PMC-EF2a
(2.0402)

U.S. DEPARTMENT OF ENERGY
EERE PROJECT MANAGEMENT CENTER
NEPA DETERMINATION

RECIPIENT: Electric Power Research Institute, Inc. (EPRI) **STATE:** TN

PROJECT TITLE: Smart Grid Functionality; Smart-Grid Ready PV Inverter with Utility Communication

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000479	DE-EE0005337	GFO-0005337-002	EE5337

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.)
B3.6 Small-scale research and development, laboratory operations, and pilot projects	Siting, construction, modification, operation, and decommissioning of facilities for smallscale research and development projects; conventional laboratory operations (such as preparation of chemical standards and sample analysis); and small-scale pilot projects (generally less than 2 years) frequently conducted to verify a concept before demonstration actions, provided that construction or modification would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible). Not included in this category are demonstration actions, meaning actions that are undertaken at a scale to show whether a technology would be viable on a larger scale and suitable for commercial deployment.
B5.16 Solar photovoltaic systems	The installation, modification, operation, and removal of commercially available solar photovoltaic systems located on a building or other structure (such as rooftop, parking lot or facility, and mounted to signage, lighting, gates, or fences), or if located on land, generally comprising less than 10 acres 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.

Rational for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Electric Power Research Institute (EPRI) for the research, development and demonstration of smart-grid ready inverters with grid support functionality to capture the full value of distributed photovoltaic (PV). DOE funding would be used for the demonstration of inverters at EPRI partner sites.

A previous NEPA determination (GFO-0005337-001 CX A9, B3.6 11/09/11) was made that included Phase I research and development work. This NEPA determination applies to Phase 2 work at EPRI, Solectria, Detroit Edison Fuller (DTE), National Grid Everett and National Grid Haverhill.

Research and development activities would take place at the EPRI facility in Knoxville, Tennessee (942 Corridor Park Blvd Knoxville, TN 37932). The activities planned at the Knoxville facility consist of computer modeling and laboratory testing of prototype inverters. EPRI previously submitted an R&D questionnaire addressing the protocols for laboratory and facility safety, risk management and waste disposal.

Solectria Renewables would design and manufacture prototype photovoltaic inverters at its facility at 360 Merrimack Street, Building 9, Lawrence, Massachusetts. It would ship and assist in installation of the inverters at three demonstration sites: DTE Fuller, National Grid Everett and National Grid Haverhill. Solectria previously submitted an R&D questionnaire addressing the protocols for laboratory and facility safety, risk management and waste disposal.

Demonstration of the smart-grid ready inverters would occur at DTE Fuller solar PV system, currently under construction and located on the University of Michigan campus located on Fuller Road, Ann Arbor, Michigan. DTE would construct a 225 kW, grid connected PV system on a plot of land that was previously occupied by a campus building. Approximately 1.56 acres of land was excavated, including the removal of some trees for the PV installation. The fixed array would be 7 ft. tall by 130 ft. by 270 ft. It would include seven trackers that are 8 ft. by 10 ft. by 20 ft. each. Trenching would occur through the use of a directional bore. The trenching would be 700 ft. long, 5 ft. deep and

2-6 inches wide. Additional trenching would occur that is 600 ft. long by 2 ft. deep and 30 in. wide. The system would be visible from Fuller road as wells as from surrounding parking lots. The proposed scope of work would not have any adverse impacts to threatened or endangered species, floodplains or wetlands, as these resources are not known to occur at the proposed site. No cultural resources were known to occur in the area. Washtenaw County is part of the Southeast Michigan non-attainment area for particulate matter 2.5 (PM 2.5). DOE has determined the proposed project would not exceed emissions levels under the Southeast Michigan non-attainment area and therefore would not have adverse impacts PM2.5 emissions.

Demonstration of the smart-grid ready inverters would also occur at two existing National Grid PV systems located at (1) 600kW Everett PV Site, 14 Rover Street, Everett, Massachusetts and (2) 1 MW Haverhill PV Site, 123 Hilldale Avenue, Haverhill, Massachusetts. These systems were previously constructed on open field/land. National Grid would assist Solectria in the installation of the smart inverters and plant master controllers at the National Grid Everett and Haverhill PV sites. This would include testing and commissioning the installed inverters. The proposed scope of work would not have any adverse impacts to threatened or endangered species, floodplains or wetlands, as these resources are not known to occur at the proposed site. No cultural resources were known to occur in the area.

Based on review of the project information and the above analysis, DOE has determined the proposed activities would not have significant individual or cumulative impact to human health and/or environment. DOE has determined that the work outlined is consistent with the actions identified in categorical exclusion A9, "information gathering," B3.6, "small-scale research and development," and B5.16 "solar photovoltaic systems" 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 :

Kelly Daigle 4/22/2013

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 4/26/2013

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: _____ Date: _____

Field Office Manager