

Has preliminary review occurred? Yes No
(Preliminary review must occur prior to stated internal deadlines)
If yes, indicate OSPRA Coordinator name: _____
UI eRA Number assigned _____ Netfiles file name _____

Published or Mandated Sponsor Deadline

postmarked by February 16, 2009
receipt by February 16, 2009
electronic submission due February 16, 2009
(Verification of published deadline should be made available with guidelines)

UNIVERSITY OF ILLINOIS
at Urbana-Champaign
PROPOSAL TRANSMITTAL FORM
(Submit one original and two copies of this form completed on both sides with proposal package. **Do not staple** to proposal documents. The original signature(s) must be kept on file in OSPRA for audit purposes.)

IDENTIFICATIONS:

BANNER ORGANIZATION CODE # for Responsible Department 518002

Principal Investigator Name:

| Last | First and Initial | UIN | Initiating Dept/Division Name | E-mail Address |
|-------------------------------|-------------------|------------------|----------------------------------|-----------------------------|
| <u>Wisegarver</u> | <u>Stacy D.</u> | <u>657748091</u> | <u>Facilities & Services</u> | <u>swisgar@illinois.edu</u> |
| Co-principal Investigator(s): | | | | |
| <u>Abram</u> | <u>Tom J.</u> | <u>656192232</u> | <u>Facilities & Services</u> | <u>tabram@illinois.edu</u> |

Proposal Title: Lighting Upgrade Grant Program - 2009

Sponsor/Agency Name: Illinois Clean Energy Community Foundation
(If a subaward, specify the name of originating sponsor in parentheses after the sponsor's name)

Sponsor/Agency Mailing Address: 2 N. LaSalle St.
(Include street address if express mail is to be used) Suite 950
Chicago, IL 60602

Agency RFP#, BAA#, RFQ#, Program Announcement # http://www.illinoiscleanenergy.org/lighting_body.html
[Complete Guidelines **MUST** be attached or URL provided.]

Begin date: July 2009 End date: August 2011 SBIR STTR

Supports a program of: (check one) Basic Research² Instruction² Public Service
 Applied Research² Product Development² Technical Testing² x Other (specify) Energy

Proposal Type: (check one) x New Renewal³ Continuation³ Revised Proposal or Budget Supplement

Send Agreement with Proposal:⁶ Yes No **If Yes:** Draft Sponsor Specific

For renewal or continuation, please provide previous UI eRA # _____, sponsor grant/contract # _____, and current University Grant Code _____

PRINCIPAL INVESTIGATOR RESPONSIBILITY: It is understood that if an award results from this application, the principal investigator will perform the administrative duties normally associated with the project. The principal investigator assures that he/she makes this submission with the understanding that any resulting award will contain no provision restricting the University's right to publish research results, and that if any question of such restriction arises in subsequent negotiation he/she will assist in arranging the further review that will be required.

NOTE TO PRINCIPAL/CO-PRINCIPAL INVESTIGATOR(S): By signing this transmittal form, you are certifying that 1) the information submitted herein is true, complete and accurate to the best of your knowledge, 2) any false, fictitious, or fraudulent statements or claims may subject you to criminal, civil or administrative penalties, 3) you agree to accept responsibility for the scientific conduct of the project and to provide progress reports, and 4) you have submitted a listing of your known Significant Financial Interests (and those of your spouse and dependent children) that might reasonably appear to be affected by the research being proposed.

