stand as the pillars of ethical culture and integrity. To guarantee compliance, Endesa provides all its stakeholders with a Whistleblowing Channel, accessible via its website and on the intranet, so all stakeholders may securely and anonymously report any irregular, unethical or illegal conduct which, in their opinion, may have occurred in the course of the Company's activities.

### Occupational health and safety

Endesa considers occupational health and safety to be both a priority objective and an essential value to be preserved at all times for all those working for the Company, without distinguishing between its own personnel and those employed by partner companies.

The integration of Occupational Health and Safety (OHS) into Endesa's strategy can be seen in the implementation of occupational health and safety policies in all the

companies that make up the company, as well as in the implementation of specific work plans. To guarantee that the policies regarding safety are correctly implemented, Endesa has implemented a safety inspection plan encompassing all levels of the company. All this is included in Endesa's Occupational Health and Safety Management System (OHSMS), which operates in accordance with the ISO 45001 standard.



9.

# Technology and innovation

## Investment in innovation

Endesa is making considerable investments to improve its platforms, processes, systems and tools, always paying the utmost attention to cybersecurity, personal data protection and, of course, raising the standards of security, business continuity and operational efficiency.

## Innovation model

The company has an open innovation model for the purpose of finding top-quality ideas for the development of innovative solutions to transform the current energy model.

## Enel Innovation Hub Europe

In November 2022, a new headquarters was opened in Barcelona with a view to boosting and strengthening relationships and opportunities for collaboration with the innovation ecosystem, *start-ups* and innovative SMEs in Catalonia.



# Innovation and digitalisation

Endesa is firmly committed to innovation and digitalisation, elements that it considers strategic in order to address present and future challenges across all areas of the company. Endesa's digital transformation encompasses its assets, customers and employees. In a context in which the pandemic significantly accelerated innovation and digital transformation, Endesa is investing considerably in improving platforms, processes, systems and tools, paying maximum attention to cybersecurity, the protection of personal data, and of course, raising the standards of security, business continuity and operational efficiency.

New technologies such as robotics, *blockchain*, *speech analytics*, *machine learning*, robotic process automation (RPA), virtual assistants, biometrics and *Big Data*, and new approaches to work such as *agile* methodologies,

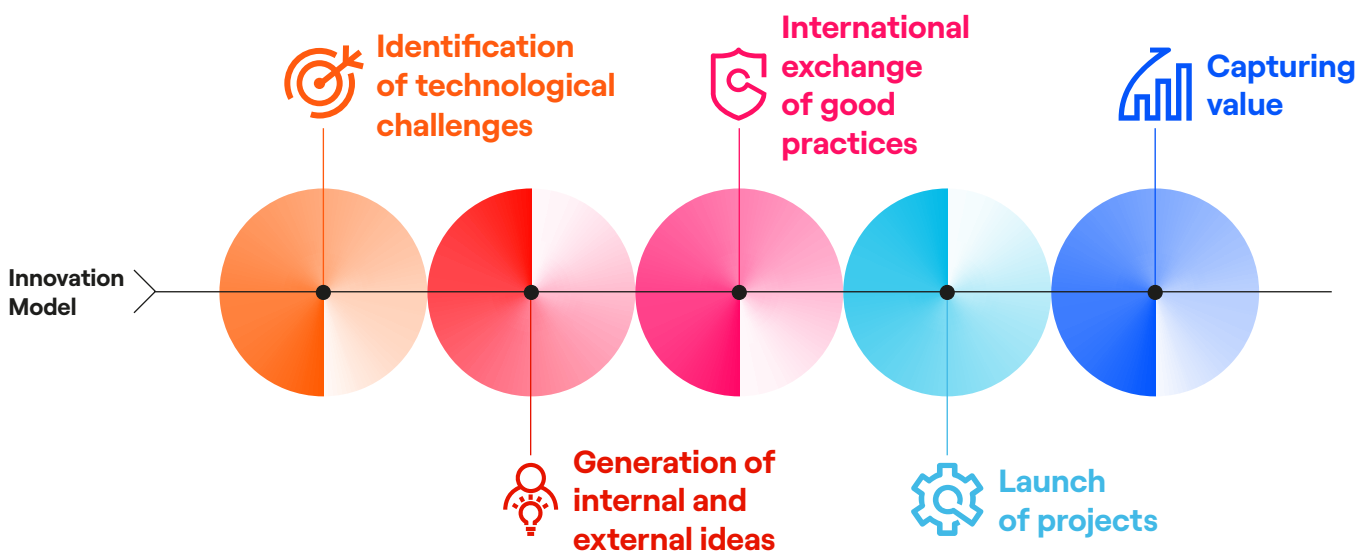
telecommuting and *data-driven* approaches are already part of our DNA, since they are a key feature of the day-to-day life of all employees. Data management is an essential pillar of business management and, for Endesa, plays a key role in the decision-making process, both for the preparation of in-depth analysis and for discovering operational improvements within the company's lines of business.

Digitalisation is therefore one of the key features of the 2023-2025 Strategic Plan as a mainstay of business development. In fact, digital strategy is geared towards maximising margins and reducing operating expenses, with a view to enhanced efficiency in order to support the energy transition, thus enabling new uses for energy and new ways of managing it by making it increasingly accessible to more people.

## Innovation model

Endesa has an open innovation model for the purpose of finding top-quality ideas for the development of innovative solutions to transform the current energy model. Open innovation is a new model used by companies to relate to external players (universities, *start-ups*, research centres, other companies in the same or a different sector, etc.) to promote collaboration and the sharing of ideas and expertise.

Endesa's innovation activities are undertaken in close collaboration and synergy with the rest of the Enel Group, taking advantage both of the Group's own laboratories and the best research centres, universities, suppliers and emerging national and international companies.



The following is a summary of Endesa's innovation model:

- **Identification of technological challenges:** In close collaboration with the Business Units and after an analysis of all the business and technology trends available on the market.
- **Generation of ideas:** To meet the challenges, we work on two levels, internal and external ideas:

Internal channels to generate ideas	Description
<b>Open Innovability</b>	<ul style="list-style-type: none"> <li>• An Enel Group platform for launching innovation and sustainability challenges, for both employees and the global innovation community.</li> </ul>
<b>Innovation Academy</b>	<ul style="list-style-type: none"> <li>• A specific programme with the aim of training employees in methodologies and work skills, which enable them to support the innovation culture in their field.</li> </ul>
<b>Open Power Space</b>	<ul style="list-style-type: none"> <li>• A space created as a benchmark collaborative meeting point at the various Endesa workplaces. In this unique environment, the creative processes that emerge from employees, partners and external collaborators are shared, disseminated and launched.</li> </ul>
<b>Make it Happen</b>	<ul style="list-style-type: none"> <li>• A global entrepreneurship programme within the Enel Group, which offers Endesa employees the opportunity to become entrepreneurs within the company.</li> </ul>
<b>Challenge Driven Sessions</b>	<ul style="list-style-type: none"> <li>• <i>Workshops</i> on the application of innovative methodologies (Creative Problem Solving, Design Thinking, Lean Start-up) to find innovative solutions and approaches to the company's challenges.</li> </ul>
<b>Innovation Ambassadors Network</b>	<ul style="list-style-type: none"> <li>• Consists of Company employees who voluntarily receive specific training to become drivers of innovation within their field.</li> </ul>
<b>Participation in the Enel Innovation Communities</b>	<ul style="list-style-type: none"> <li>• Each of the communities is dedicated to a specific innovation theme: Artificial intelligence, robotics, drones, <i>blockchain</i>, Circular Economy, etc. In total, there are sixteen communities in which employees from the different Business Areas participate by sharing their projects, experiences and points of view. They also regularly host open events to which experts are invited to present their initiatives.</li> </ul>

- **International Best Practice Sharing:** Through working groups in which different companies from all the countries of the Enel Group are involved. Success stories are shared, which enables us to stay at the forefront of the various activities and technologies worldwide.
- **Project launches:** After they have been assessed by Endesa's experts (in accordance with a common methodology based on the initiative's value creation), if

External channels generating ideas	Description
<b>Entrepreneurs</b>	<ul style="list-style-type: none"> <li>• Enel Innovation Hub Europe: With physical locations in Madrid and Barcelona, and in coordination with the global Enel Innovation Hubs network, it is responsible for developing a relationship with the European entrepreneurship ecosystems that are relevant to the Enel Group, including ecosystems in Spain and Portugal. It also undertakes the prospecting of European SMEs and <i>start-ups</i> that can contribute to achieving goals and meeting innovation challenges identified by the Group's Business Lines and Group companies. Enel Innovation Hub Europe units form part of a network of ten Innovation Hubs deployed by the Enel Group at key enterprise centres and strategic markets for the Group around the world: Spain (Madrid and Barcelona), Brazil, Chile, Israel, Italy (Milan, Pisa and Catania) and the United States (Boston and Silicon Valley).</li> <li>• Sponsorship and promotion of key events that are emerging as meeting points for companies, entrepreneurs and investors. Endesa thus aims to strengthen, encourage and support the entrepreneurial ecosystem and promote innovation and the creation of real business opportunities.</li> </ul>
<b>Associations and working groups</b>	<ul style="list-style-type: none"> <li>• Collaboration with a number of technology platforms and working groups promoted by various administrations to share experiences in different areas and technologies.</li> </ul>
<b>Suppliers</b>	<ul style="list-style-type: none"> <li>• Endesa actively works with its suppliers with the aim of developing and incorporating new disruptive solutions emerging from the range of projects. The Innovation by Vendors programme deserves special mention. Specific challenges are set for suppliers in order to validate innovative solutions in a shared manner and through full mutual cooperation</li> </ul>
<b>Communities of experts</b>	<ul style="list-style-type: none"> <li>• Through innovation challenges launched on the Open Innovability platform.</li> </ul>
<b>Other sectors</b>	<ul style="list-style-type: none"> <li>• Endesa participates in innovation forums with other sectors.</li> </ul>

the evaluation is positive the ideas are converted into projects which then embark upon a structured management and monitoring process.

- **Capturing value:** Once the projects have been successfully completed, they move on to production in order to create value for Endesa. Endesa also follows a prudent policy with regard to the protection of intellectual property.

# Endesa and entrepreneurs

Endesa remains committed to working with entrepreneurs and *start-ups* because of their capacity when it comes to disruptive innovation, their use of technology, their *know-how* and, most importantly, their agility in developing and bringing products and services to market with the shortest

possible turnaround time. Our relationship model is mainly based on the development of collaborations aimed at establishing commercial agreements with *start-ups*, known as Venture Clients.

## 10 innovation hubs throughout the world

As part of the Enel Group, Endesa benefits from the activity of the Group's ten Innovation Hubs, and mainly the Enel Innovation Hub Europe which, as of this year, is physically located in two places: Madrid (opened in 2017) and Barcelona (opened in 2022). These Innovation Hubs are located in significant centres of entrepreneurship and in the group's strategic markets around the world: Spain (Madrid and Barcelona), Brazil, Chile, Israel, Italy (Milan, Pisa and Catania) and the United States (Boston and Silicon Valley). The Enel Innovation Hub Europe is responsible for developing relations with the corresponding entrepreneurship ecosystems in Europe, including the entrepreneurship ecosystems of Spain and Portugal, markets in which Endesa is present and searching for European *start-ups* and SMEs capable of responding to the challenges presented by Endesa, as well as other Enel Group companies.

In November 2022, the Enel Innovation Hub Europe opened its headquarters in Barcelona, where the main objective is to boost and strengthen relations and collaboration opportunities with the innovation ecosystem, *start-ups* and innovative SMEs in Catalonia, an area of special significance for Endesa. This *hub* is located in the Endesa building in Barcelona and will develop activities that promote interaction between entrepreneurs and the Group's innovation teams, as well as developing the Company's innovation culture. A unique space like the building's modernist room, the "Espai Endesa", will be used by the *hub* to host innovation and entrepreneurship events. Of Endesa's collaborations in 2022 with *start-ups* and SMEs from a number of countries, as well as of other ENEL group companies with Spanish and Portuguese *start-ups* and SMEs, the following deserve special mention:

### Collaborations

<b>Aerones</b>	Latvia	Inspection, cleaning and repair of wind turbines using advanced technology and robotics.
<b>Alea Soft</b>	Spain	Artificial intelligence applied to processes in the Trading area.
<b>Alesea</b>	Italy	Smart cable reel monitoring devices.
<b>Appfollow</b>	Finland	Solution for the automatic management of comments received on Endesa's <i>apps</i> .
<b>Bamboo Energy</b>	Spain	Algorithms to promote the participation of small and medium industrial consumers in local flexibility markets (European project CoordiNet-Cascading Funds).
<b>Biodiv Wind</b>	France	Bird protection system in wind farms.
<b>Bioseco</b>	Poland	Bird protection system in wind farms.
<b>DAIL Software</b>	Spain	Solution for the Trading area, based on natural language processing (NLP).
<b>Dinnteco Spain</b>	Spain	Innovative system for lightning protection in wind turbines.
<b>Donecle</b>	France	Testing and development of operational solutions on overhead lines using drones (European project Aerial-Core).
<b>Enefgy</b>	Spain	Energy consumption monitoring for residential consumers, including peer-to-peer comparison and personalised advice on savings opportunities.
<b>EOS Energy Storage</b>	US A	Hybrid cathode batteries.
<b>EPSILINE</b>	France	Air velocity measurement using a LIDAR system.
<b>ESS</b>	US A	Iron redox flow batteries.
<b>FUVEX</b>	Spain	Long-range inspections of airlines using fixed-wing drones (European Aerial-Core project).
<b>Karten Space</b>	Spain	Processing of satellite images with applications in different business areas.

