STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
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CERTIFIED MAIL
RETURN RECEIPT REQUESTED

September 15, 2017

Dimitriy Kamenetskiy
Project Manager
FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810

RE: **PETITION NO. 1317** - Broad Street Fuel Cell, LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, maintenance and operation of a 1.4 megawatt customer-side combined heat and power fuel cell facility to be located adjacent to and south of the Ferris Athletic Center at Trinity College, 300 Summit Street, Hartford, Connecticut.

Dear Mr. Kamenetskiy:

At a public meeting held on September 14, 2017, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal meets air and water quality standards of Department of Energy and Environmental Protection and would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k would not require a Certificate of Environmental Compatibility and Public Need, with the following conditions:

1. Approval of any minor project changes be delegated to Council staff;

2. The use of natural gas as a fuel system cleaning medium during fuel cell construction, installation or modification shall be prohibited;

3. Submit the following information to the Council 15 days prior to any fuel pipe cleaning operations related to fuel cell construction, installation, or modification:
    a. Identification of the cleaning media to be used;
    b. Identification of any known hazards through use of the selected cleaning media;
    c. Description of how known hazards will be mitigated, including identification of any applicable state or federal regulations concerning hazard mitigation measures for such media;
    d. Identification and description of accepted industry practices or relevant regulations concerning the proper use of such media;
    e. Provide detailed specifications (narratives/drawings) indicating the location and procedures to be used during the pipe cleaning process, including any necessary worker safety exclusion zones;
    f. Identification of the contractor or personnel performing the work, including a description of past project experience and the level of training and qualifications necessary for performance of the work;
    g. Contact information for a special inspector hired by the project developer who is a Connecticut Registered Engineer with specific knowledge and experience regarding electric generating facilities or a National Board of Boiler and Pressure Vessel Inspector and written approval of such special inspector by the local fire marshal and building inspector; and

h. Certification of notice regarding pipe cleaning operations to all state agencies listed in General Statutes § 16-50j(h) and to the Department of Consumer Protection, Department of Labor, Department of Public Safety, Department of Public Works, and the Department of Emergency Management and Homeland Security;

4. Compliance with the following codes and standards during fuel cell construction, installation or modification, as applicable:
   a. NFPA 54
   b. NFPA 853; and
   b. ASME B31;

5. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable;

6. Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, and the City of Hartford;

7. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;

8. The facility owner/operator shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v;

9. This Declaratory Ruling may be transferred, provided the facility owner/operator/transferor is current with payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v and the transferee provides written confirmation that the transferee agrees to comply with the terms, limitations and conditions contained in the Declaratory Ruling, including timely payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v; and

10. If the facility owner/operator is a wholly owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition, dated August 2, 2017 and additional information dated August 8, 2017 and September 6, 2017, and in compliance with Public Act 11-101, An Act Adopting Certain Safety Recommendations of the Thomas Commission.

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

Very truly yours,

Robert Stein MAB

Robert Stein
Chairman

RS/bm

Enclosure: Staff Report dated September 14, 2017

c: The Honorable Luke Bronin, Mayor, City of Hartford
Jamie Bratt, AICP, LEED AP, Director of Planning and Economic Development, City of Hartford
Frederick Peck, Senior Planner, City of Hartford
Jennifer D. Arasimowicz, Esq., FuelCell Energy, Inc.
Henry Sire, Esq., FuelCell Energy, Inc.

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Petition No. 1317
Broad Street Fuel Cell, LLC
Trinity College
Hartford, Connecticut

Staff Report
September 14, 2017

On August 3, 2017 the Connecticut Siting Council (Council) received a petition from Broad Street Fuel Cell, LLC, a wholly-owned subsidiary of FuelCell Energy Inc. (FCE), for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the installation of an 1.4 megawatt (MW) fuel cell combined heat and power generating facility at the Trinity College campus in Hartford, Connecticut. Council member Robert Hannon and Council staff member Fred Cunliffe conducted a field review of the proposed project site on September 6, 2017. Dmitriy Kamenetskiy, Louis Ernst, Kirk Arenson, Henry Sire, Esq., and Tim Rzeszutek representing the Petitioner and Damon Coke representing Trinity College, attended the field review.

FCE discussed the project with the City of Hartford Department of Development Services on June 21, 2017. FCE mailed notification of the project to abutting property owners, City of Hartford officials, and required state agencies and officials on or about August 2, 2017. The Council has not received any written comments to date.

