

Call: Energy Efficiency in Lighting – EELYS

The Swedish Energy Agency is announcing approximately SEK 15 million in the first call for the new research programme entitled Energy Efficiency in Lighting – EELYS. In this call we welcome project proposals in all the programme's fields of research. Application deadline: 13 September 2017.

The purpose of the research programme entitled "Energy Efficiency in Lighting – EELYS" is to contribute to the energy policy objective of greater efficiency in energy use, by tapping the vast potential for energy efficiency in the field of lighting. The aim is to bring about changes to achieve the following general long-term impact objectives in the field of lighting:

General long-term impact objectives in the field of lighting

1. Swedish researchers have an international reputation and are helping to push forward the frontiers of knowledge.
2. Swedish companies develop functional and resource-efficient lighting systems that stimulate technical and economic advances and create new Swedish export opportunities.
3. Swedish companies, academies, institutes and public sector organisations work together in an effective way to develop, evaluate and apply new technology.
4. More and more people can use lighting solutions that are appropriate and needs-based and that interact with daylight as much as possible.
5. The lighting is manufactured with minimal use of resources and with methods that do not involve hazardous substances. All the material can be reused or recycled.
6. New lighting solutions help to improve functionality and well-being in the environments where they are used.

Projects from the private and public sector will be considered, for example college and university institutions, companies or institutes which are active in the particular field. Doctoral research projects may also be financed. Projects seeking funding in this call must be focused fully or partly on one of the four fields listed above, or on a combination of several of the fields.

The Swedish Energy Agency works to promote diversity and equality, and applicants are therefore asked to consider these issues in the composition of the project group, the choice of project leader, and in the management, content, objectives and impacts of the project.

The programme is subdivided into four fields:

1. Lamps and components.

The pace of technical development shows no sign of slowing down – indeed, there are a number of parallel developments. At component level, examples include:

- Phosphor-conversion chips and RGB based LED chips.
- Lighting control technology such as sensors, optics, etc.
- Ongoing development of robust and controllable drivers for lamps.
- Ongoing development of modular systems, in other words systems in which components can easily be replaced if they break or need upgrading.

At lamp level, examples include:

- Ongoing development of efficient LED and OLED lamps. Development of laser-based lighting.
- Development of controllable features such as luminous flux and spectrum, which are very important for the various applications of lighting systems.

2. Lighting systems.

The development of new, intelligent lighting system based on digital control technology for active lighting control is expected to reduce power consumption because it allows the lighting to be controlled dynamically according to actual needs. However, the applications are different in different sectors, so the systems must be easily adapted.

A lighting system may also need to communicate with other systems such as the ventilation or heating system in a building. It may therefore be necessary to develop and test common interfaces and communication protocols (cf. the "Internet of things").

Communication between lamps in a large lighting system may be beneficial, for example in dynamic presence control of light output along a path, and this can be achieved in various ways.

3. Energy-efficient and functional lighting of high quality.

Lighting and daylight affect people in many different ways in terms of safety, perceived security, behaviour, and the quality of lighting at work and at home. As technology develops, it is also important to ensure that the lighting works well, meets the users' needs and creates a good indoor and outdoor environment. Alongside the development and introduction of new lamps and lighting systems, further fundamental interdisciplinary research is necessary into how the light interacts with people, as well as further methodological development. In this field, new business models and research in circular economy may be relevant.

Ongoing development of lamps and associated control systems also includes resource efficiency and the promotion of a circular economy. The materials must be used efficiently and must have the lowest possible environmental impact.

It must also be easy to repair, upgrade and eventually reuse or recycle the components forming part of the finished lighting solutions.

A range of research, innovation and evaluation projects may be run to push forward the frontiers of knowledge, preferably in partnership with academics, businesses and potential consumers. International collaboration will also be given priority. The programme is focused on the system level because that is where the greatest challenges lie.

4. Evaluation of new technology and new applications.

New lamps or new lighting systems need to be verified in some way to ensure that they work as intended. This is particularly important for more complex systems or solutions designed for entirely new applications. It may also be necessary to develop evaluation methodologies. Projects may be run in the laboratory environment and then implemented in a real-world environment. Other projects could involve creating test beds in which companies can collaborate to test new ideas under real conditions in the development phase.

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What percentage of the project's costs can the Swedish Energy Agency cover?

The maximum amount of aid permitted per project is SEK 5 million for this call.

State aid may be granted to companies with different levels of aid depending on the focus of the project.

For projects involving experimental development, the maximum state aid is 25%, for applied research the maximum is 50% and for fundamental research it is 100% (link to [Commission Regulation \(EU\) No 651/2014 + section](#)).