## Collaborations

<b>Minerva</b>	USA	Analysis of <i>online</i> feelings to help and guide customer service agents at <i>call centres</i> .
<b>Nvisionist</b>	Greece	Bird protection system in wind farms.
<b>Nymiz</b>	Spain	Anonymisation and pseudo-anonymisation of sensitive data in customer documents while respecting the nature of the original documents.
<b>Omniflow</b>	Portugal	Smart pole that consists of lighting, surveillance and telecommunications services for applications in <i>smart cities</i> .
<b>Ping Services</b>	Australia	Detection of wind farm blade problems.
<b>Prati Armati</b>	Italy	Protection of slopes and revegetation of damaged soils with selective hydroseeding methods.
<b>Qilimanjaro</b>	Spain	Quantum Computing solutions applied to energy management processes.
<b>Reiwa</b>	Italy	Autonomous photovoltaic module cleaning robot.
<b>Rosi</b>	France	Recycling of photovoltaic modules.
<b>Serikat</b>	Spain	Anonymisation and pseudo-anonymisation of sensitive data in customer documents while respecting the nature of the original documents.
<b>Smappee</b>	Belgium	Monitoring of consumption to reduce consumption levels and increase energy efficiency.
<b>SMART-i</b>	Italy	Improvement of the active safety of workers through the use of artificial vision systems.
<b>Solar Recycling</b>	Spain	Recycling of photovoltaic modules.
<b>Veridas</b>	Spain	Use of voice biometrics as a customer authentication system in call centres.
<b>VES Robotics</b>	Spain	Testing and development of operational solutions on overhead lines using drones (European project Aerial-Core).
<b>Vitirover</b>	France	Autonomous and automatic clearing and stripping robot used in photovoltaic plants.
<b>Zepren Solutions</b>	Spain	Bird protection system in wind farms.

In the model that focuses on open innovation and collaboration with *start-ups* promoted by the Enel Group, Endesa acts as a growth platform for the *start-ups*. The constant communication between them and Endesa's experts during the project development phase promotes the creation of value, as well as providing new challenges and ideas, in a framework of mutual benefit for both entrepreneurs and the company.

Endesa's firm commitment to entrepreneurship is manifested in the sponsorship for the tenth consecutive year of "South Summit", the largest innovation and entrepreneurship exhibition in southern Europe, which

took place between 8 and 10 June 2022. This year's edition had 15,400 participants from more than 120 countries, as well as having all its content in virtual format to achieve greater dissemination and impact. Endesa presented a number of initiatives that are under development to achieve the goal of being a Net Zero company by 2040, in which entrepreneurship plays an important role in our strategic axes for energy transition: Innovability, Decarbonisation, Electrification, Digitalisation and People. There should be special mention for the "Endesa Start-up Lovers" meeting, a *networking* space to connect entrepreneurs who want to create new companies.



**15,400**  
participants in the South  
Summit



# Technological projects

## Generation

The main innovation projects developed in 2022 with regard to Generation area were the following:

Projects	Description
<b>Pioneering MW-scale demonstration projects for a number of innovative energy storage technologies</b>	<ul style="list-style-type: none"><li>• Second Life project at the thermal power plant in Melilla, for the use of second-life batteries from electric vehicles as stationary storage that was launched at the beginning of 2022.</li></ul>
	<ul style="list-style-type: none"><li>• Vanadium flow battery demonstration project, developed at the Son Orlandis photovoltaic plant in Mallorca.</li></ul>
	<ul style="list-style-type: none"><li>• Iron flow redox and hybrid cathode battery demonstration projects in the Canary Islands and feasibility studies for energy storage technology in compressed liquid air on the island of Tenerife.</li></ul>
	<ul style="list-style-type: none"><li>• Other important developments featured the launch of new initiatives and projects in the area of green hydrogen generation as a key tool for decarbonisation in the industrial sector.</li></ul>
<b>Robotics projects to improve operation and maintenance activities in generation plants</b>	<ul style="list-style-type: none"><li>• Using robotics to make improvements in inspection activities during maintenance work in generation plants, both with regard to technical capacity, so as to be able to inspect areas that were previously not accessible, and reducing risks to people, by restricting access to intrinsically dangerous areas, such as work done underwater, in confined spaces, or at height.</li></ul>
	<ul style="list-style-type: none"><li>• There was continued validation of solutions based on ground robots and autonomous drones for the inspection of ducts and channels in hydraulic power plants.</li></ul>
	<ul style="list-style-type: none"><li>• Finally, the company worked with a number of <i>start-ups</i> on the development of specific solutions for on-site inspection of wind farm components, including wind towers and the detection of problems on blades, as well as photovoltaic modules using thermography from autonomous robots and piloted drones.</li></ul>
	<ul style="list-style-type: none"><li>• A number of pilot schemes are being developed focussing on support in the exploitation of photovoltaic plants and this involved developing specific projects for the validation of solutions for the automatic cleaning of photovoltaic modules and for the automatic clearing and stripping of plants in solar photovoltaic plants.</li></ul>





Projects	Description
<b>Agrivoltaic pilot projects</b>	<ul style="list-style-type: none"> <li>There has been development of this type of project in five plants in Andalusia, Extremadura and Murcia involving the study of the best integration designs to reconcile agricultural use on land occupied by photovoltaic plants.</li> </ul>
<b>New sustainable processes to reduce environmental impact</b>	<ul style="list-style-type: none"> <li>Validation of innovative processes for the biological processing of soils and finding more environmentally sustainable solutions for use in thermal plants still operating or in the processes of being shut down with the development of 3 pilot schemes using different technologies in the As Pontes, Compostilla and Melilla plants.</li> </ul>
<b>Flexibility project in hydroelectric plants-Hydroflex</b>	<ul style="list-style-type: none"> <li>Two demonstration projects, one at the Les Illes flowing water plant and the other at the Guillena pumping station.</li> </ul>
<b>Development of machine learning models in wind power</b>	<ul style="list-style-type: none"> <li>Development of <i>machine learning</i> models to improve predictive maintenance with regard to wind energy.</li> </ul>
<b>Innovative system for protection against lightning</b>	<ul style="list-style-type: none"> <li>Pilot project for the validation of a new system for protection against lightning in wind turbines.</li> </ul>
<b>Nanowings Project</b>	<ul style="list-style-type: none"> <li>New anti-icing coatings for the protection of wind turbine blades.</li> </ul>
<b>Somosclean Project</b>	<ul style="list-style-type: none"> <li>AI solution for improving the programming for washing photovoltaic modules.</li> </ul>
<b>AI4ControlRoom Project</b>	<ul style="list-style-type: none"> <li>This consists of the development of an AI system to support operations in Endesa's renewable control room.</li> </ul>
<b>AI4Archaeology Project</b>	<ul style="list-style-type: none"> <li>The objective is the automatic detection of archaeological remains in areas with growth of renewable energy.</li> </ul>
<b>Systems to improve the protection of birdlife-WEBB Project</b>	<ul style="list-style-type: none"> <li>Demonstration project for new systems to improve the protection of birdlife in the areas surrounding wind farms, based on cameras and artificial intelligence.</li> </ul>
<b>AI4Safety Project</b>	<ul style="list-style-type: none"> <li>Use of AI technologies and camera images to monitor unsafe behaviour in the construction of new plants and for the operation of active conventional plants.</li> </ul>
<b>End-of-life projects for renewable assets with a circular approach</b>	<ul style="list-style-type: none"> <li>This consists of the development of an industrial battery recycling plant in collaboration with Urbaser and another for recycling wind blades in collaboration with Prezero within the framework of the Futur-e project associated with the site of the closed down Compostilla coal-fired plant.</li> </ul>
<b>New systems for the pre-assembly of photovoltaic modules</b>	<ul style="list-style-type: none"> <li>Development of new systems for the pre-assembly of photovoltaic modules to reduce the time required to build photovoltaic plants.</li> </ul>
<b>CEIDEN Platform</b>	<ul style="list-style-type: none"> <li>In the nuclear field, we are participating in a number of R&amp;D&amp;i programmes including the EPRI nuclear programme, the CEIDEN platform and the Nuclear Energy Committee for the Nuclear Forum.</li> </ul>



# Distribution

Distribution projects were developed in 2022 in accordance with the following guidelines: Strengthening security of supply, improving service quality and responding to future customer demands through the development of smart grids, remote management and grid automation. The main projects in 2022 involved the following areas of action:

Projects	Description
<b>Digitalisation of distribution networks</b>	<ul style="list-style-type: none"> <li>• NDT-Network Digital Twin: Highly computerised digital replication of physical assets and their management, development and maintenance processes.</li> <li>• Grid Blue Sky (GBS): Development of technological solutions for more efficient process execution. These solutions are organised into 3 pillars: Asset Owner, Asset Operator and Customer Engagement.</li> </ul>
<b>Flexibility projects</b>	<ul style="list-style-type: none"> <li>• Coordinet Project: To improve collaboration between transmission and distribution grid operators and electricity consumers to contribute to the development of a smart, secure and more resilient energy system. And to do so by exploring the possibilities offered by the flexibility to use the grid infrastructure more efficiently. The Spanish pilot scheme was conducted at five locations: Cádiz, Málaga, Murcia, Alicante and Albacete, where different mechanisms were tested to study how the introduction of underutilised resources into the market may generate value for their owners and for the system as a whole. The flexibility provided by more than 1,100 MW (combined generation from renewable plants, cogeneration plants, batteries, municipal and business consumption) was leveraged to contribute to local congestion management and voltage control within the system.</li> <li>• Flow Project: The project seeks to test new services for the distribution company making use of the mass implementation of electric mobility and to provide flexibility services through different electric vehicle charging stations connected to the distribution networks on the island of Minorca.</li> <li>• BeFlexible Project: This aims to overcome existing limitations by applying versatile solutions that will enable distribution networks to adapt to future scenarios. It will promote flexible services that provide benefits to all those involved in the energy market by responding to all manner of consumer needs. In the case of the Edistribución Redes Digitales, S.L.U. use-case demonstrator, a study will be made of the flexibility services from electric heaters installed in homes in the city of Zaragoza.</li> </ul>
<b>Projects and proofs of concept for network innovation</b>	<ul style="list-style-type: none"> <li>• Aerial-Core project: It involves the development of an integrated aerial cognitive robotic system (a drone) that will have capabilities within the range of the operation, handling grid elements with a robotic arm and safety in the interaction with people.</li> <li>• Smart5Grid project: The Spanish demonstrator is located at the High-Voltage/Medium-Voltage sub-station in the Garraf Nature Reserve (Barcelona province). The aim is to establish a safe area in volumetric terms, so that field technicians will be monitored by a real-time tracking system that will use a private 5G network. The project uses alarm signals to warn and make sure that no operators are near energised elements of the sub-station.</li> <li>• Resisto Project: The goal of the project is to minimise the impact of weather and other risks by increasing the resilience of the power grid through the use of sensors, prevention algorithms and autonomous drones in the Doñana National Park.</li> <li>• Project for the delimitation of Areas in Transformation Centres (Holoach): A high-precision monitoring system that helps prevent access to risk areas within enclosed spaces, such as transformation sites (medium-voltage/low-voltage).</li> <li>• Project for Noise Reduction in High-Voltage/Medium-Voltage Transformers (Sonobex): Noise reduction through the use of specialised materials.</li> <li>• Project for the Advanced Monitoring of High-Voltage Lines in forest environments, and high- and medium-voltage networks, the "Living Lab" in Garraf (Barcelona province) begins to be the scene of tests of different sensor technologies, for the calculation of both the maximum date for the line as well as its structural integrity.</li> <li>• Reset Project: Development of a low-voltage 4-branch Statcom converter. The aim is to reduce neutral currents and minimise technical losses from the grid.</li> <li>• RE2GRID Project: Inspection of sub-stations using autonomous drones with BVOLS flight and advanced monitoring and action on high-power transformers in order to contribute to improving the resilience of the power grid and minimise the impact of potential meteorological phenomena.</li> <li>• LEO Satellite project: Connectivity through low-earth orbit satellites to enable network automation and remote control in remote areas, thus providing global coverage where mobile phone or fibre optic networks are not available.</li> <li>• App Waste Crowdsourcing Project: Development of a digital tool (mobile application and management platform) for recording and reporting both waste detected and birdlife incidents in the vicinity of aerial networks in rural and forest areas to facilitate their subsequent management.</li> </ul>
<b>Endesa Red professorships in Energy Innovation</b>	<ul style="list-style-type: none"> <li>• The aim is to collaborate with universities in the holding of seminars and conferences, the development of Bachelor's and Master's degree final projects and research projects on topics relating to electricity distribution infrastructures (flexibility, safety and efficiency, storage systems, energy recovery, etc.) and the promotion/capture of talent among students.</li> <li>• There are professorships at the Polytechnic University of Catalonia, the University of Seville, the University of Las Palmas de Gran Canaria, the University of the Balearic Islands and the University of Zaragoza.</li> </ul>

# Retailing

The retailing projects launched in 2022 were in accordance with the following guidelines: Executing proofs of concept and pilot projects with the validation of basic ideas to new technology tests in real environments, providing new work approaches looking for areas of improvement and the optimisation of processes, focussing on the improvement of the value proposition for our customers. The areas of action for the main projects undertaken were as follows:

