

SAFE
INTEGRATION
OF RENEWABLE
ENERGIES



RED
ELÉCTRICA
DE ESPAÑA

C E C R E
CONTROL CENTRE
OF RENEWABLE ENERGIES

WE ARE THE BENCHMARK IN THE SAFE INTEGRATION OF RENEWABLE ENERGIES

Red Eléctrica, as operator of the electricity system, has the only control centre in the world that enables the safe integration of renewable energies into the electricity system: The C E C R E



Objective

Integrate the maximum amount of electrical energy generated from renewable sources into the electricity system under safe conditions.

Key player

Renewable energy has unique characteristics due mainly to the variability inherent to its generation, changing weather conditions, uncertainty in its forecasting and the technology used by many of the generators.

All these variables must be taken into account in order to ensure the required levels of quality of supply, including the proper balance between electricity production and consumption.

To address the peculiarities of renewable energies, the CECRE monitors and controls production from renewable generation facilities, or groups of facilities, with a power capacity greater than 5 MW.

Safe integration

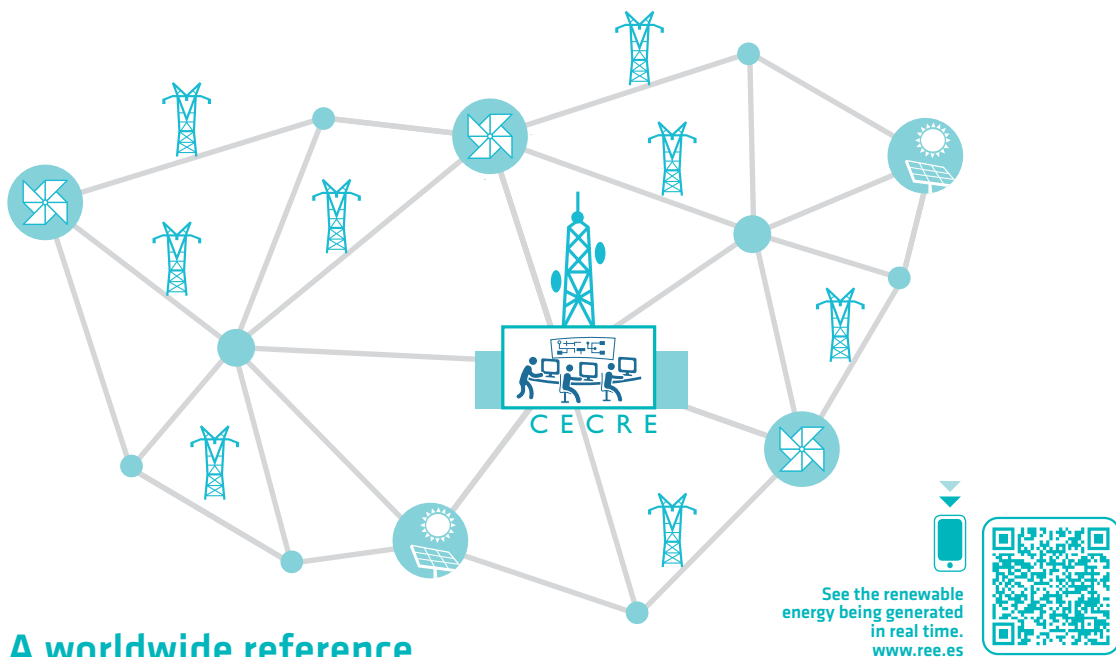
Every 12 seconds the CECRE receives information in real time from renewable generation centres. All data is analysed to check how much renewable energy can be integrated into the electricity system at each moment without affecting security of supply.

Thanks to the CECRE it's possible to analyse the current scenario in real time, foresee operational measures necessary for the system to remain in a safe state and if unacceptable situations in the system are detected, issue orders to non-manageable renewable energy generation facilities limiting their production.

Benefits

- Encourages the use of locally available energy sources.
- Helps reduce CO₂ emissions.
- Contributes to decreasing dependence on foreign energy.



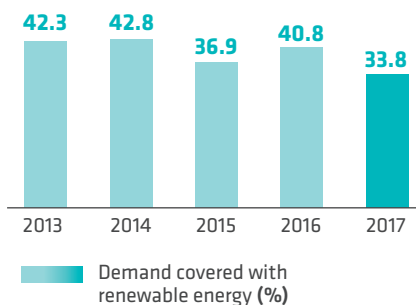


A worldwide reference

Spain is a world leader in the integration of renewable energies.

The work of the CECRE is contributing to the fact that in recent years more than 40 % of the annual electricity demand is covered by renewable generation, reaching, in some cases, hourly coverage values greater than 80 %.

This allows a greater diversity of energy sources to be involved in the coverage of demand, resulting in improved efficiency and sustainability of the electricity system.



INTEGRATION OF RENEWABLES



40 %

OF THE PENINSULAR DEMAND COVERED BY RENEWABLE ENERGIES

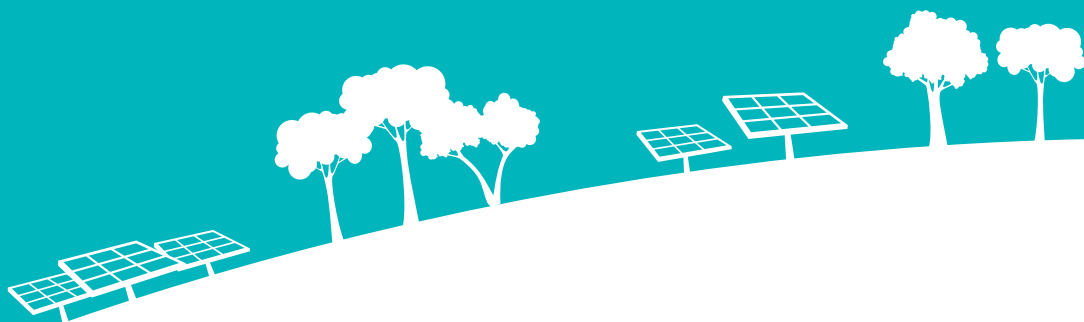
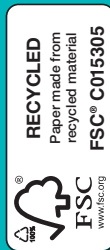
Average over the last five years





See the CECRE video.
www.ree.es

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We care for your energy

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