(Attach additional pages for multiple signatures (i.e., PI/Co-PI and affected Colleges and Departments), if necessary)

Approved By:
2/10/09 [Signature] 2/10/09 [Signature]
Date Principal/Co-principal Investigator(s) or Initiator(s) Date Executive Officer(s) of Department(s)
of Proposal (Signature may not be delegated)
2/10/09 [Signature] _____
Date Dean or Director Date Other Signatures if Required⁴

Office of Sponsored Programs and Research Administration Research Board Authorization
For information on this proposal call Name: Curt Taylor Phone: 333-8380 E-mail: ctaylor2@illinois.edu

SPECIAL MAILING INSTRUCTIONS: (Attach special instructions if needed) **OVER**

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Facilities & Services

Physical Plant Service Building
1501 South Oak Street
Champaign, IL 61820



February 10, 2009

James Mann
Executive Director
Illinois Clean Energy Community Foundation
2 North LaSalle Street, Suite 950
Chicago, Illinois 60602

Dear Director Mann:

Please consider this request for funding support from the Illinois Clean Energy Community Foundation's Lighting Upgrade Grant Program. This submittal is asking for the continued support of the Foundation in a campus-wide lighting upgrade to take place in twenty-one (21) laboratories, libraries, and classroom buildings across the campus. This request is in addition to the scope of our prior grant award from 2008. In compliance with the grant request, included with this submission is the following information:

- A project description and update of progress of the previous lighting grant work;
- The number of each type of lighting fixture to be upgraded, showing the rated wattage of each current fixture type and the wattage of each type after the upgrade has been completed;
- An explanation of how the University would pay for the portion of the lighting upgrade project costs not covered by the requested grant, if any;
- An explanation of the need for the lighting upgrade;
- The estimated timeline for completing the lighting upgrade;
- A description of planned educational efforts to inform facility users and/or the general public in our community about the lighting upgrade and the benefits of energy efficiency;
- A description of how the cost savings will be used that result from the lighting upgrade
- The required Grant application forms.

We would like to thank the Foundation for its prior support, and for offering us this additional opportunity to reduce energy consumption across the University of Illinois at Urbana-Champaign. If any additional information is needed regarding our application, please do hesitate to contact me directly.

Project Description

The University of Illinois at Urbana-Champaign (UIUC) is currently executing many projects on campus devoted to reducing our overall energy consumption. This project focuses on the replacement of T12 lamps and magnetic ballasts within lighting fixtures located in 21 of our laboratories, libraries, and classroom buildings on campus in favor of newer more efficient ones. The new lamps will be Super T8 type with electronic ballasts. This new combination of lamps and ballasts will use 33% less wattage than the present arrangement, for a campus wide energy reduction of 1,338,768 Watts.

Several of the buildings were included in the initial scope for UIUC's previous lighting grant from the Illinois Clean Energy Community Foundation. During the implementation of that project, UIUC determined a greater number of fixtures in the buildings than initially estimated. Thus, the previous lighting grant will not be able to cover the entirety of the initial building list. This grant request includes those buildings, as well as additional buildings that were determined to be suitable for lighting retrofits. A complete count of fixtures that were actually installed will be included in the documentation after completion.

The existing grant work is currently being conducted with several buildings already completed. The first request for payment on the initial grant will be submitted by the end of April 2009 for an estimated amount of \$361,891, representing a reduction of 603,152 watts. The following payment request is anticipated to be in September 2009 for an estimated amount of \$527,450, representing a reduction of 879,083 watts. The final payment request is anticipated to be in December 2009 for an estimated amount of \$292,927, representing a reduction of 488,212 watts.

Details of the current systems in use and the proposed new systems can be seen in the table affixed to this document.

Project Financial Plan

With the support of the Illinois Clean Energy Community Foundation, UIUC will be able to secure internal funding necessary for the completion of this project from budgets allocated for campus rehabilitation projects.

Explanation of Project Need

The existing lighting systems noted in this document, while operational, are inefficient in comparison to newer technologies. These systems also are located in buildings which see extended use throughout the year. By improving the efficiency of these systems, the facilities will reduce the overall energy consumption of the campus and demonstrate how energy efficient upgrades can deliver benefits to the University. The support from the Foundation will allow Facilities & Services to move forward in the execution of this project.

Estimated Project Timeline

Pending the Foundation support, the lighting projects could start construction as early as July or August 2009, with completion of the project coming two years from the proposed start date.



