

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Sun Power, LLC**STATE:** MO

PROJECT TITLE: Reusable Solar PV Module Pallet (PVpallet)

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
	DE-EE0009334	GFO-0009334-001	

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Policy 451.1), 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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide funding to Sun Power, LLC to develop reusable, recyclable, high-density polyethylene pallets with sidewalls as a shipping, handling, and storage solution for solar PV modules.

Proposed project activities would include prototype design and development, performance testing, stakeholder outreach and feedback, and cost model development. Prototypes of PV pallets would be designed in batches and modifications would be made based on testing and stakeholder feedback. Approximately eight prototypes would be fabricated using high-density polyethylene and aluminum or steel support rods. Each pallet would be evaluated for performance in warehouse settings, during shipping, and on solar PV construction sites in which they would be tested for stackability, shipping and handling resiliency, overall durability, and ease of use. A financial model would be used to simulate the total lifecycle costs and financial benefits of the PV pallets. The final iteration would be sent to an independent certification firm for final testing and certification.

Sun Power LLC would lead a team of project partners in performing activities. Sun Power activities would include project management, stakeholder outreach, prototype design, fabrication of desktop prototypes using 3D printing, and full-scale prototype testing in a warehouse setting. 20/20 Custom Molded Plastics, Inc and TEE Holding, contractors on the project, would assist in fabrication and testing. At the 20/20 Custom Molded Plastics fabrication facility, activities would include low-pressure HDPE injection molding, mold calibration/adjustments, mold modifications between prototype iterations, manual assembly of pallet components, and any other necessary fabrication/assembly-related activities. Field testing would be done at Sun Power and at the TEE Holding test site location. Testing would include activities such as hitting pallets with the forks of a forklift, moving pallets in and out of a truck multiple times, or dropping pallets from certain heights. Underwriter's Laboratory, Inc, Van Meter, Inc, Tri-State Renewable Energy, Mission Solar, LG Solar, and First Solar would also assist in prototype testing which would occur indoors. No permanent installations or ground disturbing activities would occur. These existing facilities are purpose-built for the type of activities being proposed; therefore, no adverse impacts to sensitive resources are

expected as a result of the proposed activities at these locations.

No permits or changes to the use, mission, or operation of existing facilities would be required as part of this project.

Any health and safety risks would be mitigated through adherence to established health and safety policies and procedures including employee training, use of proper protective equipment, engineering controls, monitoring, and internal assessments. Sun Power and its project participants would observe all Federal, state, and local environmental, health, and safety regulations. Waste products would be recycled or disposed of by licensed waste management service providers.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Solar Energy Technologies Office

This NEPA determination does not require a tailored NEPA provision.

Review completed by Shaina Aguilar on 1/21/21.

FOR CATEGORICAL EXCLUSION DETERMINATIONS

The proposed action (or the part of the proposal defined in the Rationale above) fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D. To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposed action that may affect the significance of the environmental effects of the proposal.

The proposed action has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

The proposed action is categorically excluded from further NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:

 Kristin Kerwin
NEPA Compliance Officer

Date: 1/22/2021

FIELD OFFICE MANAGER DETERMINATION

- Field Office Manager review not required
- Field Office Manager review required

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature:

Field Office Manager

Date: _____