Rec 2/15/17

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 : Reggie Floyd	
Department/Office : Energy Services	Phone # (Office) 615-898-2306
MTSU Box # 32	Phone # (Cell) 615-406-3768
E-mail : reggie.floyd@mtsu.edu	Submittal Date 2-14-2017

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 : Data loggers(general campus)

3b. Project Cost Estimate : $2,060

3c. Source of Estimate : Reed Instruments

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

Purchase two sound data loggers to measure noise levels. This equipment will identify high noise levels. High noise levels will not be conducive to students learning.

Purchase two AC voltage/current data loggers. This equipment tracks performance issues and electronically captures data. This devices will also help identify equipment deterioration, troubleshoot mechanical devices and improve productivity.

Purchase two thermo-hygrometer data loggers. This equipment measures relative humidity as well as temperature, dew point and wet bulb temperatures. This device will help us monitor temperatures, humidity and troubleshoot HVAC equipment.

4b. Scope: Benefit Statement

Data loggers will improve productivity, identify areas for equipment repair, monitor high noise levels, and high humidity levels.

4. Project Description (continued)
4c. Location of Project (Building, etc.) Devices can be used across campus for approximately 55 E&G buildings
4d. Participants and Roles Energy services staff
4e. Student participation and/or student benefit n/a
4f. Future Operating and/or Maintenance Requirements. none
4g. Additional Comments or Information Pertinent to the Proposed Project. n/a

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.)see below
5b. Annual Energy COST Savings ($) Savings can be realized from repairs on equipment, improve air quality, and reduce high levels of noise
5c. Annual Operating or Other Cost Savings. Specify. ($) By using AC voltage/current data logger you could save a motor ($3,000).
5d.Matching or Supplementary Funding (Identify and Explain) N/A

REED INSTRUMENTS

The Right Source.
The Right Solutions.

1 YEAR REED WARRANTY

SOUND LEVEL METER/DATA LOGGER TECHNICAL DATA

FEATURES

- Meets IEC 61672-1 Class 2 requirements
- Records up to 64,000 datapoints (1MB)
- 60dB dynamic space in each range
- Real time clock and calander
- Fast/Slow time weighting
- "A & C" frequency weighting
- Min/Max function
- USB Interface
- Low level battery indicator
- Analog digital bargraph
- Backlit LCD display
- Tripod mount design for longterm monitoring
- Includes windscreen, USB cable, Windows software, batteries and hard carrying case

NIST TRACEABLE CERTIFICATION Available!

SPECIFICATIONS

Measuring Range: Low: 30 to 90 dB; Med: 50 to 110 dB; High: 70 to 130 dB Auto: 30 to 130 db
Dynamic Range: 60BdB
Accuracy: ±1.4 dB
Resolution: 0.1 dB
Sample Rate: Digital: 0.5 sec. Analog: 50 mS
Frequency Range: 20 Hz to 8 kHz
Time Weighting: Fast/Slow
Microphone: 1/2" electret condenser
Power Supply: 4 x AAA batteries
Battery Life: 50 hours
Operating Temperature: 32 to 104°F (0 to 40°C)/<80% RH
Memory: Up to 64,000 records (1MB)
Dimensions: 10.4 x 2.5 x 1.2" (264 x 63 x 29mm)
Weight: 8.8 oz (250g)

ORDERING INFORMATION

R8080 ..... **Sound Level Meter/Datalogger**
R8090 ..... **Acoustic Calibrator**
SB-01 ..... **Windshield Ball**
BS-6 ..... **Tripod**
CERTISL1 ..... **NIST Calibration Certificate**
R8080-NIST ..... **Sound Level Meter & NIST**

REED INSTRUMENTS

The Right Source.
The Right Solutions.

1 YEAR REED WARRANTY

AC VOLTAGE/CURRENT DATA LOGGER

TECHNICAL DATA

NIST TRACEABLE CERTIFICATION Available!

FEATURES

- Simultaneously measure 2 True RMS AC voltage inputs OR 2 AC current inputs OR 1 AC voltage and 1 AC current input
- User programmable sample rates from 1 second to 24 hours
- Stores up to 256,000 measurements
- User programmable high/low alarms
- LCD indicates time/date, current readings, Max/Min, Peak hold and whether alarm settings have been exceeded
- Download collected data through USB interface
- Auto power off and battery check
- Includes AC current clamp sensor, AC Adapter and voltage sensor, USB cable, software, and battery

SPECIFICATIONS

AC Current Range: 15 to 200A
Resolution: 0.1A
Accuracy: ±(2% rdg. ±1A)
AC Voltage Range: 10 to 600V
Resolution: 0.1V
Accuracy: ±(2% rdg. ±1V)
Power Supply: 4 AAA batteries and 1 CR 3V memory button battery (CR2032)
Dimensions: 114 x 63 x 34mm (4.5 x 2.5 x 1.3")
Weight: 248g (8.7 lb)

ORDERING INFORMATION

R5003 ..... **AC Voltage/Current Data Logger**
CERTIRE1 ..... **NIST Calibration Certificate**
R5003-NIST ..... **Data Logger & NIST**

REED INSTRUMENTS

The Right Source.
The Right Solutions.

REED 1 YEAR WARRANTY

THERMO-HYGROMETER/ DATA LOGGER

TECHNICAL DATA

FEATURES

- Measures relative humidity as well as temperature with a type J/type K thermocouple thermometer
- Also measures dew point and wet bulb temperatures
- Automatic temperature compensation
- Easy to read LCD with backlight
- Data hold and Max/Min record
- Real time data logger with integral 4GB SD memory card (OPTIONAL)
- Just plug the SD card into the computer and it downloads directly to EXCEL
- RS-232 and USB computer interface
- Auto or manual power off

NIST TRACEABLE CERTIFICATION Available!

SPECIFICATIONS

Humidity Range: 5% to 95% RH
Resolution: 0.1% RH
Accuracy: ≥70% RH: ± (3% reading + 1% RH)
< 70% RH: ± 3% RH
Temperature Range: 0 to 50°C (32 to 122°F)
Resolution: 0.1°C/°F
Accuracy: ±0.8°C (±1.5°F)
Dew Point Range: -25.3 to 48.9°C (13.5 to 120.1°F)
Resolution: 0.1°C/°F
Wet Bulb Range: -21.6 to 50.0°C (-6.9 to 122.0°F)
Resolution: 0.1°C/°F
Type K Temp.Range: -100.0 to 1300.0°C (-148.0 to 2372°F)
Resolution: 0.1°C/°F
Accuracy: ±(0.4% +0.5°C/+1°F)
Type J Temp.Range: -100.0 to 1200.0°C (-148.0 to 2192°F)
Resolution: 0.1°C/°F
Accuracy: ±(0.4% +0.5°C/+1°F)
Power Supply: 6 x 1.5V UM3/AA batteries
Dimensions: 177 x 68 x 45mm (7.0 x 2.7 x 1.9")
Weight: 515g (1.13 lb)

ORDERING INFORMATION

SD-3007 ..... **Thermo-Hygrometer/Data Logger**
TP-01 ..... **Type K Thermocouple Wire Probe**
SD-4GB ..... **4GB SD Memory Card**
USB-01 ..... **USB Cable**
CA-05A ..... **Soft Carrying Case**
SW-U801-WIN ..... **Data Acquisition Software**
BS-6 ..... **Tripod**
AP-9VA-110V ..... **AC adapter**
CERTITH1 ..... **NIST Calibration Certificate**
SD-3007-NIST ..... **Thermo-Hygrometer & NIST**