TomKat Center Graduate Fellowships in Sustainable Energy

Introduction
This call for proposals is open to Stanford doctoral students performing research in sustainable energy or at the nexus of sustainable energy with food, water, transportation, human health, and the environment. The TomKat Center for Sustainable Energy (TKC) expects to award up to three fellowships through this call. These fellowships are meant to support advanced doctoral students (third year and beyond) to pursue innovative research projects beyond the proof-of-concept stage toward impactful applications. These fellowships will provide salary/stipend and tuition support for up to two years and $5000 in research and conference travel funding.

Program Goals
As part of its mandate to develop solutions for energy and environmental challenges, TKC works to help Stanford’s student researchers develop and deploy new technologies and systems and to further the understanding of their impacts on sustainability. The goals of this program are to train the next generation of leaders and to support the development of applied research that has the potential to address sustainable energy and sustainable resource utilization challenges.

Eligibility
Stanford doctoral students currently in their second year or beyond can apply. Proposed projects must investigate activities that are focused on an area relevant to sustainability, clearly outline a research plan that will help advance innovative research beyond proof-of-concept toward impactful real-world solutions, and be conducted under the guidance of one or more Stanford University faculty members.

A faculty member may only endorse one graduate fellowship application per cycle and may only have one funded TomKat Center Graduate Fellow in their lab at a time.

LETTER OF INTENT (LOI) and FACULTY ENDORSEMENT by March 1, 2020, at tomkat.stanford.edu/rfp

FULL PROPOSAL (by invitation only) due by May 1, 2020, at tomkat.stanford.edu/rfp

For questions associated with this fellowship, contact: Danica Sarlya (dsarlya@stanford.edu)
TomKat Center Graduate Fellowships in Sustainable Energy

The TomKat Center for Sustainable Energy (TKC) was formed to harness the knowledge and creativity of Stanford University’s research community to transform the world’s energy systems for a sustainable future. The intersection of energy with food, water, transportation, human health, and the environment is of particular interest. TKC was established through a generous gift to Stanford University from Tom Steyer and Kat Taylor.

As part of its mandate to develop sustainable energy systems for the future, TKC actively works to foster Stanford’s capability in relation to the development and broad deployment of sustainable energy technologies and systems. In this inaugural year of the TomKat Center Graduate Student Fellowship, we are pleased to issue a general call, and invite proposals for applied research projects from advanced doctoral students that are consistent with our broad mandate. The intent of this RFP is to fund projects that will advance research from proof-of-concept to a stage where there is a clearer path to an impactful application.

Proposals should include the sustainability challenge your project addresses, your solution, your proposed research activities, the potential impact of your solution, a research timeline with target metrics for the project (e.g. performance, scale, material composition, efficiency, etc.) plus justification of why meeting these targets will enable an impactful solution to a real-world problem and an outline of what the future trajectory of this work might be beyond the term of the fellowship.

Since early-stage research projects inevitably involve risk and uncertainty, the evaluation process will attempt to balance the risks and potential impacts of a successful project. This research funding is intended to encourage graduate students to delve more deeply into applied research with the potential to address sustainable energy and sustainable resource utilization challenges.

Through this general call, proposals from advanced doctoral students from all departments and programs are welcome. Because of the strong belief in the value of diversity (broadly defined) in the pursuit of its mission, TKC strongly encourages applications from women and under-represented groups, as well as from others whose backgrounds and experience would bring additional dimensions to their research and professional pursuits.

Project proposals with translational potential, from diverse domains and research areas, are preferred. Non-limiting examples include the scaling of a proof-of-concept experiment or device, a focused effort to improve the efficiency or other performance metric of a new technology or technology concept, a rigorous technoeconomic or lifecycle analysis of a prospective technology or sustainability program, or a study of individual or group behavior relating to energy production or consumption.

This competition will consider both new areas as well as previously supported research areas provided they meet the aforementioned criteria. Lists of TKC funded projects may be found at https://tomkat.stanford.edu/research-seed-grants and https://tomkat.stanford.edu/innovation-transfer-grants-list
The program is intended to support an application-focused research effort that goes beyond what is already supported by the funded projects in the applicant’s research group. In addition, in the interest of expanding Stanford’s sustainable energy research capabilities, new research areas will be viewed favorably. Research initiatives and groups for which the additional funding for the proposed research would be incremental to funding already available, or for which the research is too early-stage or whose impactful applications have not been identified, are less likely to be selected.

**Additional Program Guidelines**

- A faculty member may not have more than one funded TomKat graduate fellow at a time.
- A faculty member may not endorse or serve as a mentor/sponsor on more than one graduate fellowship application per cycle.
- Funding is restricted to support of investigative activities that are focused on an area relevant to sustainability, and that are conducted under the guidance of one or more Stanford University faculty members.
- With the goal of this funding being to advance research projects beyond the proof-of-concept stage toward impactful applications, TomKat Center Graduate Fellows will have the opportunity to apply for additional funding, up to $20,000, for items and activities in support this goal.
- If the graduate student currently has other fellowships or has applied to fellowships that may be awarded during the TomKat fellowship award period, full disclosure of the names, amounts, and dates of the other award(s) must be made in the application materials.
- Re-applications from previous applicants are accepted.