Projects	Description
<b>Única: First energy subscription model</b>	<ul style="list-style-type: none"> <li>Within a context of high volatility in energy prices, Project Única has become Endesa's firm commitment to offering energy to its customers at stable prices in the long term. Using digitalisation and <i>Big Data</i>, Endesa offers a customised individual price to each customer, without penalties, with 100% renewable electricity and neutral gas emissions, 100% digital, and it also includes a challenge plan that rewards efficient consumption.</li> <li>With this proposal, Endesa also offers additional services that can be included in the Única Project, including annual maintenance inspections, repairs and third-party services at discounted prices (for example: Netflix). It seeks to make life easier in homes through the use of new technologies.</li> </ul>
<b>GEA</b>	<ul style="list-style-type: none"> <li>Social and environmental innovation project for Endesa's customers, enabling them to choose the initiatives that they would like the company to support. Some of the initiatives promoted include the support for families with members suffering from Jacobsen Syndrome, Food Banks, support for the Endesa Forest and training for the employment of people at a risk of social exclusion.</li> </ul>
<b>Valuable 500</b>	<ul style="list-style-type: none"> <li>Joining the Valuable 500 initiative will enable Endesa to conduct an in-depth review of the accessibility of all its processes and service channels. The Company is specifically working on improving in-person service channels, the telephone and digital service channels, in collaboration with Fundación Ilunion, as well as improving the products and services offered to its customers so that they are accessible to the largest possible number of people and especially to those groups of people with disabilities.</li> </ul>
<b>RC4ALL</b>	<ul style="list-style-type: none"> <li>The RC4ALL (Responsible Consumption 4 All) project uses Artificial Intelligence and <i>Big Data</i> techniques to generate customised recommendations for Customers, with the aim of improving consumption efficiency, promoting responsible and efficient consumption, reducing energy consumed and unused, contributing to the decarbonisation of society and meeting the UN's Sustainable Development Goals (SDGs). This project is funded by the Ministry of Science and Innovation and is being developed jointly by Endesa and Comillas-IIT (Institute of Technological Research).</li> </ul>
<b>Voice biometrics at Call Centres</b>	<ul style="list-style-type: none"> <li>A pilot project that uses voice biometrics for customer authentication purposes at call centres, facilitating the validation of security policies in their interactions with Endesa, through a 2-step process:</li> <li>Enrolment: Asking the customer, after completing a transaction via Watson (AI) to create the customer's voiceprint after recording the conversation with an agent.</li> <li>Authentication: Identification of the telephone number used by the customer to call us and check the customer's voice (if enrolled) against the voiceprint assigned to this number.</li> </ul>
<b>Analysis of online sentiment in the call centre</b>	<ul style="list-style-type: none"> <li>This initiative enables the analysis customer sentiment and helps agents during customer calls by providing them with the necessary information in the customer service flow to reduce the average operation time, improve the quality of service and reduce customer dissatisfaction.</li> </ul>
<b>Customer data enrichment for activation on digital platforms</b>	<ul style="list-style-type: none"> <li>Measurement of improvement of results from digital campaigns through enrichment of Endesa's own data (<i>1st party data</i>) with data provided by a third party (<i>3rd party data</i>).</li> </ul>
<b>Anonymisation of sensitive data in customer documents</b>	<ul style="list-style-type: none"> <li>Setting up an automatic mechanism, fully integrated into the incoming Social Bonus application channels, that can recognise documents that are not required for this type of applications and anonymise sensitive information within them but without destroying them so that the nature of the document remains recognisable.</li> </ul>
<b>Integration with bank APIs</b>	<ul style="list-style-type: none"> <li>Solution for access through <i>APIs</i> to customers' bank data, thus enabling automatic management of direct debit payments. This initiative, in line with European PSD2 regulations, allows customers who wish to change their direct debit address in the private area of Endesa's website to select the bank they work with from a list and, with prior consent, access it with their passwords and automatically enter the data required for the change of direct debit address.</li> </ul>
<b>Confía</b>	<ul style="list-style-type: none"> <li>A project for the improvement of the management of vulnerable customers, developed jointly with Málaga City Council, the University of Málaga and a number of collaborators to improve the exchange of information between the Public Administrations involved, social services and energy companies.</li> </ul>
<b>Analysis of customers' website/app browsing behaviour</b>	<ul style="list-style-type: none"> <li>Customer Experience Analytics platform to track and visualise customer digital behaviours. There is an analysis of aspects such as user frustration, navigation fluidity, the degree of "<i>engagement</i>" with the <i>website/app</i>, the fluidity of interaction with forms, and the technical aspects of the <i>website</i> and the <i>app</i> (loading speed, response speed, validation errors, etc.).</li> </ul>

# 10.

# Our people

## Generating employment

With the recruitment of 648 people in 2022, Endesa has been confirmed as a company that generates employment.

## People are the focal point of our culture

Endesa's development plan is based on four pillars: Leadership and self-development, well-being, diversity and inclusion and acknowledgment.

## Online training

In 2022, traditional in-person courses were completely transformed into virtual courses that were accessible from anywhere. They were undertaken using all types of devices, with shorter formats and adapted dynamics.

## Working environment

In 2022, the focus was on improving the level of satisfaction and well-being, with the cycle followed being well-being-motivation-results.



Endesa had a workforce of 9,258 employees as at 31 December 2022, of which 9,238 were employed in Spain and 20 in Portugal. 2022 saw the incorporation of 648 people; the volume of new recruits is an indicator that shows Endesa as a generator of employment. In this regard, of the 648 recruits, 101 corresponded to employees who had previously had an internship in the company. 559 employment contracts were terminated, 75 corresponding to resignations, 265 to voluntary redundancy, 58 to retirements, 11 to dismissals and 150 to other types of termination.

#### Workforce as at 31 December

	2020	2021	2022
Spain	9,577	9,242	9,238
Portugal	14	16	20
<b>Total</b>	<b>9,591</b>	<b>9,258</b>	<b>9,258</b>

When breaking down the workforce by age, it can be seen that the majority of employees, 59.5%, are aged between 30 and 50. The average age of the workforce was 45.9.

#### Workforce by age

	2020	2021	2022
<30	352	506	569
30-50	5,264	5,565	5,505
>50	3,975	3,187	3,184
<b>Total</b>	<b>9,591</b>	<b>9,258</b>	<b>9,258</b>

It is worth mentioning that 97.63% of employment contracts were for an indefinite period, with a total of 9,039 contracts.

The large majority of the workforce works full time. The number of employees in full-time employment was 9,254, with 4 in part-time employment.

#### Distribution of employees by type of contract and working day as at 31 December 2022

	Men	Women
Indefinite contract	6,652	2,387
Temporary contract	168	51
Part time	2	2
Full time	6,818	2,436

The average time an employee stayed with the company is 17.2 years, while 73.7% of the workforce had been working for the company for over 10 years.

By gender, 73.7% of the workforce are men and 26.3% are women.

#### Workforce by gender

	Men			Women		
	2020	2021	2022	2020	2021	2022
Total	7,235	6,894	6,820	2,356	2,364	2,438
%	75.4	74.5	73.7	24.6	25.5	26.3

With regard to the composition of the workforce by professional category, 44% corresponded to administration and management personnel, followed by middle management with 41%, manual workers 13% and managers 2%.

**9,258**  
employees as at 31  
December 2022

**45.9**  
was the average age  
of the workforce

**97.6**  
% of employment  
contracts were  
indefinite

**26.3**  
% women

# Leadership and personal development

Endesa is committed to making people the focal point of its culture. The transformation of the business also implies cultural development, which enables us to accompany this change and face the challenges that lie ahead. To better project ourselves in this new scenario, Endesa has a cultural development plan based on four pillars: Leadership and self-development, well-being, diversity and inclusion and acknowledgment.

Leadership is a critical lever in any process of change. At Endesa, this is based on "Open Power" values (responsibility,

innovation, trust and proactivity) that are a feature of people management. Leadership is also developing, and in 2022 the Softleadership model was implemented, which is an emotional development based on caring for oneself, others and relationships. An empathetic, sensitive, gentle and inclusive leadership style that is based on 6 principles: Inspiring with meaning, communicating, active listening, nurturing trust, transparency and accountability.

## Leadership model

Development towards Softleadership places people at the centre, focussing on the strengths and talents of each individual, openly promoting recognition throughout the organisation and highlighting the potential of each person so that they can give their best. To demonstrate this change, the assessment process is now an open, participatory process for everyone, focussing on identifying their talents, promoting their development and making use of a *feedback* culture

### Behavioural assessment system

(No. of evaluations)

	2020	2021	2022
Open Feedback Evaluation (OFE)	8,301	7,816	7,855

Open Feedback Evaluation (OFE) focusses on Endesa's 15 competences, which are based on Open Power values. It is a process that lasts throughout the year with quarterly review periods structured into 3 areas:

- **Talent:** Designed for each person to identify the skills in which it is believed they excel.
- **Generosity:** Promoting feedback between colleagues for the purpose of recognise and promoting their development.
- **Action:** The person responsible assigns professional goals to his/her team members, who have the option of proposing their own goals.

Endesa promotes close leadership accompanied by a 360° evaluation process, which is open to the entire organisation in order to enhance the *feedback* exchange culture at all levels.

In addition to this process, there are the Management By Objectives (MBO) and the Annual Bonus (AB) evaluation systems, which apply respectively to managers and employees who receive variable remuneration and the Sales Force Objectives system, which affects all salespeople receiving variable remuneration, excluding the MBO and AB and other Remuneration by Objectives systems in force. 38.05% of employees participated in the assessment of objectives with variable remuneration in 2022.

### Variable remuneration objective evaluation systems

(No. of evaluations)

	2020	2021	2022
Management by Objectives for Managers (MBO)	201	190	202
Annual Bonus (AB)	2,725	2,608	2,615
Sales Force Objective (SFO)	409	405	505
Other Variable Remuneration systems	170	181	157

**38.05**  
% of employees  
participated in the  
assessment of  
objectives with variable  
remuneration

# Talent development

Endesa is committed to promoting talent development and personal and professional growth as part of its business strategy focussed on the sustainability of human capital.

Some of these actions are detailed below:

- **Onboarding:** The aim of this process is to facilitate the recruitment of new employees into the organisation, creating a sense of belonging from the very beginning and promoting well-being and motivation. A process that combines digitalisation to speed up the recruitment of the person into the company and with customised, continuous support. The objective is to provide him/her with the culture, values, transversal processes, tools and any information that makes their integration into the company easier.
- **Talent Engagement Programme:** A programme aimed at High Potential young people with the aim of creating and developing their leadership strengths through training and development initiatives that enable them to gain greater knowledge of and integration into the company's culture.
- **Softleadership:** A global programme aimed at implementing Softleadership, an empathetic, sensitive, gentle and inclusive leadership style, at all levels of the company. We identified 110 Softleadership ambassadors in Spain to serve as role models and facilitate the development of this leadership approach within the organisation. To achieve this, an action plan was drawn up that includes training activities, inspirational talks, meetings and communication activities in line with the 6 principles of Softleadership: Inspiring with meaning, communicating, active listening, nurturing trust, transparency and accountability.
- **Coaching:** Endesa continues to have a strong commitment to *coaching* through individual and group actions, undertaken mainly through the Internal Coaching Network. More than 52 internal *coaches* (of which 22 are also team coaches) accompany professionals in the company, making this a benchmark model in IBEX-35 companies. The network is a key group that not only organises *coaching* processes, it also provides internal training to transfer these skills to daily management.
- **Mentoring:** Continuing a line of action launched in previous years, Endesa has kept this knowledge transfer project in place which involves professionals with specific experience in a specific skill or area of knowledge tutor and mentoring other colleagues for a period of 3 to 6 months. In 2022, apart from the internal *mentoring* programme, an international *Mentoring*

project was held with Enel Peru, and a *cross-mentoring* programme together with other companies involving women with potential being mentored by leading figures from companies in different sectors.

- **Job Shadowing:** This development action, aimed at getting to know another area of the Company, consists of accompanying another professional of the Company in his/her day-to-day work for a certain period, sharing experiences and points of view. An annual campaign is launched for the entire organisation offering an opportunity to participate in this programme.
- **Talent Development Consultancy:** One of the greatest achievements in the field of Talent Development involves offering tailor-made solutions for the businesses that require them. In 2022, Endesa continued to strengthen its internal consultancy services, providing "ad hoc" solutions to business needs (organising workshops, team building, tailor-made seminars, etc.).
- **Succession Plans:** In 2022 Endesa continued with the identification of successors for the positions of greatest managerial responsibility within the organisation. Criteria are defined for this identification, including a requirement that at least half of the successors chosen for each plan should be women, thus contributing to meeting Gender Diversity objectives. Successors nominated in the Succession Plan have a catalogue of actions structured into three blocks of initiatives: Accompanied, formative and experiential. They choose the one they believe will have the greatest impact on their personal and professional development.
- **Total Rewarding:** This process promotes recognition management in a broad sense. It includes not only economic actions, but also training and implementation actions exclusively for those people who, due to their track record, attitude and performance, are to be recognised accordingly.

## Development actions

(No. of participants)

	2020	2021	2022
Active mentoring	88	100	42
Active Coaching	137	238	171
Active Job Shadowing	N/A	78	89
Manager Coach and Manager Coach+ workshops	219	407	200
Manager Coach III, Development Agent and Become a Softleader	N/A	N/A	42
Growing with Coaching and Coaching Tools for your Development	N/A	746	319
Empowerment processes People and business partners <sup>1</sup>	N/A	86	N/A

<sup>1</sup> Initiative terminated in 2021.

# Training

As part of its commitment to people, Endesa's learning strategy focusses on people by offering a comprehensive catalogue of learning activities to equip them with and improve the technical skills they need to enhance their personal development. This enables them to improve their performance and contribute to making the company a benchmark in the sector. Endesa has a fully updated catalogue with courses on the most avant-garde skills and techniques; with learning experiences that strengthen people's integral well-being; and with practical lessons that help them to work with new tools and technologies, and play a leading role in a new, more flexible, kinder, more responsible and empathetic organisational model.

Endesa encourages people to develop their ability to learn continuously and to promote and play a leading role in their own training. A new way of learning based on curiosity, openness and the ability to learn from experiences, as different personal and organisational changes occur; facilitating multi-disciplinarity and the dissemination of knowledge.

There has been a growth in learning communities on the eEducation digital platform, where it is possible to share knowledge and develop the social aspect as a meeting point for people. The content transcends the strictly professional with the development of new tools and skills to face the new model of hybrid work and a new gentle leadership.

There is evidence of comprehensive transformation of traditional in-person courses into virtual courses which are accessible from anywhere through all types of devices, with formats that have a shorter duration and adapted dynamics. There has been an increase in *online* learning content.

