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10/7/16

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MTSU Clean Energy Initiative Project Funding Request

There are five (5) sections of the request to complete before submitting. See <http://www.mtsu.edu/~sga/cleanenergy.shtml> for funding guidelines. Save completed form and email to cee@mtsu.edu or mail to MTSU Box 57.

1. General Information	
Name of Person Submitting Request Selana Ranney	
Department/Office Students for Environmental Action	Phone # (Office) N/A
MTSU Box # N/A	Phone # (Cell) 443-504-9263
E-mail sfr2e@mtmail.mtsu.edu	Submittal Date 10/7/16

2. Project Categories (Select One)	
Select the category that best describes the project.	
<input type="checkbox"/> Energy Conservation/Efficiency	<input checked="" type="checkbox"/> Sustainable Design
<input type="checkbox"/> Alternative Fuels	<input type="checkbox"/> Other
<input type="checkbox"/> Renewable Energy	

3. Project Information
<p>a. Please provide a brief descriptive title for the project.</p> <p>b. The project cost estimate is the expected cost of the project to be considered by the committee for approval, which may differ from the total project cost in the case of matching funding opportunities. Any funding request is a 'not-to-exceed' amount. Any proposed expenditure above the requested amount will require a resubmission.</p> <p>c. List the source of project cost estimates.</p> <p>d. Provide a brief explanation in response to question regarding previous funding.</p>
3a. Project Title BigBelly Solar Compactor
3b. Project Cost Estimate \$17,667 = 3 Big Belly stations + Software + Installation costs
3c. Source of Estimate BigBelly Solar, inc.
3d. If previous funding from this source was awarded, explain how this request differs? This request is a continuation of a previous, highly visible initiative.

4. Project Description

(Completed in as much detail as possible.)

- a. The scope of the work to be accomplished is a detailed description of project activities.
- b. The benefit statement describes the advantages of the project as relates to the selected project category.
- c. The location of the project includes the name of the building, department, and/or specific location of where the project will be conducted on campus.
- d. List any departments you anticipate to be involved. Were any departments consulted in preparation of this request? Who? A listing may be attached to this form when submitted.
- e. Provide specific information on anticipated student involvement or benefit.
- f. Provide information for anticipated future operating and/or maintenance requirements occurring as a result of the proposed project.
- g. Provide any additional comments or information that may be pertinent to approval of the project funding request.

4a. Scope: Work to be accomplished

It would have to be decided on where the compactors will be placed to be most beneficial. The shipping and installation is included in the price estimate, as well as insurance for the compactors in case something were to go wrong. After the Compactors are installed, the bins would have to be seldom emptied out by Custodial Services. There is also a non-compactor recycling unit attached to the compactor that would allow for convenient multi-stream recycling.

Pricing breakdown:

Double Station Big Belly Compactors: $\$4240 \times 3 = \$12,720$

Installation Costs: $\$300 \times 3 = \900

Lifecycle Software: $\$1349 \times 3 = \$4,047$

Total: $\$17,667$ for 3 stations, $\$11,778$ for 2 stations, $\$5,889$ for one station.

4b. Scope: Benefit Statement

This project would benefit the MTSU community because it is a very visible environmentally friendly solution to a problem on MTSU's campus, trash overflow. If we were to put these compactors in areas of high waste traffic, it would not only help beautify campus, but relieve pressure off of the shoulders of Custodial Services because they would not have to do trash pick-up as often. Since the waste portion of the units are compactors, it would also decrease the volume of waste going into our landfills. The recycling portion of the unit would make for more visible, modern, and easy recycling: an issue that has been consistently brought forth to the student government.

4. Project Description (continued)

4c. Location of Project (Building, etc.)

The compactors will be located in areas of high waste traffic on campus.

- East side of Peck Hall
- East side of Todd Art Building
- East side of Student Union

These locations are up for discussion.

4d. Participants and Roles

Custodial Services will be in charge of pick-up of the landfill waste. MTSU Recycles will be in charge of pick-up for the multi-stream recyclables.

4e. Student participation and/or student benefit

Students will get the impression that their campus is environmentally conscious and modern. Students will also be strongly encouraged to continue to recycle since the recycling collection will be attached to the waste receptacle. These compactors are for more aesthetically pleasing than the current trash receptacles.

