

PMC-ND
(1.08.09.13)

**U.S. DEPARTMENT OF ENERGY
OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY
NEPA DETERMINATION**



RECIPIENT:The Curators of the University of Missouri on behalf of Missouri University of Science and Technology STATE: **MO**

PROJECT TITLE : The Mid-America Regional Microgrid Education and Training Consortium

Funding Opportunity Announcement Number DE-FOA-0000856 **Procurement Instrument Number** DE-EE0006341 **NEPA Control Number** **CID Number** GO6341

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:

CX, EA, EIS APPENDIX AND NUMBER:

Description:

- A9 Information gathering, analysis, and dissemination** Information gathering (including, but not limited to, literature surveys, inventories, site visits, and audits), data analysis (including, but not limited to, computer modeling), document preparation (including, but not limited to, conceptual design, feasibility studies, and analytical energy supply and demand studies), and information dissemination (including, but not limited to, document publication and distribution, and classroom training and informational programs), but not including site characterization or environmental monitoring. (See also B3.1 of appendix B to this subpart.)
- B5.15 Small-scale renewable energy research and development and pilot projects** Small-scale renewable energy research and development projects and small-scale pilot projects, provided that the projects are located within a previously disturbed or developed area. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the MidAmerica Regional Microgrid Education and Training (MARMET) Consortium to integrate cutting-edge research and advanced instructional methods to create a flexible, evolving approach to microgrid and distributed energy resources training for all levels of student. DOE funding would be used to develop education and training programs, research activities, curriculum development, and to install a fuel cell for microgrid training.

The fuel cell would be installed within the footprint of the Missouri University Science and Technology (Missouri S&T) Microgrid, at the intersection of 10th Street and Poole Street in Rolla, Missouri 65401. The Missouri S&T Microgrid is the extension of the S&T Solar Village. The proposed installation of the fuel cell would act as a non-renewable distributed micro-generation source within the Missouri S&T Microgrid. The fuel cell would act as a base load generation for the solar village, currently at the site. It is home to four high efficiency residences, all with square footage less than 750 square feet, and some level of distributed renewable generation, including photovoltaic and solar thermal generation.

The site is roughly the size of one city block. The four homes occupy the four corners of the block, at the NW (2009), NE (2002), SW (2007), SE (2005) positions, with a sidewalk and courtyard in the middle. Each home is named for the year it was built. The microgrid housing facility, which would house the battery, bi-directional inverter, isolation transformer, switchgear, fuel cell, thermal storage tank, grid interconnect, electric vehicle charging circuit, and community solar bus, would be between the 2002 and 2005 homes, sitting at the West position of the village's city block.

The fuel cell housing facility would be approximately 14 feet long, by 12 feet wide, by approximately 9 feet tall at the wall. In order to match the aesthetic of the village, the housing facility would be made to resemble a garden shed. The dimensions of the fuel cell would be 36 in. wide, by 27 in. long, by 68 in. high. Electrical conduit would be run from the enclosure to each of the four solar residences. The trenching would be approximately 525 feet long by two feet deep by two feet wide. All installation work would be in previously disturbed areas.

The U.S. Fish and Wildlife Service (USFWS) Endangered Species Program website identifies four species in Phelps County as threatened or endangered: Running buffalo clover, Hine's emerald dragonfly, Indiana bat and Gray bat. Because the project would be located on previously disturbed land at an existing solar village and is small in scale, DOE has determined the project is not likely to affect the listed species. The proposed scope of work would not have any adverse impacts to cultural resources, floodplains or wetlands, as these resources are not known to occur at the proposed site.

Based on review of the project information and the above analysis, DOE has determined the research, development and field testing activities would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions contained in DOE categorical exclusion A9 "information gathering, analysis and dissemination," and B5.15 "small-scale renewable energy research and development and pilot projects," and is categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

This NEPA Determination does not require a tailored NEPA provision.

Kelly Daigle 9/19/2013

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____

 Electronically Signed By: Kristin Kerwin
NEPA Compliance Officer

Date: 9/19/2013

FIELD OFFICE MANAGER DETERMINATION

Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

- Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____

Field Office Manager

Date: _____