

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



RECIPIENT: AZ Board of Regents on behalf of Arizona State University

STATE: AZ

PROJECT TITLE : Electrified Processes for Industry without Carbon (EPIXC)

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0002737	DE-EE0010725	GFO-0010725-001	

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.)

A11 Technical advice and assistance to organizations

Technical advice and planning assistance to international, national, state, and local organizations.

B1.31 Installation or relocation of machinery and equipment

Installation or relocation and operation of machinery and equipment (including, but not limited to, laboratory equipment, electronic hardware, manufacturing machinery, maintenance equipment, and health and safety equipment), provided that uses of the installed or relocated items are consistent with the general missions of the receiving structure. Covered actions include modifications to an existing building, within or contiguous to a previously disturbed or developed area, that are necessary for equipment installation and relocation. Such modifications would not appreciably increase the footprint or height of the existing building or have the potential to cause significant changes to the type and magnitude of environmental impacts.

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.

Rationale for determination:

The U.S. Department of Energy (DOE) is proposing to provide federal funding to the Arizona Board of Regents on behalf of Arizona State University for the establishment of an institute for Electrified Processes for Industry without Carbon (EPIXC, or the Institute). EPIXC plans to develop electric heating that is economical and supports manufacturing decarbonization by acting as a catalyst and leveraging resources to advance shared RD&D facilities. EPIXC would function as a consortium established under a Cooperative Agreement with the DOE with participation from sub-recipients of the award, private companies, universities and other educational institutions, as well as other state and federal government agencies and research organizations. This project has five budget periods but only project activities within budget period 1 (BP1) have been defined. This NEPA Determination is specific to BP1 only. Further NEPA review will be required for the remaining budget periods once those activities have been defined and negotiated.

The Institute is planned as a public-private partnership that would develop clean energy technologies, use test beds for demonstrating new technologies, identify jumpstart projects that would receive funding, run an education and workforce development program plan, and create an operations plan. As part of Subtask 2.2 and 3.2, EPIXC plans to select jumpstart projects that would receive funding for execution in collaboration with DOE and the Industry Advisory Board. Projects selected in BP1 are expected to complete laboratory- and pilot-scale activities including, but not limited to, modeling, optimization, analysis, and education and workforce development.

Each task/subtask in BP1 would be completed by either the prime recipient or one of the project partners. For the

project partners listed in question 2b of the completed EQ1 and for the anticipated jumpstart projects expected to be selected in Subtask 2.2 and 3.2, the scope of work for proposed activities in BP1 are generally laboratory scale operations, data analysis and modeling, or educational, managerial, and reporting activities. The location of the facilities and description of proposed activities for the prime recipient and project partners are detailed within question 2b of the completed EQ1 for the project. Once identified, jumpstart projects would be added to the list of project partners in the award. Additional entries in question 2b may be incorporated as new partners are brought into EPIXC and specific sites are identified as long as these additional entries conform to the rationale and CXs applied in this NEPA Determination. Any new partners that do not fit the above will be required to submit separate EQ1s for further review.

None of the activities occurring at any of the listed facilities or activities anticipated to occur as part of jumpstart projects would require any new permits, licenses or authorizations for BP1 activities. No new waste streams or effluents would be produced as a result of the proposed activities in BP1. Once jumpstart projects are selected, health and safety hazards would be evaluated and mitigation plans executed as required, but it is expected that all facilities would conduct activities consistent with current operations and would not be expanded or modified in BP1. Existing health, safety, and environmental policies and procedures would be followed at all facilities, including personnel training, proper personal protective equipment, engineering controls, monitoring, internal assessment as applicable. DOE does not expect any impacts to resources of concern due to the proposed or anticipated activities in BP1.

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.

NEPA PROVISION

DOE has made a conditional NEPA determination.

The NEPA Determination applies to the following Topic Areas, Budget Periods, and/or tasks:

Budget Period 1

The NEPA Determination does not apply to the following Topic Area, Budget Periods, and/or tasks:

Budget Periods 2 through 5

Include the following condition in the financial assistance agreement:

The Recipient is required to consult with the DOE Project Officer and NEPA Specialist regarding any project, beyond what is proposed in this NEPA determination, that would result in:

- changes in function, use, or operation of existing facilities, and/or
- modifications to existing facilities, and/or
- ground disturbing or new construction activities

prior to initiating any of these activities in order to determine whether additional NEPA review is required.

Notes:

Industrial Efficiency and Decarbonization Office (IEDO)

The NEPA Determination requires legal review of the 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.

A portion of the proposed action is categorically excluded from further NEPA review. The NEPA Provision identifies Topic Areas, Budget Periods, tasks, and/or subtasks that are subject to additional NEPA review.

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature:  **Electronically Signed By: Casey Strickland** Date: **8/18/2023**
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