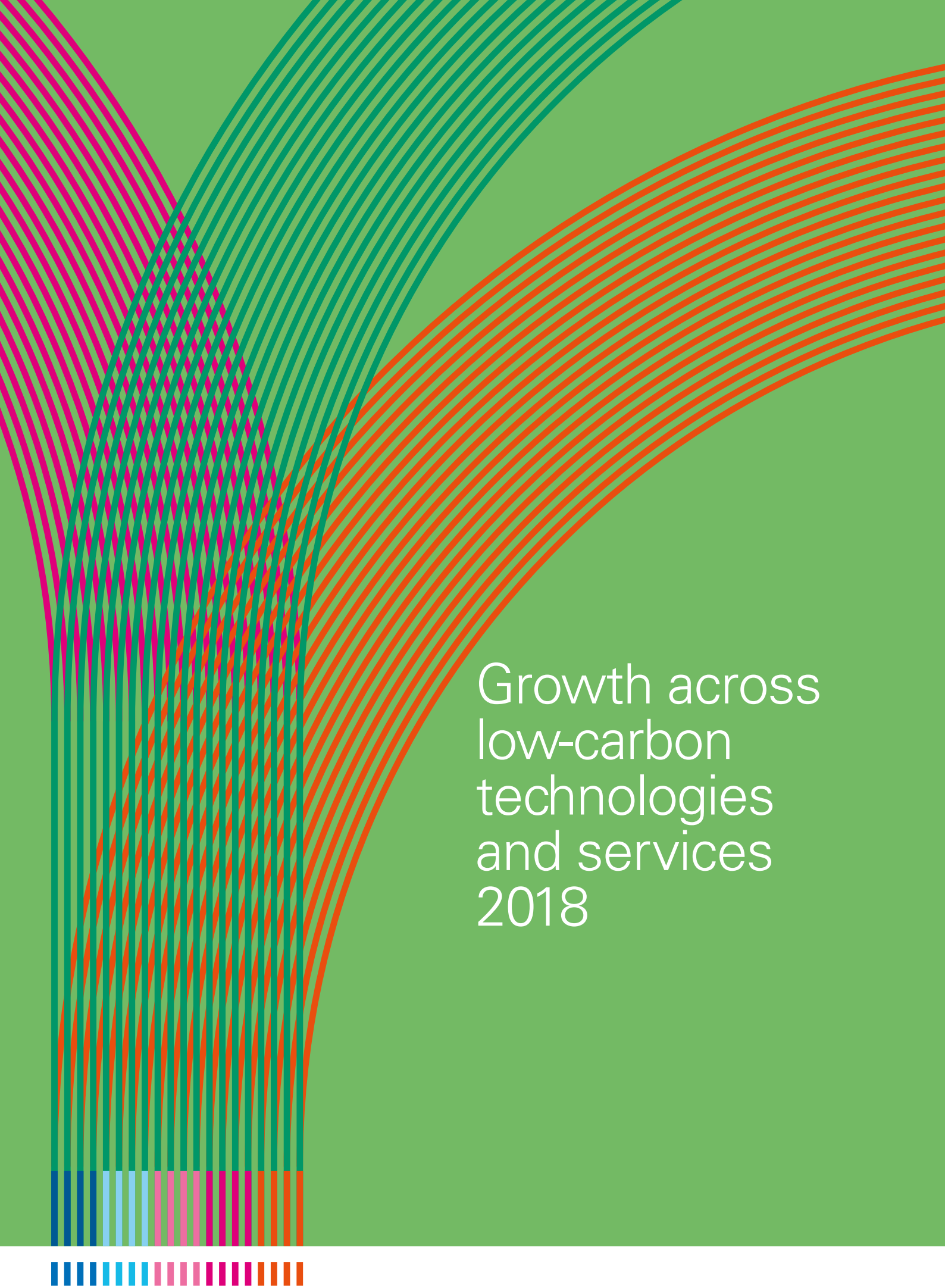
Growth across low-carbon technologies and services 2018

enel



Growth across low-carbon technologies and services 2018

Growth across low-carbon technologies and services (1/2)

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Plan 2018 > 2020 Growth across low-carbon technologies and services

ACTIVITIES/SDGs	2020 TARGETS	2018 RESULTS	CATEGORIES
Reduction of CO_2 specific emissions 13	< 0.350 $kgCO_2/kWh_{eq}$	0.356 $kgCO_2/kWh_{eq}$[1]	E Environmental footprint
Development of renewable capacity and reduction of thermal capacity 7 13	+7.8 GW renewable capacity[2] -7.3 GW thermal capacity	+3.1 GW renewable capacity[3] -0.2 GW thermal capacity	I Industrial growth E Environmental management
Implementation of environmental international best practices to selected coal plants 13	500 mil euros of investments for environmental retrofit	82 mil euros	E Environmental management
Electrification, storage and real time demand response 9 13	+200 MW/yr storage capacity[4] +5.0 GW demand response	3 MW/yr storage capacity 6.2 GW demand response	T Technologies and digitalization I Industrial growth E Environmental management S Social inclusion
Roll out of fiber optic network in Italy 9 11	7.5 mil households[5]	4.1 mil households[6]	T Technologies and digitalization I Industrial growth E Environmental management S Social inclusion
> Promotion of activities in line with the UN campaign "Making Cities Resilient" > MBA-PhD training about resilience in the countries where the Group operates 11 17	> 300 municipalities involved > 600 people involved	> 110 municipalities involved > 220 people involved	E Environmental management S Social inclusion G Partnerships

I Industrial E Environmental S Social G Governance T Technological

Plan 2019 > 2021 Growth across low-carbon technologies and services

ACTIVITIES/SDGs	TARGETS	CATEGORIES
Reduction of CO_2 specific emissions 13	0.23 kg/kWh_{eq} in 2030[7]	E Environmental footprint
Development of renewable capacity and reduction of thermal capacity 7 13	+11.6 GW additional renewable capacity[2] -7 GW thermal capacity	I Industrial growth E Environmental management
Implementation of environmental international best practices to selected coal plants 13	340 mil euros of investments for environmental retrofit	E Environmental management
Electrification, storage and real time demand response 9 13	> 9.9 GW demand response > 173 MW/yr storage capacity[4]	T Technologies and digitalization I Industrial growth E Environmental management S Social inclusion
Roll out of fiber optic network in Italy 9 11	8.5 mil households[5]	T Technologies and digitalization I Industrial growth E Environmental management S Social inclusion
> Promotion of activities in line with the UN campaign "Making Cities Resilient" > MBA-PhD training about resilience in the countries where the Group operates 11 17	> 240 municipalities involved > 600 people involved	E Environmental management S Social inclusion G Partnerships

1 Includes managed capacity. The value considering only consolitated production is equal to 0.369 $kgCO_2/kWh_{eq}$.
2 Includes managed capacity.
3 Including acquisitions for 0.2 GW and managed capacity for 0.4 GW.
4 Restated target on the basis of the only Enel X perimeter.
5 Only in Italy, A and B areas.
6 Only in Italy, A and B areas. The value added in the A-B and C-D areas is equal to 5.1 mil households.
7 CO_2 specific emissions will be < 0.345 kg/kWh_{eq} in 2021.

Growth across low-carbon technologies and services (2/2)

Plan 2018 > 2020 Environmental sustainability[1]

ACTIVITIES/SDGs	2020 TARGETS	2018 RESULTS	CATEGORIES
Launch of a circular economy (CE) strategy in new countries[2] 12	4 new countries	> Workshop in Chile with the top management > Consultation in Spain on circular economy strategy	E Circular economy I Operational efficiency
Launch of CE projects in Company's Business Lines 12	4 projects	> Circular Procurement > Enel X in "dedicated" areas	E Circular economy I Operational efficiency
Strengthening of partnerships and collaborations about CE 12 17		> Circular economy alliance > Collaboration with Arup > Founding members of ICESP[3]	E Circular economy G Partnerships
Measurement of the Group's circular EBITDA and target setting 12		Defined methodology with a pilot project on Enel X	E Circular economy I Industrial growth

I Industrial E Environmental S Social G Governance T Technological

Plan 2019 > 2021 Growth across low-carbon technologies and services

ACTIVITIES/SDGs	2021 TARGETS	CATEGORIES
Methodology finalization for Group's circular financial metrics and extension to the Business Lines 12		E Circular economy I Industrial growth
Development of Circular Community's activities 12		E Circular economy
Launch of the internal Circular Academy 12		E Circular economy
Strengthening of partnerships and collaborations about CE 12 17		E Circular economy G Partnerships
Number of new countries involved in CE strategy 12	5 new countries	E Circular economy I Operational efficiency
Number of CE projects launched, inter- and intra-Business Lines 12	6 projects	E Circular economy I Operational efficiency

1 In 2018-2020 Plan the following targets were included in "Environmental sustainability".
2 A CE strategy has currently been launched only in Italy.
3 Italian Circular Economy Stakeholders Platform.

Growth across low-carbon technologies and services

See the Appendix
Performance indicators
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Enel's commitment to combat climate change

Combating climate change and protecting the environment are among the responsibilities of a major global player in the energy industry such as Enel as we seek to achieve the full decarbonization of electricity generation by 2050, thereby helping to achieve the United Nations' SDG 13.

Global macro-trends such as decarbonization, electrification, urbanization, and digitalization are redesigning the energy industry in the direction of a new ecosystem that is **gradually transforming the traditional model of the utility business**.

It is therefore necessary to **promote the combat against climate change**, one of the primary challenges we face as a society, by promoting a global low-carbon economy. As stated by the World Economic Forum in its 2019 Global Risk Report, climate change is now the leading risk to society and will have a direct impact on long-term business performance.

Therefore, combating climate change and protecting the environment are among the responsibilities of a major global player in the energy industry such as Enel as we seek to achieve the full decarbonization of electricity generation by 2050, thereby helping to achieve the United Nations' SDG 13. We are also committed to developing a business model that is aligned with the objectives of the Paris Agreement (COP21) to maintain the average global temperature increase well below 2 °C compared with pre-industrial levels and to continue with efforts to limit this increase to 1.5 °C within a strategy based on a long-term view translated into practical objectives. In addition to actions that focus on the generation mix, Enel is active in digitalization, electric mobility, energy efficiency, and innovation. Within this landscape, Enel's commitment to the circular economy, which unites innovation, competitiveness, and environmental sustainability, engages all areas of the Group in working towards these objectives.

