



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
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E-Mail: siting.council@ct.gov
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**VIA ELECTRONIC & CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

February 16, 2024

John Prinssen
Installation Project Manager
Doosan Fuel Cell America, Inc.
101 Riverside Drive
East Hartford, CT 06108
John.prinssen@doosan.com

RE: **PETITION NO. 1595** - HyAxiom, 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 4.14-megawatt fuel cell facility and associated equipment to be located at 35 North Main Street, Ansonia, Connecticut, and associated electrical interconnection. **Final Decision.**

Dear John Prinssen:

At a public meeting held on February 15, 2024, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal meets air and water quality standards of the 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 Project changes be delegated to Council staff;
2. Provide a detailed site plan including, but not limited to, final facility layout and the interconnection points for electricity, water and natural gas prior to the commencement of construction;
3. Provide a copy of the Fuel Cell Emergency Response Plan to local emergency responders prior to facility operation and provide emergency response training that includes an itemized list of necessary fire suppression equipment;
4. Submit a fuel cell operational noise study, with mitigation measures, if necessary, confirming compliance with DEEP Noise Control Regulations;
5. Install transformers with low oil level alarms;
6. Submit a revised Emergency Response Plan with reference to leaks and spills that includes the total volume of oil in the transformers prior to the commencement of construction;
7. Submit the results of the soil tests, including any required revisions to the proposed facility site and remediation measures, if necessary, prior to the commencement of construction;
8. Install the cooling modules as close as possible to the foundation walls adjacent to North Main Street, if feasible;

9. The use of natural gas as a fuel system cleaning medium during fuel cell construction, installation or modification shall be prohibited;
10. The Council shall be notified in writing at least two weeks prior to the commencement of site construction activities;
11. 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;
12. Compliance with the following codes and standards during fuel cell construction, installation or modification, as applicable:
 - a. NFPA 54
 - b. NFPA 853; and
 - c. ASME B31;
13. 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;
14. 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 Ansonia;

15. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed **along with a representative photograph of the facility**;
16. 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;
17. The facility owner/operator shall file an annual report on a forecast of loads and resources pursuant to Conn. Gen. Stat. §16-50r;
18. This Declaratory Ruling may be transferred or partially transferred, provided both the facility owner/operator/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. 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. Both the facility owner/operator/transferor and the transferee shall provide the Council with a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility, including contact information for the individual acting on behalf of the transferee; and
19. This Declaratory Ruling may be surrendered by the facility owner/operator upon written notification to the Council.

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 October 13, 2023 and additional information dated November 7, 2023, and January 16, 2024, 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.

Sincerely,



Melanie A. Bachman
Executive Director

MAB/IN/dll

Enclosure: Staff Report dated February 15, 2024

c: The Honorable David Cassetti, Mayor, City of Ansonia (dcassetti@ansoniac.org)
Darrick Lundeen, Fire Marshal, City of Ansonia (ldlundeen@ansoniac.org)

STATE OF CONNECTICUT)

: ss. Southington, Connecticut February 15, 2024

COUNTY OF HARTFORD)

I hereby certify that the foregoing is a true and correct copy of the Decision and Staff Report in Petition No. 1595 issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:



Melanie A. Bachman
Executive Director
Connecticut Siting Council

STATE OF CONNECTICUT)

: ss. New Britain, Connecticut February 15, 2024

COUNTY OF HARTFORD)

I certify that a copy of the Connecticut Siting Council Decision and Staff Report in Petition No. 1595 has been forwarded by Certified First Class Return Receipt Requested mail, on February 15, 2024, to each party and intervenor, or its authorized representative, as listed on the attached service list, dated October 16, 2023.