In some cases, the Swedish Energy Agency may grant a higher percentage of state aid, for example for small (+ 20 percentage points) and medium size (+ 10 percentage points) companies (link to [Commission Regulation \(EU\) No 651/2014 + section](#)). This means, for example, that a project run by a small company and which involves experimental development can receive up to 45% in state aid (25+20).

For projects run by universities and colleges, the Swedish Energy Agency may grant state aid covering up to 100% of the project's costs ([link to spending authorisation](#)).

The Swedish Energy Agency may impose more stringent co-financing requirements than those stated in the Regulation if we believe this is necessary in order for the project to be given support.

For the fourth field "Evaluation of new technology and new applications", the Swedish Energy Agency may grant aid in accordance with the first paragraph (1 §) of government ordinances 2008:761 and 2003:564. For example, aid cannot be granted for evaluation of new technology and new applications under ordinance 2008:761 unless the applicant is involved in research and development concerning the technology or an associated innovation.

Co-financing can take the form of person hours (link explaining how this can be calculated), cash and experiment costs for example. If the joint financing includes state funds, this should not be included in the co-financing. For example, if an institute receives 25% of its core funding from the state, only 75% of its project costs are counted for joint financing.

Conditions for approved projects

The Swedish Energy Agency's decision regarding aid is based on an agreed project plan and cost plan. Before aid can be released to approved projects, recipients must confirm that they have read the Swedish Energy Agency's decision and that they accept the conditions for the aid. A more detailed description of the conditions can be found in the appendix below.

When the project is completed, it will be required to produce a final report containing a summary of the project results for the interested public, and to present the results in a programme conference. Research projects may also be required to publish one or more peer-reviewed articles.

Application

The application must be completed as described in the notice to applicants and submitted via the Swedish Energy Agency's electronic application tool [E-channel](#). Remember to obtain user access to E-channel well in advance, as this may take a few days.

The application must explain the project in language that can be understood by people who are not experts in the field. The application must describe the project's energy relevance and contain clear interim and final objectives. Objectives must be measurable and formulated so they can be achieved during the lifetime of the project. Project descriptions must also contain background and analysis of prior knowledge, method descriptions, costings, a summary budget and planned dissemination activities.

The complete application must be submitted by 13 September 2017 at the latest.

Assessment criteria

Applications not contained in one of the four fields listed above cannot be processed within the programme and will be rejected.

The following is a list of the assessment criteria that will be used when assessing applications. The importance of the criteria will vary depending on the project category. The application must clearly state how the project meets the assessment criteria.

- Energy relevance. The Swedish Energy Agency is legally barred from granting funding unless this is clearly stated.
- Contribution to achieving the programme's objectives and vision.

The project's potential contribution to the prioritised fields, including the need for and the benefits from the project result.

- Academic excellence and degree of innovation.

The project's academic excellence, for example the extent to which new knowledge will be created and the project's contribution to pushing forward the frontiers of national and international research in the field. The degree of innovation in the project, for example its uniqueness, the novelty of the intended solution and its potential benefits.

- Exploitation and dissemination.

The project's potential for exploitation and dissemination, for example knowledge development, publications, new products, services, processes or commercialisation. Note that it is important for all projects to describe how exploitation and dissemination will take place and who the target groups are for the project result.

- Feasibility.

The project's feasibility, for example whether the participants have the right expertise for the project, whether there is a clear plan of execution, details of the associated risks and how they will be mitigated, and whether the objectives and the budget are reasonable.

- Novelty. The application must concern a field which has not been paid sufficient attention in the past.

In addition, the Swedish Energy Agency will consider the application in light of the following information provided by the applicant:

- The energy saving potential must be described clearly.
- The project must have clear boundaries.
- Clear details must be provided about working hours and project costs.

- If the aid rules require the project to have matching finance, the project application must convincingly explain where the matching finance will come from.
- Information about who is involved in the project, and clear details of exactly what each person named in the application will do.
- Information upon which the project is based must be set out as clearly as possible.

Other useful information

The Swedish Energy Agency would like to draw applicants' attention to the following considerations which are also applicable. They are described in government ordinance 2003:561 and are also contained in 2008:761 as follows:

1. Aid may not be granted to projects which have already started before an application is received by the agency. (2a §)
2. Aid may not be granted to a company which is subject to recovery of a payment as a result of a decision by the European Commission to declare aid unlawful and incompatible with the internal market. (9 a §)
3. The Swedish Energy Agency may only release aid if the recipient is able to verify the eligible costs with specified written documents. (10 §, first sentence)
4. The aid is granted subject to the available funds (1 §) and the applications will be considered in competition with each other.

