

PMC-ND

(1.08.09.13)

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

**RECIPIENT:** Polyceed Inc**STATE:** AZ

PROJECT TITLE: Low-Cost, High-Performance Electrochromic Devices

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0001825	DE-EE0008679	GFO-0008679-001	GO8679

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.

B3.15 Small-scale indoor research and development projects using nanoscale materials Siting, construction, modification, operation, and decommissioning of facilities for indoor small-scale research and development projects and small-scale pilot projects using nanoscale materials in accordance with applicable requirements (such as engineering, worker safety, procedural, and administrative regulations) necessary to ensure the containment of any hazardous materials. Construction and modification activities would be within or contiguous to a previously disturbed or developed area (where active utilities and currently used roads are readily accessible).

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to Polyceed, Inc. for the design, development, fabrication and durability testing of low cost electrochromic windows. Design, development, fabrication and initial evaluation would occur at Polyceed's research and development facility in Tucson, Arizona. Independent durability testing would occur at the National Renewable Energy Laboratory (NREL) in Golden, Colorado.

Project activities include electrochromic (EC) coating development and EC window fabrication/testing. All project work would be done in existing facilities where no physical modifications or ground disturbing activities would be required and no change in the use of the facilities would result from project activities. No modifications to permits or new permits, additional licenses and/or authorizations would be necessary for proposed project activities. Project activities would involve the use and handling of various hazardous materials including metal oxides, nanomaterials and industrial solvents. All such handling would occur in a controlled laboratory environment adhering to strict safety protocols with dedicated proper hazardous material handling and disposal practices in place to ensure there would be no risk to the public. All hazardous materials would be managed in accordance with Federal, state and local environmental regulations. Polyceed's corporate health and safety policies and procedures would be followed, including employing training, proper protective clothing and equipment, laboratory safety practices, engineering controls, monitoring, and internal assessments. To help ensure compliance with applicable health and safety

regulations and minimize health and safety risks to employees and the public, additional policies and procedures would be implemented as necessary as new health and safety risks are identified. Carbon nanotubes would be used during project activities. These materials could cause an inhalation exposure risk, therefore all handling of these carbon nanotubes would be done in the laboratory within a fume hood using protective clothing including a mask. Waste materials would be disposed as solid waste by a professional hazardous waste management company. Any non-hazardous waste generated by the project would be removed by a waste management company and recycled as appropriate. Incidental water used for equipment cleaning would be discharged to the local sewage system. DOE does not anticipate any impacts to resources of concern due to the proposed activities of the project.

NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

Any work proposed to be conducted at a federal facility may be subject to additional NEPA review by the cognizant federal official and must meet the applicable health and safety requirements of the facility.

Notes:

Building Technologies Office
This NEPA determination requires 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:



Casey Strickland

NEPA Compliance Officer

Date: 3/20/2019

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: _____