Enel is also committed to promoting **transparency of disclosure with regards to climate change,** providing information regarding the management of issues relating to this matter, as stated in the **recommendations put forth by the Financial Stability Board's Task force on Climate-related Financial Disclosure (TCFD)**, later on in the present chapter.

Enel and the global perspective on climate change

The United Nations Framework Conventions on Climate Change: from the COP21 to the COP25

The agreement reached during the 2015 United Nations Climate Change Conference in Paris (COP21) marked a fundamental step forward in the combat against climate change. The conference resulted in a plan to control climate-altering emissions over the medium and long term, with the support of a solid regulatory governance, which has traditionally been uncertain due to continual political changes. The main aim of the agreement is to limit the increase in global temperature to below 2 °C and to strive not to exceed 1.5 °C.

In November 2016, COP22 was held in Marrakesh. Participants made progress with the technical discussions on procedures to implement the Paris Agreement for post-2020 and the strength of the political commitment following Paris Agreement was confirmed. In the short term, implementing instruments will be necessary for the continuity of the operations and to ensure stability for long-term investments. However, 2017 was the year of the COP23, which was held in Bonn and looked at issues regarding the transparency of monitoring, reporting and verification procedures and the criteria for periodic assessment and the potential updating of the relevant targets.

The COP24, the last climate conference organized by the UN in Katowice, Poland, ended on December 15, 2018, the aim was to implement the Paris Agreement through a series of clear rules for assessing the commitments made by each individual country with a view to tackling climate change. This goal was achieved with the unanimous approval of the so-called "Paris Rulebook", as required by the regulation, which actually outlines the criteria for reporting, monitoring and reviewing the commitments made. On the other hand, as announced in the COP24 closing statement, COP25 will take place in Chile in December 2019.

The Enel Group recognizes the vital role that the private sector must play in upholding the shared commitments made in the framework of the various COP meetings held over the years. In particular, the transformation in the energy sector are heading precisely in this direction and there is no turning back: the trend is toward a system that relies increasingly on renewable energies, decarbonization, energy efficiency and digitalization. Enel is leading this transformation and is fully aware of the positive contribution that such events driven by the United Nations can make to tackle climate change. Thus, the Group supports them every year, participating in and running various events and discussions relating to the energy transition, continuously promoting the development of ambitious targets and requesting governments to introduce clear climate guidelines that will contribute to achieve a low-carbon economy by 2050.

The regulatory framework on climate change in 2018

Regulating greenhouse gas emissions

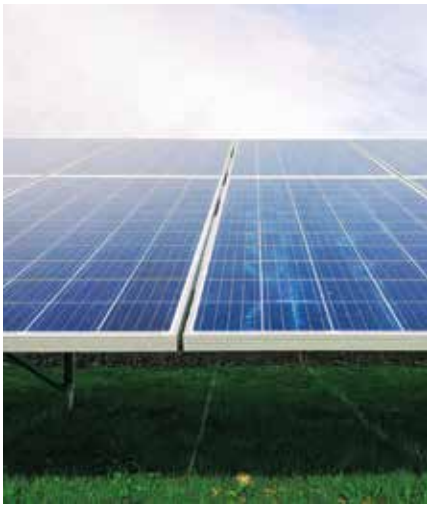
The European Parliament and the Council formally approved a review of the EU's ETS Directive for the 2020-2030 period, which then came into force on April 8, 2018. In order to meet the target of an overall reduction in greenhouse gas emissions of 40% by 2030 in relation to 1990 levels, those sectors involved in the EU's Emissions Trading System (EU-ETS) will need to reduce their own emissions by 43% in relation to their 2005 levels. The new ETS Directive will make this possible through a series of interrelated measures. In order to accelerate the emissions reduction process, the overall number of emission permits will be reduced as of 2021 at an annual rate of 2.2%, as opposed to the current rate of 1.74%. The market stability reserve (MSR) – the mechanism introduced by the EU to reduce the abundance of emission permits on the market and improve the resilience of the ETS to withstand future shocks – has been substantially reinforced.

The "Clean Energy for All Europeans" legislative package

On November 30, 2016, the European Commission released the "Clean Energy for all Europeans" legislative package containing a series of legislative proposals regarding European policy on climate and energy. The package notably contained the following Regulations and Directives, some of them revised, others brand-new: The Electricity Regulation, the ACER Regulation, the Risk-Preparedness Regulation, the Energy Union Governance Regulation, the Electricity Directive, the Renewable Energy Directive, the Energy Efficiency Directive and the Energy Performance in Buildings Directive.

The most relevant Directives and Regulations to the electricity sector are as follows:

- **Review of the European Directive and Regulation on the domestic electricity market** - On December 19, 2018 the European Parliament and Council of the European Union reached a political agreement on two of the main dossiers relating to the "Clean Energy for All Europeans" legislative package released on November 30, 2016, namely the European Directive and Regulation on the domestic electricity market. The agreement that the European legislators reached represents a major milestone with regards to the updating of the Community regulatory framework and that of the Member States with a view to efficiently incorporating renewable sources and new technologies into the electricity system, standardizing the functioning of the markets, providing efficient indications with regards to investments and guaranteeing that customers are put at the heart of the matter;
- **Directive EU 2018/2001 on the promotion of the use of energy from renewable sources** - The new directive on the promotion of the use of energy from renewable sources produced by the European Parliament and the Council of December 11, 2018 was published in the Official Journal of the European Union on December 21, 2018. The primary objective of Directive 2018/2001, which abrogates Directive 2009/28, is to accelerate the energy transition in favor of developing renewable energies. With this in mind, the directive sets a new binding European target for 2030 of energy from renewable sources accounting for at least 32% of the Union's gross final energy consumption, including a provision for this figure to be revised upwards by 2023;
- **Directive EU 2018/2002 on energy efficiency** - The new directive on energy efficiency produced by the European Parliament and the Council of December 11, 2018 was published in the Official Journal of the European Union on December 21, 2018. The directive sets a new European energy efficiency target for 2030 of at least 32.5% in relation to the baseline scenario, including a provision for this figure to be revised upwards by 2023. It also places an obligation on Member States to achieve an annual reduction in final-use energy consumption of 0.8% over the 2021-2030 period that must be adhered to through a series of mandatory schemes involving energy operators or alternative measures. The Member States must adopt the provisions of the directive by June 25, 2020;
- **Directive (EU) 2018/844 on the energy performance of buildings** - Directive (EU) 2018/844 on the energy performance of buildings, which modifies the previous directive on the matter and part of the directive on energy efficiency, came into force on June 9, 2018. The new directive provides that each European Union Member State introduce a long-term strategy to support the renovation of the country's residential and non-residential buildings in both the public and private sectors with a view to achieving a decarbonized and highly energy-efficient building stock by 2050;
- **Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action** - The new Regulation (EU) 2018/1999 on the Governance of the Energy Union and Climate Action was published in the Official Journal of the European Union at the same time as the directives on the promotion of the use of energy from renewable sources and on energy efficiency. This regulation introduced a governance mechanism aimed at achieving the Community objectives regarding greenhouse gas emissions in accordance with the Paris Agreement and the Community objectives for 2030 with regards to energy and climate. The Regulation also seeks to ensure greater regulatory certainty as well as greater certainty for investors.



"Clean mobility" legislative package

The European Commission completed the release of the "Clean mobility" package it began working on in 2017 during 2018. The package comprises three parts, the first two of which were published in 2017 and the third in May 2018, and contains a series of legislative proposals and other initiatives designed to make traffic safer, reduce CO_2 emissions and air pollution, and support the development of zero and low-emission vehicles and the creation of a European battery production network.

Enel's positioning

The decision-making and regulatory processes of the European Union (EU) are shaping the current energy transition. This, in turn, has an effect on companies' business models and on the behavior of consumers and citizens, and directly impacts national legislation in the countries where the Group operates. Furthermore, given its transnational nature and current global challenges, the European legislative process is becoming increasingly complex, requiring ever closer cooperation between the EU institutions and other stakeholders. With all this in mind, Enel decided several years ago to introduce a Europe and Euro-Mediterranean Affairs Function to monitor relevant topics and represent the Group before institutions, organizations, associations and other active counterparts at European level. One specific unit is responsible for consolidating and representing the Group's position on policies relating to climate change, low-carbon policies, international regulation of the carbon market, the environment, and security of supply. This unit also allows Enel to support climate protection initiatives and continue to engage institutional stakeholders, trade associations, non-governmental organizations and the academic world. This sort of engagement with stakeholders also helps to develop the European regulatory framework towards ambitious climate targets. It also guarantees a certain coordination between the various business areas and the various countries in which the Group operates with a view to ensuring that all regulatory processes, at both national and European level, of which the company is encouraged to be part are fully in keeping with Enel's strategy for promoting a low-carbon energy model and the electrification of energy demand.

To that effect, and with reference to the EU's ETS Directive, Enel recognizes the role of the Directive in providing an adequate price signal associated with CO_2 emissions and believes the "cap and trade" mechanism to be the most effective way of reducing emissions, particularly in the case of industrialized economies, since setting a target in terms of absolute value ensures that the environmental target can be applied whilst the price signal set by the market guarantees economic efficiency. Enel therefore welcomes the outcome of the EU's ETS Directive for the 2021-2030 period and considers the latter to be the basis for the EU's climate policies, supplemented with other policies that make it possible to achieve climate targets whilst at the same time protecting the competitiveness of the EU. The obligations imposed by the EU's ETS system have been largely integrated into Enel's long-term strategy aimed at achieving decarbonization by 2050 by increasing renewable capacity and gradually reducing thermal capacity. In this respect, a price signal that is stable in the long-term for investments in low-carbon technologies and consistency between European and national policies are vital to strengthening the role of the EU's ETS in driving a reduction in emissions. Furthermore, the EU's ETS system allows to use a framework that is already standardized at EU level and that guarantees technological neutrality and the equal treatment of market operators. Based on these considerations, the Enel Group does not support the introduction of national taxes on CO_2 (or carbon price plans) in sectors covered by the EU's ETS since this would significantly distort competition within the EU single market and increase the overall cost of achieving the desired environmental outcome.

