

CATEGORICAL EXCLUSION (CX) DETERMINATION FORM

Funding Authority (Base, IIJA, IRA, CDS): IIJASolicitation (NOFO) Number: DE-FOA-0003105

Prime Recipient Name and Location:

Princeton University - Princeton, NJ

DOE Funding Office (HGEO, EERE, OE, etc.): HGEOAward Number: DE-FE0032747

Sub-Recipient Name and Location:

Yale University - New Haven, CT
Princeton Critical Minerals (PCM) - Newark, NJNETL Org.: MESI - Minerals Production and Processing TechnologiesNETL Project Manager: Christian RobinsonTitle of Proposed Action: Infrastructure Investment and Jobs Act (IIJA) - Selective Lithium Extraction from Saline Water by Spatial Crystallization v

Brief Description of Proposed Action:

The main objective of this project is to develop a prototype of the novel string crystallization technology that can produce lithium concentrates from a variety of saline water sources with improved energy and water efficiency (30% reduction). This project will develop next generation fiber materials for interfacial crystallization and reactor systems for higher and stable reactor performance.

ADMINISTRATIVE AND ROUTINE ACTIONS EXCEPTED FROM NEPA REVIEW, 10 CFR 1021 APPENDIX A☐ The NETL NEPA Division has reviewed all proposed project activities and has determined that NEPA does not apply.**THE PROPOSED ACTION FALLS WITHIN THE FOLLOWING CATEGORICAL EXCLUSION(S) FROM 10 CFR 1021, Appendix B****Facility Operation**

- ☐ B1.3 - Routine maintenance
- ☐ B1.7 - Electronic equipment
- ☐ B1.13 - Pathways, short access roads, and rail lines
- ☐ B1.15 - Support buildings
- ☒ B1.31 - Installation or relocation of machinery and equipment

Safety and Health

- ☐ B2.1 - Workplace enhancements
- ☐ B2.2 - Building and equipment instrumentation
- ☐ B2.3 - Personnel safety and health equipment

Site Characterization, Monitoring, and General Research

- ☐ B3.1 - Site characterizations and environmental monitoring
- ☐ B3.2 - Aviation activities (aerial survey and mapping)
- ☒ B3.6 - Small-scale research and development, laboratory operations, and pilot projects
- ☐ B3.7 - New terrestrial infill exploratory and experimental wells
- ☐ B3.9 - Projects to reduce emissions and waste generation
- ☐ B3.11 - Outdoor tests and experiments on materials and equipment components

Electrical Power and Transmission

- ☐ B4.4 - Power marketing services and activities
- ☐ B4.6 - Additions and modifications to transmission facilities
- ☐ B4.11 - Electric power substations and interconnection facilities
- ☐ B4.12 - Construction of powerlines (up to 10 miles, or up to 20 miles if within previously disturbed or developed powerline or pipeline rights-of-way)
- ☐ B4.13 - Upgrading and rebuilding existing power lines
- ☐ B4.14 - Construction and operation of electrochemical-battery or flywheel energy storage systems

Conservation, Fossil, and Renewable Energy Activities

- ☐ B5.1 - Actions to conserve energy or water
- ☐ B5.3 - Modification or abandonment of wells
- ☐ B5.4 - Repair or replacement of pipelines
- ☐ B5.5 - Short pipeline segments (up to 20 miles)
- ☐ B5.12 - Workover of Existing Wells
- ☐ B5.13 - Experimental wells for injection of small quantities of carbon dioxide (up to 500,000 tons per geologic formation)
- ☐ B5.14 - Combined heat and power or cogeneration systems
- ☐ B5.15 - Small-scale renewable energy research and development and pilot projects
- ☐ B5.16 - Solar photovoltaic systems
- ☐ B5.18 - Wind turbines
- ☐ B5.21 - Methane gas recovery and utilization systems
- ☐ B5.22 - Alternative fuel vehicle fueling stations
- ☐ B5.23 - Electric vehicle charging stations

Other☐ Specify category/categories in space below

CATEGORICAL EXCLUSION (CX) DETERMINATION FORM

THE PROPOSED ACTION FALLS WITHIN THE FOLLOWING CATEGORICAL EXCLUSION(S) ADOPTED FROM OTHER FEDERAL AGENCIES PURSUANT TO SECTION 109 OF NEPA (42 U.S.C. 4336c) (APPENDIX C OF DOE'S NEPA IMPLEMENTING PROCEDURES).

This action (1) would not present any extraordinary circumstances such that the action might have a significant impact upon the human environment; (2) is not connected to other actions with potentially significant impacts; and (3) has not been segmented in order to meet the definition of a Categorical Exclusion.

SELECT ONE OF THE FOLLOWING

- ☒ This Determination includes all tasks, phases, recipients, and locations for the proposed action.
- ☐ This Determination does not include all tasks, phases, recipients, and locations for the proposed action. Only the following tasks, phases, recipients, or locations specified below are included:

NCO Comment Only: The following comment is provided for the consideration of the Contract Specialist or Contracting Officer:

The NETL Project Manager acknowledges the responsibility to obtain a NEPA determination prior to initiating or modifying any activities outside the scope of this Categorical Exclusion determination.

DOE Project Manager Signature: CHRISTIAN ROBINSON Digitally signed by CHRISTIAN ROBINSON
Date: 2026.09.21 14:35:56 -04'00' Date: 9/21/2026

NEPA Compliance Officer Signature: JILL TRIULZI Digitally signed by JILL TRIULZI
Date: 2026.09.29 11:29:22 -04'00' Date: 9/29/2026



CATEGORICAL EXCLUSION (CX) DETERMINATION FORM

U.S. DEPARTMENT OF ENERGY – NATIONAL ENERGY TECHNOLOGY LABORATORY

CATEGORICAL EXCLUSION (CX) DETERMINATION FORM

The purpose of this form is to request and obtain approval for a Categorical Exclusion (CX) determination under the National Environmental Policy Act (NEPA) for National Energy Technology Laboratory activities and extramural awards.

Instructions

Provide the following information:

- Funding Authority
- DOE Funding Office
- Solicitation Number
- Award Number
- Prime Recipient Name and Location
- Sub-Recipient Name and Location
- NETL Organization
- NETL Manager
- Title of proposed action
- Brief description of activities

Check all the boxes that apply; Use the "Other" category and the space provide to list any information not already listed.

Acquire the signature of the initiator as well as the NEPA Compliance Officer

A space is provided above the signature blocks to list any considerations that may be valuable to the contracting officer.

