

PMC-EF2a

(2010)

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



RECIPIENT: ReliOn, Inc.

STATE: WA

PROJECT TITLE : RECOVERY ACT - PEM FUEL CELL SYSTEMS PROVIDING EMERGENCY RESERVE AND BACKUP POWER

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-PS36-08GO98009	DE-EE0000487	GFO-09-221-001	EE487

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:

B5.1 Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

Rational for determination:

ReliOn will manufacture and install hydrogen fuel-cell backup-power systems within various existing AT&T Mobility wireless telecommunications facilities. The proposed Fuel Cells will operate intermittently to provide emergency power backup to the existing cell tower sites.

Activities will include the installation of a prefabricated concrete pad, installation of a fuel cell cabinet onto the pad, installation of a 1-2 kW fuel cell backup-power system inside the cabinet and trenching from pad to tower for conduit cables. Trenching for each site will be hand dug and will range between 5 – 10 feet and will be less than 18 inches deep for all sites.

The following will apply to all site locations:

- * Footprint of this system will be less than 100 sq ft for all sites;
- * Fuel Cells are "zero-emissions" devices that will result in no air quality deterioration;
- * When operating, the Fuel Cells will generate noise levels not in excess of applicable local, county and state noise limitations;
- * Hydrogen will be delivered by truck and expected deliveries will only occur two times per year, so impacts to traffic will be negligible;
- * Sites are all fenced and locked. Fuel cell equipment and hydrogen storage is integrated into locked metal outdoor enclosures. Enclosures are clearly marked with two placards stating "HYDROGEN, FLAMMABLE GAS, No Smoking, NO OPEN FLAMES" and the appropriate NFPA 704 hazard diamond signage;
- * The fuel cell system itself includes one internal hydrogen sensor which disables the system and shuts off the fuel at the source if hydrogen is detected at 25% LFL.

AT&T has a Federal Communications Commission license in place for their towers and they are both FAA and EPA compliant.

Each site will acquire the following permits/approvals prior to construction:

- * Zoning Approvals
- * Construction/Building Permits
- * Electrical Permits
- * HazMat/Emergency Power
- * International Fire Code (IFC)
- * NFPA 55
- * NFPA 853

* NEC (NFPA 70)

Recipient commits to the following actions for all sites:

- * Installations will occur at a previously disturbed site AT&T cell sites;
- * Project sites will be reviewed by local officials to determine the need for any required hearings, zoning, permitting, licensing or inspection processes;
- * All required permits and processes will be undertaken and completed prior to the commencement of the proposed installation;
- * After construction, excess soils that are not backfilled will be spread evenly within the confines of the existing cell tower site, without disruption or adverse change to the existing grades;
- * Hazardous Material permitting and reporting will occur;
- * US Fish and Wildlife guidance on activities around telecommunication tower sites will be followed;
- * Local AHJ/Fire Marshal review application for installation and assign permit will be acquired, if needed;
- * Hydrogen storage, as required by code, will be set back from property lines and other equipment;
- * All relevant piping and connections will be checked with flammable gas detectors or liquid leak detection fluid after every cylinder exchange;
- * ReliOn personnel will follow safety protocols established by the company and will follow National Electric Code (NFPA 70), NFPA and IFC standards during equipment installation activities.
- * ReliOn will provide AT&T personnel hands-on training on the safe operation and maintenance of the fuel cell equipment, including hydrogen storage.

This NEPA determination applies to 20 specific site installations. Individual EF1 forms have been submitted for each site. There are no special concerns for any of these locations.

The 20 project sites are as follows:

- * BROOK, Site ID 10309, in Clear Creek County, CO
- * Hwy 93 and 82nd Ave, Site ID 10370, in Golden, CO
- * Hwy 93 and 128th Ave, Site ID 10371, in Arvada, CO
- * Pena Blvd, Site ID 14636, in Denver, CO (due to proximity to Denver International Airport, this site already has a permit from DIA/FAA because of the cell tower.)
- * NEPHI, Site ID 36160, in Juab County, UT
- * LEVAN, Site ID 36161, in Juab County, UT
- * SCIPPIO PASS, Site ID 36164, in Millard County, UT
- * HOLDEN, Site ID 36165, in Millard County, UT
- * KANOSH, Site ID 36168, in Millard County, UT
- * GREEN RIVER, Site ID 36188, in Grand County, UT
- * EXIT 202, Site ID 36189, in Grand County, UT
- * CISCO, Site ID 36191, in Grand County, UT
- * POISON SPRINGS, Site ID 42500, in Adams County, CO
- * WALKER RANCH 4, Site ID 18297, in Pueblo County, CO
- * JESSIES TWIST, Site ID 36187, in Emery County, UT
- * MEADOW, Site ID 36167, in Millard County, UT
- * MONAY KAY, Site ID 36159, in Juab County, UT
- * RICHFIELD, Site ID 36185, in Sevier County, UT
- * YUBA LAKE, Site ID 36163, in Juab County, UT
- * I-70 & Federal, Site ID 10176, in Denver, CO

This project comprises of activities that will conserve energy; therefore a CX B5.1 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: Kurtin Kerwin
NEPA Compliance Officer

Date: 11/23/09

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: _____