



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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CERTIFIED MAIL RETURN RECEIPT REQUESTED

September 6, 2016

Jennifer D. Arasimowicz, Esq.
Vice President, Managing Counsel
Fuel Cell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810

RE: **PETITION NO. 1248** - TRS Fuel Cell, LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the construction, maintenance, and operation of a 3.7 megawatt combined heat and power fuel cell facility to be located at 64 Triangle Street, Danbury, Connecticut.

Dear Attorney Arasimowicz:

At a public meeting held on September 1, 2016, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal 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. Use of off-road construction equipment that meets the latest EPA or California Air Resources Board standards, or in the alternative, equipment with the best available controls on diesel emissions, including, but not limited to, retrofitting with diesel oxidation catalysts, particulate filters and use of ultra-low sulfur fuel;
2. Compliance with the provisions of Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies that limit the idling of mobile sources to 3 minutes;
3. Approval of any minor project changes be delegated to Council staff;
4. The Petitioner shall provide a final site plan with security fence design detail prior to commencement of construction of the facility;
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 Danbury;

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 July 21, 2016 and additional information received on August 18, 2016 and August 29, 2016, 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
Chairman

RS/CMW/lm

Enclosure: Staff Report dated September 1, 2016

- c: The Honorable Mark D. Boughton, Mayor, City of Danbury
Sharon Calitro, Director of Planning & Zoning, City of Danbury
Robin Edwards, Esq., Corporation Counsel, City of Danbury
Craig Stevenson, Project Manager, FuelCell Energy, Inc.
S. Derek Phelps, FuelCell Energy
J.A.R. Associates (property owner)



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Petition No. 1248

TRS Fuel Cell, LLC

64 Triangle Street

Danbury, Connecticut

Staff Report

September 1, 2016

On July 27, 2016, the Connecticut Siting Council (Council) received a petition from TRS 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 a 3.7 megawatt (MW) fuel cell combined heat and power generating facility at 64 Triangle Street, Danbury, Connecticut. TRS has entered into an agreement with J.A.R. Associates (JAR) to lease a portion of its property at 64 Triangle Street for the placement of the fuel cell facility. Council member Dr. Michael Klemens, Executive Director Melanie Bachman and Christina Walsh of the Council staff conducted a field review of the proposed project site on August 18, 2016. S. Derek Phelps, Henry Sire, Esq., Ricky Clark, Louis F. Ernst, Jr., and Craig Stevenson represented the Petitioner at the field review. Also in attendance were Anthony Rizzo, Jr., property owner, and Sharon Calitro, Director of Planning and Zoning for the City of Danbury.

On July 20, 2016, FCE and JAR met with Danbury Mayor Mark Boughton to present an overview of the project. Mayor Boughton did not express concerns regarding the proposed project. Notice of the project was mailed to abutting property owners, City of Danbury officials, and required state agencies and officials on or about July 21, 2016. The City of Danbury Office of the Corporation Counsel submitted comments dated August 23, 2016, stating that the City requests the facility be enclosed by a chain link security fence. The City's letter also references a site plan for site improvements on the property that are unrelated to the proposed facility and, therefore, not under the Council's jurisdiction. During the field review, FCE representatives indicated they would work with JAR to ensure the facility site and its appearance are consistent with any City requirements relative to site improvements that are unrelated to the proposed fuel cell facility.

The proposed facility would be the first commercially available High Efficiency Fuel Cell (HEFC) and would be located on property owned by JAR. The facility would deliver electrical power through an existing Eversource distribution line to the nearby 13.8 kilovolt Triangle Street Substation. Heat produced from the fuel cell facility would be provided to the JAR building to be used for comfort heating purposes during the winter. The HEFC facility would have an electrical efficiency of approximately 60 percent.

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 would deliver electrical power to Triangle Street Substation thereby reducing stress and load on electric transmission lines.

The proposed facility would be installed within a 135-foot by 74-foot area surrounded by an eight-foot high chain link fence. The proposed facility was originally oriented with its longest side facing Triangle Street; however, after consultation with the City of Danbury, the Petitioner changed the orientation of the facility by 90 degrees.

The facility would consist of three fuel cell modules. The mechanical balance of plant is made up of the desulfurization system, the main process skids, and the water treatment system skid. The electrical balance of plant (EBOP) is made up of three inverters, three transformers and one switchgear for grid connection. The EBOP converts the DC power of the fuel cell into utility grade AC power. Each of the three fuel cell modules would contain four fuel cell stacks. The height at the top of the proposed exhaust stacks would be approximately 30 feet.

The proposed facility would be surrounded by an eight foot high fence and gates. The Council recommends the fence be constructed using anti-climb measures on all four sides of the facility. A final site plan with security fence design detail shall be submitted to the Council prior to construction.

A new driveway extending from Triangle Street onto the host property would be used to access the facility. Following construction, the site would be visited periodically by technicians.

The fuel cell facility would comply with all applicable Department of Energy and Environmental Protection (DEEP) water quality standards. The project would require a DEEP Miscellaneous Sewer Compatible Discharges general permit for the discharge of wastewater 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)
NO _x	0	0.15
PM ₁₀	0.0002	0.03
CO ₂	708 With waste heat recovery	1,650
CO ₂	725 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 11,750 tons of carbon dioxide per year, 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 6,191 tons per year of carbon dioxide.

The only other greenhouse gas that would be emitted would be methane. Approximately 0.7 tons per year would be emitted. This is less than the State of Connecticut threshold of 100 tons per year per the Regulations of Connecticut State Agencies Section 22a-174-1 (49).

Surrounding land use on adjacent properties to the north, south and east are industrial. Residential properties are located approximately 200 to 240 feet west of the project site. The facility would meet DEEP noise regulations without the need for sound remediation.

Visual impact from the proposed project would be minimal due to its location adjacent to existing buildings in an industrial area. Views from properties to the north and west would be obstructed by an existing berm. Views from properties to the south and east would be screened by existing structures.

The Petitioner submitted a plume analysis to address the height of the potential plume from the facility taking into consideration the Danbury Airport, which is 2.7 miles away. The 30-foot stack would emit a 350 degree Fahrenheit exhaust plume that, during a -4 degree Fahrenheit outside temperature in an urban setting, predicts a plume height of 380 feet above grade. Given the distance of the Danbury Airport and a three-degree glideslope, aircraft altitude should not be lower than approximately 750 feet above ground level near the proposed site. Taking into account takeoff procedures and alignment of the runways at the airport, aircraft leaving Danbury Airport are not expected to be below 1,200 feet above the proposed fuel cell facility.

On June 3, 2016, TRS requested a determination from the Connecticut State Historic Preservation Office (SHPO) regarding the project's effect on historic, architectural or archaeological resources listed on or eligible for the National Register of Historic Places. SHPO provided a response to FCE dated August 8, 2016 stating that the proposed project would not affect historic properties.

The proposed project would not be located within the 100-year or 500-year FEMA-designated floodplains, nor would it be within a coastal zone. There are no waterbodies, wetlands or hydric soils at or near the facility.

The fuel cell facility would typically not use raw city water during normal operation. Approximately 4,000 gallons per day (gpd) of raw water would be used during startups. Wastewater discharge would be approximately 1,440 gpd during normal operation and approximately 2,000 gpd during each four day startup period.

There are no known extant populations of state-listed species based on information from the DEEP Natural Diversity Database.

Prior to operation, TRS would discuss the facility with the Danbury Fire Department. TRS has submitted an Emergency Response Plan in accordance with the Council's final decision in Docket NT-2010. Additionally, TRS would comply with all other requirements of the NT-2010 decision.

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.

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 1-2004 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.

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 would commence in February 2017 and the fuel cell facility would be online in July 2017.

The proposed installation 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.

Staff recommends the following conditions:

1. Use of off-road construction equipment that meets the latest EPA or California Air Resources Board standards, or in the alternative, equipment with the best available controls on diesel emissions, including, but not limited to, retrofitting with diesel oxidation catalysts, particulate filters and use of ultra-low sulfur fuel;
2. Compliance with the provisions of Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies that limit the idling of mobile sources to 3 minutes;
3. Approval of any minor project changes be delegated to Council staff; and
4. The Petitioner shall provide a final site plan with security fence design detail prior to commencement of construction of the facility.

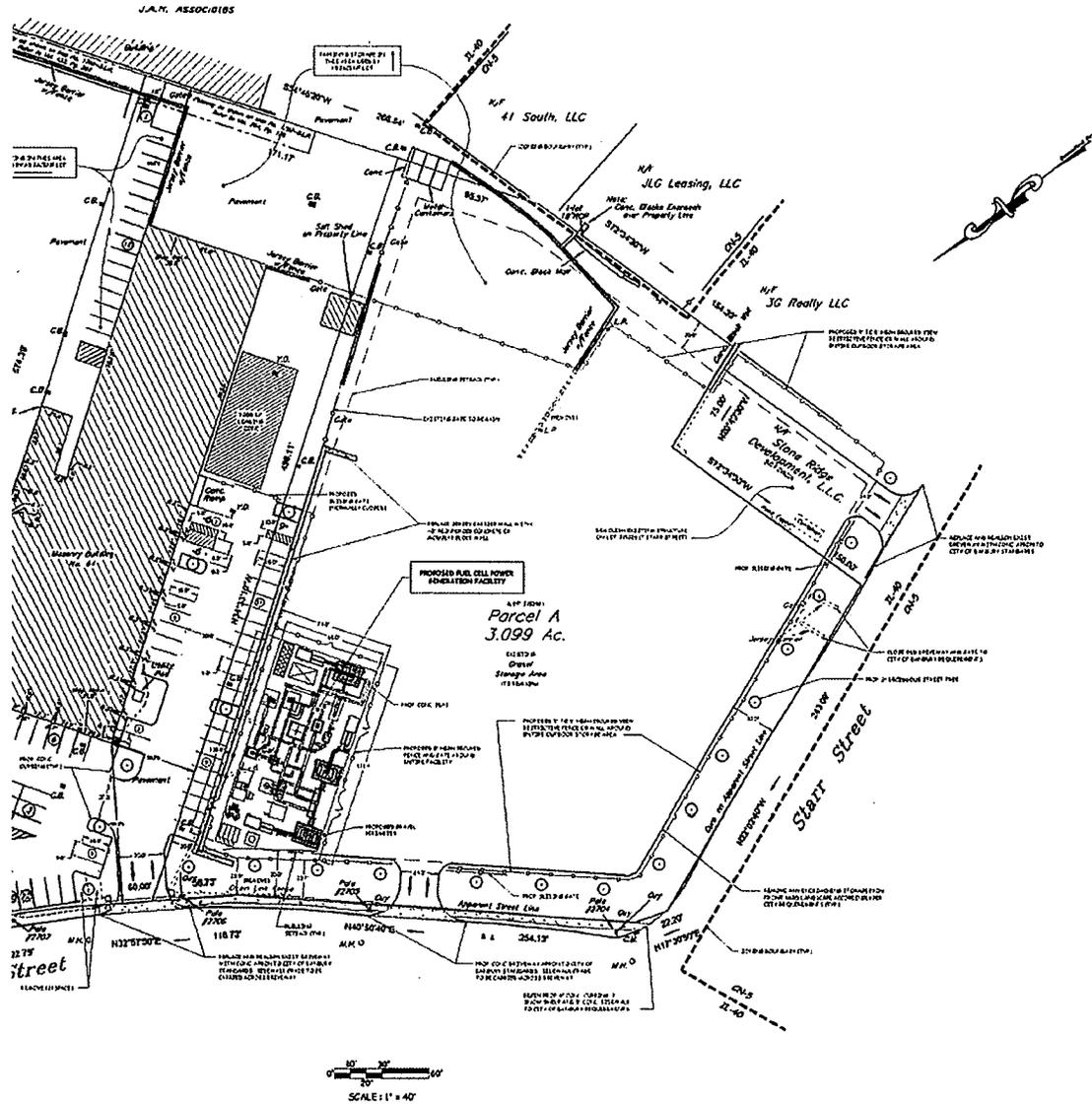


Figure 1. Modified site plan for proposed fuel cell facility.

