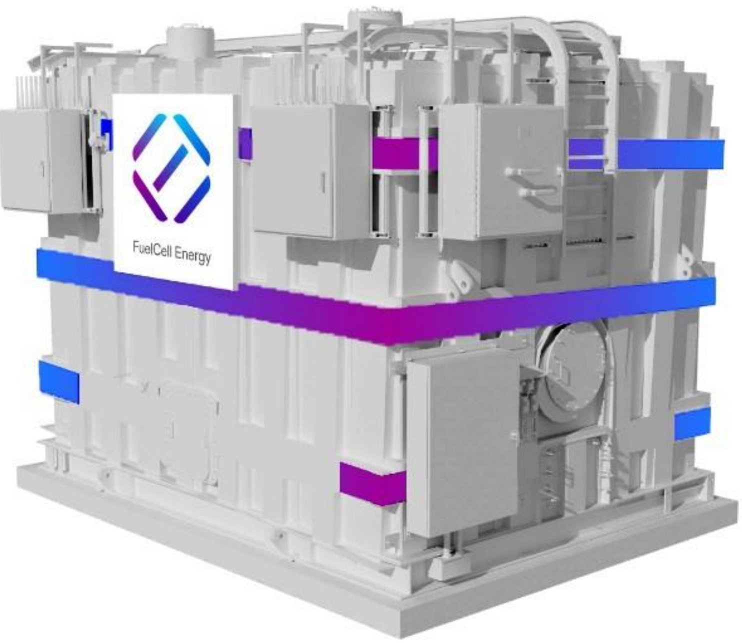
Exhibit F

Facility Sound Assessment



Fuel Cell Project

235 Brainard Road

Hartford, Connecticut

June 18, 2025 *Final*

Prepared For:

FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810

FuelCell Energy

Prepared By:

Modeling Specialties
30 Maple Road
Westford, MA 01886

Modeling Specialties

Environmental Sound Assessment
MDC Hartford Fuel Cell Project

Background

A Fuel Cell Project is proposed at an existing industrial parcel adjacent to the John J. Rossi Building. The parcel is currently part of the MDC's Brainard Road complex. The Fuel Cell process combines Connecticut Class I Renewable Energy resources, uses proven commercial technologies, is ultra-clean, and is more efficient than any other 24-hour electricity generating technology in its size range. The proposed equipment configuration is designed and provided by FuelCell Energy, Inc. ("FuelCell Energy"). The following assessment supports a petition to the Connecticut Siting Council as required by fuel cell generators greater than 250 kW. For that reason, the study is based on the standards provided by the Connecticut Department of Energy & Environmental Protection (CDEEP). Sound levels from the proposed equipment were estimated based on vendor design and measured sound from similar equipment configurations. Sound level modeling techniques were used to estimate the potential impacts at receiving locations. What follows is a complete analysis of the facility sound using measured ambient data, detailed proposed equipment configuration and using 3-dimensional noise modeling software package CadnaA by Datakustic.

This study is adapted to a fully industrial site area that has long been a source of industrial sound and is adjacent to an elevated interstate highway. The nearest residential zones are about half-mile from the proposed equipment and further isolated by shielding by the elevated roadways. The modest sound sources associated with the proposed facility will have little if any impact to the receptors in the nearby communities. Nevertheless, it is the purpose of this study to provide a full analysis of project sounds, albeit with fewer calculation details consistent with the dramatically low project emissions within a relatively high ambient sound area. Typical calculations and modeling details were needed to support the modeling process. What is provided are details that show the intuitive observation that the area lacks a sensitivity to modest sound levels.

Overview of Project and Site Vicinity

The Project is located at an existing industrial property on Brainard Road that has long supported the regional MDC Hartford Water Pollution Control Facility (WPCF). Brainard Road is lined with parcels supporting industry and heavy commercial uses. The proposed site is part of the MDC Hartford complex that has substantial processing sounds, and is currently used by the Tunnel Project associated with the WPCF. The Hartford Brainard Airport is adjacent to the MDC complex, providing industrial and training air support along with business aircraft and services. Figure 1 shows an aerial view of the site and surrounding area. Existing sources of sound in the area include Interstate 91 and several ramp systems that support local access and egress from the interstates 91 and 84 highways.