ATTEST:



Lisa Fontaine
Fiscal Administrative Officer
Connecticut Siting Council

LIST OF PARTIES AND INTERVENORS
SERVICE LIST

Status Granted	Document Service	Status Holder (name, address & phone number)	Representative (name, address & phone number)
Petitioner	<input checked="" type="checkbox"/> E-mail	Hyaxiom, Inc.	John Prinssen Installation Project Manager Doosan Fuel Cell America, Inc. 101 Riverside Drive East Hartford, CT 06108 Phone: (860) 727-2091 John.prinssen@doosan.com



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Petition No. 1595
HyAxiom, Inc.
35 North Main Street, Ansonia, Connecticut

Staff Report
February 15, 2024

Introduction

On October 13, 2023, the Connecticut Siting Council (Council) received a petition from HyAxiom, Inc. (HyAxiom) for a declaratory ruling, pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k, for the installation of a 4.14 megawatt (MW) fuel cell facility located at 35 North Main Street, Ansonia, Connecticut (Petition or Project).

HyAxiom met with City of Ansonia officials (City) on several occasions between May 31, 2023 and December 19, 2023 to review the Project and discuss site development.

On October 6, 2023, HyAxiom provided notice of the Project to abutting property owners and the City. No comments were received.

On October 16, 2023, the Council sent correspondence to the City stating that the Council had received the Petition and invited the municipality to contact the Council with any questions or comments by November 12, 2023. The Council has not received any comments to date.

Also on October 16, 2023, pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-40, the Council notified all state agencies listed therein, requesting comments regarding the proposed Project be submitted to the Council by November 12, 2023. On October 25, 2023, the Council on Environmental Quality (CEQ) provided comments regarding noise and soil remediation.¹ No other comments were received.

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.²

On October 24, 2023, the Council sent correspondence to HyAxiom noting a deficiency in the completeness of the Petition. Specifically, proof of service of the Petition to City officials, state officials and agencies and a labeled abutters map were not provided to the Council. On October 27 and November 7, 2023, HyAxiom submitted proof of service of the Petition on the required officials and agencies and a labeled abutters map. On November 7, 2023, the Council rendered the Petition complete.

The Council issued interrogatories to HyAxiom on January 5, 2024. HyAxiom provided responses to the Council's interrogatories on January 16, 2024.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act, an administrative agency is required to take action on a petition within 60 days of receipt. During a regular meeting held on December 7, 2023, pursuant to CGS §4-176(e), the Council voted to set the date by which to render a decision on the

¹ https://portal.ct.gov/-/media/CSC/3_Petitions-mediaLibrary/Petitions_MediaLibrary/MediaPetitionNos1501-1600/PE1595/ProceduralCorrespondence/PE1595_STATEMEMO-CommentsRecd_102623_a.pdf

² Corcoran v. Conn. Siting Council, 284 Conn. 455 (2007).

Petition as no later than April 10, 2024, which is the 180-day statutory deadline for a final decision under CGS §4-176(i).

Public Benefit

The Project would be a “grid-side distributed resources” facility, as defined in 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 as part of the statewide Shared Clean Energy Facility (SCEF) Program, which is a competitive procurement process administered by the state’s electric distribution companies to develop utility scale renewable energy. The facility would be installed, owned, operated and maintained by HyAxiom under a 20-year power purchase agreement with the United Illuminating Company (UI).

The proposed facility is not proposed to be undertaken by state departments, institutions or agencies, and is not to be funded in whole or in part by the state through any contract or grant. It is a privately funded project.

Proposed Site

Pursuant to CGS §16-50x, the Council has exclusive jurisdiction over the proposed fuel cell facility “site.” Under RCSA §16-50j-2a(29), “site” means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located. The Council does not have jurisdiction or authority over any portion of the host parcel beyond the boundaries of the Project “site.” This includes portions of the host parcel retained by the landowner and portions of the host parcel the landowner may lease to third parties. Once a facility is decommissioned, the Council no longer has jurisdiction or authority over the Project “site.”

