

University of Illinois at Urbana-Champaign
Center for a Sustainable Environment / Facilities & Services
FY 14 SUSTAINABILITY FELLOWS PROGRAM
REQUEST FOR PROPOSALS
Submission Deadline: Friday, March 22, 2013 at 5:00PM

The Center for a Sustainable Environment (CSE) is seeking proposals from faculty to support research activities related to specific Facilities & Services (F&S) sustainability projects. These projects are directly related to the Illinois Climate Action Plan (iCAP), which describes the various initiatives planned to achieve the campus sustainability goals. F&S is offering the selected projects as living learning laboratory opportunities for campus faculty. Faculty selected for this program will earn the name "Sustainability Fellow" for one academic year, one month's summer salary, and in some cases funding for a graduate research assistant during the same academic year.

Sustainability Fellows will be selected through a competitive process, based upon proposals submitted by interested faculty. Selection decisions will be announced during Earth Week, on April 22, 2013.

OVERVIEW

The CSE provides organizational leadership for the numerous sustainability initiatives underway on campus. For example, the CSE works with campus units, student groups, and community partners to develop and promote engagement activities and enhance communication about sustainability. Since developing the 2010 iCAP, the University of Illinois at Urbana-Champaign has developed hundreds of projects to tackle the broad range of sustainability issues that face our campus and our world involving its community, outside experts, faculty, students, and staff.

The F&S strategic plan states "We will stimulate the development, testing, implementation, and demonstration of environmentally and economically sustainable practices and technologies." F&S supports the university's education, research, and outreach missions by improving the physical conditions of the buildings, infrastructure, and grounds; reducing energy emissions through education, smart grid technology, and the use of renewable energy sources; and reducing waste through efficient use of resources. This goal ties into the campus sustainability goals through various projects and initiatives. Five iCAP projects have been selected for the Sustainability Fellows program, and a full list is available online at <http://icap.sustainability.illinois.edu/>.

The Sustainability Fellows program is designed to engage faculty throughout campus in the sustainability efforts occurring with the existing and future infrastructure on campus. The goal of this Request for Proposals is to help create a living learning community where faculty and students can become involved in an open-innovation ecosystem related to campus buildings, land, and energy. There are two levels of participation.

- 1) Sustainability Fellow Advisors – paid one month's summary salary
- 2) Sustainability Fellow Researchers – paid one month's summary salary and the salary for one 50% graduate research assistant

Significant Dates

- Request for Proposals opens February 3, 2013
- Proposals Due online by March 22, 2013, 5:00pm CST
- Confirmation of Proposal Receipt will be sent to proposers by March 30, 2013
- FY14 Sustainability Fellows will be announced on April 22, 2013
- Funding will be for Fiscal Year 2014

Selection Process

All proposals will be reviewed by a committee made up of peer reviewers and technical experts.

The application review committee will base its evaluation of proposals on

- Quality and significance of research proposal as related to the iCAP project;
- Expected positive impact on sustainability at the University of Illinois;
- Potential short-term and long-term impact of the research; and
- Qualifications of the key personnel.

Up to five Sustainability Fellows will be funded this round. All FY14 Sustainability Fellows will be invited to a recognition ceremony in early fall 2013, and a celebration of the completed efforts in spring 2014.

Contact for Sustainability Fellows Proposals

Center for a Sustainable Environment
615 E. Peabody, Room 163, MC-650
Champaign, IL 61820
Email: sustainability@illinois.edu
Phone: 217.333.4178

SUSTAINABILITY FELLOW ADVISORS

The Sustainability Fellow Advisors will participate in F&S iCAP projects throughout the year. This role involves participating in discussions about project scope, reviewing consultant proposals, evaluating design submittals, and generally working with F&S staff to guide the iCAP project throughout the year.

Successful candidates for the Advisor role will have a demonstrated knowledge of the subject matter related to the iCAP project. Advisors will be called upon to assist with key decision making about the project implementation, and they will have the opportunity to suggest improvements or alterations to the iCAP projects during the scoping and progress of the project implementation.

