

PMC-EF2a

(2.04.02)

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



RECIPIENT: City of Boston

STATE: MA

PROJECT TITLE : Integration of Solar Energy in the City of Boston's Emergency Preparedness Infrastructure

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
81.087	DE-EE0002071/001	GFO-10-255	EE2071

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 (including, but not limited to, literature surveys, inventories, audits), data analysis (including computer modeling), document preparation (such as conceptual design or feasibility studies, analytical energy supply and demand studies), and dissemination (including, but not limited to, document mailings, publication, and distribution; and classroom training and informational programs), but not including site characterization or environmental monitoring.
- B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

The City of Boston is proposing to use ARRA funding through DOE to install PV Panels along an emergency evacuation route in the City of Boston. PV panels also will be placed at a refueling station located at 200 Frontage Road Boston, MA 02118. Proposal tasks are described below.

1. Design and Build backup power PV system at Frontage Road Fueling Station

The City proposes to install a rooftop PV system to be used as a backup power supply for fuel supply pumping systems in event of a power outage. The system will also be integrated into the grid to provide year-round power for the Frontage Road facility. The proposed site for the 50kW installation is a service garage built in the 1960s and is not considered a historic building.

To mitigate any potential impacts from the construction of a 50 kW PV installation at the City's main municipal fueling station at 400 Frontage Road, the City of Boston will ensure that:

- All construction will be in accordance with city and state building permit requirements.
- A structural analysis will be completed as part of the system design.
- The City's Property and Construction Management division will be focused on ensuring that this installation is completed safely and within all code requirements.

A data acquisition system will be installed to provide real-time reporting and incorporated into any inverter installed as part of the project.

2. Design and Build backup power PV systems for Traffic Signals and Monitoring Systems

The City will provide solarized backup power to traffic signals at selected signalized intersection along the evacuation route corridor. The solar backup systems will also ensure that an existing fiber optic line that links the City's communications center to all signalized intersections along the corridor remains powered during a blackout and that BTD staff will be able to provide continuous communications to traffic control systems.

3. Design and Build Solar Street Lights for Evacuation Route

The use of solar powered LED street lights will be integrated into existing emergency related infrastructure, and will be grid-tied to help displace power consumption from the grid during normal duty cycles.

4. Procure and Install Variable Message Boards for Evacuation Route

Eight fixed solar powered variable message signs will be installed to instruct residents where to go in the event of an

emergency and will be controlled by the Boston Transportation Department's City Hall command center through the existing fiber optic communications network.

5. Procure and Install Solar Communication Repeaters

This task will integrate back-up solar/battery combinations into an existing network of radio repeaters that allow emergency responders to communicate via radio in all areas of the City. These critical systems have modest power requirements.

6. Project Management and Reporting

This task involves continuous evaluation of the performance of all installed solar systems. Detailed analysis of the system performance include various reports, deliverables, and a "lessons learned" document that details technical and other barriers encountered during the course of the project.

Any new metering equipment for the above systems will be installed behind existing utility meters.

The project comprises demonstrations of potential energy conservation and energy-efficiency activities along with data analysis and information gathering techniques; therefore it qualifies as a CX under A9 and B5.1.

NEPA PROVISION

DOE has made a final NEPA determination for this award

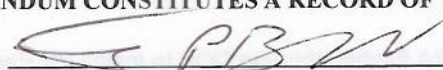
Insert the following language in the award:

Note to Specialist :

None Given.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:


NEPA Compliance Officer

Date: 3/21/10

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: _____