The proposed facility would be located within an approximately 0.4-acre site on a 3.5-acre brownfield parcel owned by the City. The host parcel is the former site of Ansonia Copper and Brass Company, zoned heavy industrial (HI) and developed with several abandoned factory buildings and parking areas. The facility would be located within a parking area in the northeastern portion of the parcel and adjacent to Route 115 (North Main Street).

The surrounding area consists of industrial development to the north and west, commercial parcels to the south and residential development to the northeast and south. The Naugatuck River is located to the west of the host parcel and North Main Street is located to the east of the parcel. The nearest residential property line and nearest residential building from the proposed facility is approximately 371 feet and 416 feet to the east, respectively, at 20 North Cliff Street.

Proposed Facility and Associated Equipment

The facility would consist of nine 460-kW HyAxiom PureCell Model 400 fuel cell power modules that utilize a non-combustion phosphoric acid technology that interacts with natural gas to generate electrical power. The amount of phosphoric acid complies with applicable state and federal regulations.

The proposed facility would be a grid-side, distributed resources project, designed only to provide electricity. The facility would have an overall annual electrical efficiency of approximately 41 percent. Although it is not presently designed to utilize waste heat, the facility could be retrofitted to utilize the waste heat in the future, potentially increasing the efficiency of the fuel cell to over 90 percent.

The facility would be installed on a proposed 184-foot by 72-foot concrete pad located within a fenced compound. The facility would be located 16-foot below street level and would be installed 5 feet from existing foundation walls. The fuel cell power modules are each approximately 29 feet 4 inches long by 8 feet 7 inches wide by 10 feet tall. A total of nine cooling modules would be installed each with dimensions of approximately 15 feet 11 inches long by 7 feet 10 inches wide by 6 feet high. The fuel cell facility would be enclosed by an 8-foot high chain-link fence with privacy slats. A 35-square foot natural gas service and meter pad would be installed just outside of the fenced compound, adjacent to the eastern fence line. Bollards would be installed to protect the meter pad.

Two 3000 kVA transformers and other associated electrical equipment would be installed along the northern boundary of the fenced compound. A 13.8-kV electrical interconnection would extend from a H-frame located in the northeastern corner of the compound and would run underground to an existing utility pole located approximately 100 feet northwest of the site along North Main Street. An interconnection application has been submitted to UI and is under review. The facility's water and natural gas connections would run underground to a yet to be determined connection point.

The fuel cell facility has an operational service life of 20 years; however, a component overhaul or replacement would be required after 10 years. At the end of the 20-year operational life, the fuel cell units and associated equipment would be dismantled and removed.

Project construction is expected to begin in early 2024 and continue over a 19 week period. Construction hours would be between 8:00 a.m. to 5:00 p.m. Monday through Friday.

The estimated cost of the facility is \$17,500,000.

Environmental Effects and Mitigation Measures

The fuel cell facility would comply with all applicable Department of Energy and Environmental Protection (DEEP) water quality standards as no water would be consumed or discharged once the facility is operational. The proposed fuel cell facility would have virtually no water usage or discharge. Water consumption would only occur at system fill and makeup water and would require about 350 gallons at start up. Minimal discharge of de-ionized water would occur in rare instances and will be directed to an on-site dry well.

Air emissions produced during fuel cell operation would be below DEEP applicable limits for a new distributed generator, as shown below, and thus, no DEEP air permit is required.

Fuel Cell Facility	
Compound	Fuel Cell Facility (lbs/MWh)
NO _x	0.01
CO	0.02
CO ₂ *	1,006

*DEEP amended its regulations in 2016 to eliminate the CO₂ permit requirements from the New Source Review and Title V Programs as a result of a United States Supreme Court decision that overturned states' regulatory CO₂ permit requirements (*Utility Air Regulatory Group v. U.S. Environmental Protection Agency*, 573 U.S. 302 (2014))

The proposed facility would emit no methane (CH₄), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs) or perfluorocarbons (PFCs), which are greenhouse gases defined in RCSA §22a-174-1(49), and would emit negligible amounts of sulfur oxides, volatile organic compounds and particulate matter.

