STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL

December 18, 2020

Walter Bonola
Doosan Fuel Cell America, Inc.
195 Governor's Highway
South Windsor, CT 06074
walter.bonola@doosan.com

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.

Dear Mr. Bonola:

At a public meeting held on December 17, 2020, the Connecticut Siting Council (Council) considered and denied without prejudice the above-referenced petition for a declaratory ruling that was submitted to the Council on May 11, 2020, with supplemental information submitted on July 9, July 27 and September 18, 2020 and information provided by NuPower Bridgeport FC, Inc. on November 10 and December 4, 2020, on the bases that the petition remains incomplete and the proposed facility appears to have a substantial adverse environmental effect, particularly with regard to matters of public health and safety.

The Council considered and identified the following deficiencies and potential adverse effects on public health and safety that include, but are not limited to:

1. Project plans provided lack site detail;

2. The petition does not address natural gas safety issues;

3. The petition does not address the safety implications of the proposed facility's location in relation to other existing infrastructure (ex. railroad, highway, electric transmission line);

4. The petition does not address potential vapor plume hazards to the adjacent highway or any potential mitigation measures; and

5. The petition does not address the potential to incorporate noise mitigation measures prior to the commencement of facility operation.

Enclosed for your information is a copy of the staff report on this project.

Please do not hesitate to contact our office if you should have any questions.

Sincerely,

s/ Melanie A. Bachman

Melanie A. Bachman
Executive Director

Enclosure: Staff Report, dated December 17, 2020

c: Service List, dated October 8, 2020
The Honorable Joseph P. Ganim, Mayor, City of Bridgeport (mayor@bridgeportct.gov)
Janene Hawkins, Chief Administrative Officer, City of Bridgeport
(janene.hawkins@bridgeportct.gov)
Thomas F. Gill, Director of Planning & Economic Development, City of Bridgeport
(thomas.gill@bridgeportct.gov)

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Web Site: portal.ct.gov/csc

Petition No. 1406
Doosan Fuel Cell America, Inc.
600 Iranistan Avenue, Bridgeport, Connecticut

Staff Report
December 17, 2020

Introduction

On May 11, 2020, the Connecticut Siting Council (Council) received a petition from Doosan Fuel Cell America, Inc. (Doosan), as an agent for and on behalf of NuPower Bridgeport FC, LLC (NuPower) for a declaratory ruling, pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k, for the installation of a 9.66 megawatt (MW) grid-side combined heat and power fuel cell facility within a 3.5-story steel and concrete structure at 600 Iranistan Avenue in Bridgeport, Connecticut.

Doosan met with City of Bridgeport (City) officials on March 13, 2020 to discuss the project and present conceptual building and site layout plans. Doosan mailed notification of the project to abutting property owners, City officials, and required state agencies and officials on or about April 25, 2020.

On May 12, 2020, the Council sent correspondence to the City stating that the Council has received the Petition and invited the municipality to contact the Council with any questions or comments. On October 13, 2020, the City submitted comments to the Council in support of the proposed project. The comments are attached.

Regulations of Connecticut State Agencies (C.G.S.) §22a-20a requires applicants seeking a permit from DEEP or the Council for a new or expanded facility defined as an "affecting facility" that is proposed to be located in an environmental justice community to file an Environmental Justice Public Participation Plan (EJPPP). The City of Bridgeport is an environmental justice community. However, the proposed facility is not an "affecting facility" under C.G.S. §22a-20a because it is a Class I renewable resource under 10 MW. Thus, C.G.S. §22a-20a does not apply to the facility, and an EJPPP is not required.

On May 12, 2020, pursuant to C.G.S. §16-50j-40, the Council notified all state agencies listed therein, requesting comments regarding the proposed project be submitted to the Council by June 10, 2020. The Council received comments from the Department of Transportation (DOT) dated June 10, 2020. The Department of Energy and Environmental Protection (DEEP) submitted comments dated June 10, 2020. The DOT Office of Rails submitted comments dated June 26, 2020. The state agency comments are attached.

While the Council is obligated to consult with and solicit comments from state agencies by statute, the Council is not required to abide by the comments from state agencies. [1]

The Council issued interrogatories to Doosan on June 18, July 24, and September 15, 2020. Doosan provided responses to the Council's interrogatories on July 9, July 27, and September 18, 2020.

