



## **Electricity supply restored in those areas of Spain affected by an incident in the French power grid that temporarily disconnected the mainland electricity system from the rest of Europe.**

- The break in electrical connectivity with France triggered the automatic system protection equipment for the disconnection of consumption in order to guarantee the security of the system and avoid a more serious impact, thus ensuring that essential services were not affected.
- Thirty-six minutes after the incident occurred, electrical power exchange through the first interconnection line with France was re-established, thus allowing the electricity supply to be restored in the system as a whole.

Madrid, 24 July 2021

At 4:35 p.m., due to a breakdown in the French electricity system, as reported by the French system operator (RTE), coinciding with a fire that was in the process of being extinguished by water bomber planes, the two circuits of the electricity cross-border connection between Spain and France were disconnected, causing the mainland electricity system to be disconnected from the rest of Europe.

The electrical isolation of the peninsular system from the central European system led to a drop in the frequency of the mainland system due to the loss of the energy that was being imported at that precise moment (2,500 MW). This imbalance between energy injection and consumption triggered the activation of automatic consumption disconnection protections (known as load shedding) to guarantee the security of the system and avoid a greater impact, thus ensuring that essential services were not affected.

Some 2,350 MW (power equivalent to more than two nuclear power plants at full load) were lost in our system, distributed throughout the Spanish mainland, in accordance with the load shedding protocol established for these situations. Portugal's electricity system also suffered the corresponding load shedding process. The French system only lost around 100 MW due to the disturbance, as it remained coupled to the European synchronous system and did not suffer from problems related to a drop in frequency. For its part, the Moroccan electricity system lost its interconnection capacity with Spain.

Red Eléctrica de España activated all the necessary resources foreseen for a situation of these characteristics, and thanks to the correct behaviour of all the protection equipment and of all agents of the Spanish electricity system, ranging from generators to the System Operator, together with the robustness of the electricity transmission grid and distribution networks, once the disturbance in the system was stabilised it was possible to start the process to reconnect the cross-border connection with France and recover consumption. At 5:09 p.m., the first interconnection line with France, the 400 kV Hernani-Argia line, was brought back into service and the peninsular system recovered the frequency of the central European system. At 5:33 p.m., all the interconnection lines were in full operation and at 5:38 p.m., the electricity supply was restored to the system as a whole.