

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



**RECIPIENT:** ACS Industries Inc.

**STATE:** RI

**PROJECT TITLE :** High-Throughput Anode Packs with Advanced Porous Transport Layers

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-FOA-0002922	DE-EE0011315	GFO-0011315-001	GO11315

**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.)

**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 ACS Industries, Inc. (ACS) to design, develop, and scale-up processes to fabricate proton exchange membrane (PEM) electrolyzer subcomponents and micromesh.

The proposed award activities would occur over three budget periods (BPs), with Go/No Go decision points between the BPs. Award activities would include porous transport layer optimization, computer modeling, anode integration, cell and stack testing, technoeconomic analyses, and Diversity, Equity, and Inclusion (DEI) activities.

ACS's DEI activities would include hosting a summer research fellowship for students from disadvantaged communities and conducting studies on community and economic impacts. ACS (Lincoln, RI) would also carry out laboratory-scale activities, including vacuum heat treatment, vapor deposition activities, design and fabrication of PEM components, and micromesh fabrication. Tanury Industries (Lincoln, RI) would assemble a vapor deposition system adjacent to their manufacturing system. Yeagle Industries (Ashford, CT) would provide additional equipment and tools integration. Plug Power (Concord, MA) would provide manufactured component testing, as well as cell and stack electrochemical testing. The University of California, Irvine (Irvine, CA) would perform data analyses, testing, modeling, and x-ray computed tomography.

Potential hazards would include installation and operation of large vacuum systems, heavy loading fixtures, and high voltage. Existing corporate health and safety policies and procedures would be followed, including employee training, proper protective equipment, engineering controls, monitoring, hydrogen systems, and internal assessments. Shut-off points and proper protective equipment for x-ray imaging would be used.

All project activities would be completed in existing, purpose-built facilities. ACS would install a vacuum furnace and vapor desalination system. The facility's electrical system would be upgraded to accommodate the new systems. An outdoor cooling system would be added that would require two 15 feet x 9 feet concrete pads. This would expand the existing outdoor equipment area by approximately 270 square feet. The outdoor cooling system and coolant piping would be located on an existing asphalt surface. Permits for ground disturbance and installation of support infrastructure for vacuum and vapor deposition systems, if needed, would be obtained by the award recipient prior to commencing those activities. Tanury would install a larger entry door and remove two internal non-load-bearing walls from an existing manufacturing facility.

Because the outdoor installation of equipment at ACS would take place in a previously developed industrial area, and no tree cutting or vegetation clearing would be required, DOE has determined the proposed project would have no effect to threatened or endangered species that may be present in the area. Any changes in the work proposed that would result in tree cutting or vegetation clearing would require notice to be sent to the DOE Project Officer and would be subject to additional NEPA review.

DOE has considered the scale, duration, and nature of proposed activities to determine potential impacts on resources, including those of an ecological, historical, cultural, and socioeconomic nature. DOE does not anticipate impacts on these resources which would be considered significant or require DOE to consult with other agencies or stakeholders.

## NEPA PROVISION

DOE has made a final NEPA determination.

Include the following condition in the financial assistance agreement:

Any changes in the work proposed that would result in tree cutting or vegetation clearing would require notice to be sent to the DOE Project Officer and would be subject to additional NEPA review.

Notes:

Hydrogen and Fuel Cell Technologies Office (HFTO)

This NEPA determination requires legal review of the tailored NEPA provision.

NEPA review completed by Alex Colling on 06/23/2024.

## 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: \_\_\_\_\_

 Electronically  
Signed By: **Melissa Parker**

NEPA Compliance Officer

Date: 6/27/2024

**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: \_\_\_\_\_