[1] *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007)

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act (UAPA), an administrative agency is required to take action on a petition within 60 days of receipt. July 10, 2020 was the deadline for this petition under CGS §4-176(e). In response to the Coronavirus pandemic, on March 25, 2020, Governor Lamont issued Executive Order No. 7M that provides for a 90-day extension of statutory and regulatory deadlines for administrative agencies, thereby extending the deadline to October 8, 2020.

On September 24, 2020, pursuant to CGS §4-176(e) of the UAPA, the Council voted to set the date by which to render a decision on the petition as no later than February 5, 2021, which is the statutorily-mandated 180-day decision deadline under CGS §4-176(i) with the 90-day extension per Executive Order No. 7M.

On September 29, 2020, NuPower requested party status. On October 8, 2020, the Council granted NuPower party status. NuPower would own the proposed facility.

NuPower submitted information regarding the proposed project to the Council on November 10 and December 4, 2020.

Public Benefit

The project would be a "grid-side distributed resources" facility, as defined in Connecticut General Statutes (CGS) § 16-1(a)(37). CGS § 16a-35k establishes the State's energy policy, including the goal to "develop and utilize renewable energy resources…to the maximum practicable extent." The proposed facility is a distributed generation resource, and will contribute to fulfilling the State's Renewable Portfolio Standard as a low emission Class I renewable energy source. The project was selected by The United Illuminating Company (UI) under the Request for Proposals (RFP) for energy and Class I and/or Class III renewable energy certificates from combined heat and power system facilities in distressed municipalities, pursuant to CGS §16-258e.

Power produced by the facility would be sold to UI in accordance with a Public Utilities Regulatory Authority (PURA)-approved power purchase agreement (PPA) between UI and NuPower in Docket No. 18-08-14. The PPA has a 20-year term and there are no provisions for extension or renewal.

The PPA includes the utilization of waste thermal energy through a district heating loop that would be constructed in the Project area. The thermal loop would be designed to deliver hot water to local institutions, businesses, and residences located in Bridgeport. The thermal loop is under design and would be constructed under a separate contract by a thermal energy transportation company. Several entities have signed letters of intent to purchase thermal energy generated from the Project. All thermal energy produced by the Project would be utilized by these potential customers if the contracts are executed.

In addition to the 9.66 MW of power produced by the proposed facility, it would provide up to 16.2 MMBtu/hr. of thermal energy to the district heating loop using high-grade and low-grade heat from the facility. The combined heat and power facility would be able to recover useful heat from electricity generation, and when used, can result in a fuel cell electrical efficiency factor of up to 90 percent.

Project Site

The site is located on a 0.51-acre triangle shaped parcel at the intersection of Iranistan Avenue and Railroad Avenue with the rear of the lot adjacent to Interstate 95 (I-95). The property is zoned Light Industrial. Parcels in the immediate vicinity include light industrial, commercial, and residential. The nearest residential properties are approximately 136 feet north of the site, across Railroad Avenue, Metro North Railway and Railroad Avenue North.

Proposed Project

The proposed facility would consist of twenty-one 460 kilowatt Doosan PureCell Model 400 fuel cell power modules, each measuring 8.3 feet wide by 27.3 feet long by 9.9 feet tall. The fuel cells are factory-assembled and tested prior to shipment. The fuel cells would have an operational service life of 20 years; however, a fuel cell component overhaul would be required after 10 years.

The 21 fuel cells would be installed within a proposed galvanized steel structure with poured concrete decks. The structure is approximately 203 feet long by 37 feet wide (avg.) with the top level reaching 60 feet above grade. The ground footprint measures approximately 7,500 square feet and would feature open air floors on each level. Six fuel cells would be installed on the first and third floors with the remaining 9 fuel cells installed on the second floor. Each fuel cell would have an associated fan cooling module located on the concrete slab roof of the building. The total height of the facility with the cooling fan units would be approximately 70.6 feet above ground level and approximately 84.6 feet above mean sea level.

The first floor of the building would also house four 2,500 kVA and one 1,500 kVA, 13.8 kilovolt/480 volt transformers, low voltage switchgear and associated metering equipment. Other site components/infrastructure consist of an underground nitrogen tank and associated piping for a centralized purge system, a medium voltage switchgear pad and a point of interconnection with the utility along the northeast side of the site, a water meter vault and a reverse osmosis system/backflow preventer enclosure in the northwest corner of the site, and a natural gas meter interconnection pad on the west side of the site. The thermal loop interconnection point would be in the eastern corner of the site.

