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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.shtml> for funding guidelines. Save completed form and email to cee@mtsu.edu or mail to MTSU Box 57.

1. General Information	
Name of Person Submitting Request Josh Stone	
Department/Office Campus Recreation	Phone # (Office) 615-904-8484
MTSU Box # 556	Phone # (Cell) 615-498-7831
E-mail josh.stone@mtsu.edu	Submittal Date 10/6/17

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	
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	Creating a more bicycle friendly MTSU
3b. Project Cost Estimate	\$24,785
3c. Source of Estimate	This estimate is from Tolar Manufacturing, Beech construction, and MOAB bike shop and is consistent with previous projects
3d. If previous funding from this source was awarded, explain how this request differs?	This is a continuation of a large scale project to increase access to bicycle use while also providing a better built environment that promotes bike use and less car use

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

The first part of work to be completed will be for the installation of a new covered bike parking shelter at in proximity to the KUC and McCallie dining. Having installed 6 shelters previously, it has been proven that they receive great use and encourage people to ride their bikes due to having a secure place to lock up their bike that is safe from the weather. In addition, it's location will encourage others to use the roadway to ride their bike and to stay off of the pedestrian corridor.

The second part of work will be the purchase of 12 more commuter bikes and locks for the commuter bike rental program. These bikes will be inventoried, maintained, and rented by the Campus Recreation bike shop.

4b. Scope: Benefit Statement

The average commute by a cyclist is 4 miles a day. During the semester, 32 of our bikes are being used 7 days a week by students commuting for 15 weeks, which equates to average 13,440 miles of travel per semester by our rental bikes, or close to 27,000 miles per school year. The addition of 12 bikes would bring this number up to 37,000 miles of commuter bike use in a typical school year. The national average of miles per gallon for American cars and light trucks is 23.6 mpg. Using this data, our commuter bike program would roughly save 1,567 gallons of gas from being used annually. In addition, CO₂ emissions from a gallon of gasoline is 8887grams per gallon. Using this data, adding 12 more bikes to our rental fleet would potentially eliminate 379,580grams of CO₂ emitted during the semester.

<p>4. Project Description (continued)</p>
<p>4c. Location of Project (Building, etc.)</p> <p>The bike shelter will be installed outside the KUC in proximity to the LRC and McCallie Dining Hall, which will allow it to serve a larger base of cyclists. The new commuter bikes to be bought will be housed at Campus Recreation's bike shop and will be used throughout MTSU and the surrounding area for commuting.</p>
<p>4d. Participants and Roles</p> <p>The shelters will be ordered through Campus Planning, who will also take on the project of coordinating the installation and final approval of install. MTSU Campus Recreation will take on the responsibility of inventorying bikes, renting out the bikes, maintaining the bikes, and also promoting the safe use of commuter bikes throughout campus. In addition, Campus Recreation will be programming different workshops on bike maintenance and safe commuting.</p>
<p>4e. Student participation and/or student benefit</p> <p>This proposal is in response to an overwhelming demand of student participation in our rental program that currently exists. The demand has far exceeded the supply.</p> <p>The student benefit with this program is that they have a less expensive way of commuting while also drastically reducing their environmental impact. Students no longer have to drive at low speeds looking for parking spots, but instead participate in a healthier way of transportation while also reducing their commute time.</p>
<p>4f. Future Operating and/or Maintenance Requirements</p> <p>The bikes purchased will require weekly, monthly, and annual maintenance to ensure longevity, including the purchase of parts as they wear out. Campus Recreation's bike shop will take on this responsibility. With proper maintenance, fleet bikes can easily last 10+ years. The operational responsibilities of bike rental will also be taken on by Campus Rec's bike shop. The maintenance of the bike shelters will be a collaborative responsibility between Campus Recreation and Campus Planning.</p>
<p>4g. Additional Comments or Information Pertinent to the Proposed Project</p> <p>This project is a continuation of a project started in 2013. The student response has been overwhelming during this time, with our rental demand always exceeding our rental supply. It can be estimated that over 100,000 miles have been logged on our rental bikes, which equates to over 4,500 gallons of gas that is not being used for vehicle commuting. This also equates to a reduction of approximately 88,166 lbs of CO2 into the atmosphere.</p>

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.)

Energy savings can be calculated by calculated through reduction of green house gases through the reduced consumption of gas when students have an option to ride a bike instead of driving their vehicle. This is especially important for cars at low or idle speeds, which increases the emission of greenhouse gases. As stated earlier, this could reduce CO2 emissions by 30,700 lbs of CO2 annually.

5b. Annual Energy COST Savings (\$)

With the addition of 12 bikes to our commuter fleet, an estimated 10,080 miles will be used by bike instead of cars. This is a savings of 427 gallons of gas, or close to \$1,000 in fuel savings. Other savings include less wear and tear on road infrastructure as well as the added benefit of increased health. Lastly, by increasing the number of students on bikes, MTSU will ultimately save on having to find more space for the creation of parking spots on campus.

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

This project is supplemented by an allocated supporting budget of over \$6000 provided by Campus Recreation. Some of this funding is recovered via rental fees for bikes and also maintenance fees collected for the repair of student's personal bikes in our bike shop. Ultimately, through this long range master plan, the university will save money by not having to create as many parking spaces as well as by reducing vehicular impact on roads and automobile infrastructure.

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

Supplementary funding comes from Campus Recreation in supporting the long range vision of making MTSU more bike friendly. Campus Recreation provides funding for student mechanic wages, space for housing a bike shop, and all tools and parts necessary for upkeep and maintenance of rental bikes.

Budget For Fall 2017 Green Energy Grant

Item	Cost	Quantity	Total
Tolar Bike Shelter	\$8,690.00	1	\$8,690.00
Shipping of bike shelter	\$2,600.00	1	\$2,600.00
Concrete pad for bike shelter	\$4,485.00	1	\$4,495.00
Kryptonite U Lock for bikes	\$25.00	12	\$300.00
Diamondback Haanjo Terro	\$725.00	12	\$8,700.00
TOTAL			\$24,785.00