Over the course of 2018 Enel took part in various public consultations, meetings, conferences, workshops and other events relating to the "Clean Energy for All Europeans" legislative package, welcoming the acknowledgment of energy efficiency as a key pillar of the low-carbon energy transition and helping to establish a reliable system for the purposes of increasing renewable energies. In this respect, Enel firmly believes that energy efficiency is vital to decarbonizing economic systems and that the switch to electricity as a more efficient energy carrier plays an important role in achieving energy efficiency targets. Many sectors (including the residential, tertiary, industrial and transport sectors) have developed highly efficient

and mature electrification technologies, often with negative greenhouse gas abatement costs and substantial fringe benefits. Nevertheless, their commitment is hindered by the presence of major non-economic barriers. In this respect, the Enel Group continues to call for action in tackling non-economic barriers complemented by an incentivizing regulatory framework to encourage the penetration of efficient electrification technologies within the market. 2018 was a significant year for European energy efficiency policy, not least because it saw the publication of the review of the Directive on energy efficiency, but efforts in this respect must be continued and stepped up. Enel supports the binding targets set by the new directive on renewable sources as they are fully aligned to Enel's investment strategy, of which renewable energies is one of the main drivers. Enel also supports the call for Member States to remove obstacles to the development of PPAs (Power Purchase Agreements) – a mechanism widely used by Enel Green Power in other countries such as United States and Mexico – and to promote the adoption of this mechanism throughout Europe. Furthermore, the Group welcomes and supports the Regulation on the Governance of the Energy Union inasmuch as it provides clarity, credibility and stability with regards to the framework for energy and climate policy, as well as involving low-carbon investment by the energy sector.

Finally, the package on mobility is naturally part of European commitments to the Paris Agreement, and to that effect, Enel welcomes the guidelines and targets set in this respect, based on a belief that they will bring with them business opportunities in the electricity sector and contribute to creating jobs and generating sustainable economic growth. Enel therefore played an active role in various work programs aimed at developing electric mobility initiatives and promoting sustainable transport as a whole in 2018.

Action platforms and partnerships

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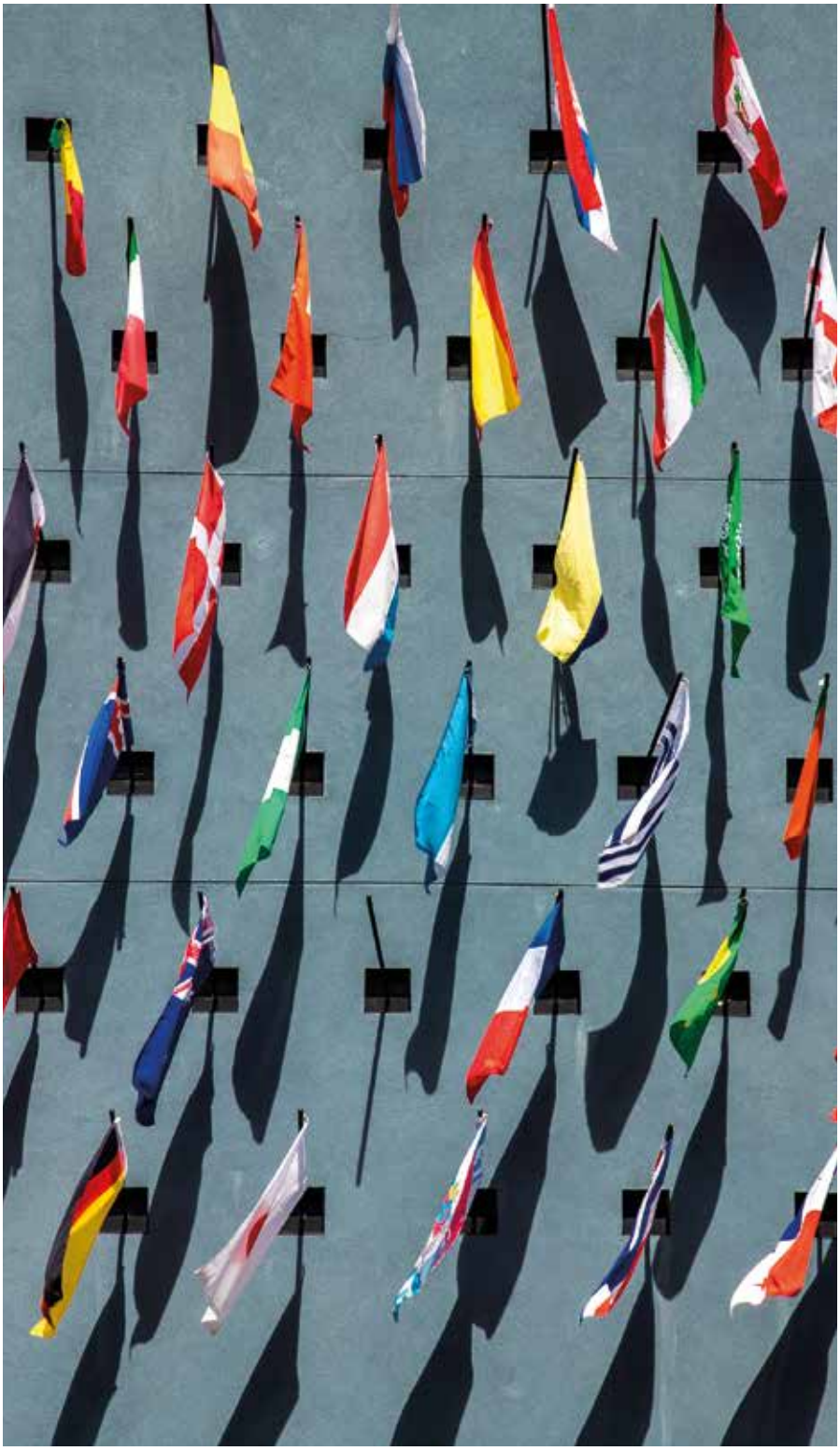
The Group plays an active role in various industry associations and organizations with a view to promoting topics relating to the energy transition at both national and global level. The following are some of the international associations with which Enel was actively involved in 2018 (see also the chapter entitled "Long-term sustainable growth").

- **Alliance of CEO Climate Leaders** - The CEO of Enel is a member of the Alliance of CEO Climate Leaders, organized by the World Economic Forum. A new letter from Chief Executive Officers was published in 2018 ahead of the COP24, calling on world leaders to encourage low-carbon finance and investment and develop policies designed to increase the demand for low-carbon solutions.
- **eurelectric** - Under Enel's leadership, eurelectric adopted a new long-term vision of the European electricity sector, through which it has committed to achieving a carbon neutral electricity mix in Europe well before 2050 and to increasing energy efficiency and the electrification of energy demand in order to mitigate the effects of climate change. Another major achievement that came in 2018 was the Eurelectric's Decarbonization Pathways study, published ahead of the COP 24, which made a major contribution to the discussion surrounding the EU's long-term climate strategy and outlined eurelectric's industry vision for achieving carbon neutrality well ahead the 2050 landmark.
- **Solar Power Europe** - This business-led association represents various organizations that play an active role right throughout the value chain with the aim of outlining the regulatory environment and improving solar energy-related business opportunities in Europe. Enel was widely represented within this association over the course of 2018, serving as Vice-President at both Board and Strategic Committee levels and playing an active role in various task forces over the course of the year.
- **Wind Europe** - This business-led association aims to promote both national and international policies and initiatives designed to strengthen the development of wind power-related markets, infrastructures and technologies at both the European and global levels. Enel Green Power is a member of the Board of Directors and has played an active role in the initiatives organized by the various working groups.
- **Platform for Electro-Mobility** - This

initiative involves various companies, non-governmental associations and other organizations that are committed to promoting electric mobility and jointly developing solutions for electrifying transport in Europe. Enel was the first utility to participate in the platform.

- **SmartEn** – This is the leading industry association in digital and decentralized energy solutions, focusing on making the energy transition through intelligent cooperation between the fields of consumption, networks, transmission and generation, which all play an equally important role in an integrated energy system. Enel played an active role on the Board in 2018, as well as in various working groups set up to promote sustainable decentralized energy solutions.
- **E.DSO for Smart Grids** - European Distribution System Operators (E.DSO) is the key interface between European distributors and European institutions, promoting the large-scale development and testing of smart grid technologies in real-life situations, as well as new market models and regulation designed to achieve the European Union's energy and climate targets. Enel serves as Vice-president of the Board of Directors together with other players of the international electricity network.
- **Carbon Pricing Leadership Coalition** - Launched by the World Bank in 2014, the coalition comprises various public and private players (including Enel) from the academic and civil spheres with the aim of advancing the adoption of effective solutions for setting carbon prices on a global scale.
- **The International Emissions Trading Association (IETA**) - This non-profit business organization is responsible for enabling business to engage in climate action consistent with the targets of the United Nations' "Framework Convention on Climate Change" and introducing effective trading systems based on the greenhouse gas emissions market. Enel is a member of the IETA's Board of Directors and has co-chaired the European Union's IETA working group since 2013.



Enel's commitment to climate disclosure

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Enel is committed to promoting transparency in climate disclosure as a way to demonstrate to its stakeholders that Enel's ambition to tackle climate change is rigorous and determined. Therefore, **Enel has made a public commitment to adopt the recommendations of the Task force on Climate-related Financial Disclosures (TCFD) of the Financial Stability Board**, which in June 2017 published specific recommendations on the voluntary reporting of the financial impact of climate risks.

As a result, within the scope of implementing these guidelines, **Enel has updated the information concerning the management of climate-related issues**. As such, this section has been structured around the four areas recommended by the TCFD, which represent the fundamental components of how organizations operate:

- ***Governance*** - Description of the role of Enel's system of corporate governance with regard to climate-related issues and the role of management in assessing and managing such issues;
- ***Strategy*** - Overview of the main climate-related risks and opportunities over the short, medium and long term, as well as of the various physical and transition scenarios considered and the Company's strategy developed to mitigate and adapt to these risks and to maximize opportunities;
- ***Risks*** - Description of the process adopted by the Group to identify, assess and manage climate-related risks and opportunities (a section that is complementary to the paragraph "Description of climate-related risks and opportunities");
- ***Metrics and targets*** - The main climate-related metrics used by Enel, including greenhouse-gas emissions and operational and financial indicators, together with the main targets set in order to promote a low-carbon business model.