4f. Future Operating and/or Maintenance Requirements

The compactors have technology installed in them that detail when it is reaching capacity, and there is smart phone software that comes with the compactors that can relay this information to Custodial Services. This software also notifies Custodial Services on when the compactors are in need of repair, what needs to be repaired, and how to repair it.

4g. Additional Comments or Information Pertinent to the Proposed Project

This Project is a continuation of a very successful program. This program has proven to be worth the upfront costs, and the addition of recycling to this project will provide a massive boost towards the already positive public appeal to these units.

5. Project Performance Information

Provide information if applicable.

- a. Provide information on estimated annual energy savings stated in units such as kW, kWh, Btu, gallons, etc.
- b. Provide information on estimated annual energy cost savings in monetary terms.
- c. Provide information on any annual operating or other cost savings in monetary terms. Be specific.
- d. Provide information about any matching or supplementary funding opportunities that are available. Identify all sources and explain.

5a. Estimated Annual Energy Savings (Estimated in kW, kWh, Btu, etc.)

Significantly less frequent pick-ups, therefore less fuel costs.

5b. Annual Energy COST Savings (\$)

N/A

5c. Annual Operating or Other Cost Savings. Specify. (\$)

Less dumping in the landfill, meaning lower Landfill fees for the University. Less operational costs for Custodial Services, since the trash pick-up will be less frequent.

5d. Matching or Supplementary Funding (Identify and Explain)

N/A



The University of Georgia

Public Affairs
News Service
News Release

Wednesday, September 23, 2015

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UGA adds solar-powered waste reduction stations to meet strategic goals

Athens, Ga. – The University of Georgia has installed 40 additional solar-powered waste reduction stations throughout the UGA Athens campus to make it easier to recycle bottles, cans, paper and plastic.

Installed by the Facilities Management Division, the project is part of ongoing effort to make it equally as easy to recycle as it is to throw something away.

Each new outdoor station has one bin for mixed recyclables and one bin for landfill items. In general, paper, plastic, metal and glass go into the recycling bin; food wrappers, food waste and Styrofoam go in the trash. The “smart” and enclosed solar-powered bins keep out rain and unwanted critters, and have effectively increased exterior recycling rates by about 40 percent.

In total, UGA now has more than 70 solar-powered waste reduction stations working to keep materials out of the Athens-Clarke County landfill.

“I think the technology will inspire more people to use the bins, and hopefully to think about where their waste is going,” said John Derosa, an environmental engineering major from Lilburn, who’s helping to lead a “Green Labs” initiative to promote best practices in safety and sustainability in laboratories at UGA.

The solar-powered waste reduction stations are one step toward meeting goals in UGA’s 2020 Strategic Plan of diverting 65 percent or more of campus waste from the local landfill.

The stations also save the university both time and money. When more waste is kept out of the landfills, UGA pays less in landfill fees. And UGA staff spend less time collecting and transporting trash and recycling.

What used to take approximately 3,500 hours in labor a year to collect now takes around 200 hours, said Cale Caudell, support services manager in the UGA Facilities Management Division. Because the smart bins send data for a daily report by email and text on when and where targeted servicing and emptying is needed, workers are now taking fewer service trips.

MORE

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UGA Today: www.uga.edu/news

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According to Tom Satterly, assistant vice president for Facilities Management Division, "FMD is excited to use ever-smarter machines, leveraging technology to improve our ability to efficiently and effectively perform what have traditionally been manual labor duties. Bigbelly bins empower just-in-time collection, saving FMD labor, time and fuel while ensuring there are no overflow issues on the campus. Through implementing this effective 'human + machine' strategy, FMD is freeing up time for our staff to perform other valuable tasks."

For more information on sustainability initiatives at UGA, see <http://sustainability.uga.edu/>.

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Note to editors: An image of the new waste reduction stations with the old trash cans in the background is available at

http://multimedia.uga.edu/media/images/big_belly_trash_cans.jpg.

This release is available online at <http://news.uga.edu/releases/article/solar-powered-waste-reduction-stations-2015/>.