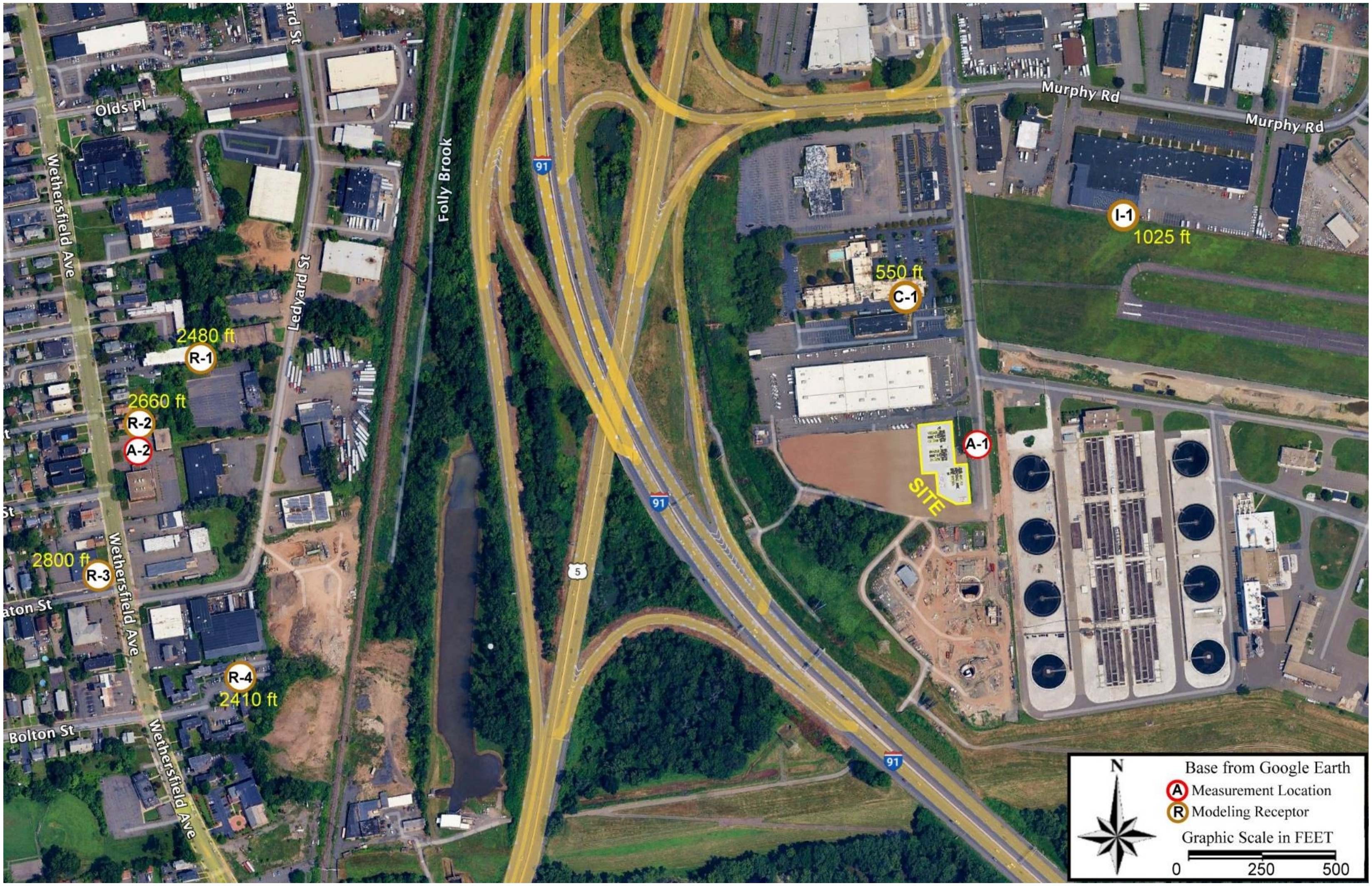


Figure 1: **Aerial Overview of the Site, Measurement Locations, Receptors and Surrounding Area**

Noise Analysis: Discussion of Analysis Methods

There are a number of ways in which sound (noise) levels are measured and quantified. All of them use the logarithmic decibel (dB) scale. Following is a brief introduction to the noise measurement terminology used in this assessment.