Training actions in 2022 addressed the needs uncovered as a result of a number of processes undertaken to ascertain

training requirements in order to ensure continuous and updated learning in the different categories defined and classified as *upskilling* and *reskilling*: Human Skills; Technical; Preventive and Prescriptive.

Within the framework of energy transition and decarbonisation, the strategic training plan in *reskilling* was completed in 2022. It had developed since 2019 with great success.

## Training in Endesa

	2020	2021	2022 <sup>(1)</sup>
Employees trained (n°)	9,444	8,876	9,526 <sup>(2)</sup>
Percentage of staff trained (%) <sup>(3)</sup>	98.5	95.9	98.2
Number of training events (n°)	4,418	5,387	5,694
<b>Total hours of training (hr)</b>	<b>348,700</b>	<b>406,917</b>	<b>422,962</b>
Direct and indirect investment (€ million)	30.8	34.3	36.1
Direct costs (€ million)	12.4	12.6	12.6

<sup>(1)</sup> In 2022, there was a change of criteria in the calculation of hours, and the hours of training for completed courses will now be taken into account, as well as the proportional hours of training on courses that were not completed. The criteria applied in the 2020 and 2021 data only corresponded to training hours for completed courses.

<sup>(2)</sup> This figure is higher than the total workforce as at 31 December because trained employees who had been absent in 2022 were also included.

<sup>(3)</sup> To calibrate the metric, this indicator identifies the people trained who were part of the workforce at the end of 2022.

To undertake this activity, Endesa invested €36.07 million in 2022, of which €12.58 million came in the form of direct costs for training activities.

In 2022, Endesa organised 5,694 training events, in which 9,526 employees participated. This activity involved 422,962 hours of training, with an average of 45.69 hours per employee.

## Commitment to people

# 36.1

million euros  
invested in training  
activities

# 5,694

training events held  
in 2022

# 9,526

employees  
participated in  
training events

# 422,962

hours of training organised  
throughout the year



## Training type and content

Training actions respond to the needs detected as part of different analysis processes to ensure continuous and up-to-date learning in the different types of training identified:

### Training in energy sustainability

A commitment to sustainable development is a core aspect of Endesa's activity. In this regard, training in this area acquires great importance with the design, development and delivery of courses. Endesa employees are expected to be able to assume the principles of sustainability in their professional and private areas of activity, and that by provoking a change in energy behaviour, they can become a benchmark for society. In 2022, there should be special mention for the 2nd edition of the Endesa Circular Economy School, a training activity designed to help explain how Sustainability has become a core

aspect of the business; in addition to the inclusion of learning in the circular economy, as an essential aspect for looking confidently towards the future and overcoming the transition towards increasingly sustainable and competitive models.

### Training in health and safety

Workplace risk prevention courses are mandatory for the entire workforce, combining *online* and in-person events. In 2022, Endesa organised a total of 83,144 hours of training in occupational health and safety for its in-house staff. 8,552 people attended training courses with regard to prevention. In addition to conducting standard health campaigns, *safety walks*, safety inspections and internal and external audits, a number of basic principles, information, preventive recommendations and awareness-raising videos were disseminated. Knowing how to detect unsafe situations is





a key aspect of Endesa's culture and requires everybody's commitment and participation.

Physical security services in installations (surveillance) are provided by external personnel and their organisation adapts to the need to cover the services necessary to safeguard the company's assets at all times.

In any case, these services are provided by professionals who are duly accredited and authorised by the Ministry of the Interior. As part of their training, aspects regarding private security legislation, the basic rights of people and human rights are also included.

## Environmental training

In 2022, emphasis continued to be placed on environmental training with the organisation of 1,666 hours of training for Endesa employees (involving 834 employees).

## Training in digitalisation

Endesa's digital skills training programmes enable people to expand their technical knowledge in IT to include the change management skills shaping the new paradigm for the digital era and a new working model. The aim is to have a more systemic vision and to achieve a sustainable, positive impact. Digital transformation training in 2022 reached record levels, with 45,905 hours of training organised.

## Technical training

One of Endesa's main commitments that has remained unchanged over the years is technical training for

employees. This enables them to continue with their professional development and provides them with the necessary qualifications to perform their duties. In 2022, 287,985 hours of technical training were imparted in the fields of Conventional Generation, Renewables, Distribution, Supply, *Global Digital Solutions* (GDS), Procurement and Support Areas.

## Training of employees in Human Rights policies and procedures

There is an *online* Human Rights course available to all the workforce for the purpose of disseminating our commitment to and knowledge about human rights, as well as the actions that Endesa undertakes to respect these rights. In this regard, 620 hours of training were organised.

## Other training activities

As part of the training offered in management, social and leadership skills, Endesa provides employees with tools for their personal and professional development. This type of training is delivered transversally between the different lines of business and support areas. The number of hours of training in skills management programmes amounted to 134,976 hours in 2022. The focus was also on promoting diversity and inclusion (with 4,007 employees trained in diversity with the House of Inclusion and Dismantling biases), as well as training in ethics and transparency, which is an essential feature of our business culture.

**83,144**

hours of training with regard to occupational health and safety or in-house personnel

**45,905**

hours of training in digitalisation

**134,976**

hours in skills management training

**287,985**

hours of technical training

# Attracting and retaining talent

In 2022 Endesa participated both in events specialising in digital profiles and in different employment fairs to offer vacancies to young recent graduates, especially to those with STEM profiles. A dozen or so workshops were also organised for secondary school and university students to spark interest in STEM training and to promote the Endesa brand.

During the year, about 200 young talents took part in *Recruiting Day* actions which involved young people taking part in individual and group activities to showcase their skills, passions and career interests in a natural and fluid manner. The candidates themselves appreciated these activities immensely from the point of view of selection

and employer branding. Most of the candidates selected using this methodology were awarded a scholarship under the Endesa Scholarship Programme. In other cases, they were considered for vacancies.

In 2022, over 220 young graduates were included in this scholarship programme (25% more than in previous years). The training projects associated with the scholarships enabled students to maximise their development and raise their level of employability to continue on their career path. There is a commitment to trying to recruit as many scholarship students as possible. Interns at Endesa are also given the opportunity to learn and gain experience and knowledge that will be useful in helping them find their first job.

## Recruiting personnel

The objective of the selection process is to fill each vacancy with the most suitable candidate for the required profile. The profile not only takes into account the technical aspect of the position, but also abilities in line with corporate values.

Endesa promotes the participation of employees in the selection processes in order to favour internal mobility and provide development and learning opportunities for employees.

### Employees recruited

	2020	2021	2022
Total local employees joining the workforce over the course of the year	223	634	352
Total local Senior Manager (managers + middle managers) joining the workforce over the course of the year	132	271	255

## Remuneration policy

Endesa's remuneration policy is aligned with Spanish and international regulatory recommendations in the area of Corporate Governance. The main objective is to retain, attract and motivate the best talent, prioritising internal equality, external competitiveness and establishing remuneration in line with the best practices used on the market.

Endesa's remuneration policy ensures competitive and fair remuneration for its employees. Remuneration is determined following an analysis of external competitiveness based on wage surveys in the market by employing a job valuation methodology with criteria used by similar companies in terms of number of employees and turnover.

Ordinary or short-term variable remuneration for 2022 aimed to align the interest of the assignees with the company's strategy, with the aim of creating value for shareholders in the short term, supporting the definition and deployment of specific action plans aimed at achieving budgetary objectives, and ensuring the transparency and coherence of the objective allocation process.

In 2022 there continued to be transparency in communications with the staff during the salary review process. The budget, the launch of the process, as well as the result were communicated, with special emphasis on the gender perspective.

Endesa, in its objective of generating well-being for its employees, offers the following social advantages and benefits:

### Social benefits not required by law

(Thousands of euros)

	2020	2021	2022
Medical care	1,724	906	996
Cultural and recreational activities	1,031	971	1,087
Financing of electricity consumption	10,309	6,702	6,355
Non-occupational accident insurance	1,206	826	578
Pension funds	55,498	51,712	38,692
Other: (for example, length of service bonus, special grants, etc.)	15,895	10,408	10,094
Employees involved in the social benefits policy (expressed in number of employees)	9,591	9,258	9,258

## Endesa's commitment to diversity

Within the framework of its Diversity and Inclusion Policy and the company's Human Rights policy, Endesa rejects all forms of discrimination and is committed to ensuring and promoting diversity, inclusion and equal opportunities. Endesa spares no efforts in fostering and maintaining a climate of respect for personal dignity and individuality,

ensuring the highest standards of confidentiality as regards any information related to the private life of employees that it may become aware of. Therefore, as part of its compliance with the values and principles included in the Endesa Code of Ethics, and as part of this Code, the Company adheres to the following essential principles:

### Basic principles

- Non-discrimination.
- Equal opportunities and dignity for all forms of diversity.
- Inclusion.
- Striking a balance between personal, family and professional life.

In 2022, Endesa experienced no incidents involving discrimination, a factor that the company regularly reports to the Workers' Representatives

Likewise, there were no fines, sanctions or compensation for damages since there were no violations relating to workers' equal opportunities rights.

Endesa believes in diversity among its employees as an enriching factor. Endesa's respect for the approaches in its Diversity and Inclusion Policy (age, gender, culture and disability) is reflected in a progressive increase in the

number of women in the workforce, the incorporation of people of other nationalities and young people to rejuvenate the workforce, the recognition of people with the most experience and the integration of people with disabilities.

In 2022, Endesa worked on each of the following dimensions by taking a number of initiatives, as described below:



## a) Gender

Endesa promotes gender equality in all areas of the Company, focussing in particular on internal and external objectives related to gender as established in the 2023-2025 Strategic Sustainability Plan.

	2022	2023-2025 Targets		
		2023	2024	2025
Increase in the presence of women in positions of responsibility (% women)				
Management positions 20.0	20.0	18.9	19.5	20.2
Middle management positions 32.5-29.3	32.5	34.7	34.9	35.0
Promoting gender diversity as part of the selection processes (% women).	50.0	50.0	50.0	50.0
Promotion of gender diversity in the recruitment process (global % of women recruited)	38.0	38.5	39.0	39.5
Providing vocational guidance in STEM areas <sup>(1)</sup> for women		> 5,000 women involved in the 2023-2025 period		

<sup>(1)</sup> Science, Technology, Engineering, Mathematics.

On a monthly basis, the data and results of the actions undertaken in the area of gender diversity were published and performance was assessed with regard to the goals set for 2022. Compared to the previous year, the number of women in the workforce increased by 0.8 %, and the number of women in *middle management* positions rose by 1.1%. In the case of the number of women in *management* positions, the objective had to be adjusted because the

criterion for appointing *managers* changed from a model based on contractual conditions to a model based on the responsibility they have, in line with Enel Group criteria. The number of women on Endesa, S.A.'s Board of Directors increased by 5.7 %.

In 2022, women represented 38.2% of all new recruitment (1.2% higher than the year before).

## Women as a percentage of the total workforce

	2022	2021
Board of Directors	41.7	36.4
<b>% Management positions</b>		
Management positions	18.9	20.8
Middle management positions	34.9	33.8
<b>Selection processes</b>		
"Short List" <sup>(1)</sup>	51.5	53.0
Recruitment	38.2	37.0

<sup>(1)</sup> List of final candidates in selection processes.

Endesa has an Equality Plan that includes the Human Resources Policies for promoting the implementation of the actions required to facilitate the incorporation of women into decision-making positions with a greater level of responsibility.

The plan was negotiated and agreed with the Workers' Representatives and its implementation is monitored within the framework of the Equality Committee.

### It is divided into 4 sections:

- Measures for promoting equal treatment and opportunities between men and women.
- Measures on striking a work/life balance.
- Specific measures providing protection during pregnancy to mothers, the partner of the mother and to the new-born baby.
- Special measures for the protection of victims of gender-based violence and victims of terrorism.

Endesa also defined a Gender Diversity Action Plan, in line with the Diversity and Inclusion Policy, aimed at achieving the following three main targets: Increasing the presence of women in the Company, increasing their presence in positions of responsibility, and ensuring equality in wages and salaries. To reach these goals, a number of initiatives are being developed structured around four pillars:

### ATTRACTING TALENT

Incorporation of inclusive language and parity in selection processes through "Science, Technology, Engineering, Mathematics" (STEM) programmes such as "Back to school" and "Ella te Cuenta".

### RAISING AWARENESS

With actions such as "Radio We" (STEM round table with the Counsellor), "Conscious Decisions", "Training programmes against harassment" and the creation of the Endesa Women's Network.

### WORK-LIFE BALANCE

- An essential part of the Equality Plan and 68 measures included in the "5th Endesa Framework Collective Agreement".
- "Parental Programme".

### FEMALE LEADERSHIP

Through programmes such as "Woman Mentoring", "Cross Mentoring" and "Desayunos Interempresas" (Inter-Company Breakfasts).

Complementary internal and external communication actions were also undertaken, including Days of Diversity and the publication of the awards received in 2022 for STEM initiatives (such as the IT Pioneers award presented by the College of Telecommunications Engineers). The actions were followed up and their impact monitored through the Equality Committee, and with the production of external indexes such as "Bloomberg" (in which Endesa has improved its rating by 3.6 points compared to 2021) and "MERCOS".

## (b) Age

Endesa is working to acknowledge and manage generational differences, guaranteeing integration, motivation and the transfer of knowledge. With this in mind, in 2022 *onboarding* actions were organised aimed at young people who had just joined Endesa and programmes aimed at highlighting the importance of senior talent through knowledge transfer initiatives and recognition of

their experience; specifically, Our Greatest Values, an initiative aimed at employees over 55 years of age with exceptional contribution to their professional career, who receive recognition from the organisation, their direct manager and their colleagues, in the form of participation in experiential or business activities.



