The Arthur L. Irving Institute for Energy and Society^{*} Request for Proposal: Investing in Our Energy Futures Spring 2019

The Arthur L. Irving Institute for Energy and Society aspires to be the world's premier institute for transforming humankind's understanding of energy issues, and driving the creation of ideas, technologies, and policies that improve the availability and efficient use of energy for all people.

The Institute is designed to be a hub of vibrant collaboration that engages faculty, students, staff and external experts worldwide across all disciplines, and that prepares the next generation of leaders who will address the most pressing energy challenges.

Summary

The Arthur L. Irving Institute for Energy and Society seeks proposals for research and education on the energy challenges faced by society – and the societal challenges posed by energy. This broad call for proposals welcomes diverse energy and society projects from all disciplines. Within that breadth we encourage applicants to consider our 2019-2020 theme: "Investing in Our Energy Futures." The theme highlights the multitude of interlocking needs for investments in society's energy transitions (financial and technical, personnel and personal) *and* invites critical reflections on the social implications of our individual and collective energy choices. We hypothesize that investing in more sustainable, equitable and resilient energy futures requires financial and technical resources as well as critical co-investments in policy, culture, values and imagination. We are also keen to encourage meaningful collaborations across disciplines and encourage proposals that integrate across two or more disciplines, especially those outside the traditional areas touching on energy.

Abstracts of project funded in the Institute's fall 2018 RFP may be found at <u>https://irving.dartmouth.edu/faculty/funded-projects</u>.

Participants and Funding Levels

We welcome proposals from all Dartmouth faculty, of any rank, and from Dartmouth staff and post-docs. Principal investigators (PI) should indicate whether they are considering the inclusion of collaborators from outside Dartmouth in the pre-proposal (note that outside collaborators are not eligible to receive funding). Post-doc proposals must include a letter of support from a faculty mentor. Preference will be given to multidisciplinary, multi-departmental team proposals. The total award pool is approximately \$250,000. Anticipated Award Levels are:

- Faculty and staff awards: up to \$50,000
- Post-doc awards: up to \$25,000

^{*}More information about IIES is available at <u>https://irving.dartmouth.edu/</u>.

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Important Dates. *****Preproposals are due March 15, 2019 at 5 p.m.*****

- February 21, 2019, 11:30 am: Information session to discuss RFP opportunity
- March 15, 2019: Pre-proposals due, 5:00 pm. Submit your pre-proposal here.
- April 5, 2019: Selected pre-proposals invited to submit full proposal
- May 3, 2019: Full proposals due, 5:00 pm
- Week of June 10, 2019: Awards announced
- July-September, 2019: Initiate project funding

Context and Guidance

IIES is pleased to announce its second request for proposals (RFP) to support collaborative, innovative research, education, and engagement projects that advance the understanding of and action at the interfaces of energy and society. This announcement also begins what will be an annual cycle in the Spring to seek out and fund innovative, interdisciplinary efforts that will advance the Institute's mission and seed opportunities for additional funding, scholarship and pedagogy. To IIES, "society" includes all dimensions of the human enterprise: business, economic and technological; political, legal, and regulatory; cultural, artistic, and ethical; and behavioral, values, and imagination. We seek to foster and enable "engaged scholarship and pedagogy" to help society guide its use of energy sustainably and equitably.

The IIES Spring 2019 announcement encourages projects that initiate or advance novel or difficult-tofund lines of inquiry; that incorporate technological and social dimensions of energy systems into both classroom and experiential education; that serve as pilot projects for future federal, state or foundation funding; and that deploy new community partnerships. We encourage creative ideas, new applications, and novel combinations of perspectives and methods. We encourage teams to bring fresh eyes to enduring questions and to rigorously test emerging hypotheses. We encourage advances in artistic expression, in policy formulation and implementation, in technological development, and in business practices.

Our theme "Investing in Our Energy Futures" seeks to highlight the complex nature and needs of sociotechnical energy systems. To bring the benefits of the current energy (r)evolution to all sectors of society is truly a multidimensional, interdisciplinary and inter-institutional endeavor. For example, how can policy incent and support adoption of new opportunities? What cultural values are at play as we seek to expand sustainable, just access to energy services? What levers can be used to adjust cost/opportunity ratios for businesses and investors? How does society join a conversation about distributing risks across those best positioned to take them and those most vulnerable to their effects? There is a wealth of evidence that simple siloed approaches will yield results that are far short of the potential offered by an integrated approach that marries culture, technology, investment, finance, values and other critical factors. We encourage proposals that take risks, think big and challenge traditional ways of thinking and modes of inquiry.

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APPLICATION PROCESS

Step 1: Pre-proposal with budget outline. DUE MARCH 15, 2019 AT 5 P.M.

