

TARGETS

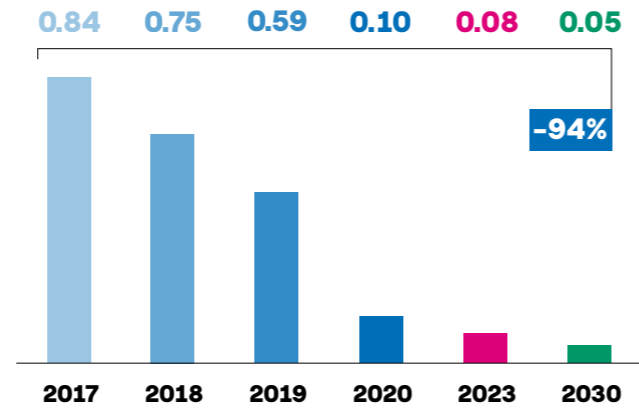
Reduction of our main emissions

SO₂
-94%

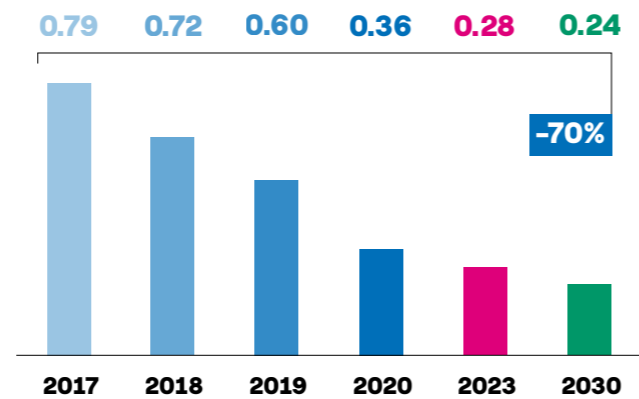
NO_x
-70%

DUST
-98%

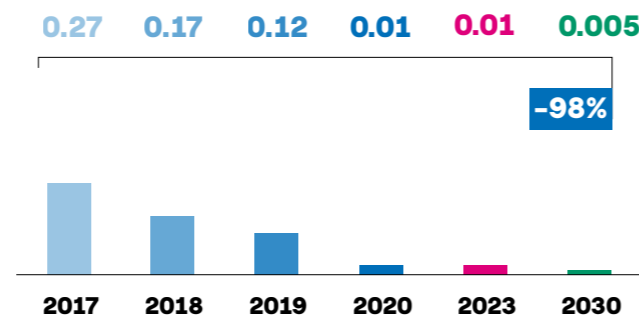
SPECIFIC EMISSIONS OF SO₂ (g/kWh)



SPECIFIC EMISSIONS OF NO_x (g/kWh)



DUST (g/kWh)



Energy

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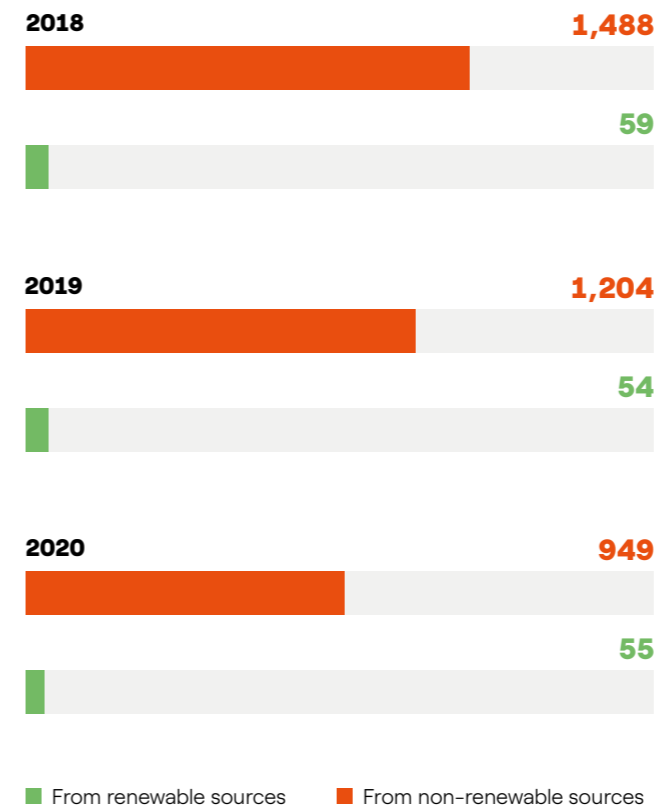
Energy efficiency in production processes

Using energy in an efficient manner is, for us, a constant commitment in the entire value chain, from generation to distribution; in particular, the strategy of reduction of consumption entails investments to increase the energy efficiency of our activities, from actions to maximize the efficiency of generation plants (thermal, nuclear and renewables) to the operational improvement of the distribution grid, but also through the diffusion of greater awareness in behaviors (see also the chapter "Net-zero ambition"). 2020 saw the continuation of process efficiency activities,

