

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

PETITION OF VFS, LLC	:	PETITION NO.
FOR A DECLARATORY	:	
RULING FOR THE LOCATION AND	:	
CONSTRUCTION OF A 194 KILOWATT	:	
FUEL CELL CUSTOMER-SIDE DISTRIBUTED	:	
ENERGY RESOURCE AT 110 WOODBURY	:	
AVENUE, WATERTOWN, CONNECTICUT	:	

PETITION OF VFS, INC. AS AN OWNER/OPERATOR
FOR A DECLARATORY RULING

Pursuant to Conn. Gen. Stat. §§ 4-176 and 16-50k(a) and Conn. Agencies Regs. § 16-50j-38 et seq., VFS, Inc. (“VFS”), as an Owner/Operator , requests that the Connecticut Siting Council (“Council”) approve by declaratory ruling the location and construction of a customer-side distributed resources project comprised of one (1) Bloom Energy ES6 Energy server and associated electrical equipment. (the “Facility”), providing 195 kilowatts (“KW”) of power to the host facility at 110 Woodbury Road, Watertown, CT. The Facility will be installed, owned, maintained, and operated by VFS.

Conn. Gen. Stat. § 16-50k(a) provides that:

Notwithstanding the provisions of this chapter or title 16a, the council shall, in the exercise of its jurisdiction over the siting of generating facilities, approve by declaratory ruling . . . (B) the construction or location of any fuel cell, unless the council finds a substantial adverse environmental effect or of any customer-side distributed resources project or facility . . . with a capacity of not more than sixty-five megawatts, as long as such project meets air and water quality standards of the Department of Energy and Environmental Projection.”

I. INTRODUCTION

The proposed Facility will be a customer-side distributed resource under 65 MW that complies with the air and water quality standards of the Department of Energy and Environmental Protection (“DEEP”). VFS submits that no Certificate of Environmental Compatibility and Public Need is required because the proposed installation will not have a substantial adverse environmental effect.

II. COMMUNICATIONS

All communications should please be directed to the following:

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III Discussion

A. The facility

The proposed Facility will be on the East side of the site adjacent to the existing boiler house and North St. (See Exhibit 1). The proposed installation will consist of one (1) ES6 Fuel Cell Energy Server manufactured by Bloom Energy of San Jose, CA. capable of producing 194 kilowatts of power delivered directly to the host facility. The Fuel Cells are totally enclosed, factory-

assembled and tested prior to shipment. See data sheet Exhibit 2. The total installation including electrical switch gear, protective relays and transformers will encompass an area 39'x 23'.

Electric utility connections will extend to the West underground to the electrical point of connection at the Math and Science building. Make up water connection will be made at the Boiler Plant Building to the North. As currently designed the Facility will not provide emergency power to the host property. All power produced by the Facility will be consumed by the host property. No power is anticipated to be traded to the grid. See Exhibit 1 for electrical One-Line Drawing.

Public Health and Safety

The facility will be designed and installed in full compliance with all state and local Building codes and in full compliance with NFPA 853. The fuel cells utilized are fully enclosed and tested prior to deployment to the field. The solid Oxide media has a maintenance life of approximately 5 years and will be exchanged at that interval.

The energy servers are controlled by Bloom Energy Remote Monitoring Control Center "RMCC". System conditions are continuously monitored and the fuel cells can be shut down if an unsafe condition is detected. VFS, LLC. will provide the Town of Watertown with an Emergency Response Plan once a completed plan set is developed. First responders will be given full access to the facility. Prior to commissioning all fuel piping will be purged clean in full compliance with "The Thomas Act" utilizing inert gas or compressed air. No natural gas will be used to purge piping. A crane with a boom height of approximately 120' will be utilized to rig the fuel cells and electrical equipment into place. No FAA notification is required.

Waterbury Airport (N41) is over 4 miles to the Northeast and Whelan Farms airport is over 5 miles to the Northwest. Both are small grass field FBO's. Proximity to Heliports is unknown.

Site Conditions

The site is presently being utilized as a utility area directly adjacent to the boiler plant on the East side of the 75 acre campus. The completed facility will be protected by concrete filled steel bollards. Vehicular access is gated and restricted.

C. Existing and Proposed Conditions

i. The Site

The site is located on the East side of the 75-acre private school campus directly adjacent to the Boiler Plant building serving the campus buildings. The campus is zoned R-20 and is bordered to the North by Watertown Golf Club and to the East, South, and West by Residential properties zoned both R-20 and R-10. Evergreen Cemetery is over 600' to the North. The nearest residence to the Facility site is 185' to the East on North St. and the nearest on-campus residence hall is over 600' to the North. The Facility will be constructed on a concrete foundation protected by concrete filled steel bollards. One (1) small tree (> 6" caliper) is expected to be removed.

ii. Wildlife

After review of the Natural Diversity Database, we found no evidence of any State or Federal listed species or critical habitats on or near the Facility site therefore no consultation with DEEP

is required. Due to the small footprint and location on the fully developed campus the facility will have no detrimental effect on the wildlife habitat. Reference exhibit #3.

iii. Wetlands and Watercourses

The nearest watercourse is a private detention pond on campus some 450' to the Southwest and Hemingway Pond some 2400' to the East. Upon review of the publicly available information the closest delineated wetlands are surrounding Hemingway Pond as shown in exhibit 4. The Town of Waterford does not publish a formal wetlands delineation map. Appropriate erosion control measures to prevent storm water discharge from the site will be utilized during construction in accordance with Connecticut Soil Erosion and Sediment Control Guidelines, effective March 30, 2024.

