

# Renewable energies

EU1 | EU2

**112.4** TWh

**NET RENEWABLE ELECTRICITY GENERATION**

108.8 TWh in 2021 **+3.3%**

Despite the difficult geopolitical context and the energy crisis triggered by the war in Ukraine, the Group **generated** around **124 TWh<sup>(1)</sup>** of electricity from renewable sources in 2022 (119 TWh in 2021), of which more than 50% (66 TWh) from wind and solar power. We installed and commissioned **new capacity of 5,223 MW**, up from 5,120 MW in 2021, thanks to more than 80 plants divided between solar and wind power. In addition, we reached **387 MW of battery storage**, an element of flexibility that is becoming increasingly strategic in the energy transition process we are currently experiencing. In 2022, the process of shutting down coal-fired power plants

proceeded. In September, we shut down the last coal-fired unit at the Bocamina power plant, decommissioning the entire coal-fired fleet 18 years ahead of the 2040 targets set in Chile's National Decarbonization Plan. In Spain, the Teruel thermal power plant was also dismantled with the demolition of the cooling towers. For more details, please refer to the chapters "[Zero emissions ambition](#)" and "[Our commitment to a just transition: leaving no one behind](#)" in this Report.

As of the end of December 2022, **the Group's net renewable installed maximum capacity reached 53.6 GW<sup>(2)</sup>** up by 3.5 GW from 2021, **and corresponding to 63.3% of the total net installed maximum capacity**. This achievement enabled Enel to meet the target set in all those financial instruments related to attaining a renewable installed capacity percentage in excess of or equal to 60%.<sup>(3)</sup> For further details, please refer to the chapter "[Sustainability-linked finance according to Enel](#)" in this document.

## THE SUSTAINABLE SITE AND PLANT MODEL

The Design and Site models of the sustainable plant were created to integrate sustainability into the business along the value chain (phases of Business Development, Engineering & Construction, Operation & Maintenance, Repurposing) and are based on the principles of Creating Shared Value (CSV) to forge synergies between the needs of the business and those of the region. These are constantly evolving pillars centered on best practices and procedures that aim to mitigate the impact of our plants on the local areas, increase and foster collaboration with communities and generate efficiency by promoting and applying the

principles of CSV, circular economy and innovation, based on a deep knowledge of the context in which we operate. The use of local labor for construction activities and actions taken to maximize the recycling of waste produced and reduce water consumption are examples of the application of the models. Specifically, the sustainable Design and Site pillar applies to the construction phase of a plant up to its completion, while the Sustainable plant pillar applies to the Operation & Maintenance (O&M) phase, i.e. the plant's operations and generation activities. In 2022, the sustainable Design and Site model was applied at all construction sites, and the sustainable practices under the model were adopted at 75% at the hydroelectric, geothermal and thermal sites and 95% at the remaining renewable sites.

According to studies by the IEA (International Energy Agency), the pace of growth of renewables must increase year after year. They must support the electrification of sectors such as private transport or domestic heating, which until now have been almost entirely based on fossil fuels. We have therefore set ourselves the ambitious goal of **generating 100% energy from renewable sources by 2040**.

To achieve this goal, we must also invest in the supply chain. In April 2022, Enel Green Power signed a subsidized

loan agreement with the European Union for the transformation of **3SUN into a solar panel Gigafactory** in Catania, Sicily, Italy, which will become Europe's largest factory for the production of high-performance double-sided photovoltaic modules. The Gigafactory will help raise efficiency standards in the market while improving the reliability and sustainability of the panels manufactured, and will make an important contribution to the growth and maintenance of a solar power industry in Europe.

(1) 124 TWh equals about 50% of total net production and excludes generation from managed capacity of 11 TWh in 2022.

(2) Including managed renewable capacity and BESS in 2022, 59 GW of installed capacity or 66% of total capacity was reached.

(3) From the calculation of the percentage of renewable installed capacity for the purpose of the Sustainability-Linked Financing Framework, 531.1 MW of purchased capacity from power plants acquired by the Group was excluded in accordance with the contractual documentation of the individual instruments.

## 3SUN Gigafactory: the future of energy takes shape in Catania

*A hub of technological excellence for energy self-dependence*

Our 3SUN photovoltaic module factory in Catania, established in 2010 and continuously growing, is preparing to become a true Gigafactory. By July 2024, 3SUN will see its annual generation capacity grow 15-fold, from the current 200 MW to 3 GW, becoming the largest photovoltaic panel factory in Europe. We expect an investment of around 600 million euros, of which almost 118 million euros from the EU Innovation Fund, which identified TANGO, i.e. iTaliAN Giga factOry, as one of the seven initiatives selected. The project has been included in funding requests for Italy's National Recovery and Resilience Plan and, if awarded, the total project funding could reach up to 188 million euros.

The selection process to recruit more than 500 secondary school graduates for technical and operational positions in the areas of generation, maintenance, auxiliary services, product quality and plant management has just begun. In 2022, 50 graduates were hired and the process to select another 100 is currently underway.



With these new recruits, 3SUN's team, which already includes more than 200 resources, will be significantly expanded to around 900 employees in total. Not only will the Gigafactory increase direct employment, it will also generate a total of 1,000 indirect jobs, including current ones, by 2024.

