

PMC-EF2a

(20402)

**U.S. DEPARTMENT OF ENERGY  
EERE PROJECT MANAGEMENT CENTER  
NEPA DETERMINATION**

**RECIPIENT:**Jadoo Power Systems, Inc.**STATE:** CA

**PROJECT TITLE :** Recovery Act: Jadoo Power Fuel Cell Demonstration: An Efficacy demonstration of an integrated solid oxide fuel power system over a two year period.

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
DE-PS36-08GO98009	DE-EE0000479	GFO-10-099	EE479

**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:

**B3.6** Siting, construction (or modification), operation, and decommissioning of facilities for indoor bench-scale research projects and conventional laboratory operations (for example, preparation of chemical standards and sample analysis); small-scale research and development projects; and small-scale pilot projects (generally less than two years) conducted to verify a concept before demonstration actions. Construction (or modification) will be within or contiguous to an already developed area (where active utilities and currently used roads are readily accessible).

**Rational for determination:**

Jadoo's objective for this project is to develop and demonstrate their specialized integrated solid oxide fuel mobile power system. They will purchase two portable 1000 watt solid oxide fuel cell generators (SOFC) from Delphi Automotive, develop and demonstrate an electromechanical liquid propane fuel interface, deploy the units for off-grid demonstrations, and collect/report data on the overall performance of the units.

Development and fabrication of the SOFC units will take place at Jadoo's facilities in Folsom, California and at two of Delphi's facilities in Brighton, New York and in Fenton, Michigan. An R&D and facility questionnaire has been filled out for all three locations. The questionnaires thoroughly address Jadoo's and Delphi's safety, waste stream and hazardous materials handling protocols. Additional fabrication and testing of the SOFC generator technology will occur at DOE's National Renewable Energy Laboratories.

The SOFCs being fabricated will be small portable generators that produce hydrogen from reformed propane gas. The propane gas used will be contained in 20 pound tanks, similar to BBQ tanks, and will have LPG storage certification for each demonstration site.

The first series of demonstrations will be conducted at various NASCAR race sites across the United States for approximately nine months. The portable SOFC power generators will be used to provide power for a range of applications, including lighting, cameras, and communications equipment. Per Jadoo Power Systems, Inc., the NASCAR Media Group will control of what will be powered and where at the race event where the demonstration will take place.

Delphi staff will train a NASCAR Media Group engineer on all operational and safety aspects of the SOFC power generator and they will be present at several of the demonstrations to ensure proper operations of the generators.

Additional demonstrations will be conducted in the City of Folsom, CA at all their Police and Fire Departments to test the efficiency of the emergency power application of the SOFC power generators. The deployed equipment will be supported by trained Delphi personnel and will be demonstrated in power applications typically encountered by first responders. Training will also be conducted by Delphi staff for operators at these demonstration sites. The same portable generators and propane gas units, with LPG storage certification, will be utilized at this demonstration site.

This project comprises conventional laboratory operations and small scale pilot demonstrations that will occur over a nine month period; therefore a CX B3.6 will apply.

**NEPA PROVISION**

DOE has made a final NEPA determination for this award

Insert the following language in the award:

Note to Specialist :

None Given.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature:   
NEPA Compliance Officer

Date: 1/21/10

**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: \_\_\_\_\_  
Field Office Manager

Date: \_\_\_\_\_