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(10/09/13)

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



RECIPIENT: GE Global Research Center

STATE: NY

PROJECT TITLE : Module Embedded Microinverter Smart Grid Ready Residential Solar Electric System

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000479	DE-EE0005344	GFO-0005344-002	GO5344

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.)
B5.16 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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to GE Global Research Center to develop and demonstrate power electronics technologies that address micro-inverter system limitations. DOE completed a previous NEPA review (GFO-0005344-001 CX A9 & B3.6 11/9/2011) authorizing power electronics research and development and prototype development. However, this determination excluded the proposed pilot demonstration based on the fact that they had not determined the location for said demonstration. This NEPA determination applies only to the pilot demonstration activities of the proposed project.

GE Global Research Center seeks to design, build, install and operate two pilot, smart grid-ready, photovoltaic systems with micro-inverter module interfaces. Building the prototypes of the micro-inverters and functional testing of the micro-inverters including grid connection communication and smart grid support functions would take place at GE Global's industrial research and development facility located at 1 Research Circle in Niskayuna, NY. Installation and operation of the 2.5kW solar photovoltaic system would take place in two separate locations: Innovative Test Solutions industrial testing facility located at 551 Kings Road in Schenectady, NY and SolarWorld Americas LLC's industrial facility located at 4650 25300 NW Evergreen Road in Hillsboro, OR. All of these locations are pre-existing sites and would require no additional licensing and/or permitting. No physical modifications would be made to any of the existing test setups. Panels in existing setups would be replaced by new panels with integrated micro-inverters.

Waste material generated by the proposed project would be disposed of according to local, state and federal regulations and no hazardous waste would be produced as a result of the proposed project. GE Global Research has OSHA and NFPA (National Fire Protection Association) 70E certified safety protocols implemented in the lab. Corporate health and safety policies and procedures would be followed, where proper protective equipment would be used by trained personnel to install the solar panels. As per GE policy an internal safety review would be performed before system operation to verify system safety before beginning of demonstration.

Based on review of the project information and the above analysis, DOE has determined the proposed project would not have a significant individual or cumulative impact to human health and/or the environment. DOE has determined the proposed project is consistent with actions outlined in DOE categorical exclusion A9 "Information gathering, analysis and dissemination" and B5.16 "Solar photovoltaic systems" and is therefore categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

100001


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.
Review completed by Rebecca McCord 07/29/2014.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____  **Electronically signed by: Kristin Kenwin** _____ Date: 7/30/2014
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

The U.S. Department of Energy (DOE) is preparing to issue a loan guarantee to GE Global Research Center to develop and demonstrate power electronics technology that address mid-voltage system limitations. DOE completed a previous NEPA review (DOE-2008-01-CX-AB-519-118031) authorizing power electronics research and development and prototype development. However, the determination included the proposed pilot demonstration based on the fact that DOE had not determined the location for said demonstration. This NEPA determination applies only to the pilot demonstration activities of the proposed project.

GE Global Research Center seeks to design, build, install and operate two pilot small-grid-ready photovoltaic systems with micro-inverter module inverters. Building the prototype of the micro-inverters and structural testing of the micro-inverters including fast correction construction and other grid support functions would take place at GE Global's industrial research and development facility located at 1 Research Circle in Westbury, NY. Installation and operation of the 2.8kW solar photovoltaic system would take place in two separate locations: Innovative Test Solutions industrial testing facility located at 220 Koyuk Road in Westbury, NY and SolarWorld America LLC's industrial facility located at 4600 250th Avenue Road in Hickory, NC. All of these locations are pre-existing sites and would require no additional permitting under existing Federal laws. Physical modifications would be made to any of the existing test areas. Plans for existing facilities would be replaced by new panels with installed micro-inverters.

Visual impacts caused by the proposed project would be minimal and would be addressed by local, state and federal regulations and no hazardous waste would be produced as a result of the proposed project. GE Global Research has a NEPA (National Fire Protection Association) Fire control safety protocol implemented in the lab. Corporate health and safety policies and procedures would be followed where proper protective equipment would be used if trained personnel to install the solar panels. As per DOE policy an internal safety review would be performed before system operation to verify system safety before beginning of demonstration.

Based on review of the project information and the above analysis, DOE has determined the proposed project would not have a significant impact on cumulative impacts to human health and/or the environment. DOE has determined the proposed project is consistent with categorical exclusion in DOE categorical exclusion AB "Information gathering and determination" and is therefore categorically excluded from future NEPA review.