Petition No. 1091
Bloom Energy/Home Depot
Manchester, Connecticut
Staff Report
January 15, 2014

On December 24, 2013, the Connecticut Siting Council (Council) received a petition from Bloom Energy Corporation (Bloom), acting as agent for Home Depot, for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the installation of an approximately 200 kW fuel cell facility at a Home Depot store at 80 Buckland Hills Drive in Manchester, Connecticut. Council member Robert Hannon and Siting Analyst David Martin visited the site on January 15, 2014 to review the proposal. Jay Stevenson, an engineer with Core States Group, represented Bloom at the field review.

Bloom's fuel cell facility would be a customer-side, distributed resources project that would consist of an approximately 200 kW Bloom solid oxide fuel cell Energy Server to be owned and operated by Home Depot. The overall dimensions of the fuel cell would be approximately 26' -5" long by 8'-7" wide by 6' -9" tall. It would be installed on a pre-cast concrete pad located adjacent to a concrete sidewalk along the rear of the store on existing pavement.

The Manchester Home Depot store is located in the heavily commercialized area in the vicinity of the Buckland Hills Mall. The fuel cell would be located in the rear of the store. Immediately beyond the store's parking lot is a belt of vegetation dominated by mature deciduous trees. There are no residences within site of the fuel cell's location. A review of the town's GIS mapping indicates that there no wetlands that could be affected by the proposed installation.

Gas and electric utility lines are located reasonably proximate to the fuel cell's proposed location. The fuel cell would be interconnected to the Home Depot store's existing switchgear inside its electrical room near to the location of the fuel cell. At this particular store, gas lines may be brought to the fuel cell from in front of the Home Depot store, over the roof, to the rear of the store.

The fuel cell is designed in accordance with American National Standards Institute and Canada Standards Association (ANSI/CSA) America FC 1-2004 for stationary fuel cell power systems and includes extensive safety control systems, including an automatic shutdown mechanism, that comply with pertinent engineering standards. The proposed fuel cell facility would comply with all applicable air and water quality standards of the Department of Energy and Environmental Protection. It will also comply with DEEP's noise regulations.

The Connecticut Public Utilities Regulatory Authority (PURA), in its Final Decision in Docket No. 12-02-09, determined that Bloom's Energy Server qualifies as a Class I renewable energy source as defined in Conn. Gen. Stat. § 16-1(a)(26)(A). Furthermore, Bloom was selected by CL&P as the winning bidder in the joint UI/CL&P request for proposals for their "Low and Zero Emissions Renewable Energy Credit Program." As a result of its selection, Bloom has entered into a standard contract for the purchase and sale of Class I renewable energy credits.

Bloom has notified abutting property owners of its proposal and has discussed the project with Manchester's Town Environmental Planner/Wetlands Agent and Town Zoning Officer. The Council has received no comments from the town on this proposal.

The proposed installation of the fuel cell is not expected to have any substantial adverse environmental impacts. It would reduce the emission of air pollutants that contribute to smog, acid rain, and global climate change. It would also contribute to the state's use of renewable energy.

Aerial View of Home Depot, 80 Buckland Hills Drive, Manchester

Aerial photograph taken from bing.com/maps