

Call Grand Solutions 2022

Green research, technology development and innovation

Application deadline: April 5, 2022, 12.00 PM, CET

Project duration: 1-5 years

Part A: Green research, technology development and innovation – seven green themes

- **Total budget:** Minimum 201.1 mill. DKK.¹
- **Investment per project:** from 5 mill. DKK to 40 mill. DKK.

Part B: Research in emission-free food production

- **Total budget:** 53.6 mill. DKK.
- **Investment per project:** from 5 mill. DKK to 40 mill. DKK.

1. About the Grand Solutions Programme

The Grand Solutions programme invests in ambitious, and preferably, interdisciplinary research and innovation projects that can create new, specific solutions to important, politically prioritized societal challenges and create value throughout Denmark. To the extent possible, the Grand Solutions programme invests in projects that are carried out in close collaboration between research institutions and the business community.

Innovation Fund Denmark distributes the available funds in open competition between projects that within the two parts A. and B., (see below) demonstrate the greatest positive effect on climate, nature and environment while at the same time contributing to growth and employment in Denmark.

Read more about the Grand Solutions programme [here](#).

2. Aim of the call

Innovation Fund Denmark's investment within "Green research, technology development and innovation" shall contribute to creating knowledge and technology that can ensure the course of the green transition towards a more sustainable society. This in order for Denmark to achieve the government's goals of 70 percent reduction of greenhouse gas emission by 2030 and CO₂ neutrality by 2050, while at the same time achieving the goals for nature, environment and biodiversity.

Denmark must be frontrunner in green research and innovation, which contribute to maintain and create green jobs. To the extent possible, the research must be carried out in close collaboration between research institutions and the business community.

¹ With the possibility of transferring funds from Innovation Fund Denmark's other programmes. The potential transfer of funds can concretely result in an increased budget.

This call consists of the following two parts:

	Budget for each part
A. Green research, technology development and innovation – seven green themes	Minimum 201.1 mill. DKK. ¹
B. Research in emission-free food production	53.6 mill. DKK.

Applicants must submit their application under part A (Green Research, technology development and innovation - seven green themes) or part B (Research in emission-free food production). If the applicant submits the application under part B, and the application meets the formal requirements for the application as specified in the guidelines for Grand Solutions, but nevertheless does not receive an investment, the application will subsequently automatically be considered under part A and will be processed here in the same way as other applications. This is because part A is the general part of the call, while part B is a specific part of the call, which is thematically contained in part A. If the applicant submits the application under part A, and the Innovation Fund Denmark assesses that the application also falls within the framework of part B, the Innovation Fund Denmark may choose to process the application under part B first.

A. Green research, technology development and innovation – seven green themes

As a follow-up to the Danish government's green research strategy, Innovation Fund Denmark wants to invest in projects within "Green research, technology development and innovation – seven green themes". For this purpose, minimum 201.1 mil. DKK is available for investment. The purpose of the investments within this area is secure the greatest effect on climate, nature and the environment and contribute to growth and employment within the following seven themes:

- 1) Energy production, etc.
- 2) Energy efficiency improvement
- 3) Agriculture and food production
- 4) Transport
- 5) Environment and circular economy
- 6) Nature and biodiversity
- 7) Sustainable behavior and societal consequences (cross-cutting)

The projects can support the development of local business powerhouses (in Danish: "erhvervsfyrårne") (see link in section 5: "Guidelines and inspiration")

The funds are distributed in open competition within the seven themes and projects can, for example, contribute to:

- Development of new sustainable plant-based foods
- Development of smart integrated energy systems and potentials in sector coupling within the overall energy- and energy-supply area. Intelligent utilization of digital technologies and solutions is crucial in this context.
- Digitalization and data utilization that contribute to the green transition. This concerns the digital transition in sectors such as transport and agriculture, as well as digital monitoring and control of climate-, environmental- and nature-relevant conditions, e.g. through the use of big data, artificial intelligence, internet of things, cyber- and information security, and drones and digital infrastructure consisting of satellites, etc.

- Sustainable housing, construction and cities, which includes a wide range of disciplines in, e.g., engineering, architecture and design in order to develop holistic climate- and environmental friendly solutions with people at the center, in connection to the political agreement on national strategy for sustainable construction.
- Sustainable fashion and textiles, including new business models and materials
- Interdisciplinary research projects that provide greater knowledge about citizens' perception, understanding and behavior in relation to climate challenges and the green transition.

B. Research in emission-free food production

Innovation Fund Denmark also invests 53.6 mil. DKK in "Research in emission-free food production". The purpose is to invest in strategic basic research projects that contribute to achieving the climate goals within Danish agriculture and food industry.

Projects within emission-free food production can for example focus on:

- Development of new crop varieties that under Danish conditions can be grown for feed and human consumption.
- Livestock breeding targeting increased feed efficiency and thus lower climate load.
- Handling and recycling of nutrients from the agricultural- and food production industries in order to minimize waste and maximize value creation.
- Development of 'omics' tools that can be used to optimize and document production and products, so that, for example, food- and feed durability can be increased and waste can be reduced.
- Bioinformatics methods that can be used to analyze and interpret very large data sets – throughout the entire value chain.
- Use of fermentation, enzymes and new biotechnological opportunities for development of new climate-friendly products for both feed and human consumption.
- Understanding of consumer preferences in relation to taste, texture, nutrition and health and utilizing this knowledge for the development of climate-optimized foods and dietary patterns.
- Food safety and traceability in the production of new, climate-friendly foods and ingredients.

The funds are distributed in open competition and it is advantageous to focus on areas where lack of knowledge prevents creation of a coherent value chain.

