



Horizon Europe projects to **REPower the EU**

January 2024

On 18 May 2022, the European Commission published REPowerEU. This is a plan that aims to make Europe independent from the import of Russian fossil fuels well before 2030. The plan includes three pillars: (1) increase the production of green energy in the EU; (2) diversify the EU's energy supplies; and (3) make energy savings. REPowerEU also includes a strong research and innovation (R&I) component that recognises the importance of R&I to accelerate the development of technologies that will support the plan's objectives.

This R&I component includes actions in the areas of hydrogen, solar energy, and energy savings. Apart from this, the Work Programme 2023-2024 of Horizon Europe Cluster 5 'Climate, Energy and Mobility', includes six REPowerEU flagships topics. These topics have resulted in 13 projects that benefit from an EU contribution of EUR 172 million, through Horizon Europe, and these will contribute directly to the goals of the REPowerEU plan.



Renewable Energy Valleys to increase energy security while accelerating the green transition in Europe

Decentralised renewable energy systems will help enhance the security and autonomy of local or regional energy supply.



Supporting the development of a digital twin to improve management, operations and resilience of the EU Electricity System in support to REPowerEU

A key tool to render the electricity system more efficient, resilient and able to integrate higher shares of renewable energies.



Demonstration of innovative, large-scale, seasonal heat and/or cooling storage technologies for decarbonisation and security of supply

Large-scale solutions are expected to be embedded into district-level heating and/or cooling storage, but also to contribute to heat demand for industrial processes.



Innovative solutions for the cost-effective decarbonisation of buildings through energy efficiency and electrification

Technologies to develop and demonstrate innovative and integrated solutions for the electrification of the thermal energy demand of buildings.



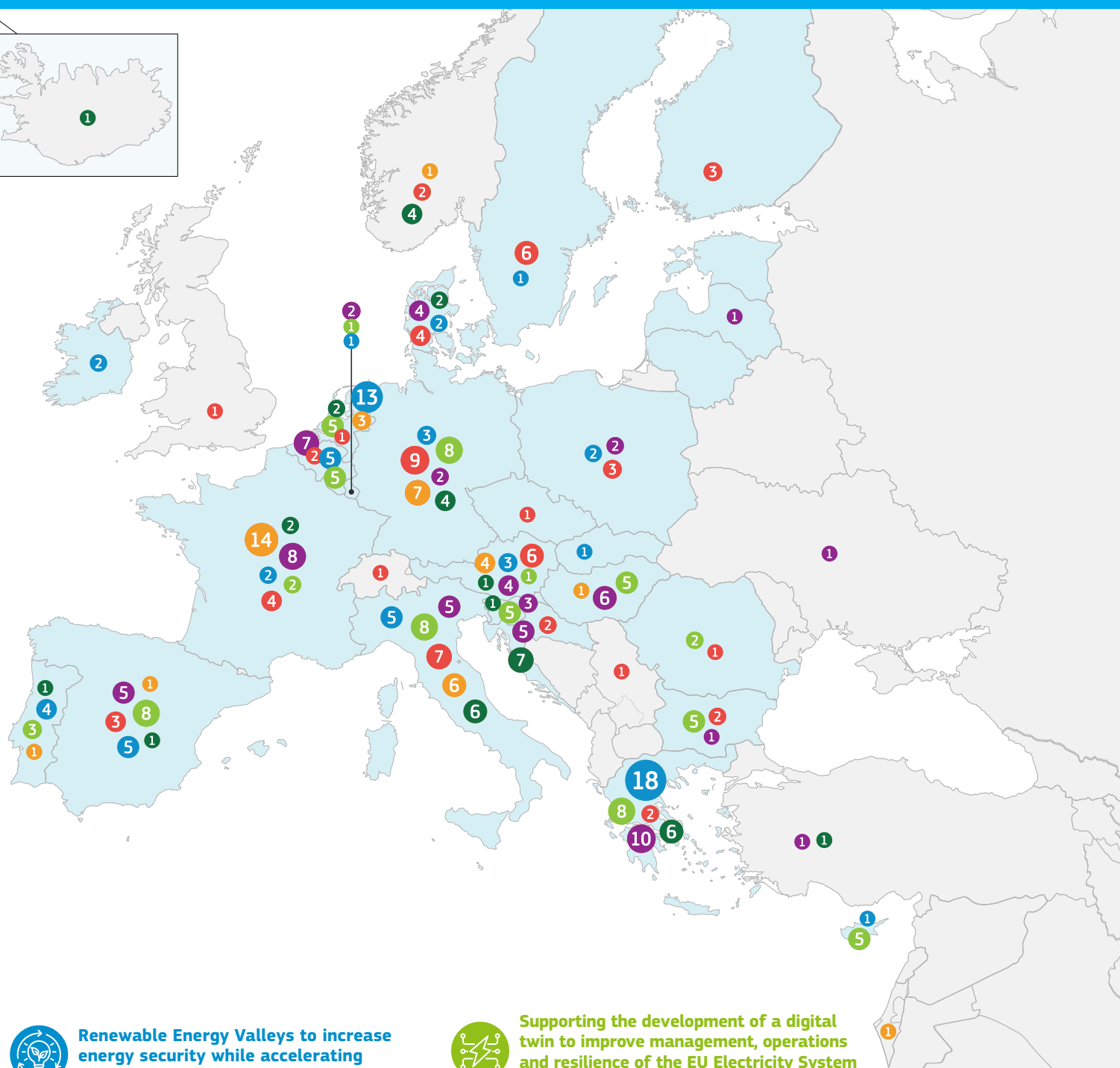
Hydrogen-powered aviation

To ensure the adequate ground-based refuelling and supply system for liquid hydrogen at air transport ground infrastructures.



Demonstrations to accelerate the switch to safe use of new sustainable climate neutral fuels in waterborne transport

To facilitate the adoption of sustainable climate neutral fuels at large scale to decarbonise the waterborne transport sector.



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