*Please submit this completed application, the supplemental budget spreadsheet, and any relevant supporting documentation by the deadline indicated in your Step 1 notification letter 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 SSC Program Advisor, Micah Kenfield, at* *kenfield@illinois.edu*

# General Information

**Project Name:** LED Pedestrian Lights

**Total Amount Requested from SSC:** $57,880.00

**Project Topic Area(s):** [x] Energy [ ] Education [ ] Food & Waste

 [ ] Land [ ] Water [ ] Transportation

# Contact Information

### Project Lead

Applicant Name: Morgan Johnston

Unit/Department: Facilities & Services

Email Address: mbjohnst@illinois.edu

Phone Number: 217-333-2668

### Financial Contact *(Must be Full-time University of Illinois Staff Member)*

Contact Name: Mike Marquissee

Unit/Department: F&S Shared Admin Services

Email Address: mlmarqui@illinois.edu

Phone Number: 217-333-4909

Organization Code: 862

### Facilities Management Contact *(If Applicable)*

Contact Name: Scott Sullivan

Email Address: scottsul@illinois.edu

**Primary Project Team**

|  |  |  |
| --- | --- | --- |
| **Name** | **Department** | **Email** |
| Name | Department/Organization | Email Address |
| Name | Department/Organization | Email Address |
| Name | Department/Organization | Email Address |
| Name | Department/Organization | Email Address |

# Project Description

**Please provide a brief background of the project, the goals, and the desired outcomes:**

Due to the LED Campus Commitment, made by Chancellor Wise, in support of LED expert Nick Holonyak (living in Urbana, IL and emeritus faculty at UIUC), grad student Sarthak Prasad worked with Morgan Johnston to identify the street lights that are LED or not LED. A map was created showing progress, and it was found that only 10% of the street and parking lot lights are LED. Prompted by this student’s work, Electrician Foreman Scott Sullivan, highlighted a map showing the pedestrian lights that are globe fixtures, which until recently could not be exchanged for LEDs.

Please note: this project will replace the bulb and the fixture for each location. Until the fixture retrofits are funded, the bulbs must continue to be replaced with the existing less efficient bulbs.

**How will the project improve the sustainability of the Illinois campus and how will the project go above and beyond campus standards?**

This project will replace 352 globes type lamps with LEDs on several pedestrian walkways throughout campus. This is more sustainable by being more energy efficient. The upgraded fixtures will allow for LED bulbs which use 65 watts, rather than the existing fixtures which use 175 watts, thus saving 110 watts per bulb per hour. Because pedestrian lights are on all year long during all hours of darkness, this is a significant energy savings.

The LED fixture and bulb have recently become available and are not yet campus standard. With this project, the exterior pedestrian lights for similar locations will also be updated to be LEDs matching or equivalent to these.

**Where will the project be located? Will special permissions be required to enact the project on this site? If so, please explain and submit any relevant letters of support with the application.**

A locations map was provided with Step 1. All permissions are already approved through F&S authority.

**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 will be benefitting from this project. Please attach letters of commitment or support at the end of the application.**

none

**Please indicate how this project will involve or impact students. What role will students play in the project?**

This project is primarily to the benefit of students, walking on campus after dark. It will be completed by F&S employees this summer.

Additionally, during FY18, F&S will seek a student intern (through ENVS 491) to continue the efforts Sarthak Prasad completed in FY17 to further document the progress made toward meeting the LED campus commitments. This student will also attend meetings with student groups to let them know that the pedestrian lights have been replaced with LEDs. The student intern will be given the tools to share an overview of the Climate Leadership Commitments, and how students can get involved. They will tell the story of the LED pedestrian lights, the SSC, and the energy conservation efforts on campus.

# 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?**

Morgan has applied for several projects with SSC before. The last project completed with SSC funding for the Utilities & Energy Services department was the Main Library Steam project. An ongoing F&S project with SSC funding is the Zero Waste Coordination project, expanding the dual bins for waste and recycling in outdoor locations on campus. (See a sample new bin at Altgeld Hall, along Wright Street.)

**If this project is implemented, will there be 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.**

Replacement of the LED bulbs is expected to be significantly less frequent than the current replacement needs of the existing Metal Hallide bulbs. The ongoing maintenance costs will thus be lower after this project, and they will continue to be included in the funding provided by the Office of the Provost for maintaining campus facilities.

**Please include any other sources of funding that have been obtained or applied for. Please attach any relevant letters of support as needed in a separate document.**

This project has been submitted to the Revolving Loan Fund for consideration. Preliminary calculations estimate a payback period of approximately 6.5 years, so it does qualify for RLF funding. A decision on the RLF funding will occur later in the spring semester.

# Environmental, Economic, and Awareness Impacts

*In addition to the below questions, please indicate specific measurable impacts as applicable on the supplemental budget spreadsheet.*

**Which aspects of sustainability does your project address, and how? Does the project fit within any of the iCAP goals? If so, how does the project go beyond the university status quo standards and policies.**

This project is an energy conservation project. Energy conservation is the first effort prioritized in the 2010 iCAP and reiterated in the 2015 iCAP. Through centralized conservation efforts, our campus has reduced energy consumption per square foot by over 25% since FY08, the iCAP baseline. In 2012, the LED Campus commitments were made, including a commitment to have all exterior lights be LED by 2025. This promise was added to the iCAP during the 2015 update.

This particular project goes beyond the status quo by changing the existing metal halide bulbs to LEDs through a retrofit that upgrades the fixtures to allow LED bulbs to be used.

**How will the environmental impacts of your project be measured in the near and long term? What specific monitoring and evaluation processes will you be using to track outcomes and progress?**

The environmental impacts are primarily a reduction in overall energy consumption for campus. This reduction in electrical demand is pre-calculated based on the wattage for the existing and proposed fixtures. There will not be follow-up calculations made for this project. Thus, outcomes will be measured simply by the completion status of the project.

This project is also part of the overall effort to make all exterior lights LEDs by 2025. The progress toward that goal will be tracked on an annual basis and shared on the iCAP Portal at <https://icap.sustainability.illinois.edu/project/led-campus>.

**What is the plan for publicizing the project on campus? In addition to SSC, where will information about this project be reported?**

F&S, in collaboration with iSEE, will share information about the LED retrofit with students, through standard promotional and educational means. This includes project updates on the iCAP Portal under the “LED Exterior Lights” page: <https://icap.sustainability.illinois.edu/project/led-exterior-lights>. There will also be a news release provided by F&S when the project is complete, along with an overall status update on the LED Campus efforts.

The student intern will be tasked with specifically promoting the completion of this project with SSC funding, as described previously and below.

**What are your specific, measurable outreach goals? How will these be measured?**

I intend to have the student intern meet with at least ten different student groups. The number of meetings and the approximate # of attendees will be tracked and shared with SSC in the final report for this project. Potential groups include SECS, Eco-Olympics, the panhellenic council, the Illinois Student Senate, the Graduate Employee Organization, departmental student groups, etc.

**Do you have any additional comments or relevant information to aid in evaluation of this application?**

The student intern component of this project is primarily aimed at spreading awareness of this specific effort, if SSC funds it. I wholeheartedly support the SSC effort to be well known. The student intern--tasked with reaching out and telling several students about the project--is my effort to make sure students know about the SSC’s funding support (if granted). If the SSC chooses not to fund this project, I will work to get the LEDs installed through the RLF or future funding opportunities, but any student interns would most likely be assigned to other priorities.