Rec 10/5/18

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MTSU Clean Energy Initiative Project Funding Request

1. General Information	
Name of Person Submitting Request Connie Casha	
Department/Office Early Learning Program/COE	Phone # (Office) 615-898-5506
MTSU Box # 93	Phone # (Cell) 615-545-0924
E-mail connie.casha@mtsu.edu	Submittal Date 10/5/18

2. Project Categories (Select One)			
Select the category that best describes the project.			
☑	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 Ann Campbell Early Learning Center LEDs
3b. Project Cost Estimate $5,696
3c. Source of Estimate Etrenzik Lighting
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

This project involves replacing the current lighting at the Ann Campbell Early Learning Center classrooms and office area with LED lighting.

4b. Scope: Benefit Statement

Approval of this project would improve the quality and efficiency of lighting at the Learning Center, while reducing the environmental impact.

4. Project Description (continued)

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

Ann Campbell Early Learning Center

4d. Participants and Roles

Connie Casha: project coordinator
Etrenzik Lighting: installation

4e. Student participation and/or student benefit

This project will benefit students by providing more efficient lighting with reduced glare in classrooms.

4f. Future Operating and/or Maintenance Requirements

The LED lights will need to be replaced in about ten years.

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

Entrenzik Lighting was recommended by Murfreesboro City Schools.

Please see the attached energy and cost analysis, provided by Entrenzik Lighting.

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.)

49% reduction in annual energy usage (from 24,702 kW to 12,591 kW)

5b. Annual Energy COST Savings ($)

49% reduction in annual energy cost (from $2,470 to $1,259)

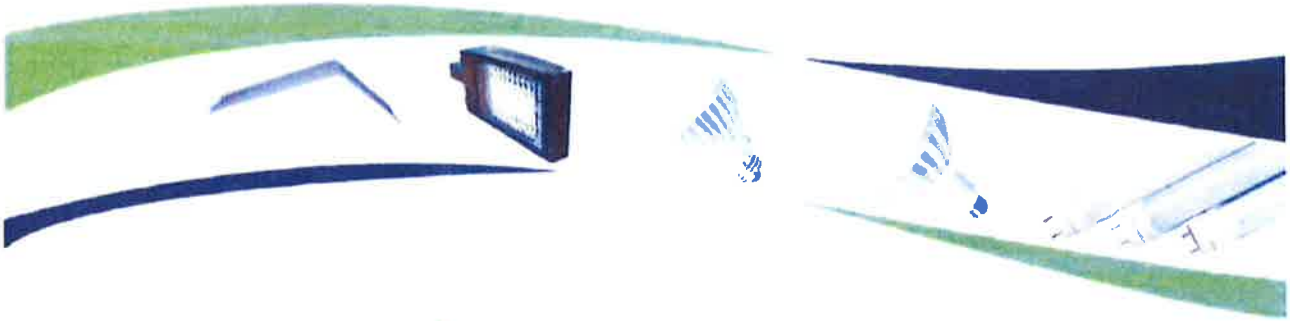
5c. Annual Operating or Other Cost Savings. Specify. ($)

44% reduction in maintenance cost (from $3,541 to $1,863)

TOTAL SAVINGS: 10-year operational savings of $16,783
ROI: 2 years

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

N/A



etrenzik

Building Name

Project Help/Ace Learning Center

Proposal Name

Etrenzik LED Lighting Upgrade

A Proposal For

Connie Cashe
Director Early Learning Center
Office of Early Learning Center

Tuesday, May 2, 2017

Executive Summary

With our sole objective being making your business more profitable by reducing your costs, streamlining the processes and generating new source of revenues, we have performed a lighting audit and assessment to identify ways to meet these profit improvement objectives following which we have created the proposal of our recommendation for improving the areas and spaces examined during the survey of your facility with a new lighting solution.

Project Overview

Cost of Project

Total Project Cost	$5,696
Less Rebates and Incentives	$(3,171)
Net Cost of Project	**$2,525**

Annual Operating Savings

Energy Savings	$1,211
Maintenance Savings	$467
Total Annual Operating Savings	**$1,678**

Operating Savings Over 10 Years

Energy Savings	$12,111
Maintenance Savings	$4,672
Total Operating Savings Over 10 Years	**$16,783**

Payback Period (years)	**2.0**

Financial Summary

Total Cost	Net Cost	10 Year Operating Savings	Payback (years)	NPV	IRR
$5,696	$2,525	$16,783	2.0	$9,955	72.86%

Cash Flow

We understand that finalizing a project like this often takes time. But each day you delay your upgrade to the energy efficient lighting we have recommended, you are missing out on the opportunity to reduce your operating expenses. As shown below, the lost opportunity continues to compound over time.

