



December 3, 2019

Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

RE: 10-MW Fuel Cell Facility
Bloom Energy Corporation
Colchester, Connecticut
Petition No. 1387

Dear Members of the Connecticut Siting Council:

Staff of this department have reviewed the above-referenced petition for declaratory ruling that no Certificate of Environmental Compatibility and Public Need will be required for the construction of a 10-MW fuel cell generating facility at 160 Old Amston Road in Colchester. A field review of the site was conducted on November 19. Based on these efforts, the following comments are offered to the Council for your use in this proceeding.

The proposed Bloom Energy fuel cell facility is one of three fuel cell projects selected by DEEP pursuant to a January 31, 2018 *Request for Proposals from Private Developers for Clean Energy*. This RFP solicited proposals for offshore wind, fuel cell and anaerobic digester Class I resources.

Site Description

The project would be located on a compact site just west of the existing Eversource Judd Brook Substation on the southern side of Old Amston Road and immediately east of and adjacent to the town-owned Colchester Spur of the Air Line Trail. The Petition describes the project compound as measuring 90' by 225'. The site is isolated from any residential areas. In addition to the substation and the recreational trail mentioned above, the only other proximal facility is the Town of Colchester Dog Park, an apparently popular facility, located just north of the fuel cell and substation sites. Five vehicles were parked at this facility at 4:00 pm on the day of DEEP's field visit. A broad wetland area immediately west of the Air Line Trail spur separates the project area from the residential area to the west.

The site itself is a small knoll rising slightly above Old Amston Road. Red oak, with lesser amounts of black oak, white oak and ironwood, cover the site. A light to moderate understory is present, being more open closer to the road and somewhat denser toward the interior of the site. The largest trees on the site are up to 36" dbh, though most of the trees are less than 8" dbh.

As described in the Petition, the high ground of the site separates the footprint area of the proposed fuel cell facility from the wetlands to the interior of the site such that drainage from the fuel cell facility will be toward Old Amston Road and away from the wetlands. The wetlands are very boulder-strewn, and contained a few scattered, small pockets of standing water on the November 19 date of the DEEP visit. Due to declining daylight at the time of the late afternoon visit, no attempt was made to locate or evaluate the three cited potential vernal pools mentioned in the Petition.

Old Amston Road is a hilly and curvy 2-lane road. The sight line from the proposed facility entrance drive to the east is limited by topography as this hilltop levels off in front of the substation. However, all traffic observed during the DEEP site visit moved at fairly slow speeds passing this site. The line of sight to the west is fairly long, though it includes curves and changes of grade.

Colchester Spur of the Air Line Trail

As mentioned above, the adjacent recreational trail is town-owned. Though it physically connects to DEEP's Air Line Trail State Park, DEEP does not own or maintain it. Though DEEP does have a grant program to towns for trail development, there has never been a grant to Colchester and thus there is no condition in any State grant which would speak to the installation of utilities on or along the trail. The trail currently supports an electric distribution or low voltage transmission line from Old Amston Road south (and for a very short distance north of that road also). We assume any agreement to install any gas or water line in the trail would include language to restore the trail to at least its current condition.

In the area immediately adjacent to the proposed fuel cell generating facility, the trail is 14' wide, well graded and maintained, and is used to provide vehicular access to a lot containing dirt piles, road millings and chunks of asphalt paving. This wide section of trail extends for several hundred feet south of Old Amston Road. After that point, the trail narrows to 8' in graded width but appears well maintained and capable of supporting vehicular access, at least as far as could be seen looking south from the junction of the trail and the access road to the above-mentioned material storage lot.

Air Permits and Greenhouse Gas Emissions

Per the chart on page 33 of the Petition, the proposed Colchester fuel cell facility will emit 679 to 833 pounds of CO₂ per MWh of electricity produced. As mentioned in DEEP's comments on Petitions No. 1350 and 1372, the EIP Investment Fuel Cell in New

Britain and the Derby Fuel Cell, LLC, respectively, the United States Supreme Court overturned the regulatory requirements for CO2 permits and DEEP subsequently eliminated the invalid CO2 permit requirements from our New Source Review and Title V programs, so this former permit requirement would not be applicable to the proposal at hand. It should be noted, however, that although these emissions are not currently regulated under air permitting, state law, in accordance with the 2018 Act Concerning Climate Change Planning and Resiliency, calls for a 45 percent reduction in greenhouse gas emissions by 2030 (from 2001 levels) and an 80 percent reduction by 2050.

Potential Hazardous Waste Generation

Fuel cells have the capability to generate various types of wastes, some of which may be subject to regulation as hazardous wastes. Typically such wastes are generated during maintenance activities, such as the replacement of individual fuel cells in an installation, or the replacement of the electrolyte media within a fuel cell. In addition, fuel cells have a limited life, and must be managed in accordance with applicable waste management requirements when they are decommissioned.

The most common type of potentially-hazardous waste routinely generated by fuel cells is associated with desulfurization filters. The sulfur that is added to natural gas as an odorant must be removed from the gas before it is fed into the fuel cells. During the process of filtering out the sulfur, certain other constituents of the natural gas such as benzene are commonly also removed. When the spent desulfurization filters are drained out or replaced, the resulting materials are typically collected and sent off-site for treatment and disposal. The presence of the benzene or other hazardous constituents can render the resultant waste a hazardous waste. All hazardous waste must be managed in conformance with hazardous waste generator requirements, which vary depending on the amount of hazardous waste that is generated and stored on the site. If the facility will generate 1,000 kg or more of hazardous waste per calendar month or will accumulate 1,000 kg or more of hazardous waste on site at any one time, it is classified as a large quantity generator of hazardous waste in Connecticut.

Bloom Energy is undoubtedly familiar with the notification and disposal requirements for both small quantity and large quantity hazardous waste generators. Information on Connecticut's requirements for notification, storage, and proper disposal is available at:

https://www.ct.gov/deep/cwp/view.asp?a=2718&q=455812&deepNav_GID=1967

Stormwater Management Permit

Though the facility compound is cited as measuring 90' by 225' or slightly less than one-half acre in size, the area of disturbance for the project is given as 1.4 acres on page 23 of the Petition. Therefore, because the area disturbed will be in excess of one acre and the project is not locally regulated, the project will require registration under the General Permit for the Discharge of Stormwater and Dewatering Wastewaters from

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Construction Activities. The petitioner should contact Neal Williams of the DEEP Stormwater Program at (860) 424-3356 or at neal.williams@ct.gov or Oswald Inglese of the same office at (860) 424-3725 or at oswald.inglese@ct.gov in this regard.

Thank you for the opportunity to review this Petition and to submit these comments to the Council. Should Council members or Council staff have any questions, please feel free to call me at (860) 424-4110.

Respectfully yours,



Frederick L. Riese
Senior Environmental Analyst

cc: Commissioner Katie Dykes