

UTLYSNING Datum 2021-12-23

Ärendenummer UT2021-00016

Avdelningen för forskning, innovation och affärsutveckling

Call 9 within the Battery Fund program

- □ Affärsutveckling
- ⊠ Forskningsstöd
- □ Planeringsbidrag
- □ Tävlingar
- □ Strategiska innovationsområden
- □ Internationellt
- □ Övrigt

If you are researching battery recycling or batteries for electrical system and vehicle applications, you are welcome to apply for support within the Battery Fund Program's ninth call.

- Last day for application 2022-01-26
- Announced funds SEK 60 million

Projects within the full width of the program are welcome

The call is open to applications within the entire width of the program, but in this call there is a special demand, linked to batteries, without mutual ranking:

- Projects focusing on practical, behavioural, or regulatory factors that may accelerate or hinder production (from material recovery to the manufacture of batteries and battery-based products), use, reuse, collection, and recycling of batteries.
- Projects that promote resource efficiency, for example around life cycle analysis, circular economy, design for reuse / recycling, or sustainable materials
- Projects from a system perspective for circular flows, for example on how the collection is maximized so that batteries return to certified / legal recyclers (regardless of whether the materials they contain are valuable or not).
- Projects that address research on safety issues around batteries along the entire chain from material extraction to the manufacture of batteries and



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battery-based products, use (such as electricity networks, buildings, motor vehicles and vehicles in general), reuse, collection, and recycling of batteries.

- Projects that can contribute to placing the Swedish and European battery value chain in an international context, such as mapping of technology and applications in different parts of the world as well as studies of import and export of primary and secondary raw materials, finished and used products, and which technical, economic, political, and social drivers and obstacles to this development.
- Projects on cell and battery system modelling, and the connection between them (better developed models can be central for better diagnostics and to avoid too extensive testing).
- Projects that contribute to the implementation of the new Battery Regulation at EU level, not least regarding standardization work. For example, analysis methods for performance and health conditions in batteries.
- Projects that contribute to increasing the number of doctoral students and others active in the battery field.
- Projects that contribute to merit for researchers who have not yet achieved stable senior positions within the academy.

Syntheses¹

1. Requirements and research needs for battery technology for stationary storage.

¹ About syntheses:

What do we know today and what do we need to find out to accelerate development? The Swedish Energy Agency requests syntheses that report on the state of knowledge and knowledge gaps in the area. Area should here be understood as the system's actors and technology as well as adjacent systems such as economic, political, social and historical.

It is important that the syntheses can describe both how the data is selected and how it is analysed. Each synthesis project is then expected to result in a scientific article, as well as a final report written in Swedish.

Applications for syntheses should describe the chosen method by, for example:

- Search strategy for the study:
- Keywords and sources
- Delimitation of the study: what criteria will be applied to exclude and include existing studies in the field
- Preparation of results and conclusions



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- 2. Safety aspects during recycling, production, and stationary storage.
- 3. Analysis methods for performance and health status of batteries.
- 4. Labelling for the purpose of promoting traceability, reuse, and recycling.

Research areas

In addition to the areas specifically requested above, the program supports, without mutual ranking, projects in the following research areas:

- Reuse, including longevity and safety aspects
- Recycling
- Battery development of today's and tomorrow's technologies and materials including supercapacitors
- Diagnostics / measurement
- Control / use
- Logistics
- Security
- Other research relevant to the program's impact objectives

Demonstration of technology available on the market is not included in the program.

The project must have the potential to contribute to the following impact goals:

- New and further developed cost- and resource-efficient battery concepts for storage and use of renewable energy in electrical system and vehicle applications.
- World-leading knowledge and expertise of both Swedish researchers and companies around:
 - Current as well as future battery systems for storage and use of renewable energy in vehicle and electrical system applications.
 - Sustainable and cost-effective processes and methods for recycling.
- Close collaboration and an active network between academia and business, and expanded battery research activities within Swedish companies.

All project proposals with the potential to contribute to the program's impact goals are welcome. Projects that address the areas in particular demand will be given priority in cases where the assessment otherwise weighs equally.

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Projects funded by the call must have the potential to contribute to advancing the research front. How the project relates to the international research front and in what way it can contribute to moving it must be stated in the application.

Battery development projects concerning vehicle batteries should relate to the EUCAR target image <u>Battery requirements for future automotive applications -</u> <u>EUCAR</u>.

Battery development projects should comply with the guidelines for publication developed within "Batteries Europe - Reporting methodologies" <u>Reporting</u> methodologies | <u>Energy (europa.eu)</u>.

Schedule for submission of application, for decision and start date for project:

First day for application	Last day for application	Decision is planned at the earliest	Earliest project start	Latest project end
17 november 2021	26 januari 2022	1 maj 2022	1 juli 2022	31 december 2027

Who can apply?

All actors who can contribute to the above goals can apply. It can be, for example:

- \circ Businesses
- o Public sector
- Universities and colleges' social sciences, humanities, technology and natural sciences
- o Institutes
- Other actors related to the battery value chain

Collaboration is important and research projects related to business, academia and society are sought to facilitate the dissemination and further use of research results. This can be done, for example, by:

- Projects in collaboration between actors in different parts of the value chain and / or different industries.
- Projects where people for a period work in academia instead of in business, or vice versa.
- Collaborative activities such as seminars where the project's results are presented in a broader context or where companies are given the opportunity to evaluate developed battery concepts in order to contribute to the industry's competence building.
- Reference groups.

Cooperation within the Nordic region, Europe and internationally is encouraged.

Gender equality and diversity shall be taken into account in the composition of the project group, in the selection of project managers and in the implementation of the project, content, as well as in its goals and effects.



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Decisions on which projects will be granted support will be made in June 2022 at the earliest. The project can start no earlier than July 2022.

Please note that the schedule may change. The call may, for example, close earlier if the announced funds run out.

Read more in the <u>full announcement text</u> (Swedish only).

Application takes place in "mina sidor"

Please note that applications for this announcement are made in the "mina sidor" tool.

Instructions for how to apply.

You can look into our open help desk where you can get help if you have questions about login or the application form.

The help is available at Microsoft Teams January 21 at 9.00–11.00.

The application must primarily be written in Swedish and be complete when it is submitted. Further information and assessment criteria can be found in the full announcement text.

About the battery program

The program will contribute to the development of:

- New and further developed cost- and resource-efficient battery concepts for storage and use of renewable energy in electrical system and vehicle applications.
- World-leading knowledge and expertise of both Swedish researchers and companies around:
 - current as well as future battery systems for storage and use of renewable energy in vehicle and electrical system applications.
 - o sustainable and cost-effective recycling processes and methods.
- Close collaboration and an active network between academia and business, and expanded battery research activities within Swedish companies.

The Battery Fund program

We provide support until 16.00 the same day as the announcement closes.

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