student sustainability committee
university of illinois at urbana-champaign

Funding Award and Acceptance Letter

April 24, 2013

Project Leader: Gaines Hall
Project: Temple Hoyne Buell Hall Lighting Controls

Re: Sustainable Campus Environment Fee and Cleaner Energy Technologies Fee – Award Recommendation

Dear Professor Hall:

On behalf of the University of Illinois at Urbana-Champaign Student Sustainability Committee (SSC), we would like to thank you for considering the funds raised by the Sustainable Campus Environment Fee and the Cleaner Energy Technologies Fee to implement a project that improves the sustainability of our campus.

SSC is pleased to inform you that we are recommending to the Center for a Sustainable Environment that the Temple Hoyne Buell Hall Lighting Controls project **receive $62,900 in grant funding** for the project as outlined in the application. This funding is contingent upon creating educational materials such as informational plaques for the project.

In order to remain eligible for this award, you must agree to the following conditions:

1. All funds must be spent by May 31, 2014.
2. A final report of all work completed should be provided by June 30, 2014.
3. Project status updates and detailed account statements must be provided at the end of each semester until the project is completed.
4. Each project is required to fulfill some kind of outreach component which may require a poster submittal, videos, photos, etc. The project applicant will work with SSC to determine the best form of outreach.
5. Any substantial modifications to project scope, budget, or timeline must first be approved by SSC.
6. All projects will be expected to follow campus policies and procedures as well as any applicable State and Federal laws.
7. SSC reserves the right to revoke funding if the project does not comply with the terms and conditions outlined in this letter.

If you agree to the terms and conditions for the funding, please sign on the designated line at the bottom of this letter. If you have any questions regarding these requirements please contact the SSC Program Advisor, Mckenzie Beverage, at mbeverag@illinois.edu. You will be notified when the Center for a Sustainable Environment officially approves this project. Again, thank you for your interest in improving the sustainability of the University of Illinois at Urbana-Champaign. We look forward to working with you in the future.

SSC Signatories

Marika Nell
Chair, Student Sustainability Committee

Teresa Tousignant
Treasurer, Student Sustainability Committee

Awardee Signatory

Gaines Hall
School of Architecture

Center for a Sustainable Environment Signatory

Pradeep Khanna, Associate Chancellor
Acting Director, Center for a Sustainable Environment

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Project Information

Project: Temple Hoyne Buell Hall Lighting Controls

Funding Source: Sustainable Campus Environment Fee

Funding Amount: $62,900

Award Code: 1-303692-767000-767030-767TBH

Receiving Campus Unit: Architecture

Unit Financial Contact: Cheryl Heck

E-mail: chaheck@illinois.edu **Phone:** 217-244-4381

Primary Contact Person: Gaines Hall

E-mail: gbhall@illinois.edu **Phone:** 217-333-3318

Applicant Project Description:

Temple Hoyne Buell Hall (TBH) was built in 1996 and is home to the Architecture, Landscape Architecture, and Urban Planning departments. The 73,000 square foot building was designed so that most classroom, studio, and office spaces have natural light available during the day. However, no automatic lighting controls were specified or installed in the building. This has two energy-wasting effects. First, many lights are on during the day when natural light would suffice. Secondly, many lights are left on during both day and night when spaces are unoccupied.

To encourage awareness of energy use among design students and faculty, and to reduce lighting and cooling energy use in the building, we will install occupancy, daylight sensors, and lighting timers in appropriate places within the building. All incandescent and fluorescent exit signs in the building will be replaced with LED exit signs. LED lights have very long life and significantly lower energy use, and are particularly suited to emergency lighting that must be on 24/7 or for lights that are located in difficult-to-maintain places. Occupancy sensors turn lights off when no activity is detected in a space for a certain period of time. Daylight sensors turn lights off when natural light provides enough illumination for the normal function of that space.

By reducing lighting waste in classrooms, public areas, restrooms, and service spaces, electric use for lighting will be reduced by approximately 30% in the controlled areas. The energy required to cool the building in the summer will also be lowered slightly, by reducing the amount of waste heat generated by lighting. The total electric use in TBH has dramatically increased in the last three years, possibly due to increased plug loads or inefficiencies in the HVAC fan and pump systems. TBH now uses around 1.7 million kWh of electricity annually at a cost to the University of more than $130,000. The attached spreadsheet shows monthly and annual usage for the two electric meters tracking TBH usage.

Educational buildings in the U.S. use an average 20% of their electricity for lighting, and lighting retrofits and controls can save 30-50% of that lighting energy use. If lighting controls are implemented in TBH, an estimated 100,000 to 170,000 kWh annually could be saved. The value of those electric savings at university rates is around $7,500 - $12,700 annually.