The fuel cell desulfurization system would remove sulfur that is used as an odorant in natural gas because it is a fuel cell system 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 desulfurization vessel is sealed and then removed from the fuel cell for recycling and disposal. The vessel is re-usable and recyclable as scrap metal.

No trees would be removed to construct the Project. Visual impact from the proposed Project would be minimal because it would be located 16 feet below street level. It would only be visible from on-site driveways. Views of the facility would be blocked by surrounding buildings to the west, south and north and the adjacent foundation wall to the east. Additionally, the 8-foot tall chain link fence with privacy slats would block direct views into the compound area.

No wetlands, forest or prime farmland soils would be disturbed by the proposed Project as it is located entirely within paved/previously disturbed areas on a developed property. The nearest watercourse, the Naugatuck River, is located over 250 feet west of the site. Erosion and sedimentation controls for the proposed facility would comply with the 2002 *Connecticut Guidelines for Soil Erosion and Sediment Control*.

The site is not located within a Federal Emergency Management Agency-designated flood zone, DEEP Natural Diversity Database buffered area or a DEEP-designated Aquifer Protection Area (APA). There are no APAs within the City.

The site is previously disturbed and would not impact historic or cultural resources.

The City intends to conduct soil testing to determine whether site remediation is required and share results with HyAxiom prior to construction.

Public Safety

Before commissioning the proposed facility, HyAxiom would use nitrogen 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. Nitrogen would be stored on site and would be remotely monitored to detect leaks and provide prompt response.

The fuel cell facility has internal and remote 24/7 operational monitoring. Abnormal operation would cause the facility to automatically shut down and service technicians dispatched to site if necessary. The facility can also be shut down through a remote operations center as well as manually. The fuel cell facility is designed in accordance with American National Standards Institute and Canadian Standards Association (ANSI/CSA) America FC 1-2004 and the National Fire Protection Association, Inc. Standard 853 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 (ERP) for the facility is included within the Petition. The fuel cell facility would be located within a locked fenced compound and a Knox box would be used to allow first responders access. LED lighting would be installed on the site and would be controlled by sensors and/or a timer.

The fuel cell system is controlled electronically and has internal sensors that continuously measure system operation. If safety circuits detect a condition outside normal operating parameters, the fuel supply is stopped, and individual system components are automatically shut down. In addition, manual emergency shut down push buttons would be located at the site.

The construction or operation of the proposed facility will not impact or interfere with any existing utilities or infrastructure within the surrounding area. The nearest airport (Waterbury Oxford Airport) is located approximately 7 miles north of the proposed facility. Notification to the Federal Aviation Administration is not required.

Noise associated with the construction of this Project would be temporary and exempt from DEEP Noise Control Regulations. A noise analysis that accounts for existing ambient noise determined that operation of the facility is expected to produce noise emissions greater than 51 dBA at the nearest residentially-zoned property line, which is church property at 31 North Cliff Street, located approximately 82 feet to the east of the fuel cell and would not comply with DEEP Noise Control Regulations for an industrial emitter to a residential receptor at night. After construction, HyAxiom would conduct an operational noise study and if required would implement post construction noise mitigation measures such as sound blankets to ensure compliance with DEEP Noise Control Regulations.

A vapor plume of deionized water would be emitted from the facility but would not cause icing on the roadway above or interference with air navigation.

