

Record of Categorical Exclusion for

Project Eagle Direct Wafer Manufacturing Plants

1366 Technologies

Description of Proposed Action:

The Department of Energy (DOE) proposed action is to issue a loan guarantee to 1366 Technologies (1366) for Project Eagle, which includes retrofitting and reequipping two existing facilities to produce standard multicrystalline silicon wafers for solar cells using 1366's proprietary Direct Wafer manufacturing process. 1366 would produce 20 megawatts (MW) of silicon wafers annually in its existing facility located at 45 Hartwell Avenue in Lexington, Massachusetts, and 980 MW of silicon wafers annually at an existing facility at [REDACTED].

1366 would begin Project Eagle in its existing 17,000 square foot facility located in Lexington, Massachusetts. The property is zoned industrial, and exterior portions of the property are comprised of paved parking/access drives and low-lying vegetation. 1366 has occupied the building since 2008. 1366 would renovate approximately 2,000 square feet of the existing building to accommodate at least four additional furnaces. There would be no outside construction and no new permits would be required, with the exception of a building permit. Renovations to the site would include selective demolition, utility service upgrades, interior wall and roof improvements, plumbing and electrical modifications, and related renovations to accommodate the additional furnaces.

The [REDACTED] site is approximately 24.2 acres, is zoned industrial, and contains a 330,000 square-foot vacant industrial building. Exterior portions of the property are comprised of paved parking/access drives and low-lying vegetation, and the site is entirely encompassed by a chain link fence. The property has been used for commercial and industrial purposes since at least 1968, and historical operations appear to be limited to the production of plastic products (i.e. plastic piping).

1366 is proposing to install and operate a Direct Wafer manufacturing plant at the existing industrial facility in [REDACTED]. The existing structure provides ample space for Project Eagle. The footprint of the existing building would not be expanded during construction. The construction limits shall be defined as the area encompassing the construction of the building, road way, and parking areas. No undisturbed land would be cleared or excavated as part of the project. It is anticipated that the following renovations would be done to the site: selective demolition and legal disposal of materials, inclusive of the demolition of the office area, exterior wall system, existing roof-top equipment, concrete at slab on grade trenches, and exterior concrete sidewalk; site improvements such as repaving sidewalks and parking lots; new roof and new exterior walls; renovations to interior walls, ceilings, and partitions; plumbing system that will include a complete sanitary waste and vent system from plumbing fixtures and floor drains

terminating at the existing system and a domestic hot and cold water system; heating, ventilating, and air conditioning system; and upgrades to the electrical system including installation of two double ended substations.

The Massachusetts and [REDACTED] manufacturing plants are expected to generate hazardous waste. The manufacturing plants are not expected to be a major source of criteria air pollutants (i.e., emit more than 100 tons per year of a criteria air pollutant). In addition, based on the low levels of estimated emissions, it is expected that both manufacturing plants would be exempt from requirements for obtaining a Minor Source Permit for air emissions.

In Massachusetts, Project Eagle is expected to create or retain approximately 100 full time, ongoing jobs and 70-100 construction jobs over the 5-7 month construction period.

In [REDACTED], Project Eagle is expected to create 300 full time, ongoing jobs and 200 to 230 construction jobs over the 12-15 month construction period, as well as 2,172 indirect jobs (estimated by the [REDACTED] Economic Development Corporation using the Regional Economic Models, Inc. (REMI) model).

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 the 1366 Project Eagle Direct Wafer manufacturing project are consistent with and are covered by categorical exclusions B1.23 for selective demolition activities, and B1.31 for the retooling and reequipping of the industrial facilities in Lexington, MA and [REDACTED]. The full text of the categorical exclusions is as follows:

B1.23, as provided in 10 CFR § 1021, Appendix B to Subpart D, Demolition and subsequent disposal of buildings, equipment, and support structures (including, but not limited to, smoke stacks and parking lot surfaces).

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 categories of actions (categorical exclusions) 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 Environmental Compliance Division staff reviewed the Environmental Report in the original 1366 loan guarantee application submitted December 30, 2010; supplemental Environmental Overview documents submitted on April 18, 2011, and May 9, 2011; and information provided in email exchanges between LPO staff and 1366 representatives. In addition to the environmental documentation reviewed, conference calls with 1366 representatives were conducted to fully understand the scope of the activities being proposed. Also, site visits by LPO staff were conducted at the Lexington, MA facility on April 7, 2011, and at the [REDACTED] on June 3, 2011. The results of the environmental due diligence review produced the following findings:

- The proposed loan guarantee 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 guarantee project does not require siting, construction, or major expansion of waste storage, disposal, recovery, or treatment facilities;
- 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;
- Federally-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 Comment section below is provided for any necessary clarifications concerning the findings listed above. Signature by 1366's designated representative in the Corporate Validation section is an indication of 1366's concurrence with the findings and determinations presented above.

Comment: _____

Corporate Validation:

Name and Title (Print): Frank van Marlo, CEO
Signature:  Date: 7/25/14

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 guarantee and associated actions involve no extraordinary circumstances (10 CFR 1021.410(b)) and fit within the specified categories 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

7-28-14
Date