## c) Disability

Endesa undertakes initiatives to foster the integration of people with disabilities in collaboration with foundations specialising in this area. The main ones are the following:

Initiatives	Description
"Valuable 500"	Endesa was the first Spanish energy company in the Energy Sector to be included in the "Valuable 500" global disability inclusion initiative, undertaking more than 36 initiatives in 2022.
Addecco Foundation Family Plan	Counselling and health therapies for family members with disabilities. This plan provided personalised counselling and health therapies for 69 relatives of employees with a disability in 2022.
Randstad Foundation	Provision of specialist disability consulting and advisory services.
Prevent Foundation and Universia Foundation	Support for a number of scholarship programmes for students with disabilities.

These actions take the form of projects that promote the inclusion of people with disabilities in the labour market and support services for employees with disabilities (90 employees with a disability as at 31 December 2022, 0.99% of the total workforce at that date).

In addition to collaborating with foundations, Endesa has an officer responsible for centralising all issues and

providing service to both managers and employees in this area.

Endesa complies with current disability regulations, in accordance with Spain's General Law on Disability (Ley General de Discapacidad).

## d) Nationality

Endesa is committed to the acknowledgment, respect and integration of persons of different nationalities working for the company. Within this framework, it assigns expatriates a tutor from the country of destination to help them with their personal and professional integration.

To lend visibility to these initiatives, "Diversity Days" was held once again in 2022, and this year it continued to be organised mostly in virtual form via a global platform for all the countries where the Enel Group operates.

## Voluntary commitments to the Administration and other entities

Within the framework of voluntary commitments acquired by Endesa with the Ministry of Equality (hereinafter the Ministry), the following are worth special mention:

- **Company Equality Certification:** As part of Endesa's commitment to equality, in 2010 the Ministry awarded Endesa the "Company Equality" certificate, and it has been renewed every three years since then. Each year, the corresponding follow-up reports, which are required to maintain the award are presented and in 2022 the fourth extension of the certification was granted. Endesa is also part of the Network of Companies that are certified on account of their efforts with regard to Equality and has actively participated in the different initiatives promoted by this Network.

- **More Women, Better Companies Initiative.** Within the framework of the "More Women, Better Companies" initiative, with which Endesa has been collaborating since 2014, its affiliation to the 2019-2023 Protocol remains in force with a view to promoting the balanced participation of women and men in pre-executive and executive positions and on management committees. The Protocol contains quantitative objectives related to the presence of women in positions of responsibility, as well as qualitative commitments related to the promotion of technological vocations in girls, female leadership development programmes, employee awareness, measures to support parenthood, and visibility of female talent inside and outside the company. The targets established in this Protocol are monitored by means of biannual reports.
- **For a society free of gender-based violence initiative.**

The Company has also made commitments to other institutions and the objectives are reported publicly:

- CEOs in support of Diversity. Since 2019, Endesa has maintained its adherence to the CEOs for Diversity Alliance, promoted by the Adecco and CEOE foundations. On becoming a signatory to the Alliance, Endesa's CEO acknowledged diversity, equity and inclusion as core values that enrich companies and strengthen their competitiveness. Endesa is also committed to promoting diversity strategies, involving its Management Committees and creating a common outlook in terms of diversity.
- AEMENER (Women in Energy Network). In 2022, Endesa signed an agreement with the AEMENER association to promote female leadership and improve *networking*.

The actions and their impact are followed up and monitored by the Equality Committee, the Sustainability Committee and Corporate Governance and tracked by external indices, e.g. Bloomberg and MERCO.

The inclusion of LGBTQ+ employees adds to the wealth of diversities represented in Endesa where talent is valued regardless of identity, gender expression or sexual orientation.

With the aim of promoting an inclusive and respectful work environment, Endesa implemented awareness-raising actions in 2022 and created an LGBTQ+ community with the support of RED! The largest and most widespread network of companies and professionals in Spain in favour of diversity and the inclusion of LGBTQ+ staff in the workplace.



## Promoting diversity through employee communities

2022 saw the promotion of the creation and implementation of communities that promote different aspects of diversity. There are currently 16 operating communities with more than 3,000 members. These communities are an example

of diversity as they include participants from different areas, ages, professional categories, etc., and have contributed to improving the climate and employee engagement.

## How do our employees feel?

63

out of 100 was the assessment of well-being in 2022 according to the Well-being survey

70

% of the workforce (6,368 employees) enjoyed a hybrid work model

11,245

participants in the Endesa Lovers Days

## Working environment

Endesa continued to promote the new work model. In 2022, more than 70 % of the workforce (6,368 employees) enjoyed a hybrid work model combining remote work with in-person work at the offices. A number of surveys, interviews, *focus groups* and initiatives were conducted at different levels within the organisation to gauge how employees felt and how they were adapting to remote working and the partial return to on-site work, including questions about workload, well-being, leadership, and their motivation and commitment to Endesa.

Survey results were positive. For example, in the "Open Listening" climate survey, participation was 71.4 %, 17 % higher than last year. Employee commitment to work scored 83.2 % and 94.9 % in the dimension relating to professional and personal well-being.

Endesa's priority is to place people at the heart of its business and with this in mind the focus in 2022 was placed on improving the level of satisfaction and well-being, following the "well-being-motivation-results" cycle that feeds back on itself (the more well-being, the better the motivation and the better the results).

To improve the climate and satisfaction, initiatives were developed by the People and Organisation Unit and a Global Well-being Plan was launched focussed on caring for people and personal well-being, both at work and in private life, with the aim of increasing the level of tranquillity and reinforcing a sense of belonging. To reinforce these

initiatives, employees' needs were listened to by means of a "Well-being" survey. In 2022, the survey obtained a wellbeing rating of 63 out of 100. The Well-Being Plan itself includes regular questionnaires on how employees feel in their professional and personal environment on a physical, psychological and relational level.

Further initiatives were also undertaken, including the Endesa Lovers Days, which were held from 21-30 September 2022 and in which there were 11,245 participations with a satisfaction of 7.6 out of 10. Those were days that reminded us that Endesa places people at the centre by focussing on their satisfaction and well-being. Numerous events were launched simultaneously in all Endesa territories, full of music, entertainment and relaxation. This helped reconnect people with the Company's cultural development strategy, based on 4 pillars: Leadership and self-development, diversity, well-being and acknowledgment.

A boost was given to the creation and implementation of communities that segment employees by stakeholder community (women's community, data experts, LGBTI community, Energy Linkers, inclusion community, etc.). This also contributed to improving the workplace climate and employee engagement.

All of the initiatives undertaken in 2022 were monitored regularly to ensure that they conformed with the planning and targets established.





# 11.



# Other activities

## Commitment to digitalisation

Endesa envisages developing investment plans in digitalisation in all its businesses amounting to €1,400 million between 2023 and 2025.

## Management of cybersecurity

Endesa has a holistic, systemic model in place to act on and manage cybersecurity, encompassing all the Group companies.

## Procurements

In 2022, Endesa collaborated with 4,124 suppliers, with this total including all suppliers subject to delegated purchases.

# Digital transformation and cybersecurity

Endesa is investing in digital transformation to become an organisation that is fully connected to the digital ecosystem, automating tasks and achieving the smart, agile optimisation of customer-centred efficiency. The integration of new technologies enables interconnection between people and objects, providing new access to both traditional and innovative products and services.

The promotion of digitalisation in Endesa's different business lines acts as an engine to accelerate energy transition.

New digital technologies enable the integration of services such as real-time monitoring and control of energy production and consumption, which will give access to adjusting supply and demand more efficiently, as well as integrating renewable energy sources, which will lead to greater diversification and optimisation of the electricity infrastructure, a reduction in costs and improved efficiency.

Endesa is very aware of this reality and of the opportunities it presents and, therefore, digital transformation is an essential feature of its sustainability plan. The plan's strategic lines of action coincide with Endesa's strong commitment to the pursuit of continuous efficiency through the digitalisation of its businesses.

Endesa plans to develop digitalisation investment plans across all its businesses amounting to €1,400 million between 2023 and 2025. The most significant investment will be in Distribution, with over €1,000 million allocated to the digitalisation of the business, accounting for more than 71% of the investments proposed during this period. Endesa placed digitalisation at the heart of its entire value chain: Generation, Distribution, Retailing and Endesa X are the key drivers in improving efficiency.



## Corporate assets

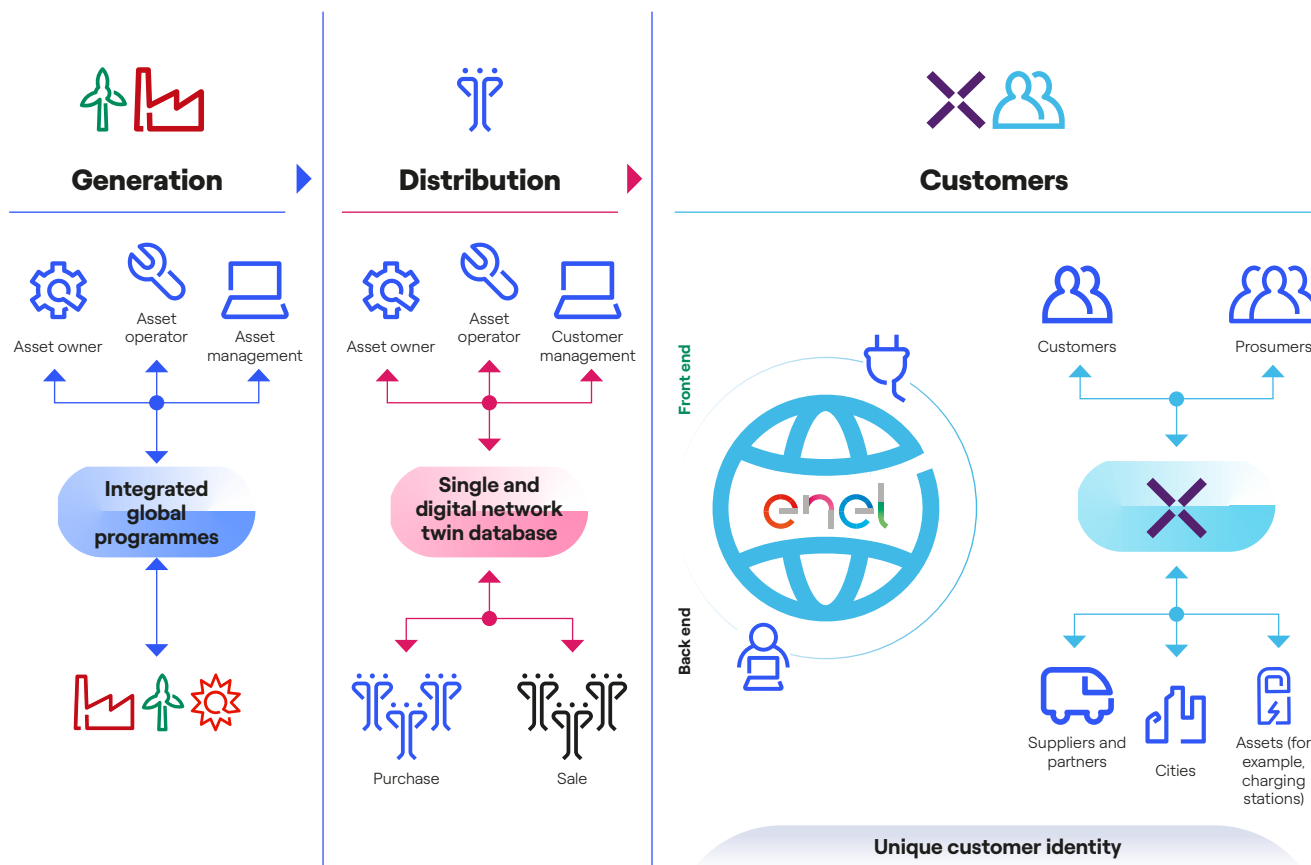
Endesa is making significant growth investments aimed at modernising and developing new infrastructures that respond to decarbonisation and electrification trends in the economy.

Digitalisation initiatives will enable us to continue to increase the automation and digitalisation of the grid. All this is aimed at improving security of supply, service quality

and efficiency, and at responding to future customer demands.

In electricity generation plants, Endesa is increasing its efforts to digitalise the management of its generation installations in order to increase the plants' operating efficiency and improve their integration into the electricity system.

### Focus on new platform-based business models



## Digitalisation of generation installations

At generation installations, there are three major digitalisation programmes underway:

- Global O&M (Operation & Maintenance) Applications that are part of an integrated operation and maintenance digitalisation programme that will enable process homogenisation between thermal and renewable technologies to generate a coherent and effective platform.

- Global E&C (Engineering & Construction) Applications. It is a programme for the digitalisation and homogenisation of engineering and construction processes.
- Data Analysis and Artificial Intelligence (AI) Initiatives. These initiatives aim to improve operational efficiency and develop towards predictive maintenance.

# Digitalisation of the distribution network

## Remote management project

This project has been developed to implement an automatic and remote electricity supply control and operating system for all household customers.

In 2022, Endesa made a total of 138,919 replacements, affecting 99.7% of type 5 meters with an active contract

and contracted power of up to 15 kW (12.02 million active customers with smart meters).

This year 14,300 type 4 devices were also installed with remote management capacity (for supplies with a contracted power of between 15 and 50 kW), affecting 97.4% of the type 4 installations.



## Smart grids

Endesa continues to configure its distribution grids in line with the Smart Grid model. Grid technification and the inclusion of Information and Communication Technologies (ICT) enable these grids to provide a rapid response to users' needs:

- They enable the connection and operation of renewable generation and distribution linked to consumption.
- They enable management of demand, making the system more flexible by flattening the load curve and maximising the use of electricity infrastructures.

- They enable the deployment of electric vehicles and the development of more comprehensive, advanced energy services, improving the quality of the power supply and reducing response times in the event of power failures.
- They make it possible to adopt preventive and predictive maintenance strategies.

The unique projects underway to develop smart grids include Network Digital Twin (NDT), Grid Blue Sky (GBS) and the Integral Quality Plan.