- Limited to 2 pages.
- Pre-proposals should concisely describe:
 - **Context and Motivation**: Why is the topic important? What are the current and future consequences?
 - Key Challenges and Barriers: Why has this opportunity not been addressed and/or captured in the past? What driving question are you seeking to answer/hypothesis are you proposing to test?
 - **Approach and Methodology**: How will this project tackles those challenges and barriers and test your hypothesis?
 - **Key Outcomes and Outputs**: What are the anticipated results and how will they help contribute to solutions and to the IIES mission?
 - **Potential to Seed Additional Funding**: How might the study undertaken lead to additional funding opportunities?
 - **Core Project Team Members**: Who are the team members, their current roles and backgrounds relevant to the opportunity being addressed?
 - Budget: Total requested budget and major budget categories. Has funding been requested from other sources? If so, briefly describe. Include fringe on salaries but not indirect costs. We encourage applicants to support salaries for graduate and postdoctoral researchers, research faculty and junior faculty rather than full established tenured faculty.

Note that this is an internal to Dartmouth RFP. Review/approval by OSP is not required.

Submit your pre-proposal here.

Successful applicants will receive an invitation to submit a full proposal no later than April 5, 2019. All pre-proposal teams will receive brief feedback to encourage improvements for the future or to provide guidance for revisions in the full proposal.

Step 2 (if invited): Full proposal with fully itemized budget. Due May 3, 2019 at 5 P.M.

Full proposals should expand on pre-proposals and respond to feedback from pre-proposal review to make a strong, succinct case for funding. In addition to expanding on the structure of the pre-proposal the full proposal should seek to highlight:

- How does the proposed approach overcome current barriers?
- What is the potential for scaling the insights to other regions or countries?
- What enabling factors or forces would amplify the impact of the project?
- How is the proposed project different from (or complementary to) other efforts/activities by the research team?
- How will the proposed project impact Dartmouth and/or outside engaged communities (intellectual, physical, artistic, civic)?

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Full proposal packages should consist of, in order:

- 1. A project title and team page, with names, faculty/student/community status, departmental affiliations, and email addresses for all core project participants.
- 2. A project abstract (150-200 words)
- 3. A text narrative of not more than 2000 words that contains:
 - **Context and Motivation**: Why is the topic important? What are the current and future consequences?
 - **Key Challenges and Barriers**: Why has this opportunity not been addressed and/or captured in the past? What hypothesis are you proposing to test?
 - **Approach and Methodology**: How will this project tackles those challenges and barriers and test your hypothesis?
 - **Key Outcomes and Outputs**: What are the anticipated results and how will they help contribute to solutions and to the IIES mission?
 - **Potential to Seed Additional Funding**: How might the study undertaken lead to additional funding opportunities?
- 4. List of references
- 5. A detailed budget and budget narrative (templates will be provided)
- 6. **Background on key personnel.** Include 2-page CVs for faculty, research staff, post-docs, and graduate students; 1-page resumes for undergraduate students.
 - Include a list of current and pending support for each faculty and research staff member.
 - Student and post-doc proposals must include a letter of support from a faculty advisor/mentor.

Selection Criteria

An expert review committee comprised of faculty from Dartmouth and peer institutions will review all full proposals. While proposals are not required to meet all criteria, selection criteria will include:

- Does the project address an important energy challenge?
- Does the project advance IIES research and/or education goals?
- Does the project help advance the "Investing in our Energy Futures" theme?
- Does the project have strong potential to make an important impact on how people see, understand, use, adapt energy systems, and/or on how energy systems themselves function and evolve?
- Is the project likely to "seed" a larger, future effort?
- Is the project novel, innovative?
- Is the project multidisciplinary?
- Does the proposal indicate how project impact will be documented/measured?
- Does the project include a mentoring dimension (i.e., senior/junior faculty, postdoc/undergraduate student)?

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FUND ADMINISTRATION

Funding period

Projects are expected to conclude on scope, on time and on budget. No-cost extensions may be requested in writing prior to the projected end date.

Use of funds

Examples of how funding may be used include: seed new research projects or add new components to existing projects; support travel and supplies; hire student research assistants; pay for student employees; develop new educational programs or classes; develop or purchase specific teaching aid(s) or material(s). We encourage applicants to support salaries for graduate and postdoctoral researchers, research faculty and junior faculty rather than full established tenured faculty. Funds cannot be used to pay salaries of non-Dartmouth employees.

Funds management

PI has sole responsibility for all expenditures. IIES will provide regular summary reports and transactionlevel details to PIs. Overages will be the sole responsibility of the PI and not IIES; any unused funds will revert to IIES unless a no-cost extension has been granted.

Project completion and reporting

All recipients of IIES funding are expected to provide semi-annual progress updates and a final report. Awardees will become IIES Affiliates, be profiled on the IIES website and in social media and are expected to meet with fellow IIES grantees to join the growing energy community, share findings, discuss new directions for collaborative inquiry and activity and present at an IIES event. Recipients are expected to share documentation of supplemental funding (grant proposals/award letters, fellowship awards, etc.).

Each project will be considered complete and its PI's will be eligible for possible future IIES funding when all of the following are submitted to IIES:

- A) Final project report and financial summary.
- B) Web/social-media ready material, including photos, to share findings and lessons learned via IIES grants SharePoint portal.
- C) Full documentation of any/all project deliverables, including published papers, public presentations/exhibits, class materials, etc.

FUTURE OPPORTUNITIES

IIES plans to release future RFPs annually on a Spring-based cycle, with the next RFP scheduled for Spring 2020.