



Energy Research Seed Fund Request for Proposals

The Energy Research Seed Fund will provide up to \$40,000 for new interdisciplinary, collaborative research teams with the larger goal of enabling Duke University investigators to obtain critical preliminary results that have a high likelihood of obtaining external funding.

Proposals are due Monday, January 16, 2017 (see submission details on the following page). Download a copy of this application information at energy.duke.edu/seed-fund

With co-funding from the Information Initiative at Duke (iiD), this year's Seed Fund places special emphasis on research topics related to energy data analytics, including those that integrate big data applications, machine learning techniques, or the broader intersection of energy and advanced computation. Additionally, special consideration will be given to proposals involving energy data analytics that integrate or lead to the development of a *Data+* project as a component of the research. *Data+* is a ten-week summer research experience that welcomes Duke undergraduate teams interested in exploring new data-driven approaches to interdisciplinary challenges. More information on *Data+* and its separate proposal process can be found at:

<http://bigdata.duke.edu/sites/bigdata.duke.edu/files/images/RFP2017DataPlus.pdf>.

The Energy Initiative is also interested funding a research project on an energy-related topic that integrates the core elements of Bass Connections. Specifically, the scope of research would be cross-disciplinary in nature and the project would be supported by a team composed of one or more graduate *and* undergraduate students. More information about Bass Connections can be found at: <https://bassconnections.duke.edu/content/about-bass-connections>

Co-funding is also available from the Trinity College of Arts & Sciences and the Pratt School of Engineering for energy research involving their respective faculty. Other potential areas of interest include energy materials, energy access and inequality, energy decision-making and behavior, energy efficiency, grid security, advanced alternative fuels and renewables, and the nexus of energy with other strategic resources (water, food). Research oriented toward solutions, rather than solely problem identification, is especially encouraged.

The maximum award per project is \$40,000, although awards may be smaller than this amount, based upon review of selected proposals. The project performance period is 12 months, and we anticipate funding approximately six to seven proposals.

Projects must engage at least two Duke faculty members representing different disciplines, schools, or departments, and preference will be given to new interdisciplinary collaborations of investigators across Duke. Proposed projects that include investigators from multiple schools within the University are especially encouraged. Proposals will be reviewed based on the quality of proposed research and potential to leverage seed grants to secure external funding.

Requirements

Eligible Applicants

The principal investigator must be a regular rank faculty member at Duke University.

Budgets

The budget for an Energy Research Seed Fund research team (working group) can include supplies, salary support for research assistants, graduate students, and technicians, and other justifiable research expenses. Faculty salary, tuition remission, and indirect costs are not allowable expenses. Travel expenses are allowable only if essential to conducting the proposed research activities and cannot include travel to scientific conferences. Applicants may apply for up to \$40,000 for up to one year. All proposal budgets must be submitted using the template provided at energy.duke.edu/seed-fund or they will not be considered.

Application Content

Cover Page. Must include the following information:

- Proposal title
- Name, title, departmental affiliation, address, e-mail address, and telephone number of all proposed investigators
- Designation of a Principal Investigator or Co-Principal Investigators

Abstract (250 words maximum)

Research plan (3 page maximum – single spaced, 12 point font, 1” margins all the way around)

Must include the following information:

- Statement of research objectives and their significance
- Work already completed related to the proposal, and any relevant preliminary results
- Description of the research team (working group) and research setting
- Proposed methods and plans for data analysis
- Potential for future grant support and specific plans to achieve external funding goals

Appendix materials (1 page maximum each– single spaced, 12 point font, 1” margins all the way around) Must include the following information:

- Research schedule and milestones
- Collaborative nature of the project
- Relevance to mission of the Duke University Energy Initiative (energy.duke.edu/about)
- An indication of whether Information Initiative (iiD) or Pratt co-funding is sought

Budget and justification (1 page maximum)

Curriculum vitae OR NSF/NIH biosketch including current grant support limited to 4 pages for each investigator.

Submission Format and Deadline

Please combine all required elements into a single pdf document and submit via email by 9:00 a.m. on Monday, January 16, 2017 to: Xiaochen Sun, Duke University Energy Initiative via email at: Xiaochen.sun@duke.edu.

Selection Process

Proposals will be reviewed by an ad hoc review committee consisting of faculty with a broad range of expertise in energy-related fields. The reviewing committee's goal is to identify the proposals that best meet the objectives of the Energy Initiative's Energy Research Seed Fund: interdisciplinary collaborative research projects that will make long-term, significant and original contributions to addressing the major energy challenges identified above. The review process will consider: (1) the significance and potential impact of the research program; (2) the degree of innovation; (3) the scope of the interdisciplinary collaboration and relevance for the goals of the proposed research; (4) feasibility of the research project and (5) likelihood of development into a project that would attract external support. Final selections will be made by the Energy Initiative Director in consultation with the faculty review committee and other stakeholders.

Awards will be announced in March 2017.

Inquiries

Please direct questions to: Xiaochen Sun, Research Analyst, Duke University Energy Initiative via email at: Xiaochen.sun@duke.edu.