# Client digitalisation

## Endesa: Towards leadership in digital transformation

Focussing on the customer, in 2022 Endesa continued development on new customer service channels, new IT tools that will favour customer digitalisation, as well as products and services that are essentially digital by their very nature. Digitalisation has been one of the basic pillars of Endesa's Strategic Plan for several years, as a lever to improve the customer experience with Endesa (customer journey) as well as process efficiency. The following procedures deserve special mention:

- Adopting new digital tools and applying Customer Intelligence and Advanced Analytics capabilities to improve *Time-to-Market* and commercial efficiency for the benefit of the customer.
- Progress in the digitalisation of processes to be able to take advantage of opportunities to improve costs to meet the ambitious goals for operational efficiency while at the same time maintaining a high level of customer service.

- Development of new platform-based business models, where both Endesa and other collaborators may offer products and services that are a product of their digital nature.
- Promotion of self-consumption and the electrification of demand, with the aim of advancing in the more efficient and sustainable use of energy and with this, to accelerate energy transition towards a more decarbonised world that is better for everyone.

This ambitious digital transformation plan had very positive impact on the market and in 2022, Endesa was recognised as a benchmark for digital transformation through the assignment of five 2022 Customer Relationship Excellence Awards, which highlight the value of a good relationship between companies and their customers. They are promoted by the Spanish Association of Experts in Customer Relations (AEERC) and are based on 36 audits using the methodology provided by the consultant IZO, and in partnership with the executive training service provider IFAES.

## New digital, sustainable platforms and capabilities in 2022, focussing on the customer

In 2022 Endesa continued to develop a digital, sustainable ecosystem. At the end of the year, there were already more than 4.6 million digital customers who accessed the private area more than 88 million times, mainly to view their invoices and undertake procedures digitally with regard to their contracts. With regard to the main advances in Spain in 2022, the following milestones were reached:

- New APP for the Deregulated Market (ML in Spanish): With the aim of continuing to improve customer service in 2022, Endesa completed the design and production of a new app for the deregulated market, called Full Digital.
- Promotion of digital invoicing: As a result of these actions, in 2022 more than 1 million energy contracts switched to digital invoicing, so that at the end of the year approximately 47% of contracts receive an e-Invoice, which represents an annual volume of more than 48 million digital invoices which do not need to be printed or sent on paper which makes the process so much more efficient and satisfactory.
- Improvements in digital customer service channels and platforms:
  - Digital customer service platforms (Whatsapp, Facebook, chat, e-mail) were strengthened to give customers a better service.
  - Digitalisation and the automation of interactions managed via the Call Centre were promoted, so

that by the end of the year contacts serviced via the Virtual Assistant (Watson IBM) and by "Lenguaje Natural" reached more than 44% of the total.

- With regard to Endesa Portugal, the main advances in 2022 were the following:
  - Improvements in the online channel: Progress was made in improving the digital customer experience and response times for the online channel, by simplifying the website language at the time of contact, greater and faster automatic resolution of website procedures and the improvement of customer communications.
  - The implementation of new *journeys* in commercial systems (CRM), which improve the customisation of their interactions with Endesa and the sequence of communications during their development as a customer.
  - Implementation in the Portuguese systems of the MB Way payment platform (equivalent to Bizum in Spain) that will enable customers to pay their invoices via a QR code, pay any other payment document and even manage cut-off notifications.
  - Launch of the Smartmeter Project: Looking ahead to 2023, work has already been completed that will enable improvements to be developed on the private website and on the contracting form to be able to provide service and assessment to customers who have a smart meter.





## Digitalisation of our people

Endesa is continuing to make significant changes with a view to becoming a more digital and innovative company; it considers offering continuous training to its employees

and providing them with the best digital tools as essential factors in achieving this, thus helping to drive the cultural change required by the company.

## Work environment

### Open Work

Endesa has Open Work areas in its headquarters with the aim of moving towards new ways of working by managing changes in human resources and implementing new spaces and technology, while ensuring digitalisation, sustainability, health and safety.

With Open Work, work at Endesa will be more agile, technology-based, efficient, flexible, open and collaborative, in line with the company's digital transformation and its commitment to agile methodology.

In 2022 the work being done at the headquarters was completely finished. At the end of the year, almost 2,500 people were working in the Open Work modality, 100% of the employees working in Madrid.

## Development of digital skills

As part of its digitalisation strategy, Endesa is focussing on the value of people since digital transformation is closely linked to the transformation of people.

Endesa's digital skill training programmes enable people to add to their technical knowledge of technology, change management skills that are the new paradigm for the digital age and the new work model, to attain a more systemic vision and achieve a positive, sustainable impact. In 2022, 45,905 hours of training were given in digital transformation. In 2022, Endesa worked on an "eDNA" pilot scheme for the development of digital skills based on gamification, new

ways of collaborating in learning, highlighting the importance of different sources of learning and creating a digital mindset. All this led to developments in the philosophy of current training and how we understand it. The new hybrid work model has increased digitalisation training with regard to quantity, quality and efficiency, to promote transformation and help people to change, understand, become aware of and acquire the skills they need to face current challenges, while encouraging them to increase their potential.

## Training programmes



### DATA DRIVEN

Collecting, improving, analysing and understanding how and why data has become essential for Endesa's competitiveness and continued growth. Guiding people through the implementation of a data-centred culture, the adoption of new technologies such as *machine learning*, and the promotion of their talent and the skills required.



### DIGITAL SKILLS

Aimed at the people who need a markedly technical view of the digital world, with an in-depth focus on digital tools specific to Endesa's different areas.



### DIGITAL SOFT SKILLS

People are the key to successful digital transformation. That is why information and training are essential, helping people to acquire the skills they need to face new challenges. Some of the aspects covered are *design thinking* tools, innovation management and idea generation processes.



### OFFICE 365

Training people so that they make better use of the tools in the Microsoft Office package.

### R21D DIGITAL ROUTINES

Promoting good digital practices to incorporate new routines every 21 days. It involves an *online* training itinerary with tips and advice on how to harness digital tools for personal and collaborative use. Short 2- to 4-minute videos, with clear and concise guidance on how to go digital within 21 days.



### WE ARE STILL TOGETHER

Webinars and *online* courses to support on people and their training in collaborative digital tools, team management, communication and emotional intelligence.



### REMOTE WORKING

Leadership and management of virtual teams; time management; communication.



### AGILE TRANSFORMATION

In-depth knowledge of the Agile development techniques to train high-performing teams as regards delivery, and integrate the value of service management in agile work dynamics.

## Cybersecurity

Technological components are becoming an increasingly integrated part of the daily life of the business world, while the cyber threats inherent in each of these environments are becoming more frequent and more sophisticated. As a result, cybersecurity is now a global issue, and one of the pillars on which the Endesa's digitalisation strategy has been constructed.

Endesa has a holistic, systemic model in place to act on and manage cybersecurity, encompassing all the Group companies. This model is promoted by Senior Management and relies on the actual involvement of all corporate business areas, as well as the areas responsible for designing, managing and operating IT systems.

Endesa also has a Cybersecurity Unit that reports directly to the Chief Information Officer (CIO) through the CISO (Chief Information Security Officer), to streamline the decision-making process at a global level, in a context where response time is essential.

Senior Management is firmly committed to the cybersecurity governance model. It also establishes the need to use first-class technologies, design *ad hoc* business processes, to increase employee awareness of it, and to transpose regulatory cyber requirements.

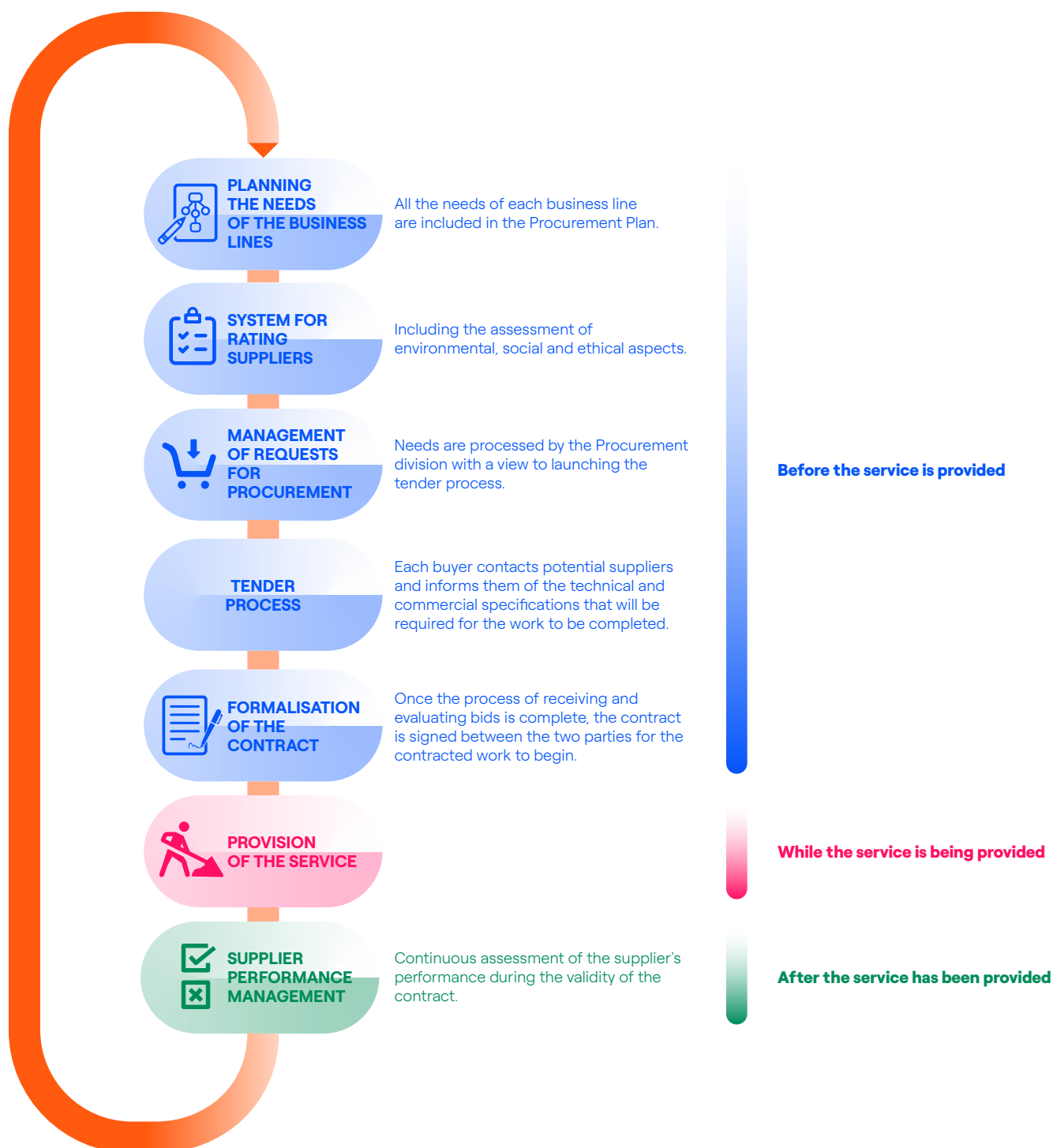


# Procurement

In 2022, Endesa collaborated with 4,124 suppliers, with this total including all suppliers subject to delegated purchases. Purchases made from suppliers amounted to €4,139 million.

The number of days worked by contractors or subcontractors involved in construction, operation and maintenance activities in 2022 amounted to 4,124,223 which represents a decrease of 5.95% compared to 2021. The total number of hours worked by contractors in 2022 amounted to 41,357,055.

## Endesa's end-to-end procurement process





# 12.



# Annexes

# Endesa's generation installations in Spain as at 31/12/2022

	Originating company	Location	Type of fuel	No. of generators	Total power (MW)	% Endesa	Consolidated power rating in Endesa (MW)
<b>MAINLAND SYSTEM</b>							
<b>CONVENTIONAL THERMAL POWER STATIONS</b>							
<b>Coal</b>							
Compostilla <sup>(1)</sup>	Endesa	Cubillos del Sil-León	C-A	0	0	100.0	0
Anllares <sup>(2)</sup>	33.33% Endesa	Anllares-León	C-A	0	0	33.33	0
As Pontes	Endesa	As Pontes-La Coruña	IC	4	1,469	100.0	1,469
Teruel <sup>(3)</sup>	Endesa	Andorra-Teruel	BL	0	0	100.0	0
Litoral <sup>(4)</sup>	66.66% End.-33.33% Sev	Carboneras-Almería	IC	0	0	100.0	0
<b>Total Coal</b>				<b>4</b>	<b>1,469</b>		<b>1,469</b>
<b>Gas combined cycle</b>							
San Roque 2		San Roque-Cádiz	CCGT	1	408	100.0	408
Besós 3		Besós-Barcelona	CCGT	1	419	100.0	419
Besós 5		Besós-Barcelona	CCGT	3	873	100.0	873
Colon 4		Huelva	CCGT	1	398	100.0	398
As Pontes		As Pontes-La Coruña	CCGT	3	870	100.0	870
<b>Total gas</b>				<b>9</b>	<b>2,969</b>		<b>2,969</b>
<b>Nuclear</b>							
Ascó I	40% Endesa-60% Fec	Ascó-Tarragona	N	1	1,033	100.0	1,033
Ascó II	40% Endesa-45% Fec	Ascó-Tarragona	N	1	1,027	85.0	873
Vandellós II	72% Endesa	Vandellós-Tarragona	N	1	1,087	72.0	783
Garroña <sup>(5)</sup>	100% Nuclenor	Stª Mª Garroña-Burgos	N		0	50.0	0
Almaraz I	36% Sevillana	Almaraz-Cáceres	N	1	1,049	36.0	378
Almaraz II	36% Sevillana	Almaraz-Cáceres	N	1	1,044	36.0	376
Trillo <sup>(6)</sup>	2% Nuclenor	Trillo-Guadalajara	N	1	1,066	1.0	11
<b>Total thermal nuclear</b>				<b>6</b>	<b>6,307</b>		<b>3,453</b>
<b>Total Mainland Conventional Generation Installations</b>					<b>10,744</b>		<b>7,891</b>
<b>CONVENTIONAL HYDROELECTRIC</b>							
U. de Prod. Hidr. Noroeste			H		749.24	100.00	749.24
U. de Prod. Hidr. Ebro-Pirineos			H		1,951.95	100.00	1,951.95
U. de Prod. Hidr. Sur			H		660.80	100.00	660.80
<b>PUMPING PLANTS</b>							
U. de Prod. Hidr. Ebro-Pirineos			H		759.89	100.00	759.89
U. de Prod. Hidr. Sur			H		589.77	100.00	589.77
<b>Total hydroelectric</b>				<b>131</b>	<b>4,711.65</b>		<b>4,711.65</b>
<b>MINI HYDRO</b>							
Anllo	Enel Green Power España	Galicia	H	1	7.82	100.00	7.82
Arroibar	Enel Green Power España	Galicia	H	1	14.56	100.00	14.56
Castro	Enel Green Power España	Galicia	H	1	0.14	100.00	0.14
Fervenzas-Coiros	Enel Green Power España	Galicia	H	1	0.25	100.00	0.25
Graus	Enel Green Power España	Aragón	H	1	2.15	100.00	2.15
Izbor	Enel Green Power España	Andalusia	H	1	11.40	100.00	11.40
La Castellana	Enel Green Power España	Galicia	H	1	1.28	100.00	1.28

