



The Duke Climate Research Innovation Seed Program (CRISP)

2023 Request for Proposals

Priority Area: Energy Transformation

Proposal Deadline: February 20, 2023

*Open to all Duke faculty and research staff, the first round of CRISP grants will include **Ideation Awards (up to \$20,000)** for projects addressing any of the four Duke Climate Commitment priority areas and **Research Awards (up to \$100,000)** for projects focusing on the priority area of **Energy Transformation**.*

The Duke Climate Commitment

The [Duke Climate Commitment](#) unites the university's education, research, operations, and public service missions to address the climate crisis. The commitment builds on Duke's longstanding leadership in climate, energy, and sustainability to educate a new generation of climate-fluent innovators and create equitable solutions for all.

The Climate Research Innovation Seed Program (CRISP)

As one of several new programs supporting the Duke Climate Commitment, CRISP seeds research collaborations among Duke scholars from the humanities, interpretative social sciences, basic sciences, engineering, law, business, and policy engagement. Focusing on [four research priority areas](#) identified by Duke faculty working groups in 2021, CRISP will support projects in **Energy Transformation, Environmental and Climate Justice, Climate and Community Resilience**, as well as **Climate and Data**. In the process, it also supersedes two legacy seed research programs, including the [Energy Research Seed Fund](#) (ERSF) from the Duke University Energy Initiative and the [Catalyst Program](#) from the Nicholas Institute for Environmental Policy Solutions. In addition, CRISP provides an avenue for additional funding for awards made under Duke's [University-Wide Collaboration Grants on Climate Change](#).

Request for Proposals: Energy Transformation

For this first round of funding, CRISP is prioritizing projects on **Energy Transformation** for its larger award category. Thanks to generous support from the Office of the Provost, the Nicholas School of the Environment, the Trinity College of Arts and Sciences, the Pratt School of Engineering, the Sanford School of Public Policy, the Duke University School of Law, and the Duke Divinity School, the Nicholas Institute for Energy, Environment & Sustainability (hereafter, the *Nicholas Institute*) is pleased to invite proposals from Duke faculty and research staff for two award categories:

- **Research Awards**, which will provide up to \$100,000 for **Energy Transformation** research projects. Supported research may be entirely new or a continuation of projects previously funded under one of three programs: the legacy ERSF, the legacy Catalyst Program, or the Duke University-Wide Collaboration Grants on Climate Change. Significant progress must be demonstrated from the previous award, either in research or in research planning and collaboration-building. Projects with a high level of scientific and/or social impact will be prioritized. *The performance period is 12 months.*
- **Ideation Awards**, which will provide up to \$20,000 for activities that accelerate the creation of research ideas and concepts. Projects can relate to **any of the four Duke Climate Commitment research priority areas**. Fundable activities include, but are not limited to, collaboration-building, workshops, public engagement, and development of new proposals to external funding sources. *The performance period is 12 months.*

The total funding amount of all categories will be \$600,000. Approximately \$100,000 will be used to fund five to eight Ideation Awards and approximately \$500,000 will be used to fund five to eight Research Awards.

Eligibility

- Any Duke faculty member or Duke research staff member from any discipline is eligible to apply.
- Each application must identify at least one member with [Principal Investigator \(PI\) status](#). In general, PI status is granted to tenured and tenure-track faculty, regular faculty on the research and “practice of” tracks, and select senior administrators, but not graduate students. For more information, consult the

[Office of Research Support](#) as well as the Faculty Handbook, especially [Section 5.2.1.2](#) and [Appendix P](#).

- Applications may include potential collaborators outside of Duke. Funding for external collaborators, however, may only be used to cover travel costs or similar logistical expenses.

Priority Areas

Four climate-related research priority areas were identified by Duke faculty working groups in 2021: **Energy Transformation, Environmental and Climate Justice, Climate and Community Resilience**, and **Climate and Data**. For detailed information on each area, refer to the groups' report [A Climate Initiative](#). (A Duke NetID is required to access the report.)

For **Ideation Awards**, proposals are welcome in **all four priority areas**.

For the first-round call for proposals, CRISP is soliciting proposals for **Research Awards** solely in **Energy Transformation**. In the future, we anticipate that CRISP research will target the other three priority areas.

In May 2022, nearly 30 faculty and professional staff from across Duke gathered for a focus group to identify key areas of mutual research interest and research strength in Energy Transformation. Key topics that resulted from that and subsequent discussions included:

- Alternative energy sources and materials science
- Grid integration and resilience
- Environmental and health implications of pollution from new and emerging energy sources
- Energy economics, law, regulation, and policy

Proposals that initiate or build on research in these areas are welcomed, as are other proposals that fit within the Energy Transformation topic. The full report from the Energy Transformation Focus Group is available [here](#).

Teams drawing on multiple schools, departments, and disciplines are highly encouraged.