Governance

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Enel is playing a leading role in the energy transition and has adopted a business model that focuses on reducing the impact of climate change. Within this view, Enel is committed to promoting a sustainable energy model aimed at achieving full decarbonization and digitalization while enhancing the electrification of energy demand in order to promote the growth of a low-carbon economy. Enel's organizational model and corporate governance establishes specific roles and responsibilities for the main governance bodies within the Company, thereby ensuring that climate-related risks and opportunities are given due consideration in all relevant decision-making processes.

Enel's governance model to tackle climate change

Board level oversight

Management level

Holding Functions	Global Service Functions	Global Business Lines	Regions and Countries
• Administration, Finance and Control • Innovability • Health, Safety, Environment & Quality • Audit	• Procurement • Digital Solutions	• Enel Green Power • Thermal Generation • Infrastructure and Networks • Enel X • Global Trading	• Italy • Iberia • Europe and Euro-Mediterranean Affairs • South America • North and Central America • Africa, Asia and Oceania

Group Investment Committee

Main climate-related functions

- **Climate strategy oversight and Board of Directors coordination**
- **Climate issues oversight (risks, planning and disclosure)**
- **Definition and oversight of the sustainable business model towards leading energy transition**
- **Definition of the Strategic Plan, in which climate-related priorities are set**
- **Managing climate-related risks and opportunities, while also setting targets and actions to promote the energy transition**
- **Granting expense approval aligned to Enel's climate goals**

Climate-related responsibilities of the corporate governance bodies

Board of Directors – The Board of Directors of Enel SpA is responsible for analyzing and approving company strategy, including the Group's annual budget and Business Plan, which include the primary objectives and actions that the Company intends to pursue in order to guide the energy transition and deal with climate change. The Board of Directors also guides and evaluates the Internal Control and Risk Management System ("SCIGR") while also determining the level and nature of risk that is compatible with the strategic objectives of the Company and of the Group. The SCIGR is the set of rules, procedures, and organizational structures aimed at identifying, measuring, monitoring and managing the main risks of the Company and its subsidiaries. These risks include those that could have an impact on the organization's sustainability of the medium to long term, including climate-related risks. In 2018, the Board of Directors dealt with issues related to climate change and sustainability, as reflected in Company strategies and operations, during 8 of its 18 meetings held. The board is supported mainly by two internal committees with regard to climate-related issues:

- **Corporate Governance and Sustainability Committee** - This committee is responsible for assisting the Board of Directors in evaluation and decision-making processes related to sustainability issues, including climate-related issues connected with the Company's business, as well as the Company's interactions with stakeholders. The committee examines the guidelines of the Sustainability Plan including the climate-related targets of the plan, and also examines the general layout of the Sustainability Report and the Non-financial Statement, including the approach to climate-related disclosures adopted for these documents, and provides opinions to the Board of Directors. The majority of the committee is composed of independent directors, and, in 2018, it comprised the Company Chairman and two independent directors. In 2018, the committee dealt with issues related to climate change and sustainability, as reflected in company strategies and operations, during 4 of its 6 meetings held;
- **Control and Risks Committee** - This committee supports the board in carrying out its duties with regard to internal control and risk management. It also examines the Consolidated Financial Statements, the Sustainability Report, and the Non-financial Report within the scope of their relevance to the SCIGR, all of which include climate-related disclosures, and issues related opinions to the Board of Directors for the purposes of approval of these documents. The committee is composed of non-executive directors, the majority of which (including the chairman) are independent. In 2018, the committee was made up of four independent directors. In 2018, the committee dealt with issues related to climate change and sustainability, as reflected in company strategies and operations, during 8 of its 13 meetings held.

Again in 2018, the Company organized a specific induction program aimed at providing the Directors with a sufficient understanding of the fields in which the Group operates, including climate-related issues and their impact on business strategy and company operations.

Chairman - Within the role of guiding and coordinating the efforts of the Board of Directors, as well as overseeing implementation of the board's resolutions, the Chairman plays a proactive role in the approval and monitoring of business and sustainability strategies, of which growth by way of low-carbon technologies and services is one of the pillars. In 2018, the Chairman also led the Corporate Governance and Sustainability Committee.

CEO and General Manager - This person is vested with broad powers of company management, with the exception of those powers reserved to the Board of Directors, and, in execution of these powers, has established a sustainable business model by defining strategies aimed at guiding the transition to a low-carbon energy model. This position reports to the Board of Directors regarding the execution of these powers, including business-related activities in line with Enel's commitment to dealing with climate change. The CEO is also the appointed senior officer responsible for the SCIGR. Finally, the CEO represents Enel in various initiatives related to climate change and holds important positions in institutions of global renown, such as the United Nations' Global Compact, the United Nations' Sustainable Energy for All, and the multi-stakeholder platform of the European Commission regarding the Sustainable Development Goals.

Enel's organizational model for managing climate-related issues

Enel has a management team in which climate-related responsibilities have been assigned to specific Functions that help guide Enel's leadership in the energy transition. Each area is responsible for managing the climate-related risks and opportunities of relevance to that area:

- **the Holding Functions** (Administration, Finance and Control; Audit; Innovability; and Health, Safety, Environment and Quality) are responsible for consolidating analyses of the scenarios and for managing the strategy and financial planning process aimed at promoting renewable energy, the decarbonization of the energy mix, asset digitalization, and the electrification of energy demand;
- **the Global Service Functions** (Procurement and Digital Solutions) are responsible for implementing sustainability and climate-related criteria in supply chain management and fostering development of digital solutions to support the implementation of climate friendly technologies, respectively;
- **the Global Business Lines** (Enel Green Power; Thermal Power Generation; Trading; Infrastructure and Networks; and Enel X) are responsible for developing activities related to the promotion of renewable energy generation, the optimization of thermal capacity, the digitalization of the electric grid, and the development of enabling solutions in the energy transition and the combat against climate change (e.g. electric mobility, energy efficiency, efficient lighting and heating systems);
- **the Regions and Countries** (Italy, Iberia, Europe and Euro-Mediterranean Affairs, South America, North and Central America, Africa, Asia and Oceania) are responsible for promoting decarbonization and guiding the energy transition towards a low-carbon business model within their areas of responsibility. Furthermore, the Europe and Euro-Mediterranean Affairs Function is responsible for defining the Group's position on climate change, for low-carbon policies, and for the regulation of international carbon markets within Europe.

In addition, Enel has established the following two management committees chaired by the CEO, the responsibilities of which include climate-related issues:

- **the Group Investment Committee**: this committee approves investments related to business development. The committee is also responsible for ensuring that all investments are fully in line with the Group's commitment to promoting a low-carbon business model and achieving full decarbonization by 2050. The committee is made up of the heads of Administration, Finance and Control; Innovability; Legal and Corporate Affairs, and Procurement, as well as the regional heads and the heads of the various Business Lines;
- **the Group Risks Committee**: the objective of this committee is to ensure that the organizational structures involved in managing operating risks are in line with business strategies and objectives, while engaging management in strategic decisions concerning risk policy, management and control.

Incentive system related to climate change

The Company's remuneration policy includes various mechanisms aimed at making progress towards the energy transition, and specifically:

→ **a short-term variable remuneration (or MBO)** that may include objectives related to the specific function of each manager involved. This may, for example, include objectives tied to the development of renewable energy for managers within the Enel Green Power Global Business Line, or related to products and/or services for the energy transition within the Enel X Global Business Line;

→ **a long-term variable remuneration** that, beginning in 2018, includes a climate-related target for the reduction of CO_2 emissions per kWh_{eq} for the Enel Group over the next three years, which accounts for 10% of total long-term variable remuneration.

Strategy

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Strategic Plan, value creation, and climate change

Enel is committed to adopt a strategy based on meeting the objectives of the Paris Agreement (COP21). By way of strategic planning and risk management integrated with sustainability and climate-related issues, the Enel Group has created sustainable value over the long term. Over the last four years (2015-2018), the Group has increased profitability while achieving objectives related to decarbonization, digitalization, and customer service. The Group's Strategic and Business Plan 2019-2021 (the Plan) calls for continuing along this virtuous path based on a long-term view and the achievement of a series of predetermined objectives.

		2015	2018	2021
Renewables	Renewable capacity (% of total)	41%	46%	55%
CO_2	CO_2 emissions (kg/kWh_{eq})	0.409	0.369	0.345
Grid customers	Million	61	73	75
Retail free-market customers	Million	17	22	36
New businesses	Gross margin (billion euros)	-	0.5	0.9
Simplification	Group earnings to total earnings (%)	64%	72%	71%
Cash generation	FFO - Gross investment (billion euros)	1.8	2.5	4.4
Remuneration of shareholders	Dividend per share (euros/year)	0.16	0.28	0.36 (1)

(1) Guaranteed minimum dividend (floor).

The Group's commitment can also be seen in the objectives pursued in relation to the United Nations' Sustainable Development Goals (SDGs), specifically: inclusive and equitable quality education (SDG 4); access to clean, affordable energy (SDG 7); inclusive and sustainable economic growth (SDG 8); industry, innovation, and infrastructure (SDG 9); and sustainable cities and communities (SDG 11). Enel is working to achieve the full decarbonization of electricity generation by 2050, in line with the objectives of the Paris Agreement and with the science-based targets, while also helping to achieve the United Nations' SDG 13.

Enel's value creation model is based on a long-term vision that aims to take advantage of opportunities in the energy transition in three main areas: (i) the decarbonization of the generation capacity (increase of about 11.6 GW in the Group's renewables capacity[1] and decrease of about 7 GW in thermal capacity by 2021 compared with 2018); (ii) infrastructure development (+10% of electricity distributed over the distribution network in 2021 compared with 2018; 3.4 million public lighting points by 2021; some 455,000 public and private electric vehicle recharging points by 2021) and new customer services (9.9 GW of demand response by 2021; 173 MW of distributed storage installed per year by 2021) at the service of electrification and urbanization; and (iii) the digitalization of assets, customers, and human capital (5.4 billion euros in investment for the period 2019-2021).

