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MTSU Clean Energy Initiative Project Funding Request

1. General Information	
Name of Person Submitting Request Sebastiano Spada	
Department/Office Construction Services	Phone # (Office) 615-898-5012
MTSU Box # 32	Phone # (Cell)
E-mail sebastiano.spada@mtsu.edu	Submittal Date 10/5/18

2. Project Categories (Select One)	
Select the category that best describes the project.	
<input checked="" type="checkbox"/> Energy Conservation/Efficiency	<input 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 Solar-Powered Attic Fans for Scarlett Commons
3b. Project Cost Estimate \$28,182.60
3c. Source of Estimate Facilities services estimate, including the cost of the fans plus labor
3d. If previous funding from this source was awarded, explain how this request differs? Fans were installed in Forrest Hall in 2011 and in Ellington Human Science in 2014

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

This project is a continuation of the effort to better-ventilate attic spaces on campus—using green energy—to lessen the burden on air conditioners, preserve insulation, and prevent mold growth. The work involves installing the solar attic fans in the roofing of the 9 buildings which make up Scarlett Commons.

4b. Scope: Benefit Statement

In the summer months, the solar attic fans work to push hot air out of the attic, preventing the ducting from overheating and the air conditioning unit from overworking, and thereby reducing energy usage and saving money while still keeping living spaces comfortable.

In the winter months, the solar attic fans work to push humid air out of the attic—from melting snow on the roof or from moisture rising to the attic from the sinks, showers, etc. in the living spaces—thereby keeping the insulation dry and maximally-effective, avoiding mold and mildew growth, and ensuring the longevity of the roofing.

4. Project Description (continued)
4c. Location of Project (Building, etc.) Scarlett Commons (9 buildings)
4d. Participants and Roles Sebastiano Spada Roofing contractor: install openings for mounting solar attic fans
4e. Student participation and/or student benefit The solar attic fans will benefit the students who live in Scarlett Commons by making the buildings more efficient, easier to cool, less humid, and less likely to develop mold.
4f. Future Operating and/or Maintenance Requirements The fans will need to be cleaned annually to retain optimum performance.
4g. Additional Comments or Information Pertinent to the Proposed Project Please see the attached information.

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.)

The annual energy savings are difficult to determine precisely. The solar fans will push out hot air, lessening the burden on the air conditioners and allowing them to run for a shorter time.

5b. Annual Energy COST Savings (\$)

The annual energy cost savings are hard to determine precisely.

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

The solar fans will have no utility costs.

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

N/A

**COOLS YOUR ATTIC AND
REDUCES ENERGY USAGE
IN THE SUMMER MONTHS**

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A/C Ducting Gets Hot in the Attic, Making the A/C Unit Work Harder

Active Ventilation Reduces Attic Heat, Making It Easier for the A/C to Cool Your Home

Solar heat causes elevated attic temperatures

Over-heated ducting

Attic heat build-up radiates into living space

Over-worked air conditioner

Before Solar Attic Fan

Solar attic fan continuously exchanges attic air to avoid heat build-up

Cooler ducting

Living space is cooler with less air conditioning expense

Ambient air intake cycles in cooler air

More efficient air conditioner

After Solar Attic Fan

Moisture in the Attic Leads to Mold and Mildew

Snow melts on roof from heat in attic and re-freezes on the eaves, causing ice damming

Condensation drips from roof into living space

Before Solar Attic Fan

source: <http://www.airvent.com/index.php/products/solar-attic-fans/roof-mounted-solar-attic-fan/30-watt-solar-attic-fan#de>

VENTILATES 2,800 SQUARE FE