Budgets

The budget for a CRISP research team can include supplies; salary support for research assistants, students, postdocs, and technicians; and other justifiable research expenses. Travel expenses are allowable only if essential to conducting the proposed research activities (including for external collaborators). Examples of nonallowable expenses include faculty or staff salary, tuition remission, indirect costs, and travel to scientific conferences.

All proposal budgets must be submitted using [the provided template](#) or they will not be considered.

Application Content

Ideation Awards

1. A **Cover Page** that includes the following information:
 - 1.1. Proposal title [specify Ideation proposal]
 - 1.2. Names, titles, departmental affiliations, mailing addresses, email addresses, and telephone numbers of all proposed investigators
 - 1.3. Designation of a Principal Investigator or Co-Principal Investigators
 - 1.4. Primary research area
 - 1.5. Secondary research area(s)
2. A [Budget Form](#)
3. A **Research Plan** of 500 words maximum that includes the following information:
 - 3.1. Description of the project
 - 3.2. Plan to increase collaborations, external engagement, and/or the likelihood of receiving external funding
 - 3.3. Expected timeline

Research Awards

1. A **Cover Page** that includes the following information:
 - 1.1. Proposal title [specify Research proposal]
 - 1.2. Names, titles, departmental affiliations, mailing addresses, email addresses, and telephone numbers of all proposed investigators
 - 1.3. Designation of a Principal Investigator or Co-Principal Investigators
 - 1.4. Primary research area

- 1.5. Secondary research area(s)
2. An **Abstract** of 250 words maximum
3. A **Research Plan** of 1250 words maximum that includes the following information:
 - 3.1. Statement of research objectives and their significance
 - 3.2. Work already completed related to the proposal and any relevant preliminary results
 - 3.2.1. The program that previously funded the research and how the project will build on results of research supported by the prior award [Research applications only]
 - 3.3. Description of the collaborative team and research setting(s)
 - 3.4. Proposed methods and plans for data analysis, if applicable
 - 3.5. Potential for sustained collaboration beyond the project term
 - 3.5.1. Highlighted work toward receiving external funding [Research applications only]
 - 3.6. Description of the potential impact of the research to accelerate sustainable and equitable solutions to the climate crisis
4. A **Budget Form**
5. **Appendix Materials**
 - 5.1. Research schedule and milestones (500 words maximum)
 - 5.2. Relevance to the objectives of the Duke Climate Initiative and Energy Transformation pillar priorities (500 words maximum)
 - 5.3. Curriculum vitae OR National Science Foundation/National Institutes of Health biosketch, including current grant support (limit four pages per investigator)

Submission Format and Deadline

Please combine all required application components into a single PDF document and submit that document via email—with “CRISP Submission” and type of proposal (Ideation or Research) in the subject line—by **5 p.m. Eastern Time on Monday, February 20, 2023**, to Dr. Tom Cinq-Mars (tom.cinq.mars@duke.edu), Nicholas Institute for Energy, Environment & Sustainability.

Review Criteria and Selection Process

Proposals will be reviewed by an ad hoc review committee consisting of faculty and research staff with a broad range of expertise in energy- and climate-related fields. In ranking applications, the committee will consider the (1) significance and potential impact of the research program, (2) degree of innovation, (3) scope of collaboration and

relevance for the goals of the proposed research, (4) feasibility of the research project, (5) likelihood of development into a sustained collaboration, (6) potential to accelerate sustainable and equitable solutions to the climate crisis, and (7) likelihood of obtaining external funding.

Overall, the review committee's goal is to seed projects at varying levels of development. As CRISP represents one rung on a large scaffold of climate-related funding opportunities at Duke, the reviewers will prioritize research projects that demonstrate potential to grow over time. They will examine all proposals on an equal footing regardless of project maturity.

In making final selections, the review committee will work closely with other stakeholders to apply a grand total of \$600,000 toward a diverse group of projects with a strong likelihood of success.

Reporting Requirements

- **Quarterly Reports.** For the first three quarters of the performance period, all CRISP awardees will submit a brief report to the Nicholas Institute, including a one-paragraph summary of the research project and a statement of funds expended to date.
- **Summary Reports.** Research Award grantees will provide the Nicholas Institute with a Summary Report within 30 days of the award end date. Ideation Award grantees will do the same 30 days prior to the award end date. Summary Reports must be approximately 1,000 words long and cover the following topics: (1) objectives, (2) progress toward project milestone(s), (3) innovations and/or new collaborations formed, (4) anticipated next steps/outcomes, and (5) funding expended. Recipients will be expected to report on the project's status and any related outputs (journal articles, conference presentations, external grants, etc.) at the end of the 12-month performance period.

Inquiries

Please direct questions to Dr. Tom Cinq-Mars (tom.cinq.mars@duke.edu), Nicholas Institute for Energy, Environment & Sustainability.

Timeline

Event	Date
Request for proposals released	December 2022
Request for proposals deadline for submission	February 20, 2023
Recipients notified	April 2023
Funds made available	May 2023
Funds to be expended by	June 30, 2024