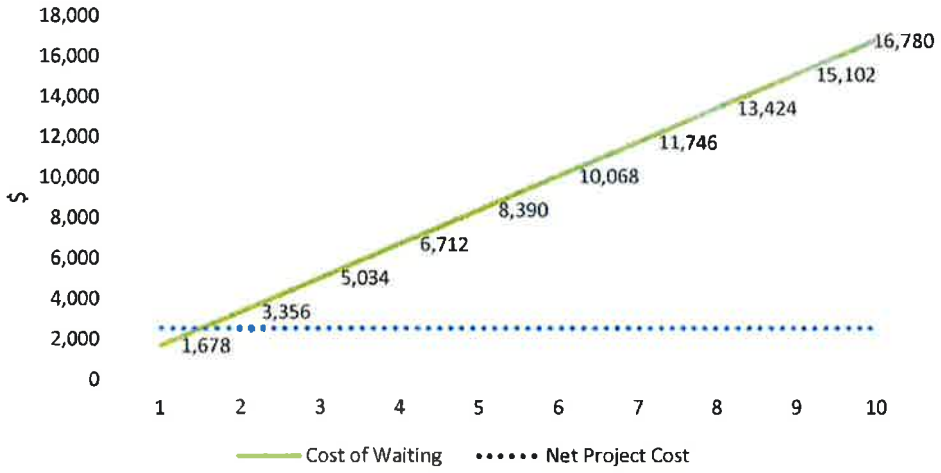
10 Year Cash Flow Analysis
(Years 1 to 5)

	Year 1	Year 2	Year 3	Year 4	Year 5
Product Costs	$2,731	-	-	-	-
Installation Services	$2,965	$0	$0	$0	$0
Incentives	$3,171	$0	$0	$0	$0
Energy Savings	$1,085	$1,085	$1,085	$1,085	$1,085
Maintenance Savings	$0	$450	$324	$126	$0
HVAC Savings	$127	$127	$127	$127	$127
Net Cash Flow	$(1,314)	$1,661	$1,535	$1,337	$1,211
Cumulative Cash Flow	$(1,314)	$347	$1,882	$3,220	$4,431

Cost Of Waiting

The cost of waiting shows the amount of cash your company will be losing if you do not move forward with the proposed lighting upgrade today. Each year that you do not move forward with the proposed solutions means another year of lost opportunity cost.

Monthly	Yearly	10 Years
$139	$1,678	$16,780



Operational Overview

While energy is the largest long-term cost of lighting, the cost for maintaining your lighting system can be a significant expense of your overall operational lighting expense. Maintaining your lighting system is critical to achieving the productivity you are trying to achieve with your lighting levels. And maintenance is not free. Understanding the impact of longer lasting lighting systems on your operational costs is critical.

Operational Savings Summary

Operational Area	Current Annual	Projected Annual	Reduction	Current 10 Year	Projected 10 Year	Reduction
Energy [1,2]	$2,470	$1,259	49%	$24,702	$12,591	49%
Maintenance[3]	$1,071	$604	44%	$10,714	$6,042	44%
Total	**$3,541**	**$1,863**	**47%**	**$35,416**	**$18,633**	**47%**

1. *Energy cost = $0.1000/kWh; Annual energy cost escalation = 0.00%*
2. *Energy costs are averaged over 10 year analysis period*
3. *Maintenance costs are averaged over 10 year analysis period*

Operational Savings Comparison

1. *Energy cost = $0.1000/kWh; Annual energy cost escalation = 0.00%*
2. *Energy costs are averaged over 10 year analysis period*
3. *Maintenance costs are averaged over 10 year analysis period*

Environmental Footprint

The metrics below estimate the benefits the environment will enjoy if you move forward with the lighting upgrade. These metrics include greenhouse gases from current and projected calculations.

Greenhouse Gas Analysis Summary

Current ($kgCO_2e$)	Projected ($kgCO_2e$)	Gases Avoided ($kgCO_2e$)	Reduction
17,435	8,887	8,548	49%