



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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VIA ELECTRONIC MAIL

June 16, 2020

TO: Service List

FROM: Melanie Bachman, Executive Director *MAB*

RE: **PETITION NO. 1406** - Doosan Fuel Cell America, Inc. petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a grid-side 9.66-megawatt fuel cell facility and associated equipment to be located at 600 Iranistan Avenue, Bridgeport, Connecticut, and associated electrical interconnection to the United Illuminating Company's existing Congress Street Substation.

Comments have been received from the Connecticut Department of Energy and Environmental Protection, dated June 10, 2020. A copy of the comments is attached for your review.

MB/emr

c: Council Members

June 10, 2020

Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

RE: 9.66-MW Fuel Cell Facility
Doosan Fuel Cell, America
Bridgeport, Connecticut
Petition No. 1406

Dear Members of the Connecticut Siting Council:

Staff of this department have reviewed the above-referenced petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need will be required for the construction of a 9.66-MW fuel cell generating facility at 600 Iranistan Avenue in Bridgeport. A field review of the site was conducted on June 5, 2020. Based on these efforts, the following comments are offered to the Council for your use in this proceeding.

As stated in Attachment 3 of this Petition, which is the October 2, 2019 decision of the Public Utilities Regulatory Authority in Docket No. 18-08-14, DEEP, through its Bureau of Energy and Technology Policy, has previous knowledge of, and involvement in, this proposal.

Project Site Description

The project site is a one-half acre vacant, level parcel on the east side of Iranistan Avenue wedged between Interstate 95 to the south and the New Haven Line of Metro-North to the north. As depicted in the photo in Attachment 1 of the Petition, the site is triangular in shape and narrows to a point on its eastern end. The site is a 50/50 mixture of graveled parking lot and grassed area. The southern boundary of the site is defined by a 6' tall chain link fence along which is a tree line of catalpa, black locust and cottonwood. The fence separates the project site from a storage yard, assumedly belonging to ConnDOT, located directly under the Interstate 95 viaduct. The eastbound lane of Railroad Avenue, also known as South Railroad Avenue, runs between the project site and the Metro-North embankment.

In addition to the transportation uses with immediately about the site on all three sides, the surrounding neighborhood is a mixture of residential and commercial/ industrial uses. The Petition notes that the nearest residential properties are 136' north of the project site. These consist of the 4-unit, 3-story building at the northeast corner of the intersection of Iranistan Avenue and North Railroad Avenue containing 788, 790, 792 and 794 Railroad Avenue, the 2-story, 2-unit apartment building at 778-780 North Railroad Avenue, a small commercial building at 756 North Railroad Avenue, a 2-unit home which experienced significant fire damage about one month previous and is now vacant, and Greenscape Lawn Care at 740 North Railroad Avenue. There are also proximal homes along both sides of Iranistan Avenue north of North Railroad Avenue and on Black Rock Avenue, north of and parallel to North Railroad Avenue.

The other significant residential area in the close vicinity of the project is Seaside Village, a development of several blocks of generally two-story brick homes west of Iranistan Avenue and south of South Avenue. The extensive Marina Village apartment complex east of Iranistan Avenue and south of Interstate 95 is currently undergoing demolition. It is planned to be replaced by the Windward Development, a new residential complex.

Commercial and industrial uses in the area are mostly west of Iranistan Avenue and south of Interstate 95 and include a large, multi-tenant complex southwest of the site between South Avenue and Admiral Street and the large Santa Fuel oil terminal west of this building.

The ambient noise in the project area is dominated by traffic on Interstate 95 and by the intermittent noise of passing Metro-North and Amtrak trains. Traffic on surface streets is a lesser but still noticeable contributor to the ambient noise in the area.

Air Permits and Greenhouse Gas Emissions

Per the chart on page 11 of the Petition, the proposed fuel cell facility will emit 41,916 tons per year of carbon dioxide. As mentioned in previous DEEP's comments (Petitions No. 1350, 1372 and 1387), the United States Supreme Court overturned certain 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. Therefore, such projects hinder our ability to achieve our climate goals including a 100% zero carbon electric supply sector as charged by Governor Lamont's Executive Order No. 3.

Although there are only two passing references (pp. 3 and 12) in the Petition to the district thermal loop which would be developed as a component of the proposal, that feature of the project will increase the overall efficiency of the facility and could offset associated emissions by capturing and deploying what would otherwise have been waste heat and putting it to productive use, substituting for thermal energy use by customers of the district thermal system. Based on discussion in Attachment 3, the PURA decision, however, there is still uncertainty about who the customers for the thermal loop will be, the type of heating and hot water technologies those customers would retire (and the associated emissions avoided), and how much of the thermal loop capacity will be under contract. In short, to the extent that this feature of the proposal is used to meet the heat and hot water needs of area institutions and facilities, it represents an opportunity to offset other energy use and potentially some emissions those displaced energy sources would have generated, but the extent of such emissions avoidance is unclear at this time.

Proposed Facility Elevation Relative to Base Flood

As shown in the map in Attachment 17 of the Petition, the project site is within the 100-year flood zone. Public Act 18-82, An Act Concerning Climate Change and Resiliency, requires that residential and community structures in areas subject to coastal flooding be elevated two feet above the base flood elevation to account for projected sea level rise. For the proposed facility, the site of which is at elevation the 12' NAVD88, this would require the elevation of the site to 14' NAVD88, which is proposed in the Petition. Therefore, the facility will be compliant with the requirements of Public Act 18-82.

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.

Doosan 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://portal.ct.gov/DEEP/Waste-Management-and-Disposal/Hazardous-Waste/Information-for-Generators>

Stormwater Management Permit

Given that that project site is 0.51 acres in size, it would appear that this project falls below the one-acre threshold for disturbed area which would invoke the need for registration under the DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities.

Natural Diversity Data Base

The NDDDB map in Attachment 11 indicates no occurrence of any NDDDB-listed species within 0.25 miles of the project site. There is, therefore, no requirement for NDDDB consultation for this project.

Miscellaneous Petition Commentary

Attachment 6, Site Plan, indicates the area along the western portion of the project site is marked for 'Future Expansion'. There is no discussion in the Petition or in the PURA Docket No. 18-08-14 decision about any second phase of the project. It is unclear what is contemplated in this expansion or what event or threshold would trigger its development.

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) 417-2758.

Respectfully yours,



Frederick L. Riese
Senior Environmental Analyst

cc: Commissioner Katie Dykes