Decision on aid

The Swedish Energy agency may ask you to supplement the application if we think there is a reason to do so. For example, we may ask you to provide details of an increased co-financing requirement, changes to the project plan or a more detailed description of the project concept. Your application will be checked by the Swedish Energy Agency. External assessors will then consider the application. The assessors will make a recommendation to the Swedish Energy Agency about which projects should be supported. The final decision will be taken by the Swedish Energy Agency. Shortly thereafter, you will be informed of the decision taken and the reason for the decision.

You may only supplement the application if you are asked to do so by the Swedish Energy Agency.

Please notice also what is written in the Appendix 1 below – Conditions for funded projects

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Appendix 1- Conditions for funded projects

The conditions that apply to funded projects are listed in the Swedish Energy Agency's funding decision. A description of the conditions follows below.

General conditions

The Swedish Energy Agency's funding decision is based on an agreed project plan and budget. The part of the costs not covered by funding from the Swedish Energy Agency shall be covered by resources or funds provided by another financier. The beneficiary is responsible for covering the extra costs that occur during the project period. When the Swedish Energy Agency's funding decision covers funding outside of the current financial year, the decision only applies provided that the Swedish Energy Agency receives/has at its disposal the required funds in the following years.

The shifting of costs between cost categories is accepted up to 10 per cent within each cost category, provided that the total budget does not change. Larger changes require approval from the Swedish Energy Agency.

§ 1 Payment of grants

The grants are disbursed without a requisition form, in the middle of the project period for each budget year, unless otherwise stated in the funding decision. Grants only cover value added tax when it occurs as net cost for the beneficiary (only applies to universities and university colleges). Verifications for accounted expenditures must, upon request, be submitted to the Swedish Energy Agency. Funds that have not been used shall be repaid. Advances can be provided, up to 30 per cent of the total grant provided (only applies to universities and colleges). 15 per cent, or another percentage set out in the funding decision, of the grant provided can be withheld until final reporting in accordance with § 4 has been submitted and approved by the Swedish Energy Agency.

§ 2 Employer relationship

The Swedish Energy Agency is not the employer or principal of the beneficiary or anyone else he/she engages in the project. Accordingly, the Swedish Energy Agency does not make deductions for taxes, social security contributions, etc.

§ 3 Notification obligation regarding other funding

The beneficiary is obliged to immediately notify the Swedish Energy Agency in writing, if funding for the project in the application process have been applied for or granted by anyone other than the Swedish Energy Agency.

§ 4 Reporting obligation

Reports and surveys as set out below shall be submitted in accordance with the Swedish Energy Agency's instructions. If additional special reports are required, it is stated in the funding decision.

Annual report

Universities and university colleges are obliged, for each budget year, at the request of the Swedish Energy Agency, to submit annual reports concerning the complete activities of the department and/or research team.

Progress report

The progress report concerning the project's activities shall be provided at the request of the Swedish Energy Agency. The progress report shall include a description of the existing activities and results of the project as well as a financial reporting. In addition, the Swedish Energy Agency may request that the report shall include a technical status report. The progress report shall be submitted to the Swedish Energy Agency at the latest on the date stated in the funding decision.

Financial Accounting – only applies to companies

Financial accounts shall be submitted once or twice a year using a specific form provided by the Swedish Energy Agency or downloaded from the Agency's website (www.energimyndigheten.se). The account shall be submitted at the latest on the date stated in the funding decision.

Final report

The final report shall include the project results and contain a description of the implementation of the project and the fulfilment of objectives. Furthermore, the report shall contain a summary of the project results in English of no more than 200 words. The report shall be submitted to the Swedish Energy Agency at the latest on the date stated in the funding decision.

A specific final financial accounting shall be submitted no later than on the date stated in the funding decision using a specific form provided by the Swedish Energy Agency or downloaded from the Agency's website (www.energimyndigheten.se).

Survey

As a beneficiary, you need to complete a survey at the end of each year and submit this to the Swedish Energy Agency. We collect, on behalf of the Government, details from all beneficiaries in order to present a number of results in the form of indicators form in our annual financial statement.

§ 5 Changes

Significant changes within project and budget approved by the Swedish Energy Agency must be reported in advance to the Swedish Energy Agency for evaluation and approval. The beneficiary must immediately notify the Swedish Energy Agency if circumstances of significant importance occur that result in the

cancellation or delay, etc. of the project. The beneficiary is obliged to immediately report any changes in name or address.

§ 6 Publication

The project results shall be published. Publication shall take place in accordance with international best practice for the publication of research results.

