

U.S. DEPARTMENT OF ENERGY - NETL

CATEGORICAL EXCLUSION (CX) DESIGNATION FORM

Project No.: DE-FE0032011 Recipient Name: Washington University Project Location: St. Louis, MO

Sub-recipient(s) and Locations:

Giner, Inc., Newton, MA (This sub-recipient has been previously approved)  
University of Texas at San Antonio - San Antonio, Bexar County, TX (new sub-recipient)

NETL Sponsoring Org.: FE/TDC/ACCM/Minerals Sustain. Team NETL Contact: Jessica Mullen

Brief Title of Proposed Action: Titanium-Cerium Electrode-Decoupled Redox Flow Batteries Integrated With Fossil

Brief Description of Activities:

WUSTL will advance the integration of a Ti-Ce electrode-decoupled redox flow battery system with conventional fossil-fueled power plants through detailed technical and economic studies and R&D.

THE PROPOSED ACTION FALLS WITHIN THE FOLLOWING CATEGORICAL EXCLUSION(S) FROM APPENDICES A AND B TO SUBPART D OF DOE NEPA IMPLEMENTING PROCEDURES (10 CFR 1021):

General Administration/Management

- A1 - Routine business actions
- A9 - Info gathering, analysis, documentation, dissemination, and training
- A11 - Technical advice and planning assistance

Facility Operations

- B1.3 - Routine maintenance and custodial services
- B1.7 - Communication system and data processing equipment acquisition, installation, operation, removal
- B1.15 - Support building or structure, non-waste storage, construction/operation

Safety and Health

- B2.1 - Modifications to enhance workplace habitability
- B2.2 - Installation/improvement of building/equipment instrumentation
- B2.3 - Installation of equipment for personnel safety and health

General Research

- B3.1 - Site characterization/environmental monitoring
- B3.6 - R&D or pilot facility construction/operation/decommissioning
- B3.7 - New infill exploratory, experimental oil/gas/geothermal well construction and/or operation
- B3.9 - Certain CCT demonstration activities, emissions unchanged
- B3.11 - Outdoor tests, experiments on materials and equipment components

Electrical Power and Transmission

- B4.4 - Power management activities (storage, load shaping, and balancing)
- B4.6 - Transmission support addition/modifications at developed facility site
- B4.11 - Construction of power substations and interconnection facilities
- B4.13 - Upgrading and rebuilding existing power lines (< 20 miles)

Conservation, Fossil, and Renewable Energy Activities

- B5.1 - Actions to conserve energy, no indoor air quality degradation
- B5.3 - Modification/abandonment of wells
- B5.5 - Short crude oil/gas/steam/geothermal/carbon dioxide pipeline const/oper within an existing right-of-way (< 20 miles) between existing facilities
- B5.13 - Experimental wells for injection of small quantities of carbon dioxide (< 500,000 tons)
- B5.15 - Small scale renewable energy research/development/pilot projects
- B5.22 - Alternative fuel vehicle fueling stations
- B5.23 - Electric vehicle charging stations

Other

- Specify category:
- Specify category:
- Specify category:

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; (3) is not related to other actions with cumulatively significant impacts; and (4) is not inconsistent with 10 CFR 1021.211 - Interim Actions or 40 CFR 1506.1 - Limitations during the NEPA process.

SELECT ONE OF THE FOLLOWING:

- This Categorical Exclusion includes all tasks and phases in the Statement of Work or Statement of Project Objectives for this project.
- This Categorical Exclusion is only valid for the following tasks/phases. The DOE initiator acknowledges the responsibility to obtain a NEPA determination prior to initiating any activities outside the scope of this Categorical Exclusion.

SELECT ONE OF THE FOLLOWING:

- This Categorical Exclusion includes all locations and activities for this project.
- Additional sites, sub-recipients, or activities cannot be identified at this time. The DOE initiator acknowledges the responsibility to obtain a NEPA determination prior to initiating any activities outside the scope of this Categorical Exclusion.

NOTE: ANY CHANGE(S) TO THE PROJECT SCOPE OR LOCATIONS MAY REQUIRE A NEW NEPA DETERMINATION.

DOE Initiator Signature: Jessica C. Mullen

Digitally signed by Jessica C. Mullen  
Date: 2021.08.02 12:13:54 -0400

Date: 08 / 02 / 2021

month day year

NEPA Compliance Officer: PIERINA FAYISH

Digitally signed by PIERINA FAYISH  
Date: 2021.08.04 09:37:14 -0400

Date: 08 / 04 / 2021

month day year

The following special condition is provided for the consideration of the Contracting Officer:

NCO Note: This CX is to add the new sub-recipient University of Texas at San Antonio, San Antonio, TX to the existing project.