1 Includes managed capacity.

Climate-change reference scenarios

The Group develops financial and macroeconomic scenarios over the short, medium and long term to support both business and strategic planning and the investment evaluation process. This makes use of economic and statistical models progressively integrated with climate-related data by introducing projections related to physical and transition scenarios in order to have a broad and consistent view of the landscape both in countries in which the Group has a presence and in those of potential interest. Forecasts of the main variables are constantly compared against the most authoritative international sources.

The Group has taken two physical scenarios representing two distinct, extreme pathways of concentrations of greenhouse gases (GHGs) developed by the Intergovernmental Panel on Climate Change (IPCC) in order to include the most extreme pathways of those that are plausible:

- **Representative Concentration Pathway 2.6 (RCP 2.6)**: a climate-change scenario consistent with limiting global warming to below 2 °C by 2100 (mean of +1 °C over the period 2081-2100 based on the IPCC Fifth Assessment Report);
- **Representative Concentration Pathway 8.5 (RCP 8.5)**: a business-as-usual scenario that represents the most pessimistic forecast of containing GHGs, resulting in a mean temperature increase of 3.7 °C over the period 2081-2100.

In order to study the effects of climate change and related transition scenarios, the Group has entered into a collaboration with the International Centre for Theoretical Physics (ICTP) concerning the geographical downscaling of global climate scenarios. Downscaling enables detailed forecasts at a greater resolution so as to track the business impact of a series of relevant variables, such as temperature, rain levels, snow levels, solar radiation, and wind. This approach produces a model that integrates climate change with the other country-level variables, starting with the countries of greatest relevance to the Group and then extending out to global coverage. Integration of the scenario analyses with climate-related variables will result in an increasingly important tool supporting informed strategy and operating decisions.

The initial results of the scenario analysis and climate data have shown that significant, chronic changes will take place gradually over the coming decades. Changes compared with historical trends will be gradual, with limited effects in both scenarios until 2050, but with more extreme chronic effects under RCP 8.5 from 2050 to 2100, compared with historical trends and RCP 2.6. Studies of Europe and South America have pointed to a general increase in temperature with a greater impact in southern Europe and in Central and South America and of particular intensity by 2100. In these areas, rainfall levels could significantly decline after 2050 under RCP 8.5 forecasts, but could increase in northern Europe (e.g. Scandinavia). Differences in solar radiation patterns, on the other hand, could be more significant beginning in 2100 in the regions most exposed to a significant reduction in rainfall, whereas wind patterns could experience less homogeneous variations.

Regarding the transition **scenario definition**, the Group refers to the leading international sources, such as the **International Energy Agency** (WEO Sustainable Development Scenario; WEO Current Policies Scenario; ETP 2017 2 °C Scenario 2DS; Beyond 2 °C Scenario B2DS), the **International Renewable Energy Agency** (Reference case, Remap case), and **Bloomberg New Energy Finance** (BNEF New Energy Outlook). This approach enables Enel to associate a series of assumptions and variables to the potential climate-related pathways, to develop a scenario consistent with the Paris Agreement (COP21). The transition scenario includes variables such as demand for energy and services or assumptions about electrification, the use of electric vehicles, and the prices of commodities and CO_2. In order to reach this objective, a sharp reduction in emissions from power generation, high renewable energy sources penetration, and the use of effective policy mechanisms and measures with regard to carbon pricing are expected. Within this landscape, we are also expecting an increase in energy efficiency, and in the electrification of industrial and residential consumption as well as in the transport industry. This transition towards lower carbon emissions and efficiency in the use of energy could lead to a gradual uncoupling of economic growth and the consumption of resources and, consequently, to lower demand and lower prices for fossil fuels.

Description of climate-related risks and opportunities

The Group's strategy and positioning ensure resiliency and adaptation as well as mitigation capabilities with respect to the evolution of the external context associated to climate change thanks to a vision, a business model, and a position of leadership that are aligned with the Paris Agreement (COP21) and which are centered around the axes of sustainability and flexible growth of utilities:

- world leader among private-sector operators in terms of installed capacity in renewable energy[1] (about 43 GW);
- world leader among private-sector operators of distribution networks in terms of customers served (some 73 million);
- world leader among private-sector operators in terms of retail power and gas customers (about 70 million);
- approximately 6 GW of demand response managed worldwide.

Risks and opportunities are described by taking into account the physical and transition scenarios and with the support of the various components of long-term strategy assessment described in the section "Risk management" (e.g. materiality analysis, ESG risk analysis, competitive analyses, etc.). The Group is working to gradually integrate the models of scenario analysis and strategic planning with climate models in order to establish more accurate relationships between the climate scenarios themselves, the macroeconomic landscape, the energy scenarios, and business fundamentals.

The information presented below is the result of a preliminary impact analysis that, by assessing the potential long-term effects (beyond 2030) and analyzing the Group's portfolio over the period of the Strategic Plan (2019-2021), associates sensitivity analyses of operational and industrial phenomena related to physical and transition variables.

With regard to the **risks and opportunities associated with physical variables**, and taking the IPCC pathways as points of reference, we analyzed the trends in the following variables and associated operational and industrial phenomena with potential risks and opportunities: (i) change in mean temperatures and potential increase and/or decrease in energy demand; (ii) change in mean rainfall and snow levels with a potential increase and/or decrease in hydroelectric generation; (iii) change in mean solar radiation and wind with a potential increase and/or decrease in solar and wind generation. In addition to chronic trends, the frequency and impact of these events have been looked at in terms of extreme events potentially resulting in unexpected physical damage to assets. However, work to perfect these analyses is ongoing. According to the scenarios used, significant, chronic changes in the variables analyzed, even in the event of increases, would have a material impact mainly over the long term.

By integrating financial strategy with sustainability and innovation, the Group has already implemented a series of actions aimed at mitigating potential risks and taking advantage of opportunities related to physical variables, such as the digitalization plan aimed at, *inter alia*, implementing systems and plans of preventive maintenance and, in particular, resilience plans for the infrastructures of the electrical grid. Enel is also active throughout the electricity value chain (generation, distribution and sales) and has a diversified portfolio of assets, in terms of both generation technologies (with a marked increase in renewables, especially wind and solar) and the markets and geographical areas in which we operate, thereby minimizing climate-related risks and their overall financial impact. The Group also adopts the best strategies of prevention and protection in order to reduce the potential impact on the communities and territories surrounding our assets. All areas of the Group are subject to ISO 14001 certification, and the potential sources of risk are monitored by way of internationally recognized Environment Management Systems (EMSs).

1 Includes managed capacity.

Sensitivity analysis of operational and industrial-type phenomena that can be associated with physical variables

Chronical physical variable	Description of the potential impact in terms of scenario values of the Strategic and Industrial Plan	Estimated potential impact on EBITDA (average year figures in the 2019-2021 period)
Temperature	Higher/lower demand for electricity (+1/-1% accumulated) with an impact on generating [1] and distribution [2] facilities	+0.1/0.2 billion euros -0.1/0.2 billion euros
Rainfall	Higher/lower hydroelectric generation (+10/-10% annual) with an impact on generating facilities [3]	+0.1/0.2 billion euros -0.1/0.2 billion euros
Wind	Higher/lower wind generation (+10/-10% annual) with an impact on generating facilities [3]	+0.05/0.1 billion euros -0.05/0.1 billion euros
Irradiation	Higher/lower solar generation (+10/-10% annual) with an impact on generating facilities [4]	+0.01/0.05 billion euros -0.01/0.05 billion euros

(1) Values calculated using the stochastic methodology and representation of the equivalent deterministic variations.
(2) Impact with regards to Italy and Iberia.
(3) With regards to Italy, Iberia, Romania and South America, whether thermal or renewable.
(4) Global scope.

As for the **risks and opportunities associated with transition variables**, and based on the various scenarios mentioned above in combination with the various factors involved in the identification of risks (e.g. the competitive landscape, the long-term outlook for the industry, materiality analyses, etc.), we analyzed the trends in the following drivers and related potential risks and opportunities: (i) prioritizing the phenomena of greatest relevance in terms of climate change; (ii) distinguishing between the short term (less than 3 years), medium term (3-5 years), and long term (beyond 5 years); and (iii) connecting these drivers to the TCFD recommendations for the classification of risks and opportunities.

Short-term risks and opportunities and strategic actions of mitigation and adaptation:

- **introduction of laws and regulations** for getting through the transition and the Paris Agreement introducing stricter emission limits and/or altering the generation mix by price signals;
- **increasing focus within the financial community on ESG issues** with potential future benefits in terms of the availability of capital, which is also tied to financial sustainability, and of new products and markets (e.g. green or other sustainable bonds);
- **technological maturity and full competitiveness of renewable energy**, both large-scale and small-scale, with positive effects on return on investment.

Medium-term risks and opportunities and strategic actions of mitigation and adaptation:

- use of **more efficient means of transport** from the point of view of climate change, particularly with regard to the development of **electric vehicles and recharging infrastructures**;
- **development and/or expansion** of (new) assets (e.g. storage) **and/or low-carbon services** (e.g. energy as a service) in response to technological progress and shifts in investment from the supply side to the demand side of energy in order to move beyond the Paris Agreement with benefits in terms of new revenue opportunities;
- **use of low-carbon sources of energy as the mainstream segment of the energy mix** in countries with opportunities to develop renewable resources and with flexibility in their electricity and energy systems with positive impacts in terms of return on investment and new business opportunities;
- **increase in the level of competition and convergence of opportunities from diverse fields** with opportunities to access new markets, services and/or partnerships or for the entry of new players into the energy industry;
- **regulatory changes with a view to integrating new digital and renewable technologies and to driving infrastructure resilience** with potential benefits in terms of introducing new mechanisms of remuneration tied to environmental performance and innovation.

Long-term risks and opportunities and strategic actions of mitigation and adaptation:

- **uncertainty and volatility in business drivers** (e.g. macroeconomics, energy, climate, etc.) that are **growing and persistent as new paradigms**, with effects on price indicators, on the cost of raw materials and technologies, on the value of assets, and on reputation;
- **gradual increase in the decentralization of the energy and electricity industries with a shift towards distributed technologies and resources**, which leads to new business and investment opportunities with a focus on the customer and on the needs of infrastructures.

