Call for Seed Funding Projects within NTNU Energy's Focus Areas

NTNU's strategic research area on Energy aims to address complex societal challenges through interdisciplinary collaboration and the development of innovative solutions. To strengthen collaboration across faculties and departments, NTNU Energy invites proposals for seed funding projects aligned with our thematic focus areas.

Projects should contribute primarily to **one** focus area but may address additional focus areas where relevant.

All projects must be completed by **June 2027**.

NTNU Energy's Focus Areas

To help applicants identify where their proposal best fits the call, each focus area provides a short description and/or examples of the types of projects they are particularly interested in supporting.

1. **The Renewable Revolution**
   - Projects working towards supporting rapid and substantial transition to renewables, drawing on several disciplinary perspectives (e.g., social, economic, ecological, technological, ethical, political, historic, art, literature, engineering, …)
   - Projects identifying and addressing interdisciplinary barriers of rapid transitions to renewables, based on several disciplinary perspectives.
   - Projects working towards real world implementations of rapid transition processes taking a system perspective, identifying and addressing bottlenecks, for example in local energy transitions.

2. **The Transformation of Energy End Use**
   - Projects working towards solutions (including methods, tools, products, processes, systems) that have the potential to drastically reduce and transform the energy and power demand in buildings, industry, or transport, drawing on several disciplinary perspectives (social science, engineering, economics).
   - Projects identifying and addressing interdisciplinary barriers to wide-scale deployment of energy sufficiency, energy efficiency, and demand-side flexibility in services and solutions within the built environment, within industry, or within transport.

- Projects working towards real-world implementation of solutions that support a rapid transition towards a low carbon society.

3. Resilient and Integrated Energy Systems

- Projects working towards solutions, methods and tools, for resilient energy systems operation, considering generation, transmission, distribution, end-use, and storage.
- Projects supporting renewables integration, decarbonization and electrification, considering societal transformation, technological development, regulatory frameworks, and market design transformation e.g. implementing FBMC.
- Projects working towards critical infrastructure preparedness considering drivers such as geopolitical conditions, climate change, digitalization, decentralization, technological disruption, and cybersecurity aspects.

4. Beyond the Fossil Fuel Era

This focus area understands the fossil fuel era as a historical formation where oil, gas, and coal are central to most aspects of life. Fossil energy has helped structure everyday life, work and labour, value chains, welfare and education, culture and imaginaries, wealth and inequality, and geopolitical power. We seek projects that explore what it means to move beyond such an era, and how post fossil futures can be imagined, made real, governed and lived in different places and sectors.

Examples of desired projects include, but are not limited to:

- Projects working towards a deeper interdisciplinary understanding of the fossil fuel era, by analysing how fossil energy is built into infrastructures, institutions, knowledge practices, culture and everyday life, and by identifying key mechanisms of lock in, dependence and vulnerability.
- Projects envisioning and exploring alternative futures beyond the fossil fuel era, for example through scenario work, speculative and utopian design, artistic and literary practices, innovation, prototyping or futures studies.
- Projects working towards real world experiments and collaborations that support life beyond the fossil fuel era, for example living labs, new planning and governance practices, decommissioning and repurposing of fossil infrastructures, or community-based initiatives in cities, regions, industries or coastal and rural communities.

5. Sustainable upscaling of energy technologies

Successful implementation of technologies in a renewable energy system requires scalable and sustainable solutions. Within this focus area, we adress the challenges related to environmental impact and scalability (technical, economic, social/regulatory) of emerging and mature energy technologies, with the aim of identifying barriers for implementation and assessing potential for scalability and sustainability at an early stage.

Examples of desired projects:

- Activities that can promote/initiate methodology development to evaluate potential for scalability of materials and technologies for renewable energy conversion and storage.
- Projects that adress political incentives for shifts towards abundant, environmentally friendly materials, as well as needs for regulatory frameworks.
- Projects adressing potential for cost reduction of renewable energy technologies. Establish a common understanding of cost-drivers, and identify areas with high potential for cost reductions along the value chain.

6. Leapfrogging to the front: Energy transition in Low- and Middle-Income Countries

There is a strong need and opportunity to strengthen international cooperation in the energy sector, a major source of greenhouse gas emissions. Although many initiatives exist, cooperation—especially involving developing countries—does not yet reach its full potential. Greater coordination in knowledge transfer, technology and industrial development, and trade is needed, with broader and long-term participation to ensure global impact.

We aim to launch projects in collaboration with partners in low- and middle-income countries.

The projects can include researchers and/or students from universities and research institutes in low- and middle-income countries, with a long-term goal of establishing sustainable research and education collaboration between NTNU and institutions in the Global South.

Examples of desired projects include, but are not limited to:

- Renewable and sustainable energy production
- Smart energy systems
- Low-energy demand-side solutions

7. Artificial Intelligence in the energy transition

AI is expected to play a key role in the future energy system. The green transition implies that energy will be generated in a more decentralized fashion by many agents, which will introduce more uncertainty and reduce the controllability of the energy system. In parallel, our energy system is eager to achieve a more democratic engagement in the energy system, eventually going all the way to the end consumer, to facilitate the management of that uncertainty. Achieving that will dramatically raise the need for intelligence to manage the energy system. We aim to launch projects with close collaborations with energy actors and cross-disciplinary research engagement with long-term thinking about the problem. Examples of interesting projects can, e.g., be:

- AI to enable automation square, i.e. to develop plug-and-play solutions to engage the energy flexibility of end-users in balancing the energy system. That

includes the human-AI interactions involved in engaging flexibility at, e.g., the building and household level.

