V.B.4 NextEnergy Fuel Cell Demonstration Project (New Project)*

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**Congressionally directed project*

Objective

- Design, specification, procurement, installation, commissioning, training and operation of a facility that will provide pure hydrogen for the NextEnergy Center in Detroit, Michigan.

Technical Barriers

This project addresses the following technical barrier from the Technology Validation section of the Hydrogen, Fuel Cells and Infrastructure Technologies Program Multi-Year Research, Development and Demonstration Plan:

- C. Hydrogen Refueling Infrastructure

Approach

The NextEnergy facility is to feature the on-site generation of hydrogen using natural gas reformer technology complemented by high-pressure storage, with an option for on-site liquid hydrogen storage and dispensing. The facility will also feature a dual-hose dispenser that will provide hydrogen to vehicles at the standard industry pressures of 3,600 psig and 5,000 psig.

In addition to vehicle fueling, the facility will serve stationary hydrogen-fuelled generators that will use the fuel to make electrical power. This power will primarily be consumed on-site by the “micro-grid”. The facility will also provide hydrogen to the site’s tenants to support their laboratory, testing, research and development activities.

The project scope includes the acquisition of all necessary permits and approvals from all Authorities Having Jurisdiction (AHJs) and the preparation of the hydrogen infrastructure portion of the site, including all civil and structural work and the supply of utilities. It also includes an overarching supervisory control and data acquisition (SCADA) system for the hydrogen infrastructure portion of the site and the necessary interfaces to allow the hydrogen infrastructure facility to be integrated into the site’s overarching SCADA system.