By integrating financial strategy with sustainability and innovation, the Group has already implemented a series of actions aimed at mitigating potential risks and taking advantage of opportunities related to transition variables. Of particular note are the main actions concerning the energy and climate transition:

- **a decarbonization strategy** for power generation, resulting in a reduction of thermal fossil fuels of over 6 GW from 2015 to 2018 and an increase of about 6 GW in renewable sources to bring carbon-free power generation to 51% of the total and emissions to 0.36 $kgCO_2/kWh_{eq}$. The Plan calls for a further reduction of 7 GW in thermal generation by 2021 and the addition of 11 GW of renewable energy, which would bring carbon-free generation to 62% of the total[2];
- **financial strategy aimed at integrating ESG issues, leading to a sustainable approach to debt management**, including by issuing green bonds – with Enel having issued three green bonds for a total of 3.5 billion euros (for further details, see the Green Bond Report, available at the following link https://www.enel.com/investors/fixed-income/main-programs/green-bond) – and **collaboration with leading international development banks and financial institutions** (e.g. the World Bank, the European Investment Bank - EIB, and other banks dedicated to regional development);
- **strategy to develop renewable energy**, both on a large scale with the Enel Green Power Business Line with an IRR/WACC spread of around 150 bps and with the Enel X Business Line by developing distributed solutions for large and small customers;
- **strategy to develop electric mobility and new services with the Enel X Business Line**, which, as of 2018, has about 3 MW of installed distributed storage and manages some 2.5 million lamps, 49,000 public and private electric vehicle recharging points, and more than 4 million property units connected to the fiber-optic network. The 2019-2021 Business Plan calls for bringing annual installed storage to 173 MW, public lighting points to 3.4 million, recharging points to 455,000, and property units connected to the fiber-optic network to 8.5 million;
- **strategy to develop renewable-energy PPAs with players in various industries**, as well as a series of **technology and other strategic partnerships supported by innovation efforts that take advantage of a global network of innovation hubs** created to develop technology startups of the greatest potential and to transform ideas into business solutions;
- **plan for the digitalization of assets**, of customers, and of human capital, which reached around 1.5 billion euros in 2018. The plan calls for a total investment of 5.4 billion euros;
- **investment plan focused entirely on the transition to renewable energy and related networks and customers**. From 2015 to 2018, about 8 billion euros has been invested annually, over 90% of which dedicated to low-carbon products, goods and/or services and, therefore, to the energy transition. The plan calls for maintaining this level of investment and of focus on climate change.

2 All figures in this paragraph include managed capacity.

Risk management

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The Group's integrated risk management system

In the performance of our operations, which encompass a diverse range of countries, markets and industry segments, Enel is exposed to various types of risks over the short, medium and long term (e.g. commodity risk, financial risks, and strategic risks, including in relation to climate change). **In order to effectively deal with events that could lead to risks and opportunities, Enel has adopted an Internal control and risk management system ("SCIGR")**. This system consists of the set of rules, procedures, and organizational entities aimed at identifying, measuring, monitoring and managing the main corporate risks within the Group. More specifically, the SCIGR seeks to safeguard company capital and ensure the efficiency and effectiveness of corporate processes, the reliability of information provided to the corporate bodies and to the market, and the compliance with laws, regulations, as well as with the corporate bylaws, and internal procedures.

Given the importance of identifying, monitoring and managing the climate-related risks that could have an impact on achieving company objectives, **the Board of Directors is committed to developing guidelines to ensure that decisions at all levels of the Group are consistent with risk appetite**.

To this end, the board has established a Control and Risks Committee to provide support in making decisions concerning approval of the Business Plan and of financial reporting. This committee also provides the Board of Directors with opinions concerning the system of internal controls and risk management guidelines so that the main risks of Enel SpA and its subsidiaries – including any risk that may affect the sustainability in a medium-long term perspective – are properly identified, measured, managed and monitored. The Group also has specific internal committees composed of senior management that are responsible for governing and overseeing risk management, monitoring and control.

Process for identifying risks and opportunities

The identification of risks and opportunities within the Group's business and strategic planning process is designed to manage short-term (less than 3 years), the medium-term outlook (3-5 years), and the revision of long-term ambitions (beyond 5 years).

Medium- and long-term planning starts with a strategic assessment of the external landscape and climate-related issues, which involves the following activities:

- **macroeconomic, energy and climate** scenario analysis - a series of global and local analyses and forecasts to identify the main macroeconomic, climate and energy-related drivers over the short-, medium- and long-term horizon;
- **competitive landscape analysis** - a set of analysis to compare financial and operating performance as well as environmental, social and governance (ESG) performance of utility and other sectors players in order to monitor, guide and support the Group's competitive advantage and leadership position;
- **industry view** - an overview of the macro-trends affecting business environment and impact assessment on the Group business through an extensive internal and external collaborative approach;
- **strategic dialogue** - an ongoing process of engaging the Board of Directors, management, and employees in the definition of strategies. This process ensures that there is agreement as to the Group's priorities;
- **analysis of ESG risks** - analysis to identify the potential ESG risks to which the Group may be exposed due to geographical distribution and operations, is conducted based on an analysis of external studies such as the World Economic Forum's Global Risk Report, studies by leading ESG investment analysts, and internal studies such as materiality analyses or due diligence concerning human rights;
- **ESG landscape analysis and materiality assessment** - Enel conducts ESG and materiality analyses using an approach that takes account of the guidelines based on numerous international standards (e.g. Global Reporting Initiative, UN Global Compact, SDG Compass, etc.) with the goal of identifying and assessing priorities for stakeholders and correlating them with the Group's strategy.

Process for assessing risks and opportunities

Enel is committed to setting up and structuring periodical monitoring and assessment processes of risks and opportunities associated both with physical variables trends, related to acute and chronic climate-related events, and with transition scenarios related to changes in the socio-economic landscape and in laws and regulations concerning the combat against climate change.

For the *ex ante* assessment of risk levels, a Plan risk analysis, including exposure to climate-related factors, will be presented each year to the Control and Risks Committee. With regard to *ex post* monitoring, the various risk factors, including the main climate-related variables that could have an impact on the Group's objectives and operations, will be periodically evaluated and revised.

These activities will be undertaken starting from year 2019, while at the operational level there are already processes in place to monitor the risk of damage to assets and infrastructures caused by climate-related extreme events or natural disaster, as well as the consequent risk of prolonged unavailability of such assets.

Process for managing risks and opportunities

Consistently with the Strategic Plan, the Business Lines submit investment proposals, in terms of financial and sustainability performance, for approval to the relevant **Investment Committees**, composed by Business Line senior management; moreover, Group Investment Committee approves investments above a certain threshold or concerning particularly innovative projects.

Investment Committee approval is based on a joint assessment of both return and risk aspects. The risk assessment includes a quantitative analysis of economic, financial and operational risk factors and a qualitative analysis of all risk categories in order to determine the potential impact on the investment return and the appropriate mitigation efforts. The units responsible for developing each project identify the specific factors that could influence the expected return on investment, including certain environmental and climate-related risks (e.g. an increase in the frequency of extreme environmental and climate-related events and changes in national laws and regulations regarding the combat against climate change). The Group is committed to further developing the investment analysis framework to explicitly include an assessment of each project contribution to the improvement of the Group's climate resilience.

Metrics and targets

The main financial, operational and environmental metrics and targets used to measure and manage risks and opportunities related to climate change are indicated below.

Financial metrics

	2018	2017	2018-2017	%
CO_2 reference price (euros)	13.0	5.3	7.7	-
EBITDA for low-carbon products, services and technologies (billion euros) (1)	14.5	13.4	1.1	8.2
Capex for low-carbon products, services and technologies (billion euros) (1)	7.5	7.6	-0.1	-1.3
% of Capex for low-carbon products, services and technologies out of the total (1)	89.0	88.9	0.1	-

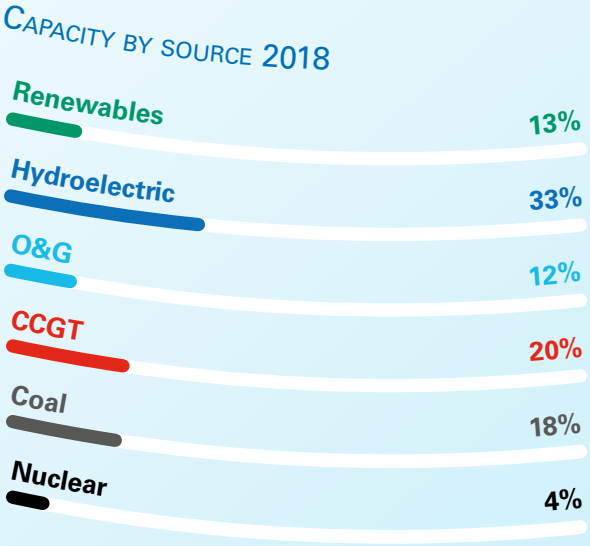
(1) The "low-carbon products, services and technologies" category includes the Enel Green Power, Infrastructure and Networks, Enel X and Retail (for 80%, excluding gas) Business Lines.

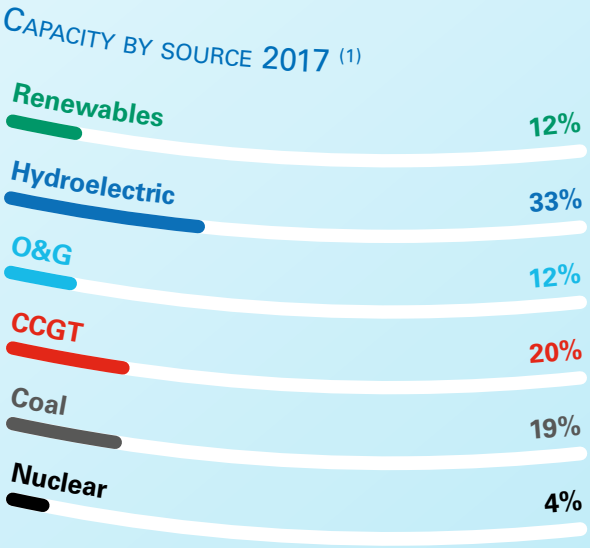
Net installed capacity

EU1

At the end of December 2018, the Group's net installed capacity amounted to approximately 85.6 GW, up by around 0.7 GW compared to 2017, mainly due to the entry into operation of new renewable energy, wind and solar plants in Brazil, Mexico and the United States, solar plants in Colombia and wind farms in Peru.