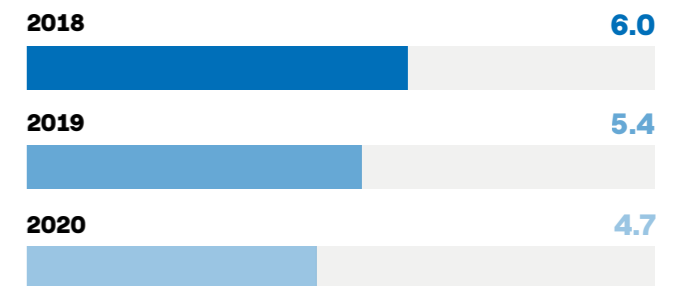
followed by the implementation of operational excellence programs across the various Business Lines. Energy consumption is mainly related to fossil fuels to operate thermal power plants and by uranium to operate nuclear power plants. A limited amount of energy consumption is related to the operation of renewable energy power plants (biomass and geothermal).

The overall direct consumption of fuels for the production of electricity is 1,004,052 TJ (23.9 Mtoe). During the year there was a 21% reduction compared to 2019 of energy consumption of fuel, a difference that reflects the important decrease of generation from coal with the consequent lower contribution of this fuel. The Group's energy intensity, which provides a measure of its operational efficiency, in 2020 was 4.7 MJ/kWh, down approximately 13% compared to the previous year.

FUEL CONSUMPTION BY PRIMARY SOURCE (,000 TJ)



ENERGY INTENSITY (MJ/kWh)



As per last year, again in 2020 a variety of initiatives were undertaken in terms of energy efficiency in all Business Lines, both for operating assets and in buildings.

Energy efficiency in the management of buildings

For us, the strategy of energy efficiency is not limited to operating sites, but also extends to the environmental sustainability of Company administrative offices. For this reason, we have equipped ourselves with a workplace handbook that collects the measures and technical references considered useful and necessary for the construction of workplaces. The fundamental principle that guides the creation of a workplace environment is, for us, care for people and for the broadest ecosystem in which they work, including also the environmental, social and economic context. Indeed, sustainability represents a fundamental driver for the design of our plants and offices, as well as for their use and end-of-life management and, through models such as that of the circular economy³, sustainability also contributes to an improvement in the quality of the external ecosystem by reducing environmental impacts and creating both economic and social value. For the purposes of ensuring the environmental sustainability of a building over its entire life cycle, the following criteria are adopted

- > use of circular materials and products that have low and sustainable emissions, and that come with environmental certifications, among which Life Cycle Assessment (LCA), Environmental Product Declaration (EPD) and Cradle to Cradle (C2C);
- > minimization of environmental impacts through the reduction of waste production and its reuse, sustainable management of water resources, containment and control of atmospheric emissions, air quality and noise;
- > identification of methods for the extension of the useful life of buildings and plants, through the modular design of spaces, which allows their reconfiguration to meet new needs;
- > an increase of the use factor of the building and of equipment present, through mechanisms of sharing and product as a service;
- > achievement, for the realization of new buildings or the restructuring of our existing buildings, of LEED and WEEL certifications. In the case of leased buildings, LEED certification is required of the property owner.

- With particular reference to energy efficiency, where possible the following criteria are adopted;
- > installation of all the renewable energy sources available (photovoltaic, solar thermal, groundwater, cogeneration/intercalations) and the possibility of connecting to district heating and district cooling systems;
 - > use of technologies that facilitate qualification of the building as a "Nearly Zero Energy Building", or better;
 - > adoption of technologies with high energy efficiency (for example, Energy Star certification), favoring, where possible, technologies and equipment that ensure outputs which are over 25% higher than the market standard;
 - > reduction of energy consumption for the production of domestic hot water with the use of renewables such as to ensure at least 50% of demand, favoring, where convenient, centralized production systems;
 - > adoption of Energy Management Systems that facilitate continuous control of energy consumption.

Energy efficient products for customers

In 2020, thanks to interventions of Enel X in relation to efficiency and technological innovation on public lighting systems, in Italy around 58 Gwh were saved and in Spain about 29 GWh, corresponding to a total of over 22,000 t of CO₂ saved. Again in 2020, around 25,000 high energy efficiency products were installed in Italy, among which condensing boilers, air conditioners and photovoltaic plants with storage systems, and about 55,000 globally between Europe and Latin America, thus avoiding atmospheric emissions of approximately 10,000 t of CO₂ in Italy and 15,000 t globally.

Water

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The responsible use of water resources and their protection is vital for the safeguarding of natural ecosystems and for the wellbeing of people that live in them, as well as for the success of our activities. For this reason, it is one of the strategic objectives of our environmental policy, which pursues the adoption of an integrated approach for its optimal management.