iv. Flood Zones and Aquifer Protection Areas

A review of flood mapping data from Federal Emergency Management Agency NFIB shows that the site is not in the 100 nor 500-year flood zone. The DEEP Aquifer Protection Mapping shows the nearest Aquifer Protection Zone over 5 miles to the west of the proposed facility. Reference Exhibits 5 and 6.

v. Cultural Resources

The site has been heavily developed and disturbed. The construction and operation of the facility will have no adverse effect on cultural resources.

vi. Natural Gas Desulfurization Process

Sulfur compounds that are added to natural gas as an odorant are removed in the first step of electricity production in a Bloom Energy Server. Sulfur is separated from the natural gas by filtering in a specialized canister within the Energy Server (the “Desulf Unit”) that uses a copper catalyst to remove the sulfur. The Desulf Units are periodically removed and replaced. The spent units are transported to ShoreMet, L.L.C. (ShoreMet) in Indiana, where they are opened, the contents are removed and copper is used as an ingredient in various products. The Desulf Units are then cleaned, refilled, and sent back to the field for reuse. Handling and transportation are performed in accordance with hazardous waste restrictions.

vii. Water, Heat and Air Emissions

The construction and operation of the Facility will comply with DEEP’s air and water quality standards and will not have a substantial adverse environmental effect. The Facility is designed to operate without water discharge under normal operating conditions. There are no connections or discharge points to the proposed Facility. The Facility uses no water after start-up.

Heat generated by the proposed Facility is used internally to increase the electrical efficiency of the fuel cell system. As a result, there is no useful waste heat generated by the fuel cell. The minimal amount of thermal load present at the Site would preclude the efficient deployment of a combined heat and power application.

Conn. Agencies Regs. § 22a-174-42 exempts fuel cells from air permitting requirements. Accordingly, no permits, registrations, or applications are required based on the actual emissions from the Facility. It should be noted, however, that Bloom Energy fuel cells do meet the emissions standards of Section 22a-174-42.

The Facility will also meet state criteria thresholds for all greenhouse gases defined in Section 22a-174-1(49). Table 1 lists thresholds set by the Low and Zero Emissions Renewable Energy Credit (LREC/ZREC) program, and compares them to emissions generated from the proposed Facility. By virtue of the non-combustion process the Bloom Energy fuel cells virtually eliminate NO_x, SO_x, CO, VOCs and particulate matter emissions from the energy production process. Similarly, there are no CH₄, SF₆, HFC or PFC emissions.

Table 1: Connecticut Thresholds for Greenhouse Gases

Emission Type	Bloom Output	LREC allowance
Nitrous Oxides (NO _x)	<0.01 lbs/MWh	0.07 lbs/MWh
Carbon Monoxide (CO)	<0.05 lbs/MWh	0.10 lbs/MWh
Sulfur Oxides (SO _x)	Negligible	Not Listed
Volatile Organic Compounds (VOCs)	<0.02 lbs/MWh	0.02 lbs/MWh
Carbon Dioxide (CO ₂) ⁵	679-833 lbs/MWh	Not Listed

³ See Conn. Agencies Regs. §§ 22a-174-42(b) and (e).

⁴ Sec. 16-244t

⁵ Carbon dioxide is measured at Bloom’s stated lifetime efficiency level of 53-60%.

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The proposed Facility will ultimately displace less efficient fossil fueled marginal generation on the ISO New England system. Based upon US Environmental Protection Agency (EPA) “eGrid” data, the proposed Facility is expected to reduce carbon emissions by more than 25% while essentially eliminating local pollutants like NO_x, SO_x and particulate discharge.

viii. Acoustics

Acoustical Technologies, Inc. performed a positive onsite assessment to prove compliance with Local and State noise ordinances. In summary their testing proved non-compliance with all

applicable ordinances. A detailed report and engineered mitigation recommendations are being developed and will be incorporated into the final design drawings to assure compliance. The report is attached as exhibit 7.

viii.

Construction of the Facility is expected to begin in August of 2024 and will take Approximately 4 months. Although the construction will disturb less than one acre of area strict compliance with erosion control best practices will be adhered to during construction activities including Connecticut Soil Erosion and Sediment Control Guidelines, effective March 30, 2024. Bloom Energy Technicians will be on site during commissioning and maintenance and will have no impact on soils.

5. Public Notice

Notice was provided via certified mail to all property owners, abutters pursuant to Conn. Agencies Regs. §16-50j-40(a). VFS, LLC. copy of the Notice Letter, Abutters list and Abutters Map are included in Exhibit 8, 9, and 10. Prior to filing this Petition, VFS, LLC also sent notices to all applicable Federal, State and Municipal officials of Watertown as listed in Exhibit 11. Exhibit 12 shows the Proof of mailing receipts for all notices.

E. CONCLUSION

As set forth above, VFS, LLC requests that the Council issue a determination, in the form of a declaratory ruling, that the proposed installation above is not one that would have a substantial adverse effect, and, therefore, that a Certificate is not needed.

Respectfully submitted,

Steve Pearson

VFS, LLC

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List of Exhibits

- Exhibit 1: GA1, SP-1, and E1, Electrical One Line
- Exhibit 2: Bloom Data sheet
- Exhibit 3: NDDDB Map
- Exhibit 4: Wetlands Mapping
- Exhibit 5: FEMA Flood Map
- Exhibit 6: Aquifer Protection Zone Map
- Exhibit 7: Acoustics Report
- Exhibit 8: Notice Letter to Abutters and Officials
- Exhibit 9: Abutters List
- Exhibit 10: Abutters Map
- Exhibit 11: Officials List
- Exhibit 12: Proof of Mailing