PMC-EF2a
(2.04.02)

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

RECIPIENT: Nevada State Office of Energy **STATE:** NV

PROJECT TITLE : Renewable Energy and Energy Efficiency Revolving Loan Program - H2 Technologies

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-0000052	DE-EE0000084	GFO-0000084-016	0

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:

B5.22 Alternative fuel vehicle fueling stations
The installation, modification, operation, and removal of alternative fuel vehicle fueling stations (such as for compressed natural gas, hydrogen, ethanol and other commercially available biofuels) on the site of a current or former fueling station, or within a previously disturbed or developed area within the boundaries of a facility managed by the owners of a vehicle fleet. Covered actions would be in accordance with applicable requirements (such as local land use and zoning requirements) in the proposed project area and would incorporate appropriate control technologies and best management practices.

Rational for determination:

The U.S. Department of Energy (DOE) provided funding to the Nevada State Energy Office (SEO) under the DOE's American Recovery and Reinvestment Act of 2009 State Energy Program (SEP). SEO selected H2 Technologies Group, Inc. (H2) to receive $1,000,000 in SEP funding (total project cost - $1,500,000).

H2 is proposing to use federal funding to build a modular and fully scalable hydrogen fueling station as part of its "Hydrogen Highway Project." The station would produce hydrogen from water electrolysis and would be located at an existing fueling facility at the "Carson City Industrial Air Park", (approximately 1 mile from the Carson City Airport) at 4550 Goni Road, Carson City NV 89706 (proposed project). The proposed project would utilize a highly efficient electrolyser, hydrogen compressor, storage tanks, and delivery system

The proposed project and associated actions have the potential to impact the following resource areas:

Land Use and Ground Disturbance: The proposed project consists of installing 2 Hydrogen and 2 Oxygen Compressors; an Oxygen Vaporizer; a Giner Electrolyser; a canopy and fueling dispenser on a concrete pad; and an explosion proof wall between the gas generation system and the public access fueling area. Hydrogen would be stored in an eight 400 bar modular tube array and two 800 bar tanks (see attached pictures). Any excess hydrogen would be stored and ultimately shipped in 400 bar carbon fiber tanks. Oxygen would be stored cryogenically in insulated tanks prior to shipment. The proposed project would be constructed within an existing, fully developed commercial card-lock fueling facility (currently gasoline and diesel) located in an industrial area near the airport. The property is currently zoned "Airport Industrial" and is part of the "Carson City Industrial Airpark" which allows for it's the proposed addition of a hydrogen fueling station. No new utility meters will be required because the station has its own meter. Minor trenching within the existing facility would be required to install the underground connection between the hydrogen production facility and the public access fueling dispenser. The proposed project (canopy, fueling dispenser and storage tanks) would be ~800 square feet and would require ~4" deep cement slab foundation. Because of the location at an existing fueling facility and the minor excavation required for the proposed facility, DOE has determined the proposed project would have minor impacts to land use and ground disturbance.

Traffic: Four vehicles (HICE Toyota Prius, Fuel Cell Honda Clarity, Fuel Cell Hyundai IX, and Fuel Cell Daimler-Chrysler) would operate on the compressed hydrogen produced. The proposed project would ultimately showcase the operation of four zero emission vehicles (ZEV's) and would help determine the cost-effectiveness of future hydrogen fueling stations. Once operational, an additional 15 vehicles would be able to utilize the compressed hydrogen. Oxygen and excess hydrogen would be shipped to a retail gas distributor in Sparks, NV. Based on the above analysis and due to its location in an existing industrial park, DOE has determined the shipment of oxygen and excess hydrogen, the addition of 4 and ultimately 15 vehicles represents a negligible impact on traffic in the project vicinity.

Historic Preservation: The proposed project area is industrial in nature and is located in close proximity to the airport (See attached satellite images). Surrounding the station are existing fueling infrastructure, parking lots, highways, and other commercial buildings. Based on the highly disturbed nature of the proposed project location, DOE has determined the proposed project will not adversely affect historic or cultural resources. If unanticipated discoveries are made during construction, MG&E and its contractors will halt construction and contact the Wisconsin State Historic Preservation Officer and DOE.

Threatened and Endangered Species: It is anticipated that the project will have little or no impact upon any wildlife. There are no known threatened or endangered species in the area that could be affected by the proposed project.

Human Health and Safety: The area is zoned "Airport Industrial." The proposed facility is not bordered by any residential properties, would be a minimum of 100 feet from any commercial property lines, and there are no schools located in the project vicinity (See attached maps and aerial view of the property). All equipment will be ringed by explosion proof vertical walls to mitigate risks of injury if a catastrophic event were to take place. The yard is already fenced and concrete stops will be installed to stop a delivery truck from backing into the station or a vehicle from striking the fueling dispenser. All employees will be trained and certified to handle hydrogen and oxygen. The tool shed will hold all tools and the fork lift, separate from the compressors and gas storage. Additionally, H2 has demonstrated success in building, operating, and maintaining similar hydrogen systems since 2006 at its sister facility in Reykjavik, Iceland. DOE has determined the proposed project represents a negligible increased risk to human health and safety.

Noise: The existing facility currently produces noise levels ≤80dB. The proposed hydrogen and oxygen compressors operate at ≤65 dB at 50 feet. The maximum noise level at the facility once the proposed project is implemented would be 80 dB at its exterior property lines, typical of a commercial fueling facility. DOE has determined the proposed project would cause a negligible increase in noise at the facility.

Water and Air Quality: The proposed project would be built according to all federal, state and local building and safety codes. There will be no environmentally hazardous materials used in the proposed project. Hydrogen fueling station do not produce "waste," effluents, or emissions, that could adversely impact air and water quality. The proposed project would use ~100 gallons of water per day and would produce ~40 kilograms of hydrogen and ~338 kilograms of oxygen, per day. Based on the above, DOE has determined the proposed project would have no or a negligible impact to water and air quality.

Permitting: Prior to constructing the proposed project, H2 will apply for and obtain the following permits: Hazardous Gas Permit (hydrogen); Oxidizer Storage Permit (oxygen); Building and Grading Permits; any permits/inspections required by NFPA, ASME, and Nevada Building Codes.

Based on the proposed project's location at an existing fueling station and the above analysis, DOE has determined the proposed project will not have significant individual or cumulative impacts on the human environment. DOE has determined the purchase and installation of the above hydrogen fueling equipment and infrastructure meets the definition of DOE categorical exclusion B5.22 "alternative fuel vehicle fueling stations" and is 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 :

Federal Funding $1M
EF2a completed by Melissa Rossiter

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: Kristin Kerwin Date: 1/27/2012
NEPA Compliance Officer

FIELD OFFICE MANAGER DETERMINATION