The structure is located on the south side of the parcel adjacent to I-95 and is not in the highway right-of-way or within the non-access highway line. The structure would be a minimum of 10.5 feet from the I-95 bridge pier caps and 13 feet from the bridge parapet. The structure would be approximately 40 feet from the sidewalk along Iranistan Avenue to the west and approximately 30 feet from the curb line of Railroad Avenue to the northeast.

The facility is designed with blocks of fuel cells connected to independent transformers. Each individual fuel cell in the facility can be independently shutdown and isolated from the facility for maintenance/repair purposes. The 21 fuel cell units are connected in four groups of five that connect to four 4000 amp switchboards with the remaining fuel cell connected to a 1600 amp switchboard. Each switchboard is connected to a dedicated step-up transformer that would connect to a 13.8 kV medium voltage distribution switchboard.

The facility would be grid-interconnected to the Congress Street Substation through two separate 13.8 kV cable runs within a new underground duct bank. The route utilizes streets owned by the City and would extend for approximately 7,800 feet. Once the route is finalized and accepted by UI and PURA, specific details would be provided to the DOT for comment and permitting. The project has completed a Transmission System Impact Study required by ISO-NE.

Natural gas would be supplied to the facility from Southern Connecticut Gas.

The project is not configured to operate as a micro-grid.

A detailed site plan, building plan, and interconnection plan are currently in design. Doosan would construct the facility and maintain the fuel cells. NuPower would own the facility. According to PURA's final decision in Docket No. 18-08-14, the estimated cost of the fuel cell facility is approximately $69,132,244.

Environmental Effects and Mitigation

The fuel cells utilize a non-combustion phosphoric acid technology that interacts with natural gas to generate electrical power. The amount of phosphoric acid in each fuel cell complies with applicable state and federal regulations.

The fuel cell facility would comply with all applicable DEEP water quality standards as no water would be consumed or discharged once the facility is operational. A DEEP Stormwater Permit is not required for development of the proposed facility.

Each fuel cell operates in water balance below 86°F. The initial fill requires 350 gallons of water and the amount of make-up water above 86°F increases linearly from 0 gallons per minute (gpm) to 1 gpm at 110°F. A reverse osmosis system would be used by the facility to provide treated makeup water, with estimated usage of approximately 90,000 gallons per year. The thermal loop is a closed loop system and would not significantly impact the water consumption for the project. Minimal discharge of de-ionized water would occur in rare instances and would be directed to the City's sewer system. Water would be supplied by Aquarion Water Company with water mains located along Railroad Avenue and Iranistan Avenue.

Air emissions produced during the operation of the facility would not trigger any regulatory thresholds. The proposed facility would emit 41,916 metric tons/yr of CO_2. With utilization of the fuel cell thermal energy in the thermal loop CO_2 emissions be reduced by approximately 9,558 metric tons/year. The proposed facility would emit 0.42 tons per year of methane (CH_4), <0.2 tons per year of nitrous oxide (N_2O), no sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs) or perfluorocarbons (PFCs), which are greenhouse gases defined in Regulations of Connecticut State Agencies Section 22a-174-1(49). The Project would also emit negligible amounts of sulfur oxides, volatile organic compounds and particulate matter.

The new building would require structural fill and piers for stabilization and building support. Environmental testing indicates site soils/old fill materials are below direct exposure and pollutant mobility criteria. Excavated soils can be re-used on the site but are not suitable for export from the site.

The site is within a Federal Emergency Management Agency-designated 100-year flood zone with a base flood elevation of 12 feet. Fill would be added to the site to bring the base elevation two feet above the flood elevation providing reduced flood risk to the fuel cells, electrical switchgear, transformers, natural gas meters, natural gas regulators, and heat recovery pumps. The additional two feet of ground elevation would comply with Public Act 18-82, An Act Concerning Climate Change and Resiliency, which 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. If additional fill was imported to the site to allow for an additional one-foot of flood protection, the estimated incremental cost increase is $117,000.

The site is within a heavily developed area next to a highway, a railroad, and an overhead transmission line and would not have an adverse effect on cultural resources. Although the facility would be visible from the surrounding area, I-95 and the Metro-North Railroad, it would conform to the existing urban development in the area.

The site is not within a DEEP Aquifer Protection Area or a Natural Diversity Database area.