The value of the difference in Group capacity between 2018 and 2017 only partially reflects the additional capacity from renewable sources in 2018, which amounts to 2.7 GW. This additional capacity gradually compensated for some renewable energy plants no longer being in the consolidation perimeter and instead being included in the BSO (Build, Sell and Operate) process. Managed capacity, therefore included some renewable energy plants in Italy, Canada, the United States, Mexico and Australia for a total of 4.2 GW. Considering the managed value as well, total capacity of the Group was equal to around 90 GW (31% hydroelectric, 17% other renewables, 11% oil and gas, 19% CCGT, 18% coal and 4% nuclear).





(1) As regards O&G (Oil and gas) and CCGT (Combined Cycle Gas Turbine), figures for 2017 were restated following the turbogas plants reclassification.

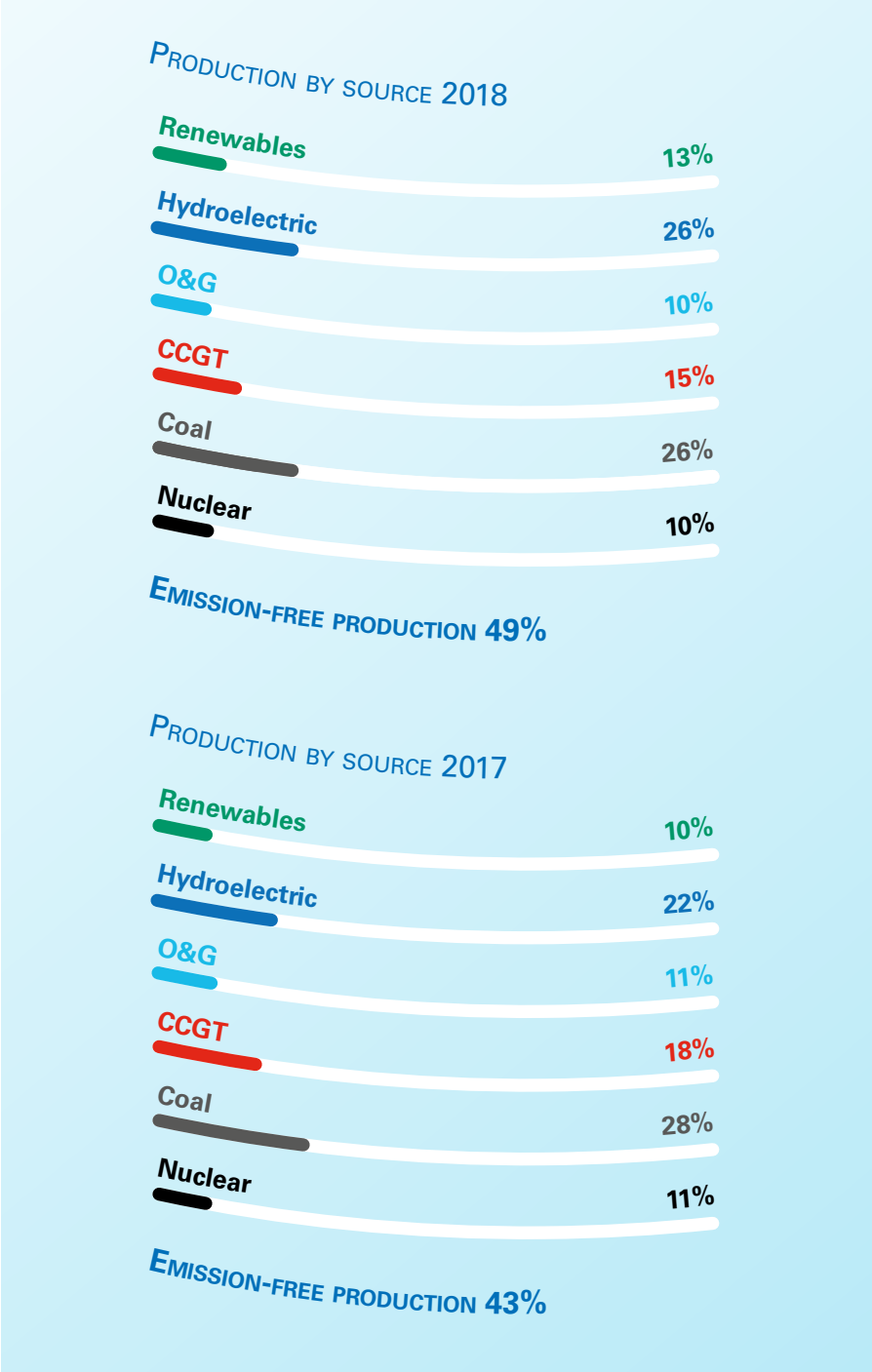
Electricity production

EU2

Production in 2018, equal to about 250.3 TWh, was stable overall compared to the figure for 2017, but reflected a different distribution internally of thermoelectric and renewable sources. Thermal production recorded a decrease (equal to 10%), in particular due to the component from coal and combined cycles. In particular, this reduction was due to coal production in Italy (-14%) and Spain (-10%) and from combined cycles in Spain and South America, following the unavailability of some plants due to maintenance. In the renewables sector, there was a significant increase in hydroelectric generation (equal to 10.5 TWh compared to 2017) mainly due to a greater water availability in Europe (in Italy equal to 31% and in Spain 68% compared to 2017). In America, the increase due to a greater generation from hydroelectric power was recorded in Argentina, Chile and Brazil, also due to activity of the Volta Grande plant, already included in the Enel perimeter since 2017. The increase in production from renewable sources was also considerable, from wind power (equal to 24% compared to 2017) and solar power (equal to 90%), with the entry into operation of new plants in North, Central and South America.

Considering also the managed production of around 9.4 TWh, the total value

is around 260 TWh (26% hydroelectric, 16% other renewables, 9% oil and gas, 15% CCGT, 25% coal, 9% nuclear).
49% of the energy produced by the Group in 2018 was emission-free. Hydroelectric, solar, wind and geothermal power generation facilities produced a total of about 99 TWh from renewable sources in 2018, representing over 39% of the energy produced by Enel during the year, thus avoiding the emission of some 62 mil t of CO_2 into the atmosphere. Nuclear power production (equal to 10% of total production) made it possible to avoid releasing a further 17 mil t of CO_2.



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Additional operating indicators related to climate change

	2018	2017	2018-2017	%
Average thermal generation yield (%) [1]	40.1	40.7	-0.6	-
Total direct consumption of fuel (Mtoe)	37.0	41.3	-4.3	-10.4

(1) The percentages are calculated according to a new methodology that does not consider Italian O&G plants that are marginal/being decommissioned. The figures do not consider consumption and generation from cogeneration relative to thermal power production facilities in Russia. The mean yield is calculated from production facilities and is weighted on production values.

Greenhouse gas emissions

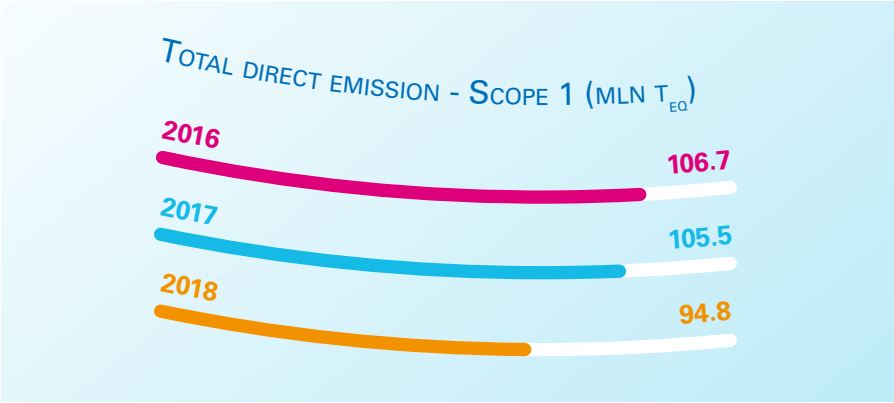
103-2 103-3 305-1
305-2 305-3 305-4
305-5 305-6

In 2018, direct emissions of CO_2 equivalent (**Scope 1**) amounted to approximately 95 million equivalent tons, registering a decrease of 10% compared to 2017. This result is due to lower thermal production compared to the previous year, with a decrease in coal production (-9% compared to 2017) and production from combined cycles (-14% compared to 2017). The percentage of thermoelectric emissions of CO_2 below EU-ETS was equal to 57% of Scope 1.

The SF_6 is used in high- and medium-voltage electrical equipment for its insulating and electric arc extinguishing properties and is, as of yet, irreplaceable in these applications. The quantities released into the atmosphere in 2018 amounted to 7,349 kg, equivalent to 173,000 t of CO_2 equivalent. In percentage terms, SF_6 contributes 0.18% of the Group Scope 1 emissions, i.e. an extremely small quantity.

Under Scope 1, Enel also considers the emission of ozone-depleting substances according to the Montreal Protocol, including for example chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs). The emissions of these substances in 2018 corresponded to around 24,000 t of CO_2 equivalent[3].

Scope 2 emissions (about 1.09 mil t_{eq}) relate to indirect emissions deriving from the generation of electricity purchased and consumed by the Company. Scope 2 includes CO_2 emissions associated with the consumption of electricity purchased in the network for civil uses (in offices, for example) and for pumping in hydroelectric plants. The Scope 2 emissions indicated above are calculated according to the "location based"[4] model.



Since 2016, all electricity supplies for Italian production sites and offices have been from renewable sources. In 2018, this supply was certified with the issue of renewable energy certificates by the competent certification body.

Scope 2 emissions, indicated according to the "market based"[5] criterion, are equal to 1.62 mil t.

Scope 3 emissions are generated as a result of the Company's activities and are not derived from sources controlled or owned by the Company itself. For Enel, this value is mainly linked to fugitive emissions of methane from coal mines in the extraction phase and to emissions from the transport of fuels used for the operation of its plants. 2018 shows a value of about 6.8 mil t of CO_2 equivalent, down about 5% compared to 2017 (7.1 mil t of CO_2 equivalent) due to the decrease in coal thermal activity.