<sup>1</sup> Enel Group	<sup>2</sup> Background	<sup>3</sup> Corporate governing bodies	<sup>4</sup> Strategy	<sup>5</sup> Financial data	<sup>6</sup> Businesses		
<sup>7</sup> Internal control systems	<sup>8</sup> Sustainability	<sup>9</sup> Technology and innovation	<sup>10</sup> Our people	<sup>11</sup> Other activities	<sup>12</sup> Annexes		
	Originating company	Location	Type of fuel	No. of generators	Total power (MW)	% Endesa	Consolidated power rating in Endesa (MW)
Mandeo-Zarzo	Enel Green Power España	Galicia	H	1	25.27	100.00	25.27
Molinaferrera-Cabrito I y II	Enel Green Power España	Castile-León	H	1	1.04	100.00	1.04
Morla	Enel Green Power España	Castile-León	H	1	0.19	100.00	0.19
Pé De Viña	Enel Green Power España	Principality of Asturias	H	1	0.67	100.00	0.67
Requeixo (As Chas)	Enel Green Power España	Galicia	H	1	3.04	100.00	3.04
Rosarito	Enel Green Power España	Castile-León	H	1	4.84	100.00	4.84
San Juan de Muro	Enel Green Power España	Galicia	H	1	0.11	100.00	0.11
Túnel de Vielha	Enel Green Power España	Catalonia	H	1	0.25	100.00	0.25
Villameca	Enel Green Power España	Castile-León	H	1	0.49	100.00	0.49
Tarrio	Enel Green Power España	Galicia	H	1	4.66	100.00	4.66
Total mini-hydro plants				17	78.15		78.15
WIND <sup>(24)</sup>							
Abo Campillo II	Enel Green Power España	Castile-La Mancha	W	1	8750	100.00	8750
Abo Campillo III	Enel Green Power España	Castile-La Mancha	W	1	8750	100.00	8750
Abo Campillo I	Enel Green Power España	Castile-La Mancha	W	1	75.00	100.00	75.00
Acampo	Enel Green Power España	Aragón	W	1	6.00	100.00	6.00
Ágreda	Enel Green Power España	Castile-León	W	1	18.00	100.00	18.00
Aguilón	Enel Green Power España	Aragón	W	1	50.00	100.00	50.00
Aldeavieja	Enel Green Power España	Castile-León	W	1	14.52	100.00	14.52
Allueva	Enel Green Power España	Aragón	W	1	26.60	100.00	26.60
Almarén	Enel Green Power España	Aragón	W	1	11.90	100.00	11.90
Alto de las Casillas I	Enel Green Power España	Community of Valencia	W	1	31.10	100.00	31.10
Alto de las Casillas II	Enel Green Power España	Community of Valencia	W	1	31.00	100.00	31.00
Cortado Extension	Enel Green Power España	Castile-León	W	1	13.50	100.00	13.50
Los Llanos Extension	Enel Green Power España	Castile-León	W	1	21.33	100.00	21.33
Angosturas	Enel Green Power España	Andalusia	W	1	37.26	100.00	37.26
Aragón	Enel Green Power España	Aragón	W	1	5.28	100.00	5.28
Barbanza I y II	Enel Green Power España	Galicia	W	1	29.04	100.00	29.04
Belmonte	Enel Green Power España	Principality of Asturias	W	1	34.85	100.00	34.85
Caldereros	Enel Green Power España	Castile-La Mancha	W	1	3780	100.00	3780
Campoliva I	Enel Green Power España	Aragón	W	1	3760	100.00	3760
Campoliva II	Enel Green Power España	Aragón	W	1	39.38	100.00	39.38
Cantiruela	Enel Green Power España	Castile-León	W	1	16.00	100.00	16.00
Cañaseca	Enel Green Power España	Aragón	W	1	19.00	100.00	19.00
Capelada I and Capelada II	Enel Green Power España	Galicia	W	1	31.35	100.00	31.35
Careón	Enel Green Power España	Galicia	W	1	18.00	100.00	18.00
Cogollos II	Enel Green Power España	Castile-León	W	1	51.75	100.00	51.75
Coriscada	Enel Green Power España	Galicia	W	1	24.00	100.00	24.00
Corzán	Enel Green Power España	Galicia	W	1	43.20	100.00	43.20
Couto San Sebastian	Enel Green Power España	Galicia	W	1	18.00	100.00	18.00
Dehesa de Mallen	Enel Green Power España	Galicia	W	1	3.47	100.00	3.47
Do Vilán	Enel Green Power España	Galicia	W	1	16.90	100.00	16.90
EEE	Enel Green Power España	Andalusia	W	1	32.00	100.00	32.00
El Campo	Enel Green Power España	Aragón	W	1	19.80	100.00	19.80
El Puerto-Trinidad	Enel Green Power España	Aragón	W	1	25.08	100.00	25.08
Faladoira-Coto Teixido	Enel Green Power España	Galicia	W	1	4752	100.00	4752
Farlan	Enel Green Power España	Aragón	W	1	41.40	100.00	41.40
Farrapa	Enel Green Power España	Galicia	W	1	20.70	100.00	20.70

	Originating company	Location	Type of fuel	No. of generators	Total power (MW)	% Endesa	Consolidated power rating in Endesa (MW)
Gigantes	Enel Green Power España	Galicia	W	1	21.30	100.00	21.30
Granujales	Enel Green Power España	Andalusia	W	1	24.84	100.00	24.84
La Estanca	Enel Green Power España	Aragón	W	1	24.00	100.00	24.00
La Muela II	Enel Green Power España	Aragón	W	1	13.20	100.00	13.20
La Muela III	Enel Green Power España	Aragón	W	1	16.50	100.00	16.50
Lanchal	Enel Green Power España	Castile-León	W	1	23.00	100.00	23.00
Las Pardas	Enel Green Power España	Castile-León	W	1	52.80	100.00	52.80
Les Forques	Enel Green Power España	Catalonia	W	1	31.05	100.00	31.05
Loma Gorda	Enel Green Power España	Aragón	W	1	23.93	100.00	23.93
Los Arcos	Enel Green Power España	Andalusia	W	1	35.50	100.00	35.50
Los Lances	Enel Green Power España	Andalusia	W	1	10.68	100.00	10.68
Los Llanos	Enel Green Power España	Castile-León	W	1	38.00	100.00	38.00
Madroñales	Enel Green Power España	Andalusia	W	1	35.19	100.00	35.19
Montargull	Enel Green Power España	Catalonia	W	1	45.54	100.00	45.54
Monte de las Navas	Enel Green Power España	Castile-León	W	1	48.84	100.00	48.84
Motilla del Palancar	Enel Green Power España	Galicia	W	1	51.00	100.00	51.00
Muniesa	Enel Green Power España	Aragón	W	1	46.80	100.00	46.80
P.E. Chan Do Tenon	Enel Green Power España	Galicia	W	1	22.40	100.00	22.40
P.E. de Enix	Enel Green Power España	Andalusia	W	1	13.20	100.00	13.20
P.E. de Escucha + Sant Just	Enel Green Power España	Aragón	W	1	28.38	100.00	28.38
P.E. Leboreiro	Enel Green Power España	Galicia	W	1	21.12	100.00	21.12
P.E. Los Barrancos	Enel Green Power España	Andalusia	W	1	20.70	100.00	20.70
P.E. Menaute	Enel Green Power España	Andalusia	W	1	37.40	100.00	37.40
P.E. Pena Ventosa	Enel Green Power España	Galicia	W	1	44.80	100.00	44.80
P.E. Tico	Enel Green Power España	Aragón	W	1	179.90	100.00	179.90
Padul	Enel Green Power España	Andalusia	W	1	18.00	100.00	18.00
Paradela	Enel Green Power España	Galicia	W	1	12.00	100.00	12.00
P.E. Castelo	Enel Green Power España	Galicia	W	1	16.50	100.00	16.50
Pena Revolta	Enel Green Power España	Galicia	W	1	14.49	100.00	14.49
Peña Armada	Enel Green Power España	Galicia	W	1	20.70	100.00	20.70
Peña del Gato	Enel Green Power España	Castile-León	W	1	50.00	100.00	50.00
Peña Forcada	Enel Green Power España	Galicia	W	1	33.80	100.00	33.80
Peña II	Enel Green Power España	Castile-La Mancha	W	1	18.00	100.00	18.00
Pesur	Enel Green Power España	Andalusia	W	1	42.00	100.00	42.00
Picazo	Enel Green Power España	Castile-La Mancha	W	1	14.00	100.00	14.00
European Wind Farms	Enel Green Power España	Andalusia	W	1	6.00	100.00	6.00
Pousadoiro	Enel Green Power España	Galicia	W	1	23.50	100.00	23.50
Primoral	Enel Green Power España	Aragón	W	1	34.65	100.00	34.65
Pucheruelo	Enel Green Power España	Castile-León	W	1	24.84	100.00	24.84
Pena Ventosa Renovated	Enel Green Power España	Galicia	W	1	8.00	100.00	8.00
San Andrés	Enel Green Power España	Galicia	W	1	33.00	100.00	33.00
San Francisco de Borja	Enel Green Power España	Galicia	W	1	23.93	100.00	23.93
San Pedro Alacón	Enel Green Power España	Aragón	W	1	39.90	100.00	39.90
Santo Domingo de Luna	Enel Green Power España	Aragón	W	1	29.87	100.00	29.87
Saso Plano	Enel Green Power España	Aragón	W	1	39.20	100.00	39.20
Serra Das Penas	Enel Green Power España	Galicia	W	1	42.00	100.00	42.00
Sierra Costera I	Enel Green Power España	Aragón	W	1	40.80	100.00	40.80
Sierra Costera II	Enel Green Power España	Aragón	W	1	48.90	100.00	48.90

<sup>1</sup> Enel Group	<sup>2</sup> Background	<sup>3</sup> Corporate governing bodies	<sup>4</sup> Strategy	<sup>5</sup> Financial data	<sup>6</sup> Businesses		
<sup>7</sup> Internal control systems	<sup>8</sup> Sustainability	<sup>9</sup> Technology and innovation	<sup>10</sup> Our people	<sup>11</sup> Other activities	<sup>12</sup> Annexes		
	Originating company	Location	Type of fuel	No. of generators	Total power (MW)	% Endesa	Consolidated power rating in Endesa (MW)
Sierra de la Virgen	Enel Green Power España	Aragón	W	1	28.80	100.00	28.80
Sierra de Oriche	Enel Green Power España	Galicia	W	1	14.20	100.00	14.20
Sierra del Cortado	Enel Green Power España	Castile-León	W	1	18.48	100.00	18.48
Sierra del Madero I y II	Enel Green Power España	Castile-León	W	1	28.71	100.00	28.71
Sierra Pelarda	Enel Green Power España	Aragón	W	1	15.20	100.00	15.20
Touriñán	Enel Green Power España	Galicia	W	1	26.68	100.00	26.68
Valdesamario	Enel Green Power España	Castile-León	W	1	24.00	100.00	24.00
Valdihuelo	Enel Green Power España	Castile-León	W	1	17.48	100.00	17.48
Viravento	Enel Green Power España	Galicia	W	1	1.20	100.00	1.20
Total Wind <sup>(14)</sup>				93	2,842.21		2,842.21
PHOTOVOLTAIC <sup>(15)</sup>							
Apicio	Enel Green Power España	Extremadura	PV	1	47.88	100.00	47.88
Ardila	Enel Green Power España	Castile-La Mancha	PV	1	49.87	100.00	49.87
Augusto	Enel Green Power España	Extremadura	PV	1	49.91	100.00	49.91
Aznalcóllar	Enel Green Power España	Andalusia	PV	1	1.00	100.00	1.00
Beturia	Enel Green Power España	Extremadura	PV	1	49.56	100.00	49.56
Cincinato	Enel Green Power España	Extremadura	PV	1	49.87	100.00	49.87
Don Quijote	Enel Green Power España	Extremadura	PV	1	42.21	100.00	42.21
El Doblón	Enel Green Power España	Extremadura	PV	1	46.59	100.00	46.59
Minglanilla I	Enel Green Power España	Castile-La Mancha	PV	1	49.87	100.00	49.87
Minglanilla II	Enel Green Power España	Castile-La Mancha	PV	1	49.81	100.00	49.81
Calatrava	Enel Green Power España	Castile-La Mancha	PV	1	49.87	100.00	49.87
Castelo	Enel Green Power España	Galicia	PV	1	0.01	100.00	0.01
Castiblanco	Enel Green Power España	Extremadura	PV	1	42.30	100.00	42.30
Coriscada	Enel Green Power España	Galicia	PV	1	0.02	100.00	0.02
Esparragal I	Enel Green Power España	Andalusia	PV	1	50.40	100.00	50.40
Ibereléctrica	Enel Green Power España	Castile-La Mancha	PV	1	7.27	100.00	7.27
Ninobe	Enel Green Power España	Castile-La Mancha	PV	1	9.71	100.00	9.71
Tico Phase I	Enel Green Power España	Aragón	PV	1	43.39	100.00	43.39
Tico Phase II	Enel Green Power España	Aragón	PV	1	33.56	100.00	33.56
Tierra de Badajoz	Enel Green Power España	Extremadura	PV	1	50.00	100.00	50.00
Torrecilla	Enel Green Power España	Extremadura	PV	1	49.69	100.00	49.69
Agripa	Enel Green Power España	Extremadura	PV	1	49.07	100.00	49.07
Alaudae	Enel Green Power España	Extremadura	PV	1	48.99	100.00	48.99
Gemina	Enel Green Power España	Extremadura	PV	1	49.20	100.00	49.20
Hernán Cortés	Enel Green Power España	Extremadura	PV	1	42.21	100.00	42.21
La Vega I	Enel Green Power España	Andalusia	PV	1	43.24	100.00	43.24
La Vega II	Baylio Solar S.L.U.	Andalusia	PV	1	43.24	100.00	43.24
Las Corchas	Enel Green Power España	Andalusia	PV	1	49.94	100.00	49.94
Los Barrios:	Enel Green Power España	Andalusia	PV	1	0.10	100.00	0.10
Los Naranjos	Enel Green Power España	Andalusia	PV	1	49.98	100.00	49.98
Navalvillar	Enel Green Power España	Extremadura	PV	1	42.30	100.00	42.30
Nertobriga	Enel Green Power España	Extremadura	PV	1	48.99	100.00	48.99
Puerta Palmas	Enel Green Power España	Extremadura	PV	1	48.02	100.00	48.02
San Antonio	Enel Green Power España	Andalusia	PV	1	30.44	100.00	30.44
Sol de Casaquemada	Enel Green Power España	Andalusia	PV	1	49.90	100.00	49.90
Torrepalma PV	Enel Green Power España	Andalusia	PV	1	22.50	100.00	22.50
Totana	Enel Green Power España	Murcia Region	PV	1	84.71	100.00	84.71



	Originating company	Location	Type of fuel	No. of generators	Total power (MW)	% Endesa	Consolidated power rating in Endesa (MW)
Valdecaballeros	Enel Green Power España	Extremadura	PV	1	42.30	100.00	42.30
Veracruz	Enel Green Power España	Extremadura	PV	1	47.46	100.00	47.46
Zurbarán	Enel Green Power España	Extremadura	PV	1	42.21	100.00	42.21
<b>Total photovoltaic<sup>(15)</sup></b>				<b>40</b>	<b>1,607.58</b>		<b>1,607.58</b>
<b>BIOGAS</b>							
Aguas de Jerez	Enel Green Power España	Andalusia	B	1	0.47	100.00	0.47
<b>Total biogas</b>				<b>1</b>	<b>0.47</b>		<b>0.47</b>
<b>Total Mainland Renewable Generation Installations</b>				<b>282</b>	<b>9,240.06</b>		<b>9,240.06</b>
<b>NON-MAINLAND SYSTEMS</b>							
<b>Balearic Islands</b>							
<b>COAL</b>							
Alcudia <sup>(7)</sup>	Gesa	Mallorca	IC	2	260	100.0	260
<b>FUEL-GAS</b>							
Alcudia	Gesa	Mallorca	G	2	75.0	100.0	75.0
Son Reus	Gesa	Mallorca	G	11	612.8	100.0	612.8
Ca's Tresorer	Gesa	Mallorca	G	6	475.1	100.0	475.1
Mahón	Gesa	Menorca	F-G	8	270.0	100.0	270.0
Ibiza	Gesa	Ibiza	F-G	13	319.6	100.0	319.6
Formentera	Gesa	Formentera	G	1	14.0	100.0	14.0
<b>Total Balearic Islands</b>				<b>43</b>	<b>2,027</b>		<b>2,027</b>
<b>Canary Islands</b>							
<b>FUEL-GAS</b>							
Jinámar <sup>(8) (11)</sup>	Unelco	Gran Canaria	F-G	7	266.45	100.0	266
Barranco de Tirajana	Unelco	Gran Canaria	F-G	10	697.00	100.0	697
Candelaria <sup>(9) (10) (11)</sup>	Unelco	Tenerife	F-G	6	203.60	100.0	204
Granadilla <sup>(12)</sup>	Unelco	Tenerife	F-G	14	797.40	100.0	797
Punta Grande	Unelco	Lanzarote	D-G	13	231.01	100.0	231
Las Salinas	Unelco	Fuerteventura	D-G	12	186.58	100.0	187
El Palmar	Unelco	La Gomera	D	10	22.90	100.0	23
Llanos Blancos	Unelco	El Hierro	D	9	13.00	100.0	13
Los Guinchos	Unelco	La Palma	D-G	11	107.74	100.0	108
<b>Total Canary Islands</b>				<b>92</b>	<b>2,526</b>		<b>2,526</b>
<b>Ceuta and Melilla</b>							
Ceuta	Endesa	Ceuta	F-D	10	99	100.0	99
Melilla	Endesa	Melilla	F-G	8	85	100.0	85
<b>Total Ceuta &amp; Melilla</b>				<b>18</b>	<b>184</b>		<b>184</b>
<b>Total Mainland and Non-Mainland Conventional Generation Installations</b>				<b>153</b>	<b>4,736</b>		<b>4,736</b>
<b>WIND</b>							
Arico I & II	Enel Green Power España	Canary Islands	W	1	16.50	100.0	16.50
Arinaga	Enel Green Power España	Canary Islands	W	1	6.92	100.0	6.92
Barranco de Tirajana	Enel Green Power España	Canary Islands	W	1	2.00	100.0	2.00
Cueva Blanca	Enel Green Power España	Canary Islands	W	1	2.00	100.0	2.00
Faro Fuencaliente	Enel Green Power España	Canary Islands	W	1	2.25	100.0	2.25
Finca San Antonio	Enel Green Power España	Canary Islands	W	1	1.50	100.0	1.50
P.E. de Epina	Enel Green Power España	Canary Islands	W	1	0.36	100.0	0.36
P.E. de Garafía (Juan Adalid)	Enel Green Power España	Canary Islands	W	1	1.60	100.0	1.60
P.E. Granadilla I	Enel Green Power España	Canary Islands	W	1	0.15	100.0	0.15

	Originating company	Location	Type of fuel	No. of generators	Total power (MW)	% Endesa	Consolidated power rating in Endesa (MW)
P.E. Granadilla II	Enel Green Power España	Canary Islands	W	1	0.30	100.0	0.30
Punta de Teno	Enel Green Power España	Canary Islands	W	1	1.80	100.0	1.80
Santa Lucía	Enel Green Power España	Canary Islands	W	1	4.80	100.0	4.80
<b>Total wind</b>				<b>12</b>	<b>40.18</b>		<b>40.18</b>
<b>SOLAR<sup>(15)</sup></b>							
Can Lloreta	Enel Green Power España	Balearic Islands	PV	1	3.90	100.0	3.90
Sacaseta	Enel Green Power España	Balearic Islands	PV	1	21.83	100.0	21.83
Son Reus	Enel Green Power España	Balearic Islands	PV	1	12.53	100.0	12.53
Biniatria	Enel Green Power España	Balearic Islands	PV	1	14.97	100.0	14.97
Son Orlandis	Enel Green Power España	Balearic Islands	PV	1	3.34	100.0	3.34
<b>Total solar<sup>(15)</sup></b>				<b>5</b>	<b>56.57</b>		<b>56.57</b>
Gorona del Viento <sup>(13)</sup>		El Hierro	H+W		11.50	0.2	0.00
<b>Total Mainland and Non-Mainland Renewable Generation Installations</b>				<b>17</b>	<b>108.25</b>		<b>96.75</b>
<b>Total Mainland and Non-Mainland Generation Installations</b>					<b>4,844</b>		<b>4,833</b>

<sup>(1)</sup> Compostilla: Resolution authorising the closure of Units 3, 4 and 5 on 29 June 2020. The Sub-Delegation of the Government of León passed the Closure Act on 23 September 2020.

<sup>(2)</sup> Anllares: The Ministry of Ecological Transition authorised closure on 20 November 2018. The Sub-Delegation of the Government of León passed the Closure Act on 18 February 2019.

<sup>(3)</sup> Teruel: Resolution authorising the closure of the 3 Units on 29 June 2020. The Sub-Delegation of the Government of Teruel passed the Closure Act on 21 July 2020.

<sup>(4)</sup> Litoral: Resolution authorising the closure of the 2 Groups on 26 November 2021.

<sup>(5)</sup> The Official State Gazette of 3 August 2017, Order ETU/754/2017, of 1 August, published a refusal of the renewal of the authorisation to operate the nuclear power plant and confirmed the date of 6 July 2013, established in Order IET/1302/2013, as the definitive cessation of the operation at the Santa Maria de Garoña nuclear power plant.

<sup>(6)</sup> On 31 July 2020, Endesa Generación acquired a 1% holding in the Trillo Nuclear Power Plant from NUCLENOR, S.A.

<sup>(7)</sup> Alcudia: Authorisation for the closure of units 1 and 2 received on 29 March 2019. The Act confirming closure was published on 30 December 2019.

<sup>(8)</sup> Jinámar Diesel 1, 2 and 3 (3\*12 MW): Declared indefinitely unavailable following the completion of a technical-economic feasibility study.

<sup>(9)</sup> Candelaria includes the Guía de Isora installation ( GT1: 48.6 MW (twin-pack = 2\*24.3 MW).

<sup>(10)</sup> Candelaria TG3 (17.20 MW) and Candelaria Diesel 1, 2 and 3 (3x12 MW): Declared indefinitely unavailable following the completion of a technical-economic feasibility study.

<sup>(11)</sup> Steamers 4 and 5 in Jinamar and 5 and 6 in Candelaria: Declared indefinite unavailability after completing a technical-economic feasibility study and not being adapted to the European emissions directive (DEI/BREF).

<sup>(12)</sup> Granadilla includes the Arona installation (GT1 and GT2: 2\*24.3 MW).

<sup>(13)</sup> Gorona del Viento: Hydro-wind electricity generation plant owned by Gorona del Viento El Hierro, S.A., in which Unelco Generación, S.A. has a 23.21% interest.

<sup>(14)</sup> Total wind power includes an increase in capacity in 24 wind farms for a total amount of +30.25 MW as a result of the development of the Power Boost project in 2022.

<sup>(15)</sup> Solar PV power is Peak Power.

#### Fuels:

B: Biomass	NG: Natural gas
CCGT: Combined cycle-gas turbine	H: Hydro
IC: Imported coal	C-A: coal-anthracite
D: Diesel	H+W: Hydraulic pump+wind
W: Wind	BL: Black lignite
F: Fuel oil	BRL: Brown lignite
PV: Photovoltaic	N: Nuclear
G: Gas oil	

# Endesa's generation installations in Portugal as at 31/12/2022

	Originating company	Location	Type of fuel	No. of generators	Total power (MW)	% Endesa	Consolidated power rating in Endesa (MW)
<b>PORTUGAL</b>							
<b>Coal</b>							
Tejo <sup>(1)</sup>	Endesa	Pego, Abrantes	IC	0	0	43.8	0
<b>Total Coal</b>				<b>0</b>	<b>0</b>		<b>0</b>
<b>Gas combined cycle</b>							
Elecgas <sup>(2)</sup>	Endesa	Pego, Abrantes	CCGT	2	855	100.0	855
<b>Total combined cycle</b>				<b>2</b>	<b>855</b>		<b>855</b>
<b>Total Portugal</b>				<b>2</b>	<b>855</b>		<b>855</b>

<sup>(1)</sup> Tejo: Closure of the plant in November 2021.

<sup>(2)</sup> Endesa holds a 50% stake in Elecgas, but 100% of the *Tolling* contract.

## Fuels:

B: Biomass	NG: Natural gas
CCGT: Combined cycle-gas turbine	H: Hydro
IC: Imported coal	C-A coal-anthracite
D: Diesel	H+W: Hydraulic pump+wind
W: Wind	BL: Black lignite
F: Fuel oil	BRL: Brown lignite
PV: Photovoltaic	N: Nuclear
G: Gas oil	

# Endesa's generation installations in Morocco as at 31/12/2022

	Originating company	Location	Type of fuel	No. of generators	Total power (MW)	% Endesa	Consolidated power rating in Endesa (MW)
<b>MOROCCO</b>							
	Morocco <sup>(1)</sup>	Tahaddart	CCGT	1	392	32	0
	<b>Total Morocco</b>			<b>1</b>	<b>392</b>	<b>32</b>	<b>0</b>

<sup>(1)</sup> Tahaddart consolidated under the equity method.

## Fuels:

B: Biomass	NG: Natural gas
CCGT: Combined cycle-gas turbine	H: Hydro
IC: Imported coal	C-A: coal-anthracite
D: Diesel	H+W: Hydraulic pump+wind
W: Wind	BL: Black lignite
F: Fuel oil	BRL: Brown lignite
PV: Photovoltaic	N: Nuclear
G: Gas oil	

# Endesa's total generation installations as at 31-12-2022

<b>TOTAL CONVENTIONAL GENERATION INSTALLATIONS</b>	<b>156</b>	<b>16,727</b>	<b>13,482</b>
<b>TOTAL RENEWABLE GENERATION INSTALLATIONS</b>	<b>299</b>	<b>9,348</b>	<b>9,337</b>
<b>ENDESA'S TOTAL GENERATION INSTALLATIONS</b>	<b>455</b>	<b>26,075</b>	<b>22,819</b>

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