Application Process

- 1) Faculty interested in serving as a Sustainability Fellow Advisor for one of the listed iCAP projects should meet with the appropriate F&S contact person to discuss the project before submitting a proposal. Obtain the F&S contact's signature on the Proposal Cover Page (blank attached).
- 2) Complete and sign the Proposal Cover Page. This must include the Department Head's name and signature, as confirmation that the department is willing to provide administrative support of the funding.
- 3) Identify two peers and their contact information to serve as references for the candidate.
- 4) Prepare a 1-2 page narrative explaining how the candidate is qualified to provide input for this specific iCAP project. Share examples of past and ongoing related research projects.
- 5) Provide a resume for the candidate. An entire list of publications is not required; please limit the resume to no more than five pages.
- 6) Collect the Proposal Cover Page, narrative, and resume in a single pdf, and upload them through the Sustainability Fellow Advisors application form.

Expectations

In addition to the participation described above, Sustainability Fellow Advisors will be expected to complete a summary of their contributions to the iCAP project, for display on the associated project website.

SUSTAINABILITY FELLOW RESEARCHERS

The Sustainability Fellow Researchers will propose a research project that utilizes an F&S iCAP project for data, support, and/or testing related to sustainability. In addition to the task of principal investigator for the proposed research, this role includes the supervision of a graduate student directly involved in the research, as well as all the requirements of the Advisor role. That is, participating in discussions about project scope, reviewing consultant proposals, evaluating design submittals, and generally working with F&S staff to guide the iCAP project throughout the year.

Successful candidates for the Researcher role will have a demonstrated knowledge of the subject matter related to the proposed research. Research proposals can build on existing efforts or they can be entirely new. Sustainability Fellow Researchers will have the ability to influence the infrastructure of campus facilities, so that it can be utilized as a living learning laboratory for their research.

Application Process

- 1) Faculty interested in being a Sustainability Fellow Researcher with one of the listed iCAP projects should meet with the appropriate F&S contact person to discuss the project before submitting a proposal. Obtain the F&S contact's signature on the Proposal Cover Page (blank attached).
- 2) Complete and sign the Proposal Cover Page. This must include the candidate's Department Head's name and signature, as confirmation that the department is willing to provide administrative support of the funding.
- 3) Identify two peers and their contact information to serve as peer reviewers for the proposed research.
- 4) Prepare a 2-4 page narrative with the following information.
 - a. Explanation of how the candidate is qualified to provide input for this specific iCAP project; share examples of past and ongoing related research projects;
 - b. Explanation of how the 50% graduate research assistant will provide support;
 - c. Description of how the research ties to the campus sustainability goals;
 - d. Description of how the research and how it will be conducted, including any anticipated changes to the campus physical infrastructure;
 - e. Description of expected outcomes, including how the research may relate to additional iCAP initiatives; and
 - f. Brief description of how the results will be evaluated.
- 5) Provide a resume for the candidate faculty member and any other key staff that will be involved. An entire list of publications is not required; please limit the resume to no more than five pages per person.
- 6) Collect the Proposal Cover Page, narrative, and resume in a single pdf and upload them through the Sustainability Fellow Researchers application form.

Expectations

In addition to the participation and research described above, Sustainability Fellow Researchers will be expected to complete a report of the research completed and the results of the research, and a corresponding display poster. This report should be no more than 10 pages, and it should be aimed at the general public for spreading awareness of the campus efforts in sustainability.

