

HORIZON-CL5-2026-03-D3-22: Novel solutions for off-grid storage of renewable energy for critical infrastructures

Call: Cluster 5 Call 03-2026 (WP2026-2027)	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 4.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 12.00 million.
<i>Type of Action</i>	Research and Innovation Actions
<i>Eligibility conditions</i>	The conditions are described in General Annex B. The following exceptions apply: If projects use satellite-based earth observation, positioning, navigation and/or related timing data and services, beneficiaries must make use of Copernicus and/or Galileo/EGNOS (other data and services may additionally be used). Subject to restrictions for the protection of European communication networks.
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 4-5 by the end of the project – see General Annex B. Activities may start at any TRL.
<i>Legal and financial set-up of the Grant Agreements</i>	The rules are described in General Annex G. The following exceptions apply: Eligible costs will take the form of a lump sum as defined in the Decision of 7 July 2021 authorising the use of lump sum contributions under the Horizon Europe Programme – the Framework Programme for Research and Innovation (2021-2027) – and in actions under the Research and

	Training Programme of the European Atomic Energy Community (2021-2025) ¹ .
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Expected Outcome: Project results are expected to contribute to all the following expected outcomes:

- Enhanced European knowledge and leadership in off-grid clean energy storage technologies.
- Improved energy security and cost-effectiveness of Europe's energy systems, particularly for critical infrastructure.
- Elimination of fossil-based backup solutions for critical infrastructures, strengthening European competitiveness.

Scope: The topic aims to develop novel, cost-efficient off-grid energy storage solutions for renewable energy, tailored for critical infrastructures such as hospitals, transport hubs, data centres, and utilities. Solutions should address challenges specific to off-grid or non-interconnected area contexts, including storage scale, compromised grid interaction, resilience to potential shortages of critical materials, and multi-energy needs (electricity, heating, cooling). Emphasis should be on robustness and error-freeness, while considering sustainability, efficiency and performance. The project should foresee these solutions for using real-world critical infrastructures through simulation and experiments and establishing a procedure for decision-making, focusing on energy security and resilience against high-impact, low-probability events, by ensuring operational efficiency both on-grid and off-grid. Where relevant, interdependencies among critical infrastructures and system redundancy should be considered.

Projects are encouraged to support the reconstruction of Ukraine by including Ukrainian beneficiaries.

¹ This [decision](https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf) is available on the Funding and Tenders Portal, in the reference documents section for Horizon Europe, under 'Simplified costs decisions' or through this link: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/ls-decision_he_en.pdf