PMC-ND
(1.08.09.13)

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

RECIPIENT: Versa Power Systems, Inc. **STATE:** CO

PROJECT TITLE: Solid Oxide Based Electrolysis and Stack Technology with Ultra-High Electrolysis Current Density and Efficiency

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000966	DE-EE0006961	GFO-0006961-001	GO6961

Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), 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.)
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 Versa Power Systems, Inc. (VPS) to develop solid oxide electrolysis cell (SOEC) technology that would be able to operate with current density up to four amps per square centimeter at or below a voltage of 1.6.

Proposed project activities include solid oxide fuel cell (SOEC) system design and development, including material and component engineering, cell and component manufacturing, manufacturing process development, stack design and assembly, hot module and system design and assembly, cell and stack testing, post-test analyses, and techno-economic analyses. Design, development, and fabrication of single cells through to stacks would occur at the VPS Ltd. research and pilot manufacturing facility in Calgary, Alberta. The design of a hot module and system, stack demonstration testing, and a techno-economic analysis would occur in the VPS Inc. headquarters in Littleton, CO. All proposed activities would consist of design work, data analysis, and bench-scale laboratory work and would take place in existing offices and laboratories. A formalized safety program is in place at Versa Power Systems Inc. Project materials would only be used with appropriate VPS in-house certified training, engineering controls, and personal protection equipment (PPE) within the facility. Hazard assessments are completed for all risk areas and employees are given appropriate safety training for their roles and responsibilities with resultant materials/contact usages. All hazardous materials are managed in accordance with federal, state, and local environmental regulations. The facilities are designed for this type of research; therefore, no modifications or new permits, additional licenses and/or authorizations would be necessary as a result of the proposed project.

Based on a review of the project information and the above analysis, DOE has determined that the proposed project would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined that this project is consistent with actions outlined in DOE categorical exclusions A9 "information gathering," and B3.6 "Small-scale research and development, laboratory operations, and pilot projects" and is therefore categorically excluded from further NEPA review.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

Fuel Cell Technologies Office

This NEPA Determination does not require a tailored NEPA provision.

NEPA review completed by Logan Sholar, 4/16/15

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: _____ Date: 5/18/2015

NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION

☐ Field Office Manager review required

NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:

☐ Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.

☐ Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :

Field Office Manager's Signature: _____ Date: _____

Field Office Manager