The project would be a "customer-side distributed resources" facility, as defined in Connecticut General Statutes (CGS) § 16-1(a)(34). 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 2013 Connecticut Comprehensive Energy Strategy emphasizes low- or no-emission sources of electric generation and development of more distributed generation. The proposed facility is distributed generation. Specifically, the proposed facility will contribute to fulfilling the State's Renewable Portfolio Standard as a low emission Class I renewable energy source.

The proposed project is consistent with the goals of the state's Comprehensive Energy Strategy to encourage provision of cheap, clean, reliable electricity, fostering the development of microgrids and promoting economic development and job growth. The project will be used to satisfy a substantial portion of the electrical and thermal needs of the Campus. As a result, the electric load that Trinity College will need to obtain from the electric grid will be reduced, including the summertime peak demand; thereby, reducing the stress on the system and reducing load on overloaded transmission lines. The Project will provide Trinity College with savings as compared to grid purchased electricity and thermal energy. Specifically, the proposed facility will contribute to fulfilling the State's Renewable Portfolio Standard as a low emission Class I renewable energy source. FCE and Trinity College have a fifteen year contract.

The host property is zoned by the City of Hartford as a multi-use mix district with a campus overlay district. The lands adjacent to the host property are zoned as open space, main street, multi-use mix, neighborhood mix and neighborhood districts, and appear to be used primarily for residential or commercial purposes. Trinity and Broad Street Fuel Cell, LLC have entered into an agreement whereby FCE would install, operate and maintain an FCE DFC1500 fuel cell unit at Trinity College. The project was not selected in any Department of Energy and Environmental Protection (DEEP) or regional procurement and is not associated with any Request For Proposal; however, the project is supported by Eversource's Low and Zero Emission Renewable Energy Credit Programs.

The proposed fuel cell uses non-combustion molten carbonate technology that consumes natural gas as fuel and uses water for fuel processing to generate electrical power. The fuel cell would be interconnected to an electric switch located approximately 100 feet south of the fuel cell unit. Natural gas connection is approximately 2,000 feet from the unit. FCE and Trinity College are discussing route options. FCE is also incorporating a fuel cell heat recovery unit to utilize fuel cell waste heat and connect to the college's adjacent heating plant.

The Project consists of multiple skids classified into three major subsystems. The first susbsystem is the fuel cell module. The fuel cell stacks would be replaced on a 5-7 year cycle. The facility typically has a 20 year life. The two others are the mechanical balance of plant ("MBOP") and the electrical balance of plant ("EBOP"). The MBOP is comprised of three separate components; the desulfurization system, the main process skid, and the water treatment system skid. The MBOP supplies fresh air, cleans and heats fuel and water, and includes the power plant control system. The EBOP is comprised of four sections: one power conditioning unit, two transformers and one switchgear for grid connection. The fuel cell facility would have a dedicated generator for black start capability and a load leveler for micro-grid operations. Trinity College is in process to apply for a micro-grid grant with the state. The main components of the fuel cell would be approximately 13-20 feet high including exhaust stack. The fuel cell facility would be installed within a 60-foot by 40-foot compound enclosed by a thirteen-foot fence that would match existing on-site fencing and include anti-climb panels. In this installation FCE would excavate the compound area to a level equal to the adjacent heating plant elevation. Retaining walls and fencing would surround the facility. The existing Trinity College-owned backup power generator will be relocated and will not be used for the operation of the fuel cell power plant.

The fuel cell facility would comply with all applicable DEEP water quality standards. The project would require up to 6,500 gallons per day of raw water and a DEEP Miscellaneous Sewer Compatible Discharges general permit for the discharge of wastewater of approximately 3,200 gallons per day resulting from fuel cell operations.

Air emissions produced during fuel cell operation would be below the DEEP applicable limits, as shown in the table below – thus, no air permit is required.

Comparison of the Fuel Cell Facility with RCSA Criteria *		
Compound	Fuel Cell Facility (lbs/MWh)	Emissions standards (lbs/MWh)
NOx	0.01	0.15
PM_{10}	0.0002	0.03
CO_2	765 With waste heat recovery	1,650
CO_2	980 Without waste heat recovery	1,650

* Regulations of Connecticut State Agencies Section 22a-174-42(b)(3)(C); 22a-174-42(d)(2)(B)(ii) & Table 42-2

While the facility would emit 4,691 tpy of carbon dioxide, the electric power it would generate would displace higher carbon emitting conventional generation in the utility grid. In total, the net carbon dioxide impact of the facility is a reduction of 1,845 tpy of carbon dioxide.

