

PRESS RELEASE

ERSE publishes report on the analysis of flexibility needs in Portugal

ERSE – the Energy Services Regulatory Authority publishes a report identifying the actual flexibility needs of the National Electricity System and various solutions that will ensure, within the context of decarbonisation, a safe, reliable and balanced electricity system.

The study stems from European regulations (Article 19e(1) of [Regulation \(EU\) 2019/943](#) of the European Parliament and of the Council of 5 June 2019, as currently worded), which stipulates that the regulatory authority, or another authority or body designated by a Member State, must adopt a report on estimated flexibility needs at national level, covering at least the next five to ten years, to be updated every two years.

With a view to the sector's decarbonisation objective, this study must take into account the need to ensure the security and reliability of the electricity supply, considering the expected integration of generation from variable renewable energy sources, the necessary integration of sectors, as well as the interconnected nature of the electricity market, including interconnection targets and the potential availability of cross-border flexibility.

The flexibility needs quantified in this study have a distinct scope and complement those analysed in the context of resource adequacy studies, namely the European Resource Adequacy Assessment (ERAA) and the National Electricity System Security of Supply Monitoring Report (RMSA-E), thereby enabling a better identification of the actual flexibility needs of the National Electricity System.

In line with the methodology approved by the European Union Agency for the Cooperation of Energy Regulators (ACER) for this purpose ([Flexibility Needs Assessment Methodology](#)), and taking into account the objectives set out in the National Energy and Climate Plan (PNEC 2030), this study assesses, for two target years (2030 and 2035), different types of flexibility needs:

- a) System flexibility needs, which include i) integration of renewables; ii) response to generation ramps; and iii) short-term flexibility; and
- b) Network flexibility needs, which are divided into i) transmission network flexibility and ii) distribution network flexibility.

System flexibility needs reflect the flexibility needed for the electricity system to adjust to the variability of generation and demand patterns. In turn, network flexibility needs reflect the flexibility needed to ensure network availability by preventing or resolving congestion or voltage control issues.

Flexibility also has a temporal dimension, in that the resources required to respond, for example, to the need to adjust generation/demand patterns in the short term (e.g. storing surplus energy during daylight hours for subsequent consumption at peak times), will differ from those required to address the seasonality of these patterns (e.g. storing surplus energy in the summer for later consumption in the winter). In this regard, flexibility needs are characterised in terms of both power and energy, and should be considered from a technologically neutral perspective (i.e., not limited to the most common storage technologies such as electrochemical batteries or hydro storage).

To this end, ERSE coordinated the work involved in drafting this report, which involved REN – Rede Elétrica Nacional, S.A., in its capacity as operator of the national transmission network, and E-REDES – Electricity Distribution, S.A., in its capacity as operator of the national distribution network, as well as the Directorate-General for Energy and Geology, given its remit at national level, particularly regarding security of supply, and in relation to the drafting and revision of the PNEC 2030.

The challenges of the energy transition towards a carbon-neutral system are evident in the conclusions of this report, which highlight the importance of various flexibility solutions in ensuring a secure, reliable and balanced electricity system.

This study also sought to assess whether there are any barriers to the integration of flexibility resources into the system and the contribution of digitalisation to the development of such solutions.

[Access the Report](#)