The beneficiary is entitled to protect the results by patents or other intellectual property rights and in doing so postpone publication until any application for such property rights has been submitted to the relevant patent office. The Swedish Energy Agency must be notified if the beneficiary intends to protect the results. Applications to the patent office must be submitted without delay. The written approval of the Swedish Energy Agency must be obtained in each individual case if the beneficiary wishes to delay publication for reasons other than those stated above or refrain from publishing certain results.

All presentations of the project must state that the work has been conducted with the support from the Swedish Energy Agency (when presentation is held in Swedish, the name should be reproduced as Energimyndigheten).

§ 7 Rights to results

The beneficiary or the rights holder of the results has the commercial right of use of the project results and is entitled to make available or transfer the rights to others.

If the rights to the project results are transferred to a company that runs economic activities, compensation corresponding to the market price for the rights shall be paid (only applies to universities and university colleges).

§ 8 Right to review

The Swedish Energy Agency or person/persons appointed by the Swedish Energy Agency (e.g. certified accountant) are entitled to follow-up the work and study documents that can provide information about the technical and economic development of the project. The Swedish Energy Agency is entitled to issue special instructions for reporting in order to enable the review.

In addition, the Swedish Energy Agency has the right to follow-up completed projects through requesting follow-up reports, that are to be structured and submitted in accordance with the Swedish Energy Agency's instructions. Such reports can be requested on three occasions within a ten-year period as of the day of the final report.

§ 9 Amendment to the decision

At the request of the beneficiary, the Swedish Energy Agency may grant well-motivated amendments to the project.

§ 10 Annulment of the decision

The Swedish Energy Agency may decide that unused funds shall be withheld alternatively that disbursed funds, that have not been used, shall be repaid if:

- a) the conditions for the project's financing have changed
- b) the project is not run according to the agreed project plan
- c) there is no prospect of achieving a satisfactory result within a reasonable timeframe (for example, due to significantly changed project or market conditions) or if the project's planned continuation cannot be considered secure (for example, due to insolvency in case the beneficiary is a company)
- d) the beneficiary fails to sign and resend a copy of the conditions appendix to the Swedish Energy Agency.

§ 11 Recovery of amounts paid

The disbursed grant along with interest rate of 8 % (eight per cent) above the applicable reference interest rate may be reclaimed with immediate effect if:

- a) the beneficiary does not provide the obligatory reports according to § 4
- b) the beneficiary uses the grant for purposes other than what is stated in the agreed project plan
- c) the project is not run according to the agreed project plan
- d) the beneficiary does not otherwise satisfy the obligations according to the conditions in this Appendix or the special conditions in the funding decision.

§ 12 Retention of grant

The Swedish Energy Agency is entitled to stop further payment of funds until a decision is made to refuse payment or to reclaim granted funds according to paragraphs 10 and 11. Such a stop to further payment of funds may affect payments to other projects administered by the same department, company or corresponding administrative unit, if the Swedish Energy Agency so decides.

§ 13 EU State aid rules

As a condition for aid, funding measures may be repealed or changed and the grant reclaimed if the European Commission through judgements which have entered into force or the Court of Justice of the European Union has found the aid to be unlawful pursuant to Article 107 of the Treaty on the Functioning of the European Union. The decision to repeal or change the funding measures is taken by the Swedish government. In this context the conditions for repayment of aid are determined in each individual case.

Consent pursuant to the Swedish Personal Data Act and concession to making information available.

The Swedish Energy Agency makes information about projects financed by the Agency available on the Agency's website: www.energimyndigheten.se. Here the

general public can search for information about on-going and completed research projects based on different keywords, such as research subject, research organisation, project title, project manager.

As the project manager and authorised signatory sign the conditions, the project manager agrees to publishing personal data (name and organisation), and the authorised signatory to non-confidential information and reports of the project, on the public domain on the Agency's website. The beneficiary is responsible for that the copyright holder has given its consent to this publication and shall ensure that the copyright holder is entitled to enter agreements in each individual case.

Public documents and secrecy

Essentially all post and e-mail sent to the Swedish Energy Agency become public documents. Among other things, this means that the public and mass media may request to view their contents. Official letters and decisions sent from the Swedish Energy Agency are also public documents. The right to view public documents is part of the Public Access to Information and Secrecy Act, and the Freedom of the Press Act.

However, the Swedish Energy Agency is not permitted to disclose information covered by secrecy in accordance with the Public Access to Information and Secrecy Act. This means that a document or certain information in a document may be protected by secrecy. A secrecy assessment is therefore made on a case-by-case basis before a document is disclosed.

Secrecy applies to information on an individual's business or operating conditions, inventions or research findings, for example, if it can be assumed that the individual will suffer damages if the information is disclosed.