The fuel cell desulfurization system would remove sulfur that is used as an odorant in natural gas because it is a fuel cell system catalyst contaminant. Desulfurization creates zinc-sulfide, a non-hazardous waste that would be contained within the fuel cell unit until facility refurbishment is required, usually after 10 years of operation. The waste zinc sulfide would be removed by trained personnel and disposed of in accordance with regulatory criteria.

The primary sources of noise for the proposed project are the dry air coolers located on the top floor of the structure. Although the site is located in an area with high background noise, acoustical modeling indicates that the Project could exceed DEEP Noise Control Regulations at adjacent receptors. A post-construction noise study would be conducted to determine if noise criteria is exceeded, and if so, noise mitigation measures would be deployed to bring the project into compliance. Noise mitigation measures may include the installation of sound-absorbing material at the noise source and/or installation of sound-absorbing material along the side walls of the structure.

Noise associated with the construction of this project would be temporary in nature and exempt per DEEP Noise Control Regulations.

Public Safety

During construction, Doosan would use inert nitrogen gas or atmospheric air under pressure as pipe cleaning media, in accordance with Public Act 11-101, An Act Adopting Certain Safety Recommendations of the Thomas Commission.

The facility would be remotely monitored by Doosan on a 24/7 basis to detect abnormalities in operation. The fuel cell facility would be designed in accordance with American National Standards Institute and Canadian Standards Association (ANSI/CSA) America FC 1-2004 for stationary fuel cell power systems and includes extensive safety control systems, including both automatic and manual shutdown mechanisms that comply with pertinent engineering standards. If operational abnormalities occur, the fuel cell can be remotely shut down and personnel dispatched to service the facility.

A decorative 8-foot tall steel fence with an anti-climb curved section would be installed around the perimeter of the site. A closed-circuit TV/proximity sensor system with alarms would also be installed to monitor the site. Fall protection along the open perimeter of each floor would be accomplished by OSHA-approved guard rails and kick plates.

No structure-mounted fire suppression system is proposed. Nearby city fire hydrants would offer fire protection. According to Doosan, the National Fire Protection Association, Standard for the Installation of Stationary Fuel Power Systems (NFPA 853), the fuel cell building is classified as an outdoor power installation because it is designed with partial weather protection (maximum coverage of a roof and up to 50 percent enclosing walls) and does not contain flammable liquids.

Overhead 345-kV transmission lines extend along the north side of Railroad Avenue, next to a Metro-North Rail corridor. UI has reviewed the site plans as part of the interconnection process. OSHA requires a minimum of 20’ working distance from exposed energized lines 200 kV to 500 kV. The site fencing and other site infrastructure would meet transmission line clearance requirements.

Interior lighting would consist of LED strip lighting that meets OSHA illumination requirements. All exterior LED lighting would utilize a flush lens design to minimize fugitive light. All lighting on the roof top level will utilize side shielding to minimize distraction along the adjacent the highway.

Each fuel cell would have its own roof vent that would extend approximately 9 feet above the roof of the structure. The fuel cell exhaust vents would be installed on the south side of the structure away from I-95 to reduce the effect water vapor plumes may have on the highway during certain weather conditions. Additionally, the dry air-coolers would be located between the vents and highway that would emit dry heated air, potentially mixing with and reducing fog-like water vapor plumes.

Conclusion

The project is a distributed energy resource with a capacity of not more than sixty-five megawatts, meets air and water quality standards of the DEEP, and would not have a substantial adverse environmental effect. It would reduce the emission of air pollutants that contribute to smog and acid rain, and to a lesser extent, global climate change, and furthers the State's energy policy by developing and utilizing renewable energy resources and distributed energy resources.

Recommendations

If approved, staff recommends the following conditions:

1. The Petitioner shall prepare a Development and Management Plan (D&M) for this facility in compliance with Sections 16-50j-60 through 16-50j-62 of the Regulations of Connecticut State Agencies. The D&M Plan shall be submitted to and approved by the Council prior to the commencement of facility construction and shall include:
    a) A final site plan including, but not limited to, detailed site design, building design, fuel cell layout, site access, electrical, water, natural gas and thermal loop connections, project interconnection detail, fencing, lighting, and site drainage;
    b) Construction site plans that include, but are not limited to, site preparation, grading, construction laydown areas, and erosion and sedimentation controls;
    c) Contact information for the spill response contractor; and
    d) Contact information for the construction contractor.

