

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Glint Photonics**STATE:** CA

PROJECT TITLE: Stationary Concentrator Daylighting System

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001383	DE-EE0007687	GFO-0007687-002	GO7687

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

B3.11 Outdoor tests and experiments on materials and equipment components Outdoor tests and experiments for the development, quality assurance, or reliability of materials and equipment (including, but not limited to, weapon system components) under controlled conditions. Covered actions include, but are not limited to, burn tests (such as tests of electric cable fire resistance or the combustion characteristics of fuels), impact tests (such as pneumatic ejector tests using earthen embankments or concrete slabs designated and routinely used for that purpose), or drop, puncture, water-immersion, or thermal tests. Covered actions would not involve source, special nuclear, or byproduct materials, except encapsulated sources manufactured to applicable standards that contain source, special nuclear, or byproduct materials may be used for nondestructive actions such as detector/sensor development and testing and first responder field training.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Glint Photonics, Inc. (Glint) to develop the Glint Stationary Concentrator Daylighting System (SCDS) into a full-scale integrated prototype and evaluate its performance in a demo installation. The SCDS consists of sunlight collecting panels and optics that redirect sunlight into the interior of a building. A NEPA determination (GFO-0007687-001; A9, B3.11) was completed in August 2016 for all project work other than the demo installation (Task 6 including subtasks) since the installation site had yet to be determined. For the demo installation, Glint has chosen to use the same location as what was used for the prototype daylighting system, the rooftop of their research facility in Burlingame, California. This NEPA determination reviews project work associated with Task 6 (including subtasks) of the project.

The demo installation site is located less than one mile from San Francisco International Airport. Because of the nature of the demo system and such close proximity to the airport, potential glare impacts were analyzed. Regulatory authority regarding glare impacts from projects occurring outside of airport property is not clear but for projects occurring on airport property the Federal Aviation Administration (FAA) has established guidelines for measuring the ocular impact of glare. If a project has no potential for glint or glare in the air traffic control tower (ATCT) cab and has no potential for glare or low potential for after-image to aircraft along the final approach path, the FAA would have no objection to the project. DOE is using these standards to determine whether the demo installation would have adverse impacts to human health and safety associated with the ATCT and arriving aircraft. Glint completed a solar glare hazard analysis to assess any glare impacts of testing the prototype system to the ATCT or aircraft arriving along the final approach path. Glint's glare hazard analysis showed that the prototype system would have no potential for glare to the ATCT and only a low potential for temporary after-image for aircraft on final approach at two miles away from the runway for eleven minutes during a few days in mid-March and late September. The demo system in Task 6 would be a smaller size with the same facing and tilt as the prototype system that was installed at this location, therefore glare is expected to be equivalent or less to that associated with the originally installed prototype system. Based on this information and the original solar glare analysis, DOE does

not anticipate any adverse impacts to human health and safety associated with the ATCT or arriving aircraft as a result of installation of the demo system. All other work in Task 6 would include only intellectual, academic, or analytical activities. DOE found no other potential impacts to resources of concern during review of Task 6 activities.

NEPA PROVISION

DOE has made a final NEPA determination.

Notes:

Building Technologies Office

This NEPA determination does not require a tailored NEPA provision.

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:



Electronically Signed By: Casey Strickland

Date: 11/8/2018

NEPA Compliance Officer

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:

Date:

Field Office Manager