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(108.09.13)

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



RECIPIENT: Wiretough Cylinders LLC

STATE: VA

PROJECT
TITLE :

Low Cost Hydrogen Storage at 875 bar by using steel liner and steel wire wrap

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000821	DE-EE0006668	GFO-0006668-001	

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 Wiretough Cylinders, LLC to develop a low-cost, high-pressure hydrogen storage cylinder for use at hydrogen refueling stations.

The proposed project would design, fabricate and test steel cylinders that would be wrapped with high strength steel wires/cables, fiberglass and resin to achieve a working pressure of 875 Bar. Tasks undertaken through the course of this project would include computer stress analysis (CAD), modeling, fabrication and preliminary testing of short cylinders measuring 16 inches in diameter and 75 inches in length; CAD analysis, modeling, fabrication and testing of long cylinders measuring 16 inches by 30 feet; and testing of the long cylinders and final reporting. Fabrication and testing of all cylinders would occur at the existing CP Industries facilities located at 2214 Walnut Street, McKeesport, PA 15132. Wrapping the cylinders in wire would occur at the existing Wiretough facilities located at 14570 Industrial Park Road, Bristol, VA 24202. There would be minor modifications to the equipment used at the facilities to complete the tasks for the proposed project.

All facilities comply with federal fire, safety, hazardous waste removal, and emergency plan regulations. Both project partners currently develop high pressure tanks and products and possess the necessary equipment to safely test high pressure hydrogen storage tanks. Epoxy and resins would be used in the manufacturing process and proper ventilation and environmental controls are in place to handle any emissions. Tanks would not be tested outside of the identified facilities or around untrained personnel. There would be no new construction or facilities modifications and no new or modified permits would be required for the proposed project.

Based on review of the project information and the above analysis, DOE has determined the research, development and testing activities associated with this project would not have a significant individual or cumulative impact to human health and/or environment. DOE has determined the proposed project is consistent with actions outlined in DOE categorical exclusion A9 "Information gathering, analysis and dissemination," 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:

