

PMC-ND

(1.08.09.13)

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



RECIPIENT: EdgePower Inc.

STATE: CO

**PROJECT TITLE :** Reducing Storage Cost with PV Forecasting and Load Control

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0001400	DE-EE0007858	GFO-0007858-001	

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:

<b>A9 Information gathering, analysis, and dissemination</b>	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.)
<b>B5.15 Small-scale renewable energy research and development and pilot projects</b>	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 EdgePower Inc. to design, develop, fabricate, and install prototype firmware at a site with commercial solar photovoltaic (PV) for a building-level demonstration project, in order to validate demand charge reduction by adding battery storage capabilities and integrated solar forecasting to existing storage load control hardware.

Activities associated with the proposed project would consist of: laboratory scale research and development of a battery storage system and load control algorithms; preliminary engineering and design of integrated hardware and software; site selection; deployment and validation of firmware at a pilot site within the U.S.; computer modeling to simulate electricity cost savings; data analysis; and stakeholder outreach. Design, development, and fabrication of project software and hardware would occur at the EdgePower offices in Prescott, AZ and Aspen, CO. Solar forecasting development work would take place at the Clean Power Research Office in Kirkland, WA. These offices are designed for this type of research; therefore, no modifications or new permits, additional licenses and/or authorizations would be necessary. At this time, the location of a proposed test site has not been identified. Site identification would occur during Task 2 of the proposed project. The potential host facility would either be a current EdgePower partner or a new partner with existing on-site solar energy management equipment.

Proposed deployment activities at a pilot site would involve installation of meteorological monitoring and load control hardware plus 45kW/90kWh battery system. Equipment would be installed by EdgePower or a certified local electrician at a currently existing commercial building equipped with solar PV. The selected site would have an EdgePower energy management control gateway installed along with a battery energy storage system, or, if the host site already utilizes an EdgePower gateway, it would be upgraded with the proposed firmware. Installed equipment would either be removed by EdgePower personnel at project end or left installed at the proposed test facility at customer request.

Physical modifications to the host site as a result of the proposed installation and demonstration activities would include the installation of solar monitoring equipment on the roof of an existing building, if required. Hardware dimensions would be approximately 12"x12" with communications cable to monitoring equipment inside the facility. The battery system would be stored indoors and would not require the construction of new facilities. Ground disturbance is not anticipated as a result of the proposed project activities. According to current demonstration plans, the system would likely be installed in an existing electrical or mechanical room at the host site. As such, no change in the use, mission or operation of existing facilities would arise out of this work. No new permits, licenses or authorizations would be required. Based on a review of current project information, DOE has determined that

installation of site-based hardware and demonstration activities would not have the potential to cause significant impacts on environmentally sensitive resources.

This authorization does not include modifications or installations on or within buildings of historic, archaeological, or architectural significance designated by Federal, state or local governments, property located within or immediately adjacent to a historic district, property 50 years or older, or property eligible for listing on the National Register of Historic Places. Should the Recipient seek to carry out such activities as described in the preceding sentence, the Recipient must first provide additional property details to the DOE Project Officer. Such activities are not authorized for Federal funding until the Contracting Officer provides written authorization on those activities. Should the Recipient elect to undertake such activities prior to written authorization from the Contracting Officer, the Recipient does so at risk of not receiving Federal funding for those activities, and such costs may not be recognized as allowable cost share.

The proposed project would involve the use and handling of electrical equipment and batteries potentially containing hazardous materials. All such handling would occur in-lab at EdgePower's Aspen, CO location and at the host customer site by trained personnel. EdgePower is an established energy management company dedicated to proper electrical protection practices, hazardous material handling, and disposal practices in compliance with all pertinent local, state, and federal regulations. Employee training, proper protective equipment, engineering controls, and safety monitoring would be implemented for all personnel involved in the proposed activities.

Based on the review of the proposal, DOE has determined the proposal fits within the class of action(s) and the integral elements of Appendix B to Subpart D of 10 CFR 1021 outlined in the DOE categorical exclusion(s) selected above. DOE has also determined that: (1) there are no extraordinary circumstances (as defined by 10 CFR 1021.410 (2)) related to the proposal that may affect the significance of the environmental effects of the proposal; (2) the proposal has not been segmented to meet the definition of a categorical exclusion; and (3) the proposal is not connected to other actions with potentially significant impacts, related to other proposals with cumulatively significant actions, or an improper interim action. This proposal 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 the Recipient intends to make changes to the scope or objective of this project, the Recipient is required to contact the Project Officer, identified in Block 15 of the Assistance Agreement before proceeding. The Recipient must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved. If the Recipient moves forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA decision, the Recipient is doing so at risk of not receiving Federal funding and such costs may not be recognized as allowable cost share.

Insert the following language in the award:

You are required to:

This authorization does not include modifications or installations on or within buildings of historic, archaeological, or architectural significance designated by Federal, state or local governments, property located within or immediately adjacent to a historic district, property 50 years or older, or property eligible for listing on the National Register of Historic Places. Should the Recipient seek to carry out such activities as described in the preceding sentence, the Recipient must first provide additional property details to the DOE Project Officer. Such activities are not authorized for Federal funding until the Contracting Officer provides written authorization on those activities. Should the Recipient elect to undertake such activities prior to written authorization from the Contracting Officer, the Recipient does so at risk of not receiving Federal funding for those activities, and such costs may not be recognized as allowable cost share.

Note to Specialist :

Solar Energy Technologies Office  
This NEPA determination requires a tailored NEPA Provision.  
NEPA review completed by Whitney Doss, 12/22/2016

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature:



Casey Strickland

Date: 12/22/2016

NEPA Compliance Officer

**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: \_\_\_\_\_