Illinois Clean Energy
community foundation

Lighting Upgrade Grant Program

2 North LaSalle Street • Suite 1140 • Chicago IL 60602
312.372.5191 • fax 312.372.5190 • www.IllinoisCleanEnergy.org

2009 APPLICATION FORM

Please print clearly, type or download from www.IllinoisCleanEnergy.org to complete and print form electronically.

Legal name of organization applying for grant: **Board of Trustees of University of Illinois**
(If a non-profit, this should match your IRS tax status determination letter.)

Check one: Government Agency 501(c)3 Nonprofit Organization Federal Tax Exempt ID No.:

Check one program area: Child Care Center College & University Historic County Courthouse

Primary contact at organization regarding this grant request:

Name: **John G. Dempsey** Title: **Executive Director, F&S**

Address: **1501 S. Oak Street**

City: **Champaign** Zip Code: **61820** County: **Champaign**

Phone: **217-333-2500** Fax: **217-333-4294** E-mail: **jdempse@illinois.edu**

Total estimated electricity demand reduction from lighting upgrade project: **1,338.77**

The grant amount will be based on the permanent demand reduction resulting from the upgrade (taken to two decimal places) based on ANSI rated ballast system wattages. **It is very important that this figure be expressed in kilowatts (kW) or Watts, not kilowatt hours (kWh).** This estimate should match the total demand reduction shown on attachment described below.

Amount of grant being requested from ICECF to complete lighting upgrade **803,261**

Please see specific lighting program brochures for incentive levels and associated maximum caps.

Attachments that must accompany this application form for it to be complete:

- ① A list of the exact number of each type of lighting fixture to be upgraded, showing the rated wattage of each fixture type currently and the wattage of each fixture type after the upgrade has been completed. While this list may be generated through a lighting or energy efficiency audit, neither type of audit is required to apply for a grant through this program. Please note that the installation of screw-in compact fluorescent lamps is *not* an eligible permanent upgrade.
- ② A cover letter on organization letterhead that is signed by an authorized representative of the organization and includes the following information:
 - an explanation of how the organization would pay for the portion of the lighting upgrade project costs **not covered** by the requested grant, if any;
 - an **explanation of the need** for the lighting upgrade;
 - the **estimated timeline** for completing the lighting upgrade;
 - a description of planned **educational efforts** to inform facility users and/or the general public in your community about the lighting upgrade and the benefits of energy efficiency; and
 - a description of **how the cost savings will be used** that result from the lighting upgrade.
- ③ An **IRS charitable tax determination letter if the organization applying for the grant is not a public agency.** If Legal Name (above) and organization name on IRS letter are not the same, explain the relationship between them.

The undersigned authorized representative hereby certifies that (a) s/he has received, read and understood the Foundation's brochure laying out the guidelines for the specific lighting grant program through which funding is being requested (b) the information set forth in this application and supporting documents is correct to the best of his/her knowledge, and (c) the Internal Revenue Service determination of tax-exempt status has not been revoked, canceled, or modified.

