STUDENT SUSTAINABILITY COMMITTEE

Funding Application – Step II

Funding Criteria

A. General Rules

1. Students, faculty, and staff are encouraged to submit requests for funding. Student-led projects require a faculty or staff sponsor in order to have funds awarded.
2. Funding can only go to university-affiliated projects from students, faculty, staff, and departments.
3. All SSC projects must make a substantial impact on students. This may be a direct impact or an impact through education and engagement. All SSC funding is 100% from student green fees, so the projects funded by the students must benefit them.
4. SSC encourages innovation and new technologies – creative projects are encouraged to apply.
5. Unless a type of expense is specifically listed below as having restrictions, SSC can generally fund it. The items referenced below should not be taken as comprehensive list.

B. Things SSC Can Fund, On A Case-By-Case Basis

1. SSC can fund feasibility studies and design work; however, it must work toward ultimately addressing a sustainability need on campus.
2. SSC can fund staff positions that are related to improving campus sustainability. Strong preference will be given to proposals receiving matching funding from departments and/or plans for maintaining continuity of the position after the end of the initial grant.
3. SSC can fund outreach events with a central theme of sustainability, provided their primary audience is the general campus community.
4. SSC discourages funding requests for food and prizes but will consider proposals on a case by case basis that prove significant reasoning.
5. SSC can fund repairs and improvements to existing building systems as long as it works toward the goal of improving campus sustainability; however, a preference is shown to projects utilizing new or innovative ideas.
6. SSC can provide departments with loans for projects with a distinct payback on a case by case base. Loans will require a separate memorandum of understanding between SSC and departmental leadership pledging to repay the award in full and detailing the payback plan.

C. Things SSC Will Not Fund:

1. SSC will not fund projects with a primary end goal of generating revenue for non-University entities.
2. SSC will not fund personal lodging, food, beverage, and other travel expenses.
3. SSC will not fund any travel expenses.
4. SSC will not fund tuition or other forms of personal financial assistance for students beyond standard student employee wages.

Your Step 2 funding application should include this application, the supplemental budget form, and any letters of support.

Please submit this completed application and any relevant supporting documentation to Sustainability-Committee@Illinois.edu. The Working Group Chairs will be in contact with you regarding any questions about the application. If you have any questions about the application process, please contact the Student Sustainability Committee at sustainability-committee@illinois.edu.

General & Contact Information

Project Name: Gable Home - Permanent Location
Total Amount Requested from SSC: : $60,000

Project Topic Areas: ☐ Land & Water ☒ Education ☒ Energy
☐ Transportation ☐ Food & Waste

Applicant Name: Timothy Mies
Campus Affiliation (Unit/Department or RSO/Organization): Crop Science - ACES
Email Address: tmies@illinois.edu

Check one:
☐ This project is solely my own ***OR***
☒ This project is proposed on behalf of (name of student org., campus dept., etc.): The University Solar Decathlon RSO, Crop Sciences/Energy Farm

Project Team Members

Name	Department	Email
Timothy Mies	Crop Sciences - ACES	tmies@illinois.edu
Michael Cooper	Architecture(student)	michaelcooper@gmail.com
Jonah Messinger	ABE- Engineering (student)	Jonahfm2@illinois.edu
Mark S Taylor	Architecture	mstaylor@illinois.edu

Student-Led Projects (Mandatory):
Name of Faculty or Staff Project Advisor:
Advisor's Email Address:

Financial Contact *(Must be a full-time University of Illinois staff member)*
Contact Name: Anna Tammen
Unit/Department: Crop Sciences - ACES
Email Address: tmies@illinois.edu

Project Information

Please review the proposal materials and online content carefully. It is highly recommended you visit a working group meeting sometime during the proposal submission process.

Please provide a brief background of the project, its goals, and the desired outcomes:
You may copy and paste your Step 1 application answer if nothing has changed.

The Gable Home was designed and built by students to compete in the 2009 US Dept. of Energy's Solar Decathlon Competition. Following the competition the house returned to campus and was located at the I Hotel until Spring 2017 at which point it had to be moved due to the expansion of the research park. Since then a team of students and faculty have been working on finding a new permanent location for the Gable Home and gathering information to determine what costs would be involved in putting the building on a permanent foundation with all required connections to water, sanitary and the electrical grid. A suitable location was found at the Energy Farm on Race St. in Urbana and the project is now ready to move forward this semester.

The house is a valuable educational tool for students from many units on campus to visit and experience occupying a space that is powered solely by the sun and uses passive and active systems to create desirable thermal comfort throughout the year. Monitoring systems were originally installed in the house to collect and present real time data on the performance of the solar array along with key parameters of the house environmental conditions. This data would once again be available for student classes and research projects.

The project has already served as a great resource in the past. This funding request is to make the Gable Home accessible to students again and make it available for an increasing number of visitors to the Energy Farm in conjunction with co-located high profile sponsored projects including the Center for Advance Bioenergy and Bioproducts Innovation (CABBI), Gates Foundation, and Agroforestry for Food. This project will further expand the Energy Farm breadth of ongoing renewable energy production research that includes geothermal and biomass heat, both of which benefited from generous past SSC funding.

The Gable Home is the first installation in the concept of a Living and Learning Laboratory to the Energy Farm. Future planning is already underway to develop the next structure as a multi-purpose destination demonstration and outreach center building upon the success of the Gable Home. This area under development would also be a potential permanent destination for future Solar Decathlon projects.

Where will the project be located? Are special permissions required for this project site?
If special permission is required for this location, please explain and submit any relevant letters of support with the application.

UIUC Energy Farm Research Center.
4110 South Race St, Urbana

No special permissions are required to use this location. Tim Mies manages the research and operations of the proposed location and has been actively involved with the site planning. In addition, Dr Taylor and Mr Mies met with the college of ACES Associate Dean of Research Dr. German Bollero, Crop Sciences Department Head Dr. Adam Davis, and iSEE Director Dr. Evan DeLucia to secure support for the Gable Home placement along with future planned developments to make the home part of a Living Learning Laboratory on the South Farms.

Other than the project team, who will have a stake in the project? Please list other individuals, groups, or departments affiliated directly or indirectly by the project. This includes any entity providing funding (immediate, future, ongoing, matching, in-kind, etc.) and any entities that benefit from this project.
Please attach letters of commitment or support at the end of the application.

College of Agricultural, Consumer, and Environmental Sciences - $30,000
Institute for Sustainability, Energy, and Environment - $30,000
Solar Decathlon RSO - In-kind support through assistance in getting MEP systems back online once installed
Department of Crop Sciences : Financial and in-kind support through site and project management in addition to long term support of this installation.

How will this project involve and/or benefit students?
This includes both direct and indirect impact.

Students from the Solar Decathlon RSO will get the opportunity to see the foundation, septic and electrical systems installed on site - this will be a great educational opportunity for those interested in energy efficient architecture to observe the work that is typically required to takes place at the beginning of the construction process. As the house has been offline for several years, students would be able to participate in bringing monitoring and data collection back online to allow for future data availability.

How will you bring awareness and publicize the project on campus? In addition to SSC, where will information about this project be reported?

Publicity will be distributed through the iSEE communications office in the form of electronic communications to the campus. Field days, class tours, and frequent visitors will also benefit from onsite education and outreach utilizing the Gable Home. Finally, a web portal with data from the solar array and hvac systems will be available as a public resource.

Financial Information

In addition to the below questions, please submit the supplemental budget spreadsheet available on the Student Sustainability Committee website. Submission of both documents by the submission deadline is required for consideration of your project.

Have you applied for funding from SSC before? If so, for what project?

Yes, Field to Fuel - Biomass Heating on Campus - Project was complete and operational in June 2017 and is in its second successful heating season.

If this project is implemented, will you require any ongoing funding required? What is the strategy for supporting the project in order to cover replacement, operation, or renewal costs?

Please note that SSC provides funding on a case by case basis annually and should not be considered as an ongoing source of funding.

No additional funding to support the ongoing operations and maintenance expenses of the Gable Home will be required of SSC. Departmental management will be arranging a revenue account for income from the use of the house to offset ongoing expenses.

Please include any other obtained sources of funding. Have you applied for funding elsewhere?

Please attach any relevant letters of support as needed in a separate document.

College of Agricultural, Consumer, and Environmental Sciences -	$30,000
Institute for Sustainability, Energy, and Environment -	$30,000
Chancellors Fund	$40,975
Department of Crop Sciences	$ 7,320

Environmental, Economic, and Awareness Impacts

How will the project improve environmental sustainability at the Urbana-Champaign campus? If applicable, how does this project fit within any of the Illinois Climate Action Plan (iCAP) goals?

The Gable Home was built as a demonstration of net zero energy construction. With the addition of this house to the campus electrical grid, the 7kW solar electrical system will once again be producing electricity that will cover its own needs with additional power exported to the campus electrical grid.

This house will expand the ever growing demonstrations of practical sustainable and renewable energy production. Other projects, many of which have benefited from SSC funding in the past, include now geothermal, biomass, and sustainable food production. This ever expanding wealth of research and demonstration are becoming a regular and sought out destination for academic and community tour groups from campus and around the world.

How will you monitor and evaluate the project's progress and environmental outcomes? What short-term and long-term environmental impacts do you expect?
Some examples include carbon emissions, water conservation, green behavior, and reduced landfill waste.

Once the house is back on a foundation and operational, Energy Farm staff will work with the Solar Decathlon RSO to bring instrumentation back on line that was originally installed for monitoring of the houses mechanical and electrical systems. This data will be available for student use in renewable energy classes, public outreach through web portals, and to Facilities and Services to account for the renewable energy campus goal. Utilizing data from the solar energy production and net energy meters, resulting carbon emission decreases can be determined and reported from this project.

What are your specific outreach goals? How will this project inspire change at UIUC?

Outreach will be accomplished through several avenues both in person and electronically. The Energy Farm is a regular destination for student classes and groups throughout the year. Some of these groups are specific to renewable energy classes, but no matter the area of focus, the renewable energy projects are a regular stop for groups to learn about the activities on the Energy Farm. Tour groups from campus hosted conferences and symposia also frequently stop at the Energy Farm as part of their campus activates. Finally, outreach through digital media and digital dashboard presentations will be a continued activity that frequently lead to on follow up requests for information and tour opportunities.

Visitors will gain exposure to best building practices for integrating renewable energy production and sustainable best practices construction. The long term living-learning laboratory theme will allow active participation and quantifiable impact from students involved in the research

If applicable, how does this project impact environmental injustice or social injustice?