*Please do not propose projects that are duplicative of ongoing efforts sponsored by any external or other Stanford grant or fellowship programs without prior discussion with the center.*
Proposal Submission and Review Process

Letter of Intent to Submit and Faculty Endorsement
To apply for this fellowship, the graduate student will need to receive an endorsement from their faculty advisor (faculty advisors are limited to endorsing one student per application cycle) by March 1, 2020. Eligible graduate students can then submit a brief letter of intent (LOI). The LOI should be submitted by the graduate student and should outline the status of the research and results demonstrated to date, describe the proposed project, and identify potential applications in 500 words or less. That description will allow us to determine if the research falls within the goals of our solicitation. Applicants that meet the criteria of the call will be invited to submit a full proposal.

Faculty advisors, please submit the name of the student you are endorsing by March 1, 2020, at tomkat.stanford.edu/rfp

Graduate student applicant, please submit your LOI by March 1, 2020, at tomkat.stanford.edu/rfp

For questions associated with the submission process or fellowship administration, please contact: Danica Sarlya (dsarlya@stanford.edu)

Proposal Submission
Full proposals (format and submission instructions described below) are due by May 1, 2020.

Application Materials
Submitted by invited graduate student applicant at tomkat.stanford.edu/rfp

1) The proposal is subject to a 3-page limit with font size no smaller than 11 point. The page limit includes the text, figures, tables, and references.
   a) The proposal should outline:
      i) The sustainability challenge your project addresses
      ii) Your solution
      iii) The potential impact of your solution
      iv) The current status of the research (what has been demonstrated to date)
      v) Your research plan
      vi) A research timeline. Applicants are strongly encouraged to provide target metrics for the project (e.g. performance, scale, material composition, efficiency, etc.) and justify why meeting these targets will enable an impactful application.
      vii) What the future trajectory of this work might be beyond the term of the fellowship.

2) Unofficial Stanford transcript (downloaded from Axess)
3) 1-page Bio-sketch or CV (with relevant publications listed)
4) Budget for up to two years (can include graduate student salary/stipend of $12,250/quarter, tuition, fringe, and $5k of research support)

Submitted by the faculty advisor and second recommender at tomkat.stanford.edu/rfp
1) Letter of recommendation from faculty PI advisor.
2) A second letter of recommendation – optional, but encouraged.
Incomplete applications or applications from scholars who do not meet the fellowship guidelines will not be reviewed. Applicants are expected to ensure that they meet all eligibility criteria and follow the application procedures.

Proposal Review

The objective of the review process is to identify high-quality candidates and projects that are consistent with the goals of this solicitation. The proposals will be screened for relevance and then reviewed by Stanford experts with knowledge related to the areas of research but who are not involved in the proposed projects. The opinions of additional experts outside of Stanford may be sought, with the requirement that the reviewer maintains the confidentiality of the proposed research.

Reviews are performed confidentially and in the exercise of academic judgment and discretion by Stanford experts, and other experts if needed, in adherence with general principles of conflict of interest (financial and otherwise) in effect at Stanford.

Awards

It is anticipated that awards based on this solicitation will be announced by July 1, 2020, and students selected for these fellowships may begin receiving their funding on September 1, 2020.

Funding and Duration

This graduate fellowship will provide a stipend and tuition support. An annual stipend ($12,250 per quarter in 2020-21) and tuition for two 4-quarter academic years beginning in the autumn quarter. This fellowship will also provide $5000 in research or conference travel funding. This research funding will be provided through the purchase and payment of direct expenses, by Stanford. Any items purchased with this Stanford funding are considered the property of Stanford University.

The source of funding is gift funds. Awarded fellowships will be funded through a newly created and designated University Research PTA.

The graduate fellow must perform their research in connection with one or more Stanford faculty members. One Stanford faculty member will need to serve as the fellow’s primary faculty advisor. The primary faculty advisor must be an eligible Principal Investigator (PI) per Stanford policy.

All fellowship recipients are expected to continue to make satisfactory progress towards their degree, otherwise support may be suspended or canceled.

Leaves of Absence

All fellows must comply with University Leave of Absence Policy and procedures, as well as any department or program requirements. Please note that fellows on a leave of absence are not eligible to receive fellowship support during the quarters of leave.

Once a leave of absence is approved by a department, fellows must contact TKC to indicate the quarter the leave begins and the quarter in which the fellow will resume studies (including summer quarters without enrollment before or after the leave of absence).
If a fellow does not return after four consecutive quarters of leave (including summer quarters without enrollment before or after the leave of absence), the remainder of the fellowship will be cancelled.

If the leave of absence is due to serious illness or other medical condition, or active military service, and will result in an absence of more than four consecutive quarters without enrollment, contact TKC regarding fellowship arrangements.

Read the GAP Policy 5.3, regarding leaves of absence

Project Reporting
Graduate fellows will be required to prepare an interim progress report at the end of the first year. At the end of the final year, a final summary report will be required. If any technical review sessions, workshops, or other activities that report on the funded research are held, fellows may be asked to participate in them or to provide presentation materials. Second-year funding is contingent upon the submission of the interim progress report. Papers/abstracts and project summaries may be posted on the TKC website. Beyond the term of the award, updates on follow on research, publications, awards, and activities are requested by the TKC.

Contact info

For questions associated with the fellowship program or the submission process please contact: Danica Sarlya dsarlya@stanford.edu

APPLICATIONS (by invitation only) and letters of recommendations will be due by May 1, 2020.

Information and submission links can be found at tomkat.stanford.edu/rfp