John G. Dempsey
Signature

Printed Name and Title

| Facility | Fixture Count | Fixture Description | Proposed Upgrade | Current Fixture Wattage | Upgraded Fixture Wattage | Watt Reduction | Facility Costs (\$) |
|---|---------------|--|--|-------------------------|--------------------------|----------------|---------------------|
| Horticulture Field Lab | 549 | 4' fluorescent fixtures with T12 magnetic ballasts | T8 electronic ballasts and high performance T8 lamps | 84 | 48 | 19,764 | \$32,940 |
| Institute of Labor and Industrial Relations | 298 | 4' fluorescent fixtures with T12 magnetic ballasts | T8 electronic ballasts and high performance T8 lamps | 84 | 48 | 10,728 | \$17,880 |
| Atmospheric Sciences Lab | 134 | 4' fluorescent fixtures with T12 magnetic ballasts | T8 electronic ballasts and high performance T8 lamps | 84 | 48 | 4,824 | \$8,040 |
| Environmental Health & Safety Building | 72 | 4' fluorescent fixtures with T12 magnetic ballasts | T8 electronic ballasts and high performance T8 lamps | 84 | 48 | 2,592 | \$4,320 |
| Harding Band Building | 329 | 4' fluorescent fixtures with T12 magnetic ballasts | T8 electronic ballasts and high performance T8 lamps | 84 | 48 | 11,844 | \$19,740 |
| Art East Annex | 565 | 4' fluorescent fixtures with T12 magnetic ballasts | T8 electronic ballasts and high performance T8 lamps | 84 | 48 | 20,340 | \$33,900 |
| Smith Music Hall | 898 | 4' fluorescent fixtures with T12 magnetic ballasts | T8 electronic ballasts and high performance T8 lamps | 84 | 48 | 32,328 | \$53,880 |
| Physical Plant Services Bldg. | 1,921 | 4' fluorescent fixtures with T12 magnetic ballasts | T8 electronic ballasts and high performance T8 lamps | 84 | 48 | 69,156 | \$115,260 |
| University High School | 489 | 4' fluorescent fixtures with T12 magnetic ballasts | T8 electronic ballasts and high performance T8 lamps | 84 | 48 | 17,604 | \$29,340 |
| Swanlund Administration Building | 399 | 4' fluorescent fixtures with T12 magnetic ballasts | T8 electronic ballasts and high performance T8 lamps | 84 | 48 | 14,364 | \$23,940 |
| David Kinley Hall | 988 | 4' fluorescent fixtures with T12 magnetic ballasts | T8 electronic ballasts and high performance T8 lamps | 84 | 48 | 35,568 | \$59,280 |

**Lighting Upgrade at UIUC
Installation Budget Estimate**

| | |
|---|----------------|
| Materials | |
| New low mercury T8 lamps | 133,877 |
| New programmable rapid start ballast, low ballast factor 0.71 | 364,442 |
| Lamp/ballast recycling | 111,564 |
| | <u>609,883</u> |

| | |
|-------------------------------|------------------|
| Labor | |
| Lamp and ballast installation | 1,621,397 |
| | <u>1,621,397</u> |

Lighting Upgrade Project Total 2,231,280

Note 1. This is a construction cost estimate. It does not include design, project management, or inspection fees.
 Note 2. This project does not consist of replacing lighting controls or any lighting fixtures.

The proposed amount to be provided by ICECF is \$803,261. This amount is based on a reimbursement rate of \$.60 per watt reduction.

| | |
|--|----------------|
| Total Projected Watt Reduction | 1,338,768 |
| Reimbursement per Watt \$ | <u>0.60</u> |
| Proposed ICECF Funding \$ | <u>803,261</u> |
| Previously Approved Funding [1] \$ | 1,399,373 |
| Additional Proposed Campus/Central Administration Funding \$ | 28,646 |

Lighting Upgrade Project Total 2,231,280

[1]: Includes VMTH & VMBS (ESCO self-funding), 2009 & 2010 AFMFA, UA Reserves prior to 2009.

MISSION & PROGRAM AREAS

The Illinois Clean Energy Community Foundation invests in clean energy development and land preservation efforts, working with communities and residents to improve environmental quality in Illinois.

*The Foundation funds projects in three core program areas: improving **energy efficiency**, developing **renewable energy** resources, and preserving and enhancing **natural areas** and wildlife habitat throughout Illinois.*

VISIT www.IllinoisCleanEnergy.org

The Foundation's web site – www.IllinoisCleanEnergy.org – has other useful information for organizations seeking funding, including lists of past grants awarded, more information on the grant application process and announcements about new program initiatives that may be launched during 2008. It also has information on other grants for which colleges and universities may apply, such as funding for energy efficient design of new or substantially renovated facilities or for installation of solar or wind power generation systems.



Illinois Clean Energy
community foundation

2008 Energy Efficient Lighting Upgrade Grant Program for Colleges & Universities



Colleges & Universities

Illinois Clean Energy
community foundation
2 N LaSalle St • Chicago IL 60602



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