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Rec 2/22/11

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: Dr. Cliff Ricketts	
Department/Office: Agribusiness & Agriscience / SAG 13	Phone # (Office): 898-2430
MTSU Box #: 5	Phone # (Cell): 615-308-7605
E-mail: srickett@mtsu.edu	Submittal Date: February 22, 2011

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: Hydrogen Storage Infrastructure for Cross Country Travel on Sun and Water
3b. Project Cost Estimate: $62,000
3c. Source of Estimate: Dynetek Industries
3d. If previous funding from this source was awarded, explain how this request differs? NA

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

A mobile hydrogen storage system will be developed so that a vehicle can be driven across the USA on only sun and water. Last fall, MTSU had a Hydrogen Vehicle which was driven across the State of Tennessee (Bristol, VA to West Memphis, AK) on only Sun and Hydrogen from Water. The hydrogen is separated from water by the use of an electrolysis unit powered by the sun using a solar unit in conjunction with TVA's Generation Partners, Green Power Switch Program. All of this is on the MTSU campus. The hydrogen vehicle was also developed on the MTSU Campus. A key challenge on holding back the development of hydrogen powered vehicles is the infrastructure. MTSU can be the leader in the nation on providing a model how completely clean energy is possible by using only our natural resources of sun and water. The President mention running vehicles off sun and water in the State of the Union Address. It makes me wonder if he already knows that MTSU is a leading the way in clean energy.

4b. Scope: Benefit Statement

The Green Fee was established to provide clean energy. Part of the monies was designated for research. This request is for research, demonstration and action. The benefit will be that a model will be created to show that producing and running vehicles on completely clean energy is a reality and not a goal or a dream. Besides clean energy, this project has economic implications since money is not being spend on foreign oil. It also has world peace implications since there would not be a need to endanger the lives of young Americans to keep oil flowing in certain parts of the world.

4. Project Description (continued)

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

The location(construction) of the project would be in the Vocational Agriculture Building. This is the location of the 10 kilowatt solar unit, electrolysis unit and the alternative vehicle vehicles.

4d. Participants and Roles

The construction of the system will involve MTSU students and staff. MTSU students will be involved in the cross country demonstration of the sun and water vehicle trip from coast to coast. Tentative plans are starting in Savannah, Georgia and ending at Long Beach outside Los Angeles, California. The students will be involved in distributing the mobile hydrogen storage units along the Interstate route across the country as well as other duties as needed.

4e. Student participation and/or student benefit

See above(4d) for student participation. The benefits to students will long term rather than immediate. Talk is cheap. Actions are far greater. Just as college itself is for long term benefit rather than immediate, thus, the thrust of this proposal, long term.

4f. Future Operating and/or Maintenance Requirements

None

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

I fully realize that this proposal goes far beyond the MTSU campus. However, when Brandon Armstrong helped start the Green Fee initiative several years ago, I don't believe even Brandon realized the potential global impact that the Clean Energy Fee (formerly Green Fee) could have. I believe such an endeavor could become a model for other universities with similar programs where students are making a difference.

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 ($)

Considering a person drives an average of 25,000 miles per year and averages 25 miles per gallon, this equals to 1,000 gallons of gasoline. At $3.00 per gallon this equals $3,000 per person. Theoretically, if 24,000 MTSU students were to take advantage of this process, this would amount to $72,000,000 not being spend annually by MTSU students on gasoline. Just think how this translates statewide and nationally. When I was an MTSU student in the Fall of 1966, computers filled a classroom. Now, they will fit in a pocket or purse and do more.

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

See above

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

Tractor Supply Company has been a corporate partner for 20 years. Their funding will be used for lodging and mileage expense to distribute the mobile hydrogen storage units in the cross country demonstration as well as related expenses on the project.

Subject: Re: Ricketts proposal, spring 2011 clean energy
From: "S. Cliff Ricketts" <srickett@mtsu.edu>
Date: Tue, 22 Feb 2011 10:49:54 -0600 (CST)
To: "Linda Hardymon" <lhardymo@mtsu.edu>
CC: jwhitefi@mtsu.edu

Linda,

I wish the committee would come over for a presentation. I could give them an overview of everything that is involved. This probably will not get funded, but I believe it would be one of the most awesome things in the US by any university to drive across the country off just sun and water. Actually, everything is in place except for the storage.

I really do not know what could ever top it and for it to be sponsored by MTSU makes it even more fabulous. Plus, I am going to be 63 this fall, and I will not have that many more opportunities. I did not state in the proposal that over $250,000 additional in-kind supplies, equipment, etc is in place to make this happen, plus, 25 years of research.

Have a great day,

Cliff

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---- Original message ----

Date: Tue, 22 Feb 2011 10:12:06 -0600
From: Linda Hardymon <lhardymo@mtsu.edu>
Subject: Re: Ricketts proposal, spring 2011 clean energy
To: Kym Stricklin <kstrick@mtsu.edu>
Cc: cee@mtsu.edu, "'Cliff Ricketts'" <srickett@mtsu.edu>

Thanks. Good luck!
Linda

On 2/22/2011 9:55 AM, Kym Stricklin wrote:

To: Clean Energy Initiative Committee

From: Cliff Ricketts, Agribusiness and Agriscience

Please see attached proposal for spring 2011.

Submitted on behalf of Cliff Ricketts.