Visual impact from the proposed project would be minimal as it is located between the college's heating plant and Ferris Athletic Center building blocking views from the north, west, and east. Anti-climb fencing would obstruct views from the south. While the nearest residences are located approximately 290 feet south the facility would meet City of Hartford and DEEP noise regulations without the need for sound mitigation.

The State Historic Preservation Office indicates the project would have no effect on historic or archeological resources. DEEP has reviewed the project and anticipate no negative impacts to State-listed species.

The facility would be remotely monitored by FCE on a 24/7 basis to detect abnormalities in operation. The fuel cell facility is designed in accordance with American National Standards Institute and Canadian Standards Association (ANSI/CSA) America FC 1-2014 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. An Emergency Response Plan and Decommission Plan have been provided. FCE would consult with the Hartford Fire Department and Trinity College's Safety Department prior to operation.

A clean rag would be drawn through the pipe multiple times to clean construction debris or foreign matter from the pipe. Air would then be used to blow out any remaining dust.

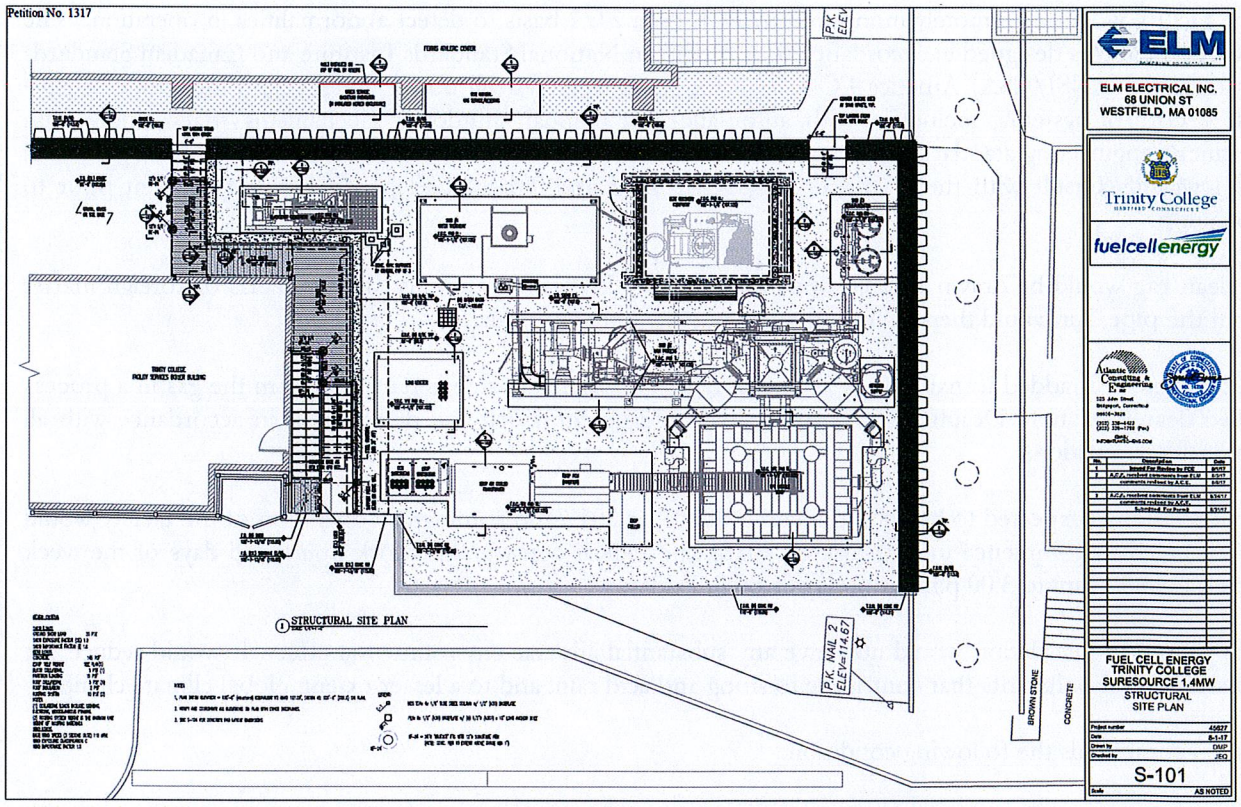
Sulfur dioxide is added to natural gas as an odorant. The sulfur dioxide is removed from the gas in a process called desulfurization. Desulfurization materials would be contained and disposed of in accordance with all applicable regulations.

