

## Battery research and development nicosia

Horizon Europe is the European Union (EU) funding programme for the period 2021 – 2027, which targets the sectors of research and innovation. The programme's budget is around EUR 95.5 billion, of which EUR 5.4 billion is from NextGenerationEU to stimulate recovery and strengthen the EU's resilience in the future, and EUR 4.5 billion is additional aid.

Projects under this topic are expected to substantially advance the state of the art in the field of battery management, by developing innovative physics and data-based approaches, both at the software and hardware levels to ensure an optimised and safe utilisation of the battery system during all modes of operation.

Several of the following items should be addressed: the development and implementation of physics-based battery models (e.g., ageing phenomena models); adaptable battery models (e.g., based on operation data); sensor-based solutions at the battery system level (e.g., with respect to sensor integration, communication with the battery management, data fusion, data analysis); advanced state estimators (e.g., state of health, state of function, state of energy, state of power, state of safety); methods for the prognosis of remaining useful lifetime and ageing; methods for the early detection or prediction of failures; solutions for the management of special situations (e.g., unbalanced or dysfunctional cells).

EU contribution per project: EUR5,00 million

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European Commission, Directorate-General for Research and Innovation

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For clarifications or additional information regarding specific programmes/calls, you may contact the relevant contact points whose details are provided for each specific call through the Portal. Για διευκρινίσεις ή προθέσεις πληροφοριών σχετικά με συγκεκριμένα προγράμματα / προκλήσεις, μπορείτε να επικοινωνήσετε με τα σχετικά σημεία επαφής των οποίων τα στοιχεία παρέχονται για κάθε συγκεκριμένη πρόκληση μέσω της Πύλης.

In order to succeed in the development of a thriving innovative battery industry, pan-European cooperation on research and innovation is essential. It is essential to work across geographical borders and institutional levels but it is also crucial that stakeholders from all parts of the battery value chain pull together in a strategic coordinated manner to ensure our collective research efforts are efficiently translated into sustainable technologies and products economically, environmentally and socially. There is a need to continuously consolidate the Battery R&I community across the EU and associated countries and across Battery-related

networks, projects and initiatives.

Proposals are expected to:

EU contribution per project: EUR 3,00 million

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