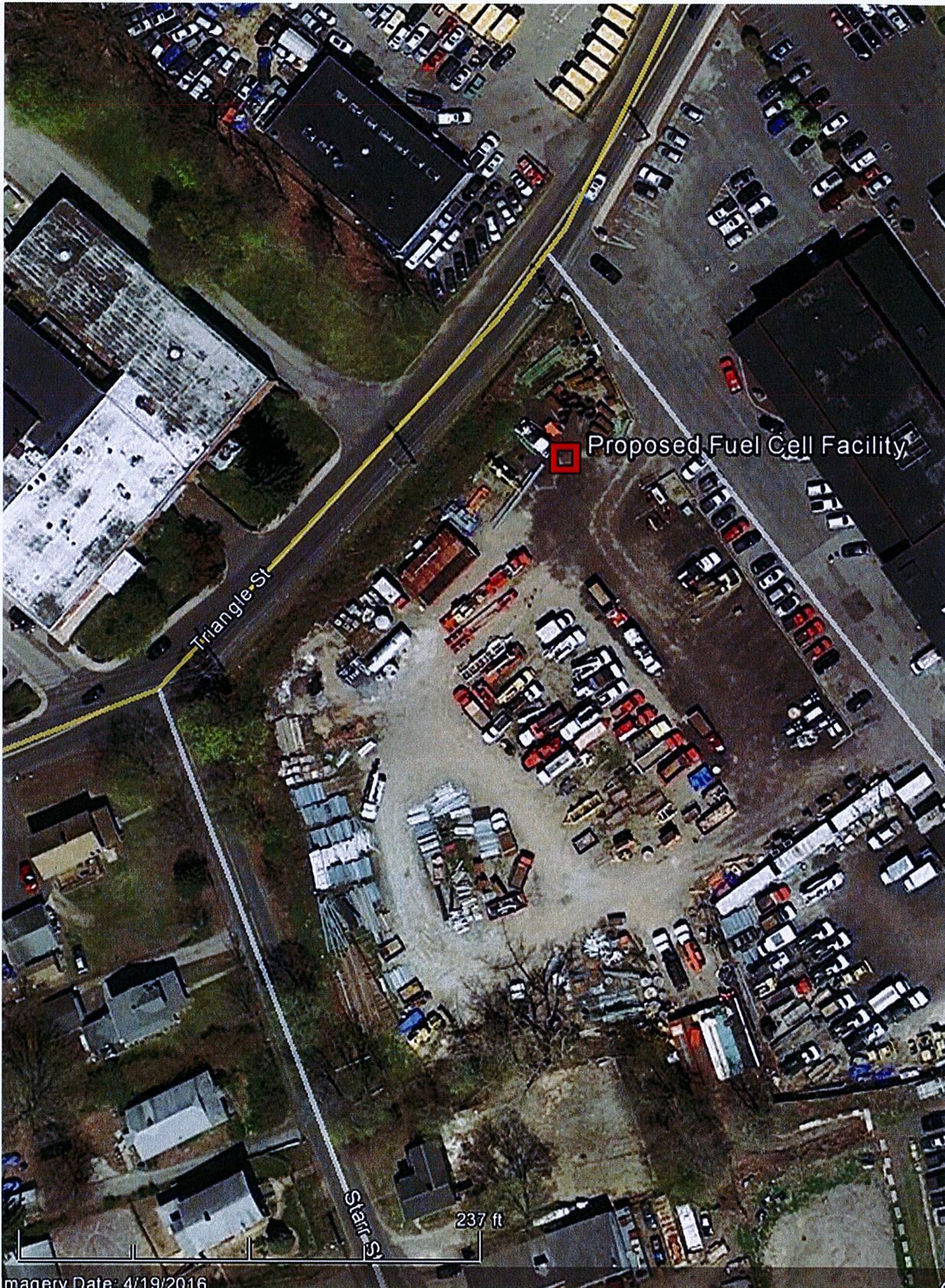


Figure 2. Location of proposed fuel cell facility.