Green Fund Project
Final Report

This report may be published on the SIU sustainability website.

Name of person(s) completing report: Kyle Kieffer
Department: ECE
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Faculty Advisor (if applicable): Frances Harackiewicz
Project Title: Occupancy Motion Sensing Lights in Computer Lab
Project ID #: 17SP116
Award Date: April 27, 2017
Completion Date: 8/28/2018
Total Funds Used: $1006.35

Note: The total Green Fund Award for this project was $911.00. The balance ($95.35) will be paid using Dr. Harackiewicz's overhead account: BP 202190.

1. Provide a summary of your project/project experience.

   The overall project experience was positive. There were some setbacks in the beginning that delayed the start of the work for the project. There was some miscommunication between us and the Physical Plant on what materials were required and the cost of them. Working through these problems gave me a real-world situation where communication is key to getting everyone on the same page and getting things accomplished.

2. Provide a summary of your results (environmental, social, and/or economic) including quantifiable data as appropriate (ex. # of individuals reached, lbs. diverted from landfill, energy saved, etc.).

   The environmental and economic benefits are closely tied together. Computer lab E132 as shown in the pictures attached to the email is now dark when no one is using it. This saves the college money on electricity because the room is only lit when someone is using it. We save 0.15 pounds of greenhouse gases per hour that the lights are off in a non-residential building according to a study by Boston University. Over a single day, we save about a pound of greenhouse gases from being emitted into the environment. As far as the social, this project was completed over the summer when not many students were around to witness it. With the new semester starting, returning and new students will notice the difference in the lab and will learn more about the vacancy sensors when they use the lab for classwork.

3. Summarize how your project promoted the Green Fee/Sustainability on campus including, but not limited to, flyers created, screenshots of website, signage, etc. Please include website links, if applicable. (Reminder: you are required to promote your project using at least 2 items from the awardee website promotion list.)

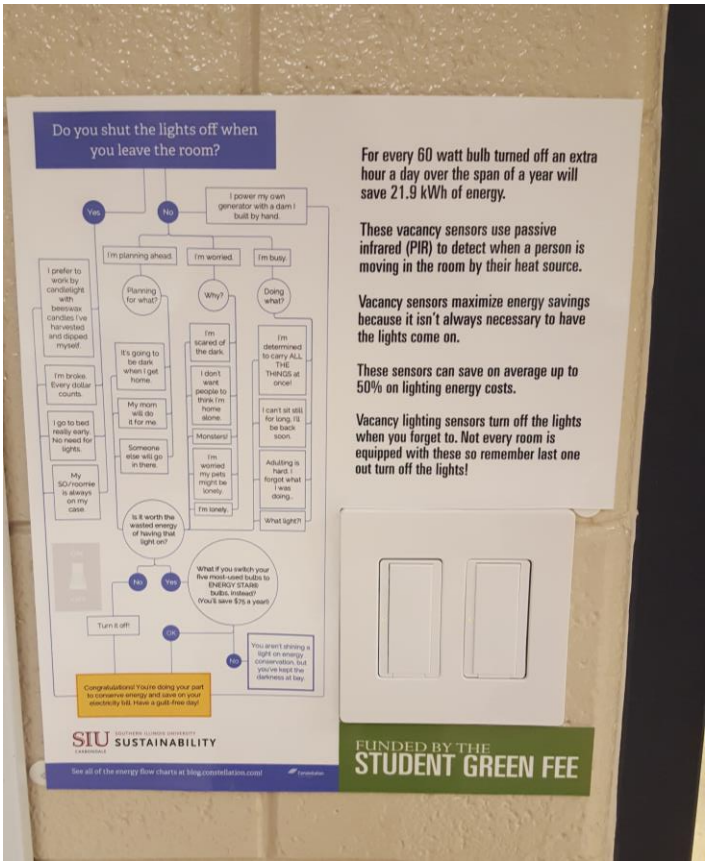
   A big poster was placed around the switch to inform everyone using the lab how the sensors work. Everyone that enters the lab has to use the switch to turn on the lights so

they are forced to see the poster. We will be making a press release once the other lab has been installed with the same vacancy sensors later this year.

4. Provide evidence of how you used the Green Fund Marker in your project.
   The Green Fund Marker was incorporated into the poster design that is attached to the email. (UNIX_poster)
5. Is there anything you would do differently if you were to do a similar project in the future? If so, please describe.
   I would do an in person meeting with someone from Physical Plant to make sure that all materials and costs are clear to everyone. A form outlining everything like a bill of materials instead of an email chain with different prices spread throughout.
6. Provide as an attachment to the email (see email address below) a minimum of 5 digital images. Images should be of high a quality as possible and be attached in jpg format, if available. Images will be used to promote interest in sustainability projects on campus and may be used on our website and in other promotional material. These can be photos of the progress of the project or the completed project. Provide captions for photos here.
   UNIX_dark shows that now the lab is dark when no one is using it.
   UNIX_doorway shows the entrance to the lab
   UNIX_empty1 and UNIX_empty2 show the lab with the lights on when no one is using it
   UNIX_poster shows the poster that was put around the light switch that incorporates the green fee tag.
7. List suggestions for the SIU Sustainability Council to improve the Green Fund Award Process here:

The only suggestion I have is to maybe work a little closer with the Physical Plant to maybe develop a request form that applicants can submit to the Physical Plant to get an estimate for the amount of work that they want done for their project.

E0132
VLSI & DESIGN AUTOMATION LAB
ECE Department


Do you shut the lights off when you leave the room?
Yes
No
I power my own generator with a dam I built by hand.
I'm planning ahead.
I'm worried.
I'm busy.
I prefer to work by candlelight with beeswax candles I've harvested and dipped myself.
Planning for what?
Why?
Doing what?
I'm broke. Every dollar counts.
It's going to be dark when I get home.
I'm scared of the dark.
I'm determined to carry ALL THE THINGS at once!
I go to bed really early, no need for lights.
My mom will do it for me.
I don't want people to think I'm home alone.
I can't sit still for long, I'll be back soon.
My SO/roomie is always on my case.
Someone else will go in there.
Monsters!
Adulting is hard. I forgot what I was doing.
I'm worried my pets might be lonely.
Is it worth the wasted energy of having that light on?
I'm lonely.
What light?
No
Yes
What if you switch your five most-used bulbs to ENERGY STAR® bulbs, instead? You'll save $75 a year!
Turn it off!
OK
No
You aren't shining a light on energy conservation, but you've kept the darkness at bay.
Congratulations! You're doing your part to conserve energy and save on your electricity bill. Have a guilt-free day!
SIU SUSTAINABILITY
See all of the energy flow charts at blog.constellation.com!
For every 60 watt bulb turned off an extra hour a day over the span of a year will save 21.9 kWh of energy.
These vacancy sensors use passive infrared (PIR) to detect when a person is moving in the room by their heat source.
Vacancy sensors maximize energy savings because it isn't always necessary to have the lights come on.
These sensors can save on average up to 50% on lighting energy costs.
Vacancy lighting sensors turn off the lights when you forget to. Not every room is equipped with these so remember last one out turn off the lights!
FUNDED BY THE
STUDENT GREEN FEE