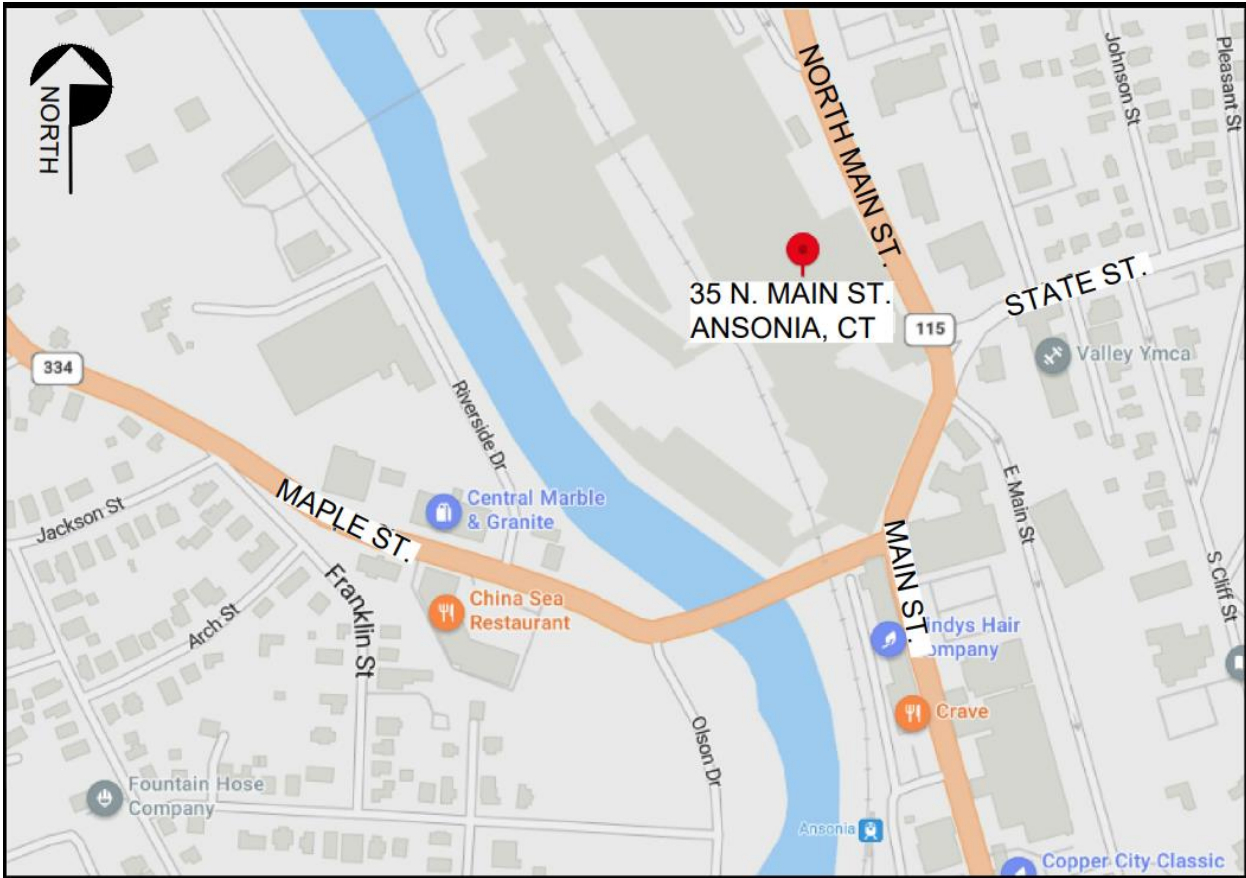
Conclusion

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. Furthermore, the Project was selected under the SCEF Program