The Sound Level Meter used to measure noise is a standardized instrument.[1] By using exceedance levels, it is possible to separate prevailing, steady noises (L_{90}) from occasional, louder noises (L_{10}) in the environment.

- The L90 characterizes the background sound level, much like the "residual" which is the level in the absence of any nearby intrusive sources. The sound from short term or infrequent sources is statistically excluded from the L90 samples. Much of the sound measured in the project area is from passing vehicles which momentarily elevate the Leq levels, but which are screened from the L90 results.

- The *equivalent level* is the level of a hypothetical steady sound that has the same energy as the actual fluctuating sound observed. The equivalent level is designated L_{eq}, and is also A-weighted. The equivalent level is strongly influenced by occasional loud, intrusive noises.

This CDEEP analysis is based on the background level or L_{90} metric. The L_{eq} is also provided as an indicator of the impulsive content in the sampled community sound. All broadband levels represented in this study are weighted using the A-weighting scale.

In the analysis of project sound, it is usually valuable to assess the frequency spectrum of the sound of interest. Simple A-weighted levels are not useful for noise-control design or the identification of tones. The frequency spectra of sounds are usually stated in terms of *octave band sound pressure levels,* in dB, with the octave frequency bands being those established by standard.[2] The sounds in the community were measured in 1/3 octave band levels. The sounds expected as a result of this project have been evaluated with respect to the octave band sound pressure levels as well as the A-weighted equivalent sound level. For simplicity both are summarized in this report as single-value A-weighted levels.

Noise Regulations and Criteria

Sound compliance is evaluated based on meeting applicable regulations, and the extent to which it is estimated that the community is protected from excessive sound levels. The governmental regulations that may be applicable to project sounds are summarized below.

---

1 *American National Standard Specification for Sound Level Meters,* ANSI S1.4-1983, published by the Standards Secretariat of the Acoustical Society of America, Melville, NY.

2 *American National Standard Specification for Octave, Half-octave and Third-octave Band Filter Sets,* ANSI S1.11-1966 (R1975).

- ***Federal***

Occupational noise exposure standards: 29 CFR 1910.95. This regulation restricts the noise exposure of employees at the workplace as referred to in Occupational Safety and Health Administration requirements. The facility will emit only occasional sounds of modest levels, as demonstrated by this study.

- ***State***

The state of Connecticut (Connecticut Department of Energy & Environmental Protection or CDEEP) regulates noise at Regulation Title 22a, Sections 69-1 through 69-7.4, Control of Noise. The project is a Class C (Industrial) emitter. Some properties in the area are zoned commercial or residential and were evaluated as Class B and A Noise Receptors, respectively. An excerpt of the Hartford Zoning Map is provided in Figure 3 for the project area. The details of the CDEEP performance criteria are shown in Table 1 based on the character of both the source and receiving land uses.

Table 1: Connecticut DEEP Noise Standards, by Zoning District

	Receptor's Zone			
Emitter's Zone	Industrial	Commercial	Residential/Day	Residential/Night
Residential	62 dBA	55 dBA	55 dBA	45 dBA
Commercial	62 dBA	62 dBA	55 dBA	45 dBA
Industrial	70 dBA	66 dBA	61 dBA	51 dBA

Adjustments for high background noise levels or impulse sounds

1. In those individual cases where the background noise levels caused by sources not subject to these regulations exceed the standards contained in this chapter, a source shall be considered to cause excessive noise if the noise emitted by such source exceeds the background noise levels by five dBA, provided that no source subject to the provisions of this chapter shall emit noise in excess of eighty (80) dBA at any time, and provided that this section does not decrease the permissible levels of other sections of this chapter.

2. No person shall cause or allow the emission of impulse noise in excess of eighty (80) dB peak sound pressure level during the nighttime to any residential noise zone.

3. No person shall cause or allow the emission of impulse noise in excess of one hundred (100) dB peak sound pressure level at any time to any zone.

- ***Local Hartford Requirements***

A review of the Hartford Code of Ordinances has identified Chapter 112-3 to regulate noise. Like many Connecticut municipalities, Hartford's requirements are numerically the same as the State CDEEP standards above. Electrical generation generally requires a petition before the Connecticut Siting Council, so this project was evaluated based on the CDEEP criteria. Criteria are based on land uses shown on an excerpt of the Hartford Zoning Map in Figure 2.