The Group withdraws water primarily for industrial needs

The project for redevelopment of the Enel office in Viale Regina Margherita (Rome, Italy)

The redevelopment of our Headquarters, which will last some 40 months, involves an overall surface of around 80,000 mq, with a project based on innovative and sustainable principles and which aims to reduce consumption and increase the wellbeing of our people, through modern and comfortable workplaces. The objective is to design a new "work space" where people can find the environments and technical solutions to carry out their work to the best of their abilities. Lighting and air conditioning systems, for example, will mean more comfortable conditions, and the quality of the air will be ensured through the realization of bioclimatic glasshouses. The distribution of spaces will ensure alternation of workplace environments with indoor and outdoor green spaces and areas dedicated to psycho-physical wellbeing. The rationalization of layouts will lead to a more space for services for people, including a gym, that will be added to already existing facilities (kindergarten, refreshment areas, auditorium). The level of sustainability and comfort of the building will be submitted for verification to external international certification bodies, with the objective, in particular, of obtaining LEED and WELL certifications respectively for the objectives of sustainability and wellbeing promoted, achieved and perceived.

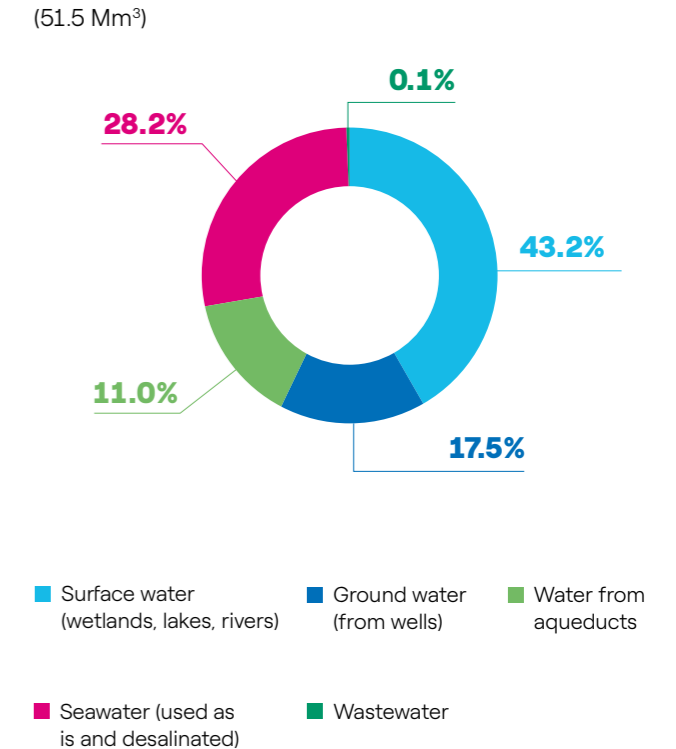
and uses it largely for thermal and nuclear generation, for the cooling of thermal cycles, or for atmospheric emission abatement systems. Overall water needs for production are covered through withdrawal from what is referred to as non-scarce sources (seawater) and scarce sources (surface freshwaters, groundwater and water for civil use). Where locally permitted, we use, as incoming water resources for our own processes, treated waste waters, typically supplied by water management consortia. In the international context, since 2014 Enel has been among the endorsing companies of the CEO Water Mandate, an initiative of the UN Global Compact devised to support companies in the development, implementation and disclosure of practices and policies concerning the sustainable management of water.

Efficient use of water resources

In 2020 the overall **withdrawal⁴ of process and closed-cycle cooling water** was 51.5 Mm³, a reduction of around 54% compared to 2017, while specific water withdrawal were 0.20 l/kWh (down 55% compared to 2017 and in line with the Group's water requirement reduction target). This reduction is mainly due to lower thermal production, in particular coal-fired.

(4) The specific water withdrawal is composed by all the water withdrawal quotas from surface (including recovered rain water) and groundwater sources, by third parties, from the sea and from wastewater (quota for third party procurements) used for processes and for closed-cycle cooling, except the quota of seawater discharged back into sea after the desalination process (brine). This latter item (brine) contributes to the quota of withdrawals.

WATER WITHDRAWALS BY SOURCE 2020
(51.5 Mm³)



We have energetically pursued the objective of reducing our **specific water withdrawals** as early as 2010, a commitment renewed in 2020, reducing further the previously set objective up to a reduction of 65% in 2030 compared to the value in 2017. This renewed commitment is based on the results reached and on the Industrial Plan, which provides for efficiency in the use of water in existing thermal plants, the evolution of the energy mix towards renewables, and the progressive reduction of generation from fossil fuels.

(3) [Please refer also to the chapter "Circular economy".](#)