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10/9/15

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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 Linda Hardymon	
Department/Office FSD/CEE	Phone # (Office) 615-604-8096
MTSU Box #	Phone # (Cell) 615-519-8096
E-mail linda.hardymon@mtsu.edu	Submittal Date 10.9.2015

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 Patio-type Umbrella with Powersol Smart Battery Hub (Solar)
3b. Project Cost Estimate \$4500.00, each umbrella cost from \$1650 to \$1850 plus shipping.
3c. Source of Estimate vendor- ZON-Technology
3d. If previous funding from this source was awarded, explain how this request differs? n/a

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

Provide two convenient outdoor solar charging stations for mobile devices on campus using a solar umbrella technology.

4b. Scope: Benefit Statement

This solar umbrella offers a 'green' opportunity to recharge mobile devices- phones, small laptops. It is an opportunity to address a sustainability goal by providing the convenience of charging personal devices outdoors on campus using solar technology.

It is a visible addition to the sustainability efforts on campus.

4. Project Description (continued)
<p>4c. Location of Project (Building, etc.) Student Union Building patio area</p>
<p>4d. Participants and Roles Simple assembly required. MTSU Grounds. Umbrella may be opened and closed by building staff who oversee the patio area.</p>
<p>4e. Student participation and/or student benefit Students are presented with a learning experience, an example of putting solar technology to use, and the convenience of charging their mobile devices.</p>
<p>4f. Future Operating and/or Maintenance Requirements n/a</p>
<p>4g. Additional Comments or Information Pertinent to the Proposed Project This is a good, fun application of a sustainability idea put to use. The umbrella is made of a Marine grade fabric with aluminum ribs and 8 solar panels/sleeves which generate 54 watts of electricity. The Smart Charging Hub, using lithium ion batteries, stops charging the device when it is fully charged thus preserving its charging power.</p>

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.)

minimal

5b. Annual Energy COST Savings (\$)

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

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



ZON's Powersol - Solar Mobile Device Charging Station

Durable / Sustainable / Affordable / Convenient

- ☀ The mast is 1.5" in diameter and is one piece with wall thickness of 0.093. The mast is made of 6061 T6 aluminum. **6061 T6 aluminum has been used in spacecraft and airplane construction.**
- ☀ The frame is 0.750 fiberglass tubular ribs with a nylon hub, stainless steel pin and chain, nylon joints and endtips. Fiberglass ribs are typically 4x stronger and 30% lighter than metal or wood ribs making them excellent for windy conditions. Height of umbrella is 98 inches.
- ☀ Canopy is Sunbrella Marine Grade acrylic solution with a 10 year warranty against fading and normal wear and tear. Double stitched pockets for maximum durability. Standard umbrella size fits existing patio tables. No special installation required.
- ☀ Reduces electricity consumption.

Powersol™

Charges 3 USB Devices at a time - Day and Night

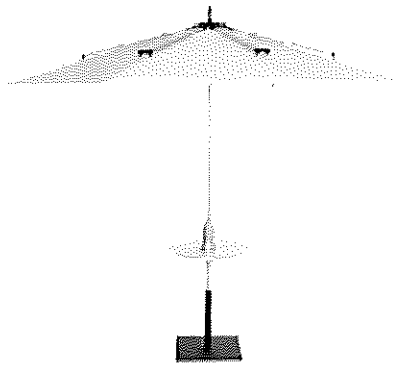
Charges as Fast as a Wall Outlet



"Energy is very intangible. You can't touch electricity, but these umbrellas will let students physically interact with solar energy on a daily basis."

Student - University of North Carolina, Chapel Hill
<http://www.unc.edu/spotlight/a-chance-to-recharge/>

ZON - Email JOE@zon-technology.com - 310-200-8018 - www.zon-technology.com



PowersolTM

Solar Mobile Device
Charging Station

Shapes and Sizes, Specs

Octagon



9 ft. / 2.75 m.

Hexagon



9 ft. / 2.75 m.

Square



7.5 ft. / 2.3 m.

Features