2. Submit an Emergency Response Plan that includes detailed safety features and emergency response for the building, site infrastructure, and fuel cells;

3. Provide a copy of the Emergency Response Plan to local emergency responders prior to facility operation, and provide emergency response training, if requested; and

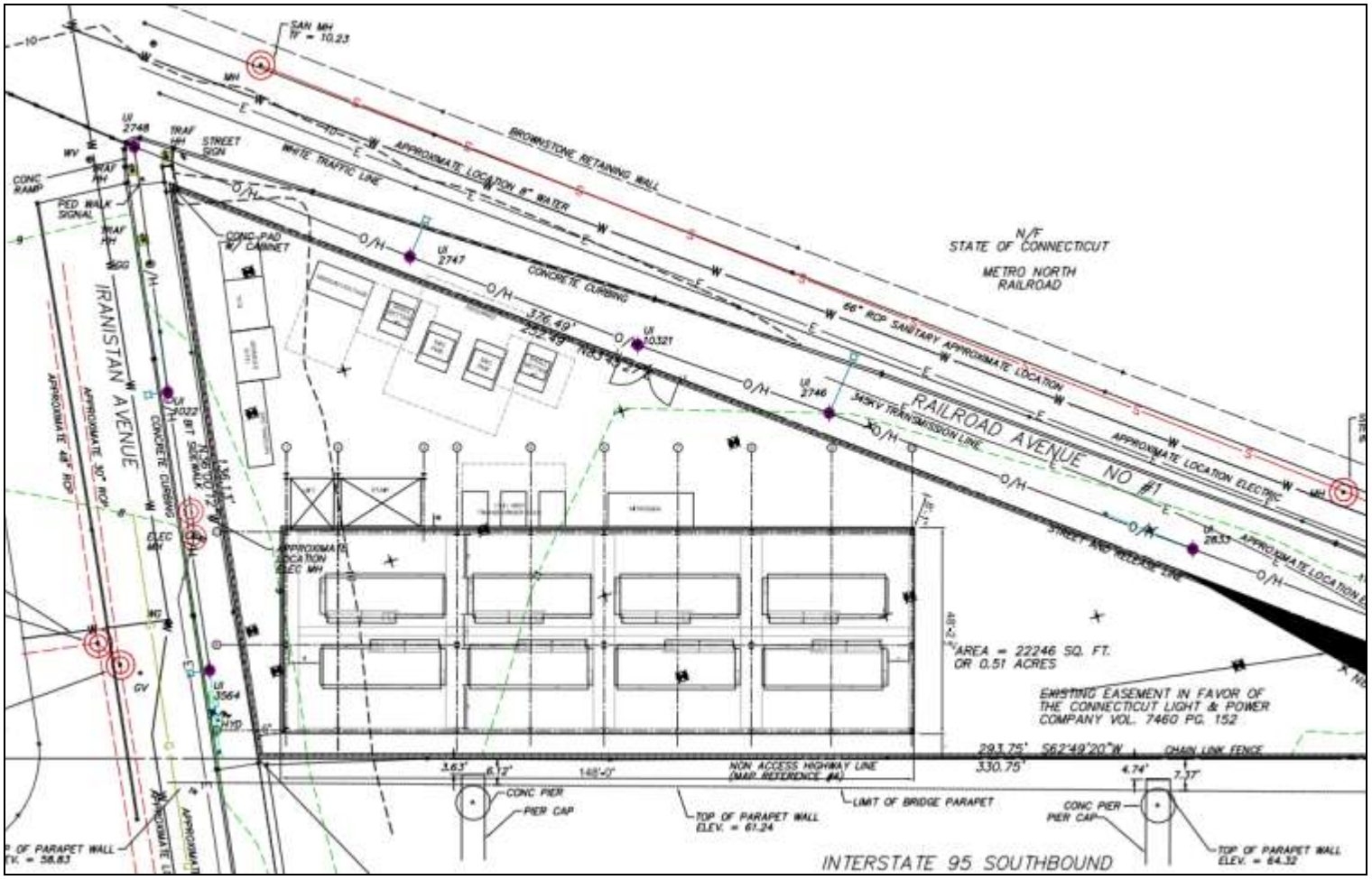
4. Submit a post-construction project noise analysis that demonstrates compliance with the DEEP Noise Control Regulations. Include noise mitigation measures, if necessary.