- AI to improve energy markets, i.e. developing AI solutions that can improve balancing markets in terms of cost, safety, and efficiency. That includes how participants approach these markets, but also how the market operators can use AI to engage the participants better. The project can be on improving current solutions but also investigating what changes in these markets could enable more harmonious balancing.

More information about the focus areas can be found at https://www.ntnu.edu/energy.

Scope of the Call

Projects should strengthen collaboration and increase the impact of NTNU's energy research by addressing one of the two categories below:

Category A – New Emerging Solutions / Basic Research

This category supports early-stage, exploratory research that lays the foundation for future breakthroughs enabling a just, inclusive and effective energy transition. Projects should focus on novel ideas, concepts, or methods that are not yet mature and require interdisciplinary collaboration to develop. Activities may include theoretical work, empirical studies, methodological innovation, or conceptual frameworks across engineering, natural sciences, social sciences, humanities and arts. The emphasis is on low Technology Readiness Levels (TRL 1–3) or equivalent early-phase research stages in non-technical fields.

Examples of eligible activities

- Early-stage concept development and fundamental scientific studies
- Exploratory experiments, laboratory investigations, and data collection
- Development of first prototypes, models, or design concepts, including ones that advance the uptake of non-technical solutions, or which seek to promote phase-out of non-sustainable technologies
- Conceptual developments and theoretical advancements in the social sciences and humanities
- Testing and validation of new scientific methods or analytical techniques
- Small-scale feasibility, sensitivity, or robustness analyses
- Interdisciplinary research retreats or idea-generation workshops
- Hosting visiting scholars to co-develop new concepts
- Joint manuscript development for high-impact journals

- Cross-disciplinary method development (computational, experimental, action research, analytical)
- Exploratory behavioural intervention studies and proof-of-concept studies for establishing relevant new behavioural mechanisms

Category B – New Initiatives with High Societal Impact

These projects aim to accelerate real-world change by strengthening connections between research, industry, policy, and society. Activities should demonstrate strong societal relevance and promote collaboration beyond traditional academic boundaries. Projects in this category may help launch new research agendas, coordinate cross-sector partnerships, or test new solutions with high potential for societal value creation.

Examples of eligible activities

- Stakeholder workshops with industry, policymakers, municipalities, activists, artists, NGOs or other relevant groups.
- Co-creation or co-design processes with end-users or citizen groups
- Hackathons, bootcamps, design sprints, innovation challenges
- Policy development activities (white papers, policy briefs, roadmaps)
- Market insights, techno-economic assessments, or regulatory analyses
- Pilot activities testing new concepts, services, processes, or governance approaches
- Cross-disciplinary capacity-building or innovation training
- Exhibitions, art installations, movies or other cultural products
- Small-scale demonstrators or feasibility experiments
- Development of interdisciplinary publications across non-traditional collaborations
- Tools or software supporting engagement, visualization, or decision-making
- Public outreach activities such as seminars, dialogue arenas, or engagement events
- Test of technological prototypes under real world conditions with involvement of behaviour science in the testing

Total Funding Available

A total of 1,500,000 NOK is available for this call.

Who Can Apply?

- Each proposal must involve **at least three NTNU employees** from **two or more faculties/VM** and **three or more departments**.
- All NTNU employees in permanent or temporary academic positions may apply.
- Participation of early-career researchers is strongly encouraged.
- Participation in NTNU Energy's interdisciplinary research teams is welcome but not required.
- The **Head of Department of the project leader must be informed**, as funding is allocated to departments.

What Can You Apply For?

Each project may apply for **50,000–200,000 NOK**.

Co-funding is **not required**.

The project period is **April 2026 – June 2027**, and all funds must be spent by 30 June 2027.

Funding may cover:

- Activities listed under Category A or Category B
- Dissemination and communication activities
- Materials, equipment, laboratory use, programming or design services
- Software, licenses, workshop costs, facility rental, or logistics
- Travel costs related to collaboration, data collection, or expert meetings

Salary compensation ("frikjøp") for scientific staff (including PhD candidates and postdoctoral fellows) may not exceed **75% of the requested budget**.

All projects must include **dissemination activities** and deliver a **short final report**.

Application Requirements

Applications must be submitted in English using the dedicated form:
https://nettskjema.no/a/seed2026-energy

Each proposal must include:

- A project description and work plan with clear, quantifiable deliverables
- A detailed budget specifying the use of funds

- A dissemination plan (including relevant arenas and target groups)
- A strategy for involving early-career researchers and other disciplines
- A short description of relevant ongoing research activities of the NTNU participants

Evaluation Criteria

Applications will be evaluated based on:

- Relevance to one or more NTNU Energy focus areas
- Contribution to new interdisciplinary collaboration
- Added value relative to other available funding sources
- Feasibility and clarity of the project plan
- Balanced distribution across focus areas and faculties
- Involvement of early-career researchers

Final prioritization will be made by the **NTNU Energy Management Team** together with the **Focus Area Leaders**.

Submission and Timeline

Submit your application here: https://nettskjema.no/a/seed2026-energy

- **Application deadline**: 28 February 2026
- **Decision expected**: 7 April 2026
- **Project start**: Immediately after decision

Questions may be directed to:

Elisa Junqueira de Andrade — elisa.j.de.andrade@ntnu.no