3. Evaluation

The three overall decision criteria are:

- Quality of the idea – the quality of the research and innovation
- Impact – value creation during and after the project
- Quality of execution – efficiency in the project execution and the implementation of the results

Further information about the decision criteria can be found in the guidelines for Grand Solutions, which will be published on Innovation Fund Denmark's website at the end of January 2022 (see link in section 5: "Guidelines and inspiration")

It is emphasized that key stakeholders of the project contributes to develop the project and participates in, or in other ways are directly involved in the project, e.g. through investment.

In connection with applications for "Green research, technology development and innovation", particular importance should be paid to describing the projects quantified contribution (as far as possible) to the reduction of CO₂ equivalents / greenhouse gas emission - both in Denmark and globally. The

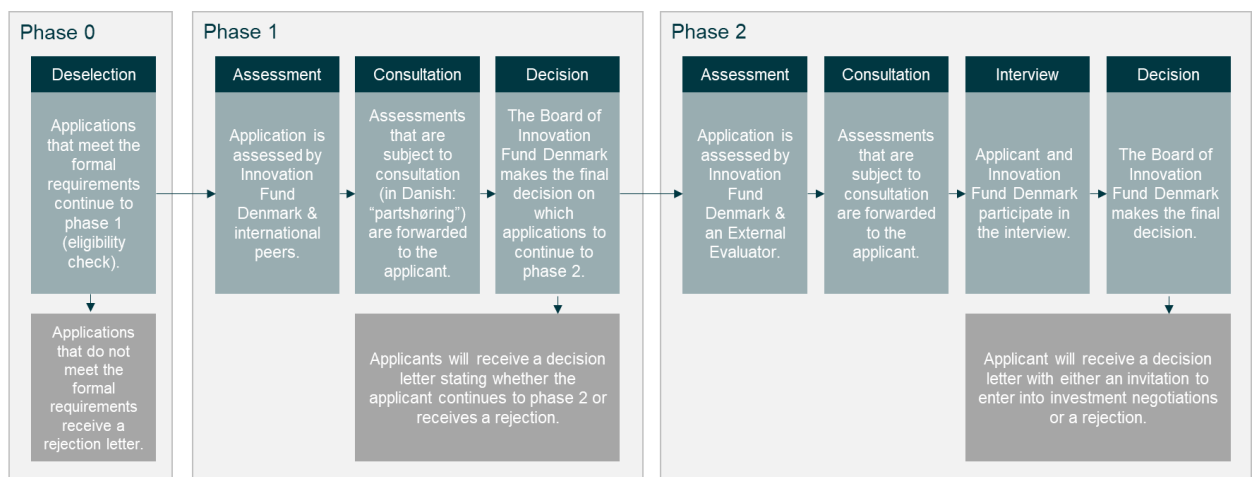
value creation in the project should not only be understood as monetary value, but may also encompass e.g. improved quality of life, nature conservation / recovery, increased biodiversity, cleaner environment etc. It is the applicant's responsibility to explain and account for the different types of value creation.

In addition to the three decision criteria, reference is made to the guidelines for Grand Solutions. The distribution of the funds originates from the current Finance Act and the agreement on the disposition of the Research Reserve (see links under section 5: "Guidelines and inspiration").

4. The evaluation process

Applications to Grand Solutions must be submitted via www.e-grant.dk, which is the application portal of Innovation Fund Denmark. The call open in e-grant on February 1, 2022. Please note, that applicants will receive a receipt for submitting the application if the application is submitted after mid March 2022.

The evaluation process is described in detail in the guidelines for Grand Solutions and briefly outlined below.



Applicants are notified of the decision via www.e-grant.dk. E-grant has prepared a FAQ that can be accessed [here](#).

It is expected that the project applications proceeding to phase 2, will receive either invitation for investment negotiations or rejection of application in November 2022, after which the investment negotiations can be initiated with an expected project start in the beginning of 2023.

5. Guidelines and inspiration

Applicants within this Grand Solutions call must take into account the following:

- [Guidelines for Grand Solutions](#)
- [The Danish government's green research strategy \(in Danish\)](#)
- [The green solutions of the future \(in Danish\)](#)

The following can be used as inspiration to the application within the present Grand Solutions call:

- Finance Act 2022
- [Disposition of the Research Reserve 2022](#)
- [UN's 17 Sustainable Development Goals \(SDG\)](#)

- [UN's SDG goal 13: Climate action](#)
- [The 13 climate partnerships \(in Danish\)](#)
- [Link to local business powerhouses \(In Danish: "erhvervsfyrstårne"\) \(In Danish\)](#)
- [The green project bank \(in Danish\)](#)

6. Contact

Innovation Fund Denmark hosts regular webinars and Q&A on Grand Solutions where everyone is welcome to participate. Registration for upcoming webinars and Q&A sessions takes place via Innovation Fund Denmark's website [here](#) (scroll down to see upcoming events).

Frequently asked questions to Grand Solutions and related answers can be found on Innovation Fund Denmark's website [here](#).

6.1. Contact Information

For questions regarding formalities, Innovation Fund Denmark's Investment Officers may be contacted. In connection to this, please note that Investment Officers or other employees of the Innovation Fund Denmark are not allowed to answer specific questions regarding projects or ideas.

The following Investment Officers may be contacted regarding questions to this Grand Solutions call:

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7. About Innovation Fund Denmark

Innovation Fund Denmark accelerates Danish research and innovation to solutions that strengthen Danish society's competitiveness and sustainability. We do this by investing in researchers, companies and entrepreneurs who create value, jobs and solve societal challenges - and by realizing potentials in the innovation system.

Innovation Fund Denmark wants to promote diversity in all its aspects. Therefore, all interested applicants, regardless of ethnicity, religion, gender identity, disability status, age or professional areas, etc., are encouraged to apply for the fund's programs.