Site Location

(view northwest)

(view west from Iranistan Avenue)

Site Drawing



Facility Rendering

(view northwest)

ATTACHMENTS

State Agency Comments

Department of Transportation dated June 10, 2020

Department of Energy and Environmental Protection dated June 10, 2020

Department of Transportation, Office of Rails dated June 26, 2020

City of Bridgeport Comment

Green Initiatives Coordinator, October 13, 2020

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

2800 BERLIN TURNPIKE, P.O. BOX 317546
NEWINGTON, CONNECTICUT 06131-7546

Phone:

June 10, 2020

Ms. Melanie Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Dear Ms. Bachman:

Subject: Petition 1406
Construction of 9.66 MW
Fuel Cell Grid – Side Distributed Energy Resource
City of Bridgeport

The Department of Transportation has reviewed the above-mentioned Petition and offers the following comment.

The proposed 966 Fuel Cell Energy Resource Facility abuts CT Railroad right of way (Metro-North) to the North and CT DOT right of way to the South. The proposed Facility will feed power through two separate dedicated power cable runs to the United Illuminating, Congress St. substation. It appears that from the proposed project location to Congress St. substation will have to cross CT Railroad Right of way, either overhead or underground. Therefore, United Illuminating must attain an encroachment permit pursuant to the Highway Encroachment Permit Regulations in conjunction with the Connecticut General Statutes prior to performing any work within the state highway right of way.

The District 3 Permit Office will need to review three complete sets of construction plans which show all work within the state highway right of way, all site work, any required easements and standard details for highway construction prior to issuing the encroachment permit.

The District 3 Permit Office will determine what is necessary including but not limited to bond amount, insurance coverage, maintenance and protection of traffic, inspection, roadway and pavement restoration requirements. Please see attached D.O.T. Screening Checklist.

Should you have any questions, please contact Ms. Latoya Smith, Utility Engineer (Utilities) at (860) 594-2533.

Very truly yours,

Andrzej Myslinski

Transportation Supervising Engineer
Division of Facilities and Transit
Bureau of Engineering and Construction

Enclosure

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

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

Frederick L. Riese
Senior Environmental Analyst

cc: Commissioner Katie Dykes

STATE OF CONNECTICUT
DEPARTMENT OF TRANSPORTATION

2800 BERLIN TURNPIKE, P.O. BOX 317546
NEWINGTON, CONNECTICUT 06131-7546
Phone:

June 26, 2020

Ms. Melanie Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Dear Ms. Bachman:

Subject: Petition 1406
Construction of 9.66 MW
Fuel Cell Grid – Side Distributed Energy Resource
City of Bridgeport

The Connecticut Department of Transportation Office of Rails has reviewed the above-mentioned Petition and offers the following comment.

The Office of Rail requests more detail regarding how the proposed fuel cell will connect to the electrical transmission system. They need to know if the proposed fuel cell will be connecting to the transmission system on monopoles within the Connecticut Department of Transportation Right of Way.

Should you have any questions, please contact Ms. Latoya Smith, Utility Engineer (Utilities) at (860) 594-2533.

Very truly yours,

Andrzej Mysliwiec

Transportation Supervising Engineer
Division of Facilities and Transit
Bureau of Engineering and Construction

CITY OF BRIDGEPORT, CONNECTICUT
999 BROAD STREET
BRIDGEPORT, CONNECTICUT 06604
TELEPHONE (203) 576-7201
FAX (203) 576-3913

October 13, 2020

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Dear Ms. Bachman:

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

The City of Bridgeport has been working closely with Doosan and NuPower in their plans for a fuel cell project to be located at 600 Iranistan Avenue on a vacant property bounded by Railroad Avenue and I-95. The City has met with representatives from the project on several occasions and the City has appreciated the project's collaborative outreach efforts. The plans for this project are consistent with the overall intent of Plan Bridgeport – Bridgeport's Plan of Conservation and Development (POCD). The City is very comfortable in taking the position that this project is in the best interests of the City and will provide significant fiscal and conversation benefits. If the project is approved by the Council it will deliver additional tax revenue to the City, create employment opportunities and encourage the development of and significantly contribute to Connecticut's clean energy future.

Our City has gained a well-deserved reputation for innovation, resilience and sustainability through the support and adoption of projects like these. As Connecticut's most populous city located along Long Island Sound, we are keenly aware of the dangers associated with global warming and especially with rising sea levels. This is truly a unique opportunity to bring all the environmental and financial benefits together under one project.

The City supports the Connecticut Siting Council approval of this Project and we are looking forward in anticipation to the start of its construction.

Joseph P. Gresko

Green Initiatives Coordinator

City of Bridgeport