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(Previous Editions Obsolete)

U.S. DEPARTMENT OF ENERGY - NETL

CATEGORICAL EXCLUSION (CX) DESIGNATION FORM

Project No.: DE-FE0032528 Recipient Name: EPRI Project Location: Charlotte, NC

Sub-recipient(s) and Locations:

Turbine Logic - Atlanta GA
EPRI - Palo Alto CA

NETL Sponsoring Org.: FECM/TDC/Integrated Carbon Mgmt NETL Contact: Andrew Downs

Brief Title of Proposed Action: Deployment and Test Facility Data Implementation of Physics-Based Digital Twin

Brief Description of Activities:

Enhance and integrate existing digital twins for gas turbines, Rankine cycles, and Carbon Capture into a cohesive hydrogen gas turbine combined cycle with carbon capture system model

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
- [x] A1 – Routine business actions
- [x] 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:
- [x] 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:
- [x] 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: ANDREW DOWNS Digitally signed by ANDREW DOWNS Date: 2024.07.29 09:35:07 -04'00' Date: 07 / 29 / 2024 (month / day / year)

NEPA Compliance Officer: JOHNNA SHOLTIS Digitally signed by JOHNNA SHOLTIS Date: 2024.07.30 11:51:56 -04'00' Date: 07 / 30 / 2024 (month / day / year)

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