

Record of Categorical Exclusion for
Solar Junction's 100 MW Manufacturing Line
Solar Junction Corporation

Description of Proposed Action:

The Department of Energy's (DOE's) proposed action is to issue a loan guarantee to Solar Junction to finance a 100 Megawatt (MW) solar cell manufacturing line for multi-junction photovoltaic (PV) solar cells to expand their existing 7 MW Demonstration Facility at 401 Charcot Ave, San Jose, California, 95131. The proposed project will commercialize an entirely new class of high-efficiency solar cells and concentrating PV components that incorporate high performance junctions formed with a tunable band gap semiconductor material, Gallium Indium Nitride Arsenide (GaInNAs).

The project would involve the installation of production tools, test equipment, and the support systems necessary to produce multi-junction PV solar cells within the existing 55,610 square foot building where the Demonstration Facility is housed. The manufacturing line would include all equipment required to manufacture solar cells from Gallium Arsenide (GaAs) wafers with the end product either singulated cells or integrated receiver assemblies. The semiconductor process to be implemented includes photolithography, wet etching, and evaporation. In addition, the packaging portion of the line will include packaging equipment and wire bonding of the cell to the package. Minor construction of exterior material storage and a waste neutralization system is anticipated. The waste neutralization system (250 sq ft) would be installed in an exterior parking lot and would involve excavation for sewer connections.

Most of the hazardous wastes produced on-site are a dilute aqueous acidic or basic solution used in the production process. Currently, Solar Junction has wastewater trucked off-site. However, with the higher quantities that would be generated by the expanded facility, Solar Junction would treat the acid and caustic hazardous waste in the new waste neutralization system and the neutralized water (about 1,000 gpd) would be disposed of through the sewer system operated by the City of San Jose. No upgrades to the site's existing sewer service are expected to be required. However, an updated permit for wastewater discharge must be obtained from the San Jose/Santa Clara Water Pollution Control Plant. Solar Junction is currently in the process of preparing their wastewater permit application.

As a result of the planned facility expansion, an increase in hazardous waste production is expected. The facility currently operates under the Environmental Protection Agency Hazardous Waste ID#CAR000070540, as a small quantity generator. The increased production of hazardous waste would require a redesignation to a large quantity hazardous waste generator; Solar Junction is currently preparing their permit application for redesignation.

Air discharges from the production process would be scrubbed to meet Bay Area Air Quality Management District (BAAQMD) standards before being released into the atmosphere. Solar Junction's current air permit would require updating to account for higher flow rates for the expanded facility; once final design is complete.

It is estimated that 80 to 90 long-term production jobs would be created at the expanded facility.

The proposed loan guarantee would be made pursuant to Title XVII of the Energy Policy Act of 2005 which authorized DOE to make loan guarantees for projects that "avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases; and employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued." The two principal goals of the Title XVII loan guarantee program are to encourage commercial use in the United States of new or significantly improved energy-related technologies and to achieve substantial environmental benefits.

Number and Title of Categorical Exclusion:

The actions that would be taken pursuant to the loan guarantee for Solar Junction's 100 MW Manufacturing Line are covered by categorical exclusion B1.31, which includes equipment installation. The full text of the categorical exclusion is as follows:

B1.31, as provided in 10 CFR § 1021, Appendix B to Subpart D, 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.

Regulatory Requirements defined in 10 CFR § 1021.410 (b):

The proposed loan guarantee and related actions described above were subjected to an environmental due diligence review by DOE Loan Programs Office (LPO) staff to ensure they are consistent with the specific category of actions (categorical exclusion) contained in Appendix B of 10 CFR Part 1021 and the conditions for applying categorical exclusions specified in Section 410 of Part 1021. To ensure that the requirements of Appendix B were met, LPO staff reviewed the loan guarantee application submitted by Solar Junction. The results of the environmental due diligence review produced the following conclusions:

- The proposed loan project does not threaten a violation of applicable statutory, regulatory or permit requirements for environmental, safety and health, including DOE and /or Executive Orders;
- The proposed loan project does not require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities;

- The proposed loan project does not disturb hazardous substance, pollutants, contaminants or CERCLA-excluding petroleum and natural gas products that pre-exist in the environment such that there would be uncontrolled or unpermitted releases;
- The proposed action is not a connected action as set forth in 40 CFR § 1508.25(a)(2)); and
- The proposed action is not part of a DOE proposal for which an EIS is being prepared and therefore a categorical exclusion is not precluded by 40 CFR § 1506.1 or 10 CFR § 1021.211.

The environmental due diligence review also determined that the proposed project associated with the loan guarantee does not adversely affect any environmentally sensitive resources, including the following:

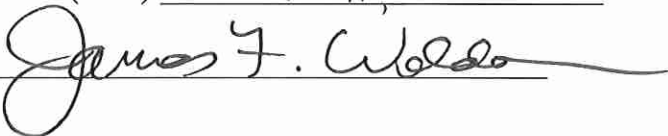
- Property of historic, archaeological, or architectural significance designated by Federal, state, or local governments or property eligible for listing on the National Register of Historic Places;
- Federal-listed threatened or endangered species or their habitat (including critical habitat), Federally-proposed or candidate species or their habitat, or state-listed endangered species or their habitat;
- Wetlands regulated under the Clean Water Act (33 U.S.C. 1344) and floodplains; or
- Special sources of water (such as sole source aquifers, wellhead protection areas, and other water sources) that are vital in a region.

The Corporate Validation below is an indication of Solar Junction's concurrence with the findings and determinations presented above. The Comment section below is provided for any necessary clarifications.

Comment: _____

Corporate Validation:

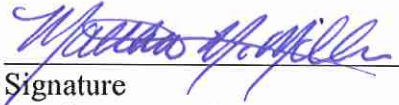
Name and Title (Print): Jim Weldon, CEO Date: 3/3/11

Signature: 

Determination:

Based on my review of information conveyed to me and in my possession concerning the proposed action, as NEPA Compliance Officer (as prescribed by DOE Order 451.1B), I have determined that the proposed loan and associated actions involve no extraordinary

circumstances (10 CFR 1021.410(b)) and fit within the specified category of actions in Appendix B of 10 CFR 1021 described above, and are hereby categorically excluded from further review under the National Environmental Policy Act (42 USC 4321, as amended).



Signature

Matthew McMillen
NEPA Compliance Officer
Loan Programs Office

3-4-11

Date