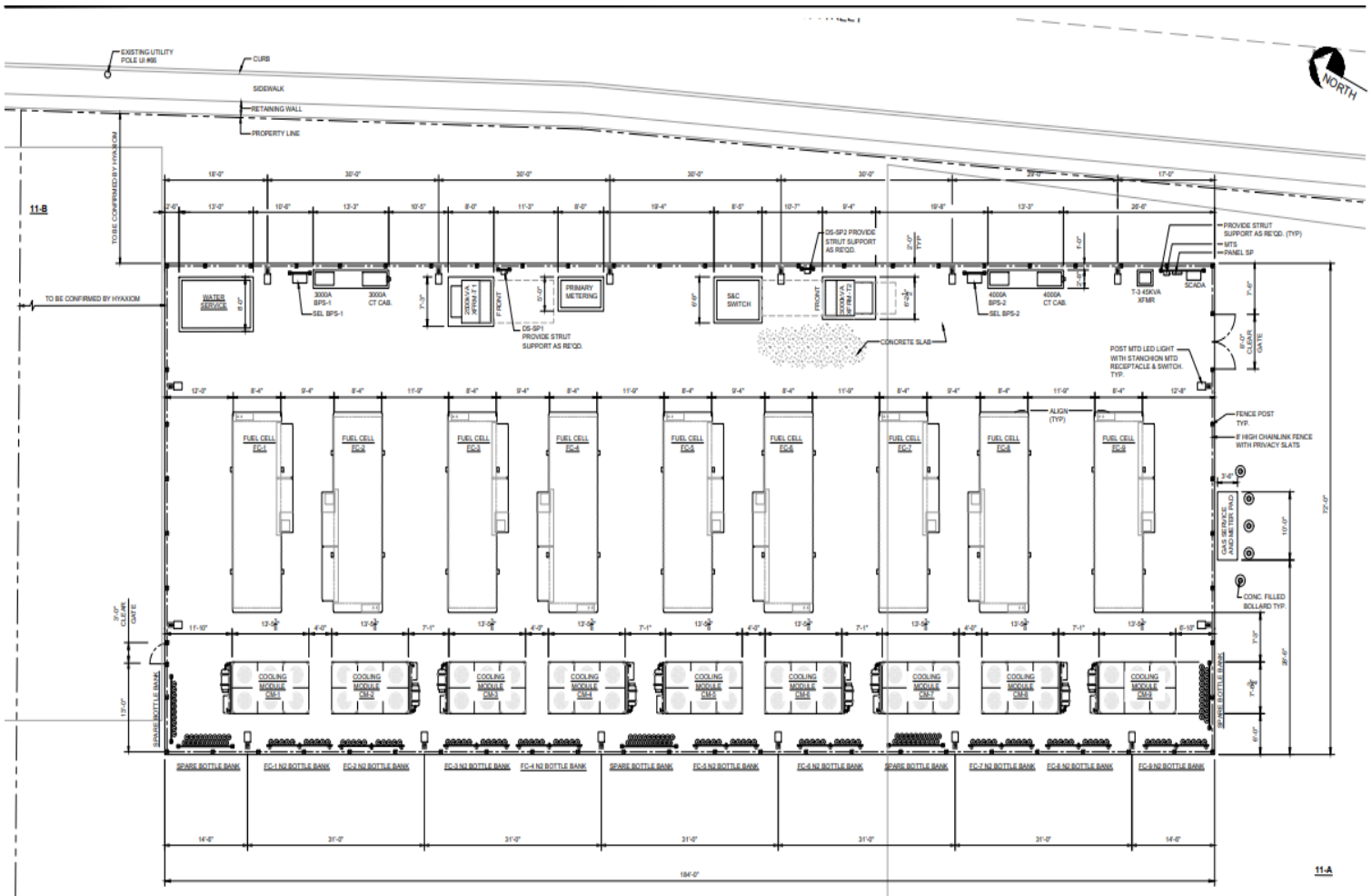
If approved, staff recommends the following conditions:

1. Approval of any Project changes be delegated to Council staff;
2. Provide a detailed site plan including, but not limited to, final facility layout and the interconnection points for electricity, water and natural gas prior to the commencement of construction;
3. Provide a copy of the Fuel Cell Emergency Response Plan to local emergency responders prior to facility operation and provide emergency response training that includes an itemized list of necessary fire suppression equipment; and
4. Submit a fuel cell operational noise study, with mitigations measures, if necessary, confirming compliance with DEEP Noise Control Regulations.

Fuel Cell Location



Site Plan



Site Location Photograph