Construction is expected to begin at the end of October 2017 and commercial operation of the facility would be expected to commence in mid- March 2018. The typical construction work hours and days of the week would be 6:30 a.m. to 3:00 p.m., Monday through Friday.

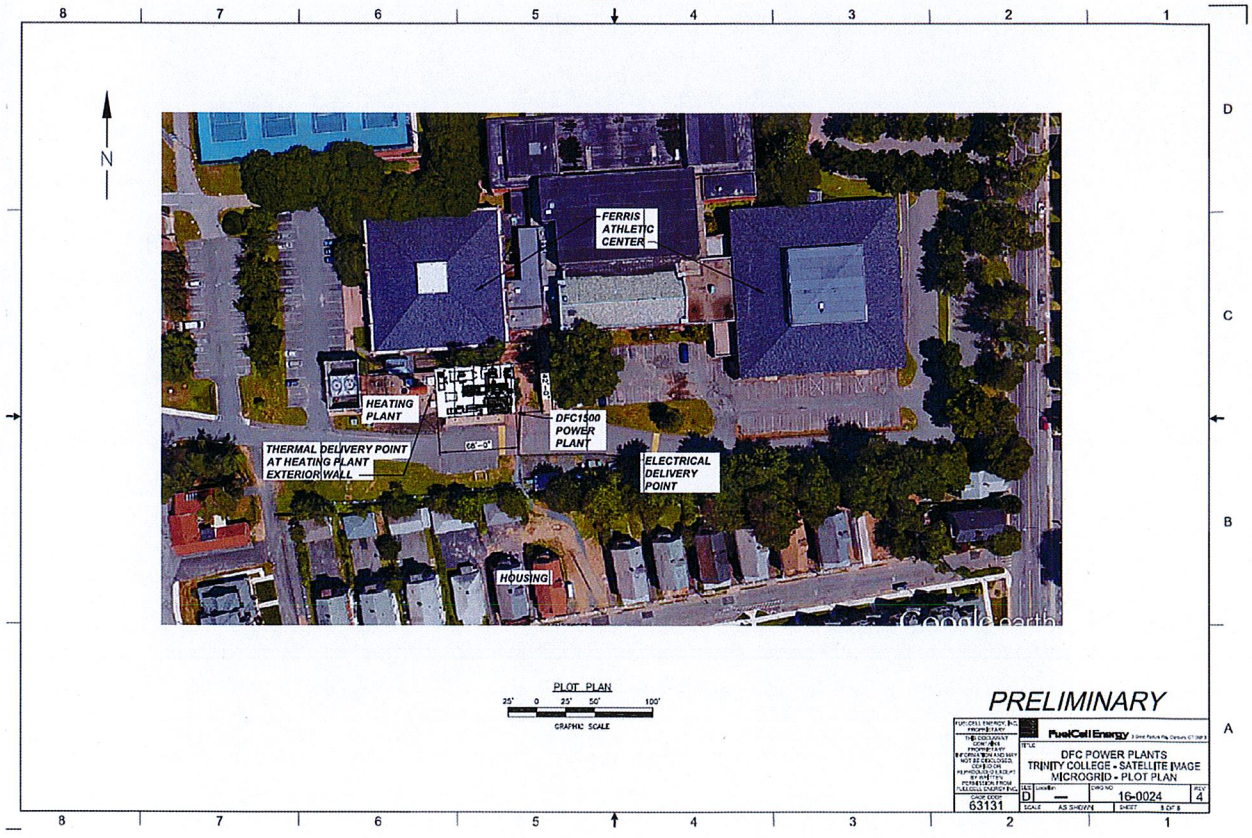
The proposed installation would not have any substantial adverse environmental effect. It would reduce the emission of air pollutants that contribute to smog and acid rain, and to a lesser extent, global climate change.

Staff recommends the following condition:

1. Approval of any minor project changes be delegated to Council staff.



Petition of Broad Street Fuel Cell, LLC
August 2, 2017
Exhibit A



Photosimulation- Fencing surrounding fuel cell