PMC-EF2a

(2.04.02)

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



RECIPIENT: Abound Solar, Inc.

STATE: IN

PROJECT TITLE: Market 5: Promote the Use of Green and RE Generation Facilities, Products, and its Supply Chain for the

Purpose of Reducing Greenhouse Gases.

Funding Opportunity Announcement Number Procurement Instrument Number NEPA Control Number CID Number DE-FOA-0000052

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:

- 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.
- **B1.31** Relocation of machinery and equipment, such as analytical laboratory apparatus, electronic hardware, maintenance equipment, and health and safety equipment, including minor construction necessary for removal and installation, where uses of the relocated items will be similar to their former uses and consistent with the general missions of the receiving structure.

Rational for determination:

The State of Indiana is proposing to use \$5,000,000 of SEP Recovery Act funds to support the start-up of a new solar panel manufacturing plant in Tipton, IN. Funding to complete the start-up of the facility consists of a loan guarantee from the DOE Loan Guarantee Program, approximately \$175-million from Abound Solar, and \$5-million from the DOE SEP Recovery Act Program.

The site comprises approximately 103.2 acres located directly northeast of the intersection of Indiana State Road 28 and U.S. Highway 31. The facility, constructed in 2007, houses the following buildings:

A 490,000-square-foot (ft2) manufacturing building (700 ft by 700 ft)

 A 175,000 ft2 warehouse building (700 ft by 250 ft) that is connected to the manufacturing building by a service corridor that is 250 ft long and 75 ft wide

A 34,000 ft2 outbuilding that houses internal building utilities

Additional property surrounds the building, which contains landscaping, solid waste receptacle area, and employee parking areas. Agricultural land comprises the remainder of the site. The facility is a newly constructed shell with an unfinished interior. The facility has never been occupied.

The \$5-million in SEP ARRA funds will be used to purchase and install equipment that is integral to the production of solar modules including: a module assembly and test, Cadmium Chloride rinse, glass (i.e., solar panel) wash, a scribe (for depositing silicon oxide on a silicon wafer), and a sputtering (a system for treating amorphous silicon solar cells). This equipment will be used in the production of Cadmium Telluride solar power modules and thin film PV modules.

Almost all modifications are expected to occur within the existing buildings, with the exception of a fire suppression water tank. No construction of transportation infrastructure, parking lots, access roads, railroad links, pipelines, transmission facilities are proposed. No site clearing or excavation is proposed.

The Abound plant will require a minor source air permit, which is being sought. The facility houses a wastewater treatment plant and a potable water treatment plant. There is adequate water supply to the existing facility to meet Abound Solar's needs. There are two storm water retention basins on the property. No impact on floodplains or wetlands is expected. There are no expected impacts to threatened or endangered species.

Solid and hazardous waste include aluminum scrap, Lucite, cadmium chloride byproducts, waste filters, polyester and polyethylene film trimmings, backing paper and tin plated copper tape trimmings, poly-isobutyl waste, and silicon waste. Abound Solar will dispose of all solid and hazardous wastes off-site at approved disposal facilities in

accordance with applicable regulations. The project includes plans for a cadmium chloride reclamation process to recover cadmium chloride for reintroduction into the manufacturing process. Abound expects a 95 percent recovery rate, which will reduce hazardous waste production. The facility will be registered as a large quantity hazardous waste generator. The primary hazardous wastes will be heavy metals. The facility has a waste water treatment facility and Abound will implement a water treatment process inside the buildings to extract heavy metals (cadmium and copper). All contaminated production wastewater will be pretreated prior to discharge. Abound will obtain a pretreatment permit for this operation.

The facility will use small quantities of industrial solvents, flammable liquids, and corrosive materials. Permits are being sought to manage use according to applicable regulations. All chemical storage areas will be within the existing structures and the areas in which these materials are to be stored or utilized will have secondary containment to ensure control from unplanned releases. All floor drains in these areas are to be blanked and blinded to ensure that an unplanned release would not migrate to a drain and enter the wastewater treatment facility or be released to the environment. Abound has stated that it will work with the fire marshal of Tipton County to develop a hazardous materials management plan and ensure that it meets or exceeds NFPA hazardous materials storage requirements.

The facility is designed with 810 parking spaces. Although Abound will employ up to 1,000 workers, it plans to operate on a four-shift basis. Traffic associated with Abound's operations are expected to be considerably less than what the facility and traffic authorities contemplated when the facility was initially built.

In view of the information provided by the State and Applicant, that the facility is designed to be environmentally neutral; that plant construction is not expected to affect the physical structure of existing buildings or surrounding; that waste stream generation will comply with State and local permits; and that proper measures are being taken in the design, construction, and operation of the facility to ensure safe operations, I have determined that this project can be classified as Categorical Exclusion B5.1 and B1.31. This Determination has been made in consideration of the full scope of the project.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist:

According to the Project Officer, funding for this project is \$5,000,000. This NEPA Determination has been

	Field Office Manager		
Fie	eld Office Manager's Signature:	Date:	
BA	SED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO:		
	Manager's attention. Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's re-		
	Proposed action fits within a categorical exclusion but involves a high profile or controversial issue	that warrants Field Office	
NC	CO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASO	ON:	
	Field Office Manager review required		
FII	ELD OFFICE MANAGER DETERMINATION		
NE	PA Compliance Officer Signature: NEPA Compliance Officer	Date:	
SIC	GNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.	alula	
	the NEPA Determination of the DOE Loan Guarantee Office, a change in funding will not af		