

# DURATION OF EUROPEAN ENERGY STORAGE POWER SUPPLY IN WINTER



Will energy supply be prepared in winter 2024-2025? To ensure preparedness in energy supply in winter 2024-2025, the European Commission organised a comprehensive exercise to test the resilience of the EU security of supply framework. It rigorously tested under extremely severe conditions, also in view of the end of the transit of gas from Russia through Ukraine from 31 December 2024.



How much gas is stored in the EU? For the second year in a row, the EU reached the binding 90% gas storage target well ahead of the 1 November deadline. The gas storage level even reached 95% this year, corresponding to approximately 100 billion cubic metres (bcm) of gas, or in other terms, around one-third of the EU's annual gas consumption.



How can the EU save energy? With adequate growth in electricity storage, demand side flexibility and cross-border interconnectivity to help take advantage of abundant home-grown clean power, the EU could reduce fossil dependence, avoid costly energy imports, and protect consumers and businesses from volatile international energy prices.



Will Europe be well equipped for the upcoming winter? The current target for renewable energy is at least 42.5% by 2030, and the goal is to reduce the EU's overall energy consumption by 11.7% compared to the projected energy use for 2030. These developments contribute to Europe being well equipped for the upcoming winter.



How does the EU achieve energy independence? Figures show that between August 2022 and July 2024 the EU managed to reduce its gas demand by 18%, compared to the average of the previous 5 years. The 18% corresponds to approximately 146 bcm of natural gas saved! Moreover, to achieve energy independence, the EU has consistently focused on increasing its production of clean, renewable energy.

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Could the EU save ???9bn by capturing excess wind and solar? In 2030, the EU could avoid gas costs worth ???9bn by capturing excess wind and solar. Between August 2023 and July 2024, nine EU countries saw solar alone exceeding 80% of their hourly domestic demand. Germany could have avoided 36 GWh of expensive fossil power and up to ???2.5mn fuel costs in June 2024 alone with 2 GW more of additional batteries.



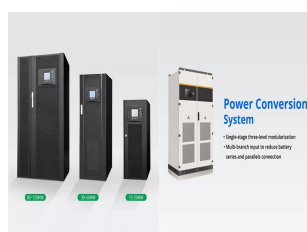
In 2022 alone, European grid-scale energy storage demand will see a mighty 97% year-on-year growth, deploying 2.8GW/3.3GWh. This reflects energy storage's emergence as a mainstream power technology. Over the ???



Thereby the system contributes to the stabilisation of the grid and to a reliable power supply. RWE benefits from its many years of expertise in the field of energy storage - project planning, modeling, system integration and ???



With adequate growth in electricity storage, demand side flexibility and cross-border interconnectivity to help take advantage of abundant home-grown clean power, the EU could reduce fossil dependence, avoid costly ???



In Europe, there is a growing consensus amongst policymakers that energy storage is crucial to securing affordable and low carbon energy. In May 2022, European Union launched their REPowerEU plan, a part of the European ???

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In Europe Energy Storage Market, Over the next decade, the top 10 countries in Europe will add 73 GWh of energy storage, amounting to 90% of new deployments. The problem of Europe's dependence on petrol still exists ???



The EU's energy storage market is expected to grow at a compound annual growth rate (CAGR) of approximately 4.2% between 2022-2025. While the global energy storage market size is expected to reach \$26.81 billion in 2028, having ???



There are clear signs of progress in this, in particular looking at gas storage levels for this winter. The EU target was to fill up to 80% of the storage capacity by the end of October. This was surpassed with 95% achieved by ???



The overall energy situation in Europe remains positive heading into the upcoming 2024-25 winter season on the back of high gas stores and lower energy prices. Improved supply fundamentals and two consecutive mild ???



This paper introduces the concept of a battery energy storage system as an emergency power supply for a separated power network, with the possibility of island operation for a power substation with one-side supply. This ???

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An EU strategy for clean flexibility can guide the transition away from reliance on fossil flexibility and ensure the complementary deployment of clean flexibility solutions across the EU. The European Commission already ???