FY14 iCAP PROJECTS

Anaerobic Digester and Methane Capture System at Beef and Sheep Facility

This project involves changing food, animal, and yard waste to a clean compost material and methane gas which will be collected to generate power for campus. A feasibility study is going to begin in early 2013 to clarify the inputs, outputs, and estimated costs. This project has research potential for ACES, Engineering, and anyone studying waste reduction options. *F&S Contact Person: Jack Dempsey, jgdempse@illinois.edu, 217-333-2500*

Energy Dashboard education project for behavior change

This project involves providing real-time energy use information for specific campus buildings through the IlliniEnergy.illinois.edu website. The primary goal is behavior change to share detailed information about energy use on campus to the people who use that energy and have direct impacts on the energy demand through their individual actions. The website is currently up and running, and efforts continue to connect more and more buildings. This project has research potential for GSLIS, Communications, LAS, Computer Sciences, and more. *F&S Contact Person: Mike Marquissee, mlmarqui@illinois.edu, 217-333-4909*

Rooftop Wind Turbines at Physical Plant Service Building

This project would install rooftop helix-shaped wind turbines on PPSB across from the athletic stadium. As an added interest point, each wind turbine could reflect the team colors of all the Big Ten sports teams. The energy impact would be minimal, but it is anticipated that these turbines could potentially be prototypes for optional similar installations elsewhere on campus, and it would provide an opportunity for faculty and students to work with and study small scale wind energy production on the Illinois campus. This project has research potential for Engineering, Recreation Sport and Tourism, and more. *F&S Contact Person: Morgan Johnston, mbjohnst@illinois.edu, 217-333-2668*

Green Stormwater Infrastructure and the relationship to Stormwater Utility Fees

This project would review the overall campus stormwater infrastructure and make recommendations toward developing a campus stormwater master plan, specifically in relationship to the upcoming stormwater utility fees in both Urbana and Champaign. This project has research potential for Landscape Architecture, Urban Planning, Political Science, and more. *F&S Contact Person: Eliana Brown, brown12@illinois.edu, 217-265-0760*

Energy Digital Control Center implementation and its relationship to a campus Smart Grid

This project is developing a Digital Control Center (DDC) location in the Physical Plant Service Building, with remote access to building energy controls, district control centers, and the information needed to optimize the campus energy load. This information includes details about upcoming weather patterns, historical trends and future predictions for energy supply costs, data on pre-purchased or real-time energy costs, and details on energy demand by building or interior HVAC zone. By considering the many options for balancing the campus energy supply and demand from moment to moment, the DDC operators will be able to minimize costs and maximize efficiencies. This project has research potential for Engineering, Finance, Computer Science, and more. *F&S Contact Person: Kent Reifsteck, kreifste@illinois.edu, 217-244-2865*

**FY14 SUSTAINABILITY FELLOW ADVISOR
PROPOSAL COVER PAGE**

Select the related iCAP Project:

- Anaerobic Digester and Methane Capture System at Beef and Sheep Facility
- Energy Dashboard education project for behavior change
- Rooftop Wind Turbines at Physical Plant Service Building
- Green Stormwater Infrastructure and the relationship to Stormwater Utility Fees
- Energy Digital Control Center implementation and relationship to Smart Grid

_____ Date _____
F&S Project Representative Signature

Name, Title, and Affiliation of Candidate:

Email: _____ Phone: _____

Annual Salary: \$ _____ (for calculation of fellowship funding)

_____ Date _____
Principal Investigator Signature

Department or Unit Head Printed Name (required)

_____ Date _____
Department or Unit Head Signature (required)

**FY14 SUSTAINABILITY FELLOW RESEARCHER
PROPOSAL COVER PAGE**

Select the related iCAP Project:

- Anaerobic Digester and Methane Capture System at Beef and Sheep Facility
- Energy Dashboard education project for behavior change
- Rooftop Wind Turbines at Physical Plant Service Building
- Green Stormwater Infrastructure and the relationship to Stormwater Utility Fees
- Energy Digital Control Center implementation and relationship to Smart Grid

_____ Date _____
F&S Project Representative Signature

Name, Title, and Affiliation of Candidate:

Email: _____ Phone: _____

Annual Salary: \$ _____ (for calculation of fellowship funding)

_____ Date _____
Principal Investigator Signature

Proposed Research Title: _____

Key Personnel Names (please list, including graduate student): _____

Annual Cost of 50% Graduate Research Assistant: \$ _____

Department or Unit Head Printed Name (required)

_____ Date _____
Department or Unit Head Signature (required)