

Qualitative improvement in the integration of renewables: 6,456 MW of new renewable generation capacity connected to the grid in 2019, 6,126 MW more than in 2018

- Red Eléctrica de España promotes the integration of the mix of renewable energy technologies via operational measures and actions in more than 30 substations.
- The integration of this amount of renewable energy capacity, in particular that associated with wind and solar photovoltaic technologies, has represented an all-time record for the Spanish electricity system. The connection to the grid of this new capacity is contributing to achieve the objectives of the energy transition established in the Integrated National Energy and Climate Plan for 2030, whilst at the same time tackling the challenges of the decarbonisation of electricity generation and the new forms of consumption that a more electrified society will demand.
- During 2019, the increase of 5.6% in Spain's total installed capacity – an all-time record increase which brings the total national generation capacity to 110 GW – was due to an increase of 12.9% in installed renewable energy capacity.
- The increase in installed renewable energy capacity has contributed favourably to reaching in 2019 a total of 97,826 GWh of renewable production nationwide; a value that represents a 37.5% share in the generation mix.

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In 2019, Red Eléctrica de España, the transmission and system operator of the Spanish electricity system, managed and enabled the commissioning of a total of 6,456 MW of renewable generation capacity, 6,126 MW more than the year before, when 330 MW were connected, of which 194 MW corresponded to the Wind Energy Plan of the Canary Islands.

The integration of this amount of renewable energy capacity, mostly wind and photovoltaic, has led to an all-time record for the Spanish electricity system and has a truly positive impact on the energy transition and the fulfilment of the renewables integration roadmap established in the Integrated National Energy and Climate Plan for 2030. Given that the deployment of new renewable generation facilities must be maintained throughout the decade, Red Eléctrica continues to work, together with all the agents involved, on the continuous improvement of the process for the commissioning of new generation capacity.

In order to facilitate the fulfilment of the objectives established in the Integrated National Energy and Climate Plan regarding the commissioning of renewable generation facilities, a set of actions were undertaken by Red Eléctrica in 2019 in its System Operation and Transmission Divisions with the objective of facilitating grid access and connection whilst always complying with the technical and administrative requirements established in the applicable provisions of the current Spanish legal system.



Development of new infrastructure to facilitate integration

Firstly, given that the connection to the high-voltage grid of the majority (70%) of this new generation capacity had already been scheduled, REE designed and built new infrastructure. To facilitate this, the Company has carried out actions in more than 30 substations, including the commissioning of 15 new substation bays.

In addition, the Company's System Operation Division has organised informative sessions aimed at promoters in order to explain in detail the grid access and connection process. The sessions included the participation of 30 of the Company's professionals who are experts in the management of said process; said sessions were well received and had more than 300 attendees.

The level of information on the Red Eléctrica website and transparency thereof have also been improved with the opening a specific section dedicated to the processes associated with grid access and connection, as well with the commissioning of new generation capacity.

Additionally, 'MiAccesoREE' (the Company's web-based platform for third-party access requests has incorporated, as an additional feature, the capability to request the commencement of the processes associated with grid access, connection and commissioning of new generation capacity and enables the possibility of monitoring the status of requests that have been submitted.

Lastly, these actions were complemented by establishing direct contact with all promoters to facilitate the completion of their projects during 2019.

The complete set of electricity generation facilities in Spain is becoming greener

At present, the amount of installed renewable energy capacity totals 55,247 MW, of which 46% is wind, 16% is photovoltaic and the rest (38%) corresponds to other renewable technologies. The complete set of electricity generation facilities in Spain is becoming greener. During 2019, an increase of 5.6% in installed power capacity nationwide – an all-time record increase which brings the total national generation capacity to 110 GW – was due precisely to a 12.9% increase in installed renewable energy capacity, with the commissioning of the aforementioned 6,456 MW of renewable generation. Of this total, 5,689 MW corresponded to capacity auctions held in 2017 and the rest, 767 MW, to renewable facilities that do not participate in this auction procedure. This power equates to 189 facilities, of which 86 are wind (2,319 MW), 93 photovoltaic (3,975 MW) and 10 correspond to other renewable technologies (162 MW).

The increase in installed renewable energy capacity has contributed favourably to reaching in 2019 a total of 97,826 GWh of renewable production nationwide; a value that represents a 37.5% share in the generation mix. Wind power generation was 9.3% higher than in 2018, ranking third in the annual generation mix with a 20.8% share just behind nuclear power (21.4%) and combined cycle (21.2 %). This share of 20.8% is the highest percentage recorded to date.

All-time records in 2019

In 2019 several all-time records were broken both for the wind power generation and for photovoltaic power generation. Specifically, on Sunday 3 November at 5:20 am wind energy covered 75.97% of the instantaneous demand on the Spanish peninsula, the highest value reached to date. Also, shortly before the end of the year, on Thursday 12 December at 4:21 pm a new all-time record for wind power generation on the Spanish peninsula was set with a value of 18,879 MW. That same technology broke its all-time high for hourly production, reaching 17,908 MWh between 4:00 pm and 5:00 pm. A day later, on Friday 13 December, it also set its maximum daily generation reaching 396,898 MWh and, in addition, renewable production registered its yearly maximum with 535 GWh.



For its part, the national total for solar photovoltaic energy increased its production by 18.8%, registering the highest annual generation value to date. Among the all-time records set by this technology, several dates stand out: on Friday 23 August, a maximum daily generation of 34,758 MWh was registered on the Spanish peninsula; that same month, the monthly maximum all-time high reached to date was recorded, with a total of 972,519 MWh. Similarly, on 26 October, it set a new maximum all-time high for hourly production, between 1:00 pm and 2:00 pm, registering a production of 4,185 MWh.