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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.htm for funding guidelines.

1. General Information	
Name of Person Submitting Request Tom Wallace	
Department/Office Information Technology	Phone # (Office) +1 615-898-2137
MTSU Box # Cope 217	Phone # (Cell) +1 615-202-0502
E-mail Tom.Wallace@MTSU.edu	Submittal Date September 17, 2012

2. Project Categories (Select One)			
Select the category that best describes the project.			
X	Energy Conservation/Efficiency		Sustainable Design
	Alternative Fuels		Other
	Renewable Energy		

3. Project Information
a. Please provide a brief descriptive title for the project. **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.** c. List the source of project cost estimates. d. Provide a brief explanation in response to question regarding previous funding.
3a. Project Title Server Consolidation/Virtualization
3b. Project Cost Estimate $21,000
3c. Source of Estimate Quote from Dell, Citrix, Softchoice

3d. If previous funding from this source was awarded, explain how this request differs?
This request does not differ significantly from previous requests which have been awarded. As noted above, this is a multi-year project. It is estimated that there are at least 200 server-class systems across the campus which could be consolidated within the blade/virtual server environment.

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

ITD manages a number of servers which can be consolidated and virtualized into a blade environment. One blade server can be utilized to replace 5-10 physical servers.

This project is to purchase 1 fully-redundant blade server (2 blades/1 set) to be used to replace up to 10 physical servers. This is a last stage phase of a multi-year project to replace servers which have been determined to be qualified for this type of replacement. ITD will be working to replace additional servers in order to reduce operating costs for the university.

4b. Scope: Benefit Statement

This project is estimated to reduce the electrical and cooling costs for these systems by approximately 90% - from approximately $4,300/year to $475/year. It will pay for itself in just over three (3) years.

4. Project Description (continued)

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

Data centers in the Cope Administration Building and Telecommunications Building

4d. Participants and Roles

Systems Administration, Information Technology Division – implementation and management

Dell, installation

4e. Student participation and/or student benefit

This project directly lowers the operating cost of the university thereby providing an opportunity for the university to reduce the utility costs passed on to students.

4f. Future Operating and/or Maintenance Requirements

The equipment has an estimated useful life time of five (5) years. Maintenance costs are included as part of the purchase expense.

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

This is part of a larger multi-year project to reduce the operating costs within the university's data centers. ITD estimates that it will be able to reduce power and cooling demands by at least 50% by the end of the project.

If additional clean energy funds are available, ITD asks that consideration be given for the purchase of additional servers to allow for additional operating savings. Each blade server costs approximately $7,500 + $2,500 software and are ordered in pairs to provide redundancy.

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.)

Power: ~43,000kWh annually
Cooling: ~19,000Btu/hr

5b. Annual Energy COST Savings ($)

Power: ~$3,000
Cooling: ~$800

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

Total: ~$3,800

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

The total cost of the entire multi-year project is approximately $150,000. ITD has proposed allocating equipment and other funds to complete the project.