With a view to accuracy and covering GHG reporting, Enel is preparing the best way to calculate Scope 3 relative to the sale of gas and electricity.

An estimate of Scope 3 emissions relative to the gas and electricity market where Enel operates in Europe (gas and electricity) is given below. Enel estimates that the contribution of emissions from network losses from distributed energy in Europe amount to around 350,000 t. However, the highest contribution is due to emissions generated during the final phase of use of sold products. The Group estimates that for gas on the European market this value is approximately 23 mil t, and that a similar emissions value is produced from customers' use of electricity.

3 The value obtained is calculated by converting the tons of each individual gas detected (CFC, HCFC, R22 and freon) by applying the value of the reference average Global Warming Potential of the gas families (source: IPCC, WG1AR5_ Chapter08).

4 The calculation of Scope 2 according to the "location based" method is based on the location of the enterprise. It is the result of the calculation of greenhouse gas emissions arising from the production of electricity in the area where it is consumed. This figure is obtained by multiplying the electricity consumption of an enterprise (indicated in kWh) within the boundaries of the reference country, and average greenhouse gas emissions by kWh in the same country (source: Greenhouse Gas Protocol Scope 2 Guidance, 2015).

5 The calculation of Scope 2 according to the "market based" method is based on the market on which the enterprise carries out operations. For companies operating in European countries, the reference market is the European market (EU). Companies can obtain this figure by calculating the emissions of the power plants they are supplied by. The origin of the electricity must be certified by "contractual instruments that meet minimum quality criteria". In Europe, the only way to prove the origin of electricity is Guarantees of Origin. Businesses that use electricity whose origin is not certified by these Guarantees must carry out the calculation referring to emissions associated with the residual mix (source: Greenhouse Gas Protocol Scope 2 Guidance, 2015).

Specific CO_2 emission

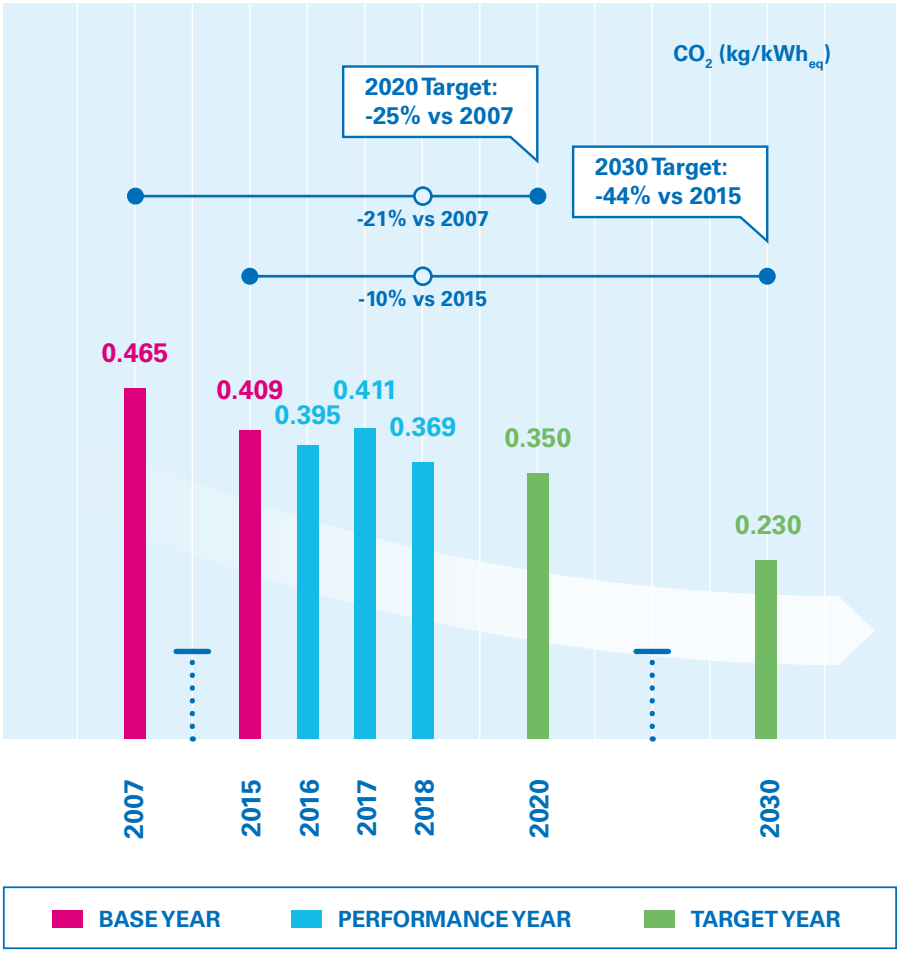
Specific emissions of CO_2 were equal to 0.369 kg/kWh_{eq} in 2018, down considerably on 2017, due to the decrease in Group net thermal production, offset by a greater production from renewable sources. Considering the managed production, the value of Enel's specific emission is equal to 0.356 kg/kWh_{eq}.

SPECIFIC CO_2 EMISSIONS, TARGET AND PERFORMANCE (kgCO_2/kWh_{eq})

Compared to 2007, which is the base year for Enel's target to reduce specific CO_2 emissions by 2020, specific emissions have decreased by 21%. Considering the managed capacity, specific emissions are down a total of 23%. The 2020 target for CO_2 emissions lower than 0.350 kg/kWh_{eq} has also been recognized as "science-based"[1], meaning that it is on track for the achievement of global decarbonization targets.

Enel has set the target of achieving a reduction of CO_2 specific emissions equal to 0.23 kgCO_2/kWh_{eq} by 2030, based on the best forecasts currently available.

The Group strategy for the period 2019-2021 works towards this target, envisaging additional capacity from renewable sources of 11.6 GW (including managed capacity), which will bring total renewable capacity to a value of 53.9 GW by 2021 and consequently an increase in emission-free production to 62%, compared to the current figure of 51%, up over 2017 (equal to 45%).



(1) "Science-based target" is an initiative of the Carbon Disclosure Project (CDP), UN Global Compact (UN-GC), World Resources Institute (WRI) and WWF (World Wildlife Fund) to stimulate companies to set greenhouse gas emission reduction targets that are in line with scientific requirements to limit the increase in the average global temperature to 2 °C by the end of the century compared to pre-industrial levels. Companies' emission targets are assessed against a decarbonization trend based on the scenarios of the International Energy Agency (IEA) and the International Panel on Climate Change set up by the UN Framework Agreement on Climate Change. The scenarios set out 14 decarbonization trends to be applied to the main sectors of the economy, including for energy generation.

303-3

Additional environmental indicators related to climate change

	2018	2017	2018-2017	%
Specific water requirement for total production (l/kWh_{eq}) (1)	0.38	0.44	-0.06	-13.6
Water withdrawal in water-stressed areas (%) (2)	12	9	3	-
Production with water use in water-stressed areas (%) (2)	8	8	-	-

(1) Following the adoption of the new GRI Standard 303, the figure indicated previously referring to specific consumption now refers to specific requirement. Requirement means the total amount of water withdrawn, including the re-use of external waste water, necessary for operation of the plant. The specific requirement from total production is calculated as total water consumption by simple thermal generation and co-generation of electricity and heat and nuclear generation as a ratio of total simple thermal generation and co-generation of electricity and heat (including the contribution of heat in MWh equivalent), renewable generation and nuclear generation. This figure does not include water used for open-cycle cooling, as the water is put back into the original water body. As regards the figure for 2018, the change in value in water drawing requirement is due to the change in the reporting criterion for the nuclear sector where cooling water returned to the receiving water body is no longer accounted for, as already recorded for all plants that adopt an "open cycle" cooling system. Based on recalculation, the total water withdrawn in 2017 was equal to 112.2 mil m^3.

(2) The World Resources Institute (WRI) defined a "Water-Stressed Area" as an area where the annual availability of water *per capita* is less than 1,700 m^3.

Targets

In addition to the objectives included in the "Strategy" section, the following targets related to the fight against climate change are reported below.

Targets

Emission-free generation (% incidence on the total) (1)	62 in 2021
Specific CO_2 emissions from total net production ($kgCO_2/kWh_{eq}$) (2)	<0.350 in 2020 (-25% compared to 2007) 0.23 in 2030 (-44% compared to 2015)
Net renewable capacity (GW) (3)	53.9 in 2021
Net thermal and nuclear capacity (GW)	39.5 in 2021
Net renewable production (TWh) (1)	132 in 2021
Net thermal and nuclear production (TWh)	124 in 2021
Specific water requirement for total generation (l/kWh_{eq}) (4)	-35% in 2030 (compared to 2015)

(1) Includes production from managed capacity.

(2) Specific emissions are calculated considering the total emissions from simple thermal generation, combined electricity and heat, in proportion to the total simple renewable, nuclear and thermal generation, combined electricity and heat generation (including the contribution of heat in MWh_{eq}).

(3) Includes managed capacity.

(4) Following the adoption of the new GRI Standard 303, the figure indicated previously referring to specific consumption now refers to specific requirement. Requirement means the total amount of water withdrawn, including the re-use of waste water, necessary for operation of the plant. This figure does not include water used for open-cycle cooling, which is entirely put back into the original water body.

The targets defined by Enel in its strategy to tackle climate change include certain assumptions – such as a benchmark price of CO_2 of 18 euros in 2021 – which result in the following forecasts, among others:

- EBITDA for low-carbon products, services and technologies[6] equal to 17 billion euros in 2021;
- Capex for low-carbon products, services and technologies[6] equal to 7.7 billion euros in 2021;
- Percentage of Capex for low-carbon products, services and technologies equal to approximately 90% in 2021.

6 The "low-carbon products, services and technologies" category includes the Enel Green Power, Infrastructure and Networks, Enel X and Retail (excluding sale of gas sales) Business Lines.

Seeding Energies.
Curiosity is the power of today.

Curiosity and knowledge are the energy that encourages us to grow more
and more each day, to tackle the present and look to the future with enthusiasm.
A journey of discovery that leads us to value diversity,
build relationships and establish trust.
Brilliant ideas and ever-new achievements make the difference, creating value
for our customers, for the communities where we work, for our people and shareholders.
Because it is through the power of curiosity, knowledge, cooperation and engagement
with others that we can safeguard and protect our planet in a sustainable way together.