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## MTSU Clean Energy Initiative Project Funding Request

There are five (5) sections of the request to complete before submitting.

### 1. General Information

Name of Person Submitting Request Russell Miller	
Department/Office Facilities Services Facilities Services	Phone # (Office) 615.898.2435
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E-mail Russell.miller@mtsu.edu	Submittal Date 9/27/2024

### 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

- Please provide a brief descriptive title for the project.
- 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.
- List the source of project cost estimates.

3a. Project Title:

MEC Tower Fan VFD Control Conversion

3b. Project Cost Estimate

\$21,300.00

3c. Source of Estimate

Quote from Supplier, In house labor estimate

#### **4. Project Description**

The scope of the work to be accomplished is a detailed description of project activities.

- a. The benefit statement describes the advantages of the project as relates to the selected project category.
- b. 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.
- c. 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.
- d. Provide information for anticipated future operating and/or maintenance requirements occurring as a result of the proposed project.
- e. Provide any additional comments or information that may be pertinent to approval of the project funding request.

##### **4a. Scope: Work to be accomplished**

Remove old pneumatic actuators and valves from AHU. Replace with new valves and electronic actuators. Run wire as necessary to control new devices.

##### **4b. Scope: Benefit Statement**

Pneumatic controls date back over 30 years. The valves attached to the pneumatic actuators are just as old. The current control system converts electronic signals to various air pressures in order to stroke the actuators for system control. There are multiple points of failure in this. Conversion to electronic actuators and new valves would modernize the control system allowing for more precise, efficient control of the equipment as well as removing points of failure and aging equipment. Many of the pneumatic actuators are not even manufactured or supported anymore, so conversion to modern equipment also nets the added benefit of being able to replace failed devices in the future with new devices as opposed to stockpiled or refurbished ones of questionable shelf life themselves.

<b>4. Project Description (continued)</b>
<p>4c. Location of Project (Building, etc.)</p> <p>Miller Education Center (MEC)</p>
<p>4d. Participants and Roles</p> <p>Facilities Engineer:</p> <p>Facilities Technician: Labor to integrate new device controls</p> <p>Outside Plumbing contractor</p> <p>Outside Controls contractor</p> <p>Supplier: Purchase actuators, valves, wiring, and wire support for installation</p>
<p>4e. Future Operating and/or Maintenance Requirements</p> <p>Facilities Technician: Mechanical adjustments to systems to optimize performance.</p>
<p>4f. Additional Comments or Information Pertinent to the Proposed Project</p> <p>N/A</p>

<b>5. Project Performance Information</b>
<p>Provide information if applicable:</p> <ul style="list-style-type: none"> <li>a. Provide information on estimated annual energy savings stated in units such as kW, kWh, Btu, gallons, etc.</li> <li>b. Provide information on estimated annual energy cost savings in monetary terms.</li> <li>c. Provide information on any annual operating or other cost savings in monetary terms. Be specific.</li> <li>d. Provide information about any matching or supplementary funding opportunities that are available. Identify all sources and explain.</li> </ul>
<p>5a. Estimated Annual Energy Savings (Estimated in kW, kWh, Btu, etc.)</p> <p>TBD</p>
<p>5b. Annual Energy COST Savings (\$)</p> <p>TBD</p>
<p>5c. Annual Operating or Other Cost Savings. Specify. (\$)</p> <p>TBD</p>
<p>5d. Matching or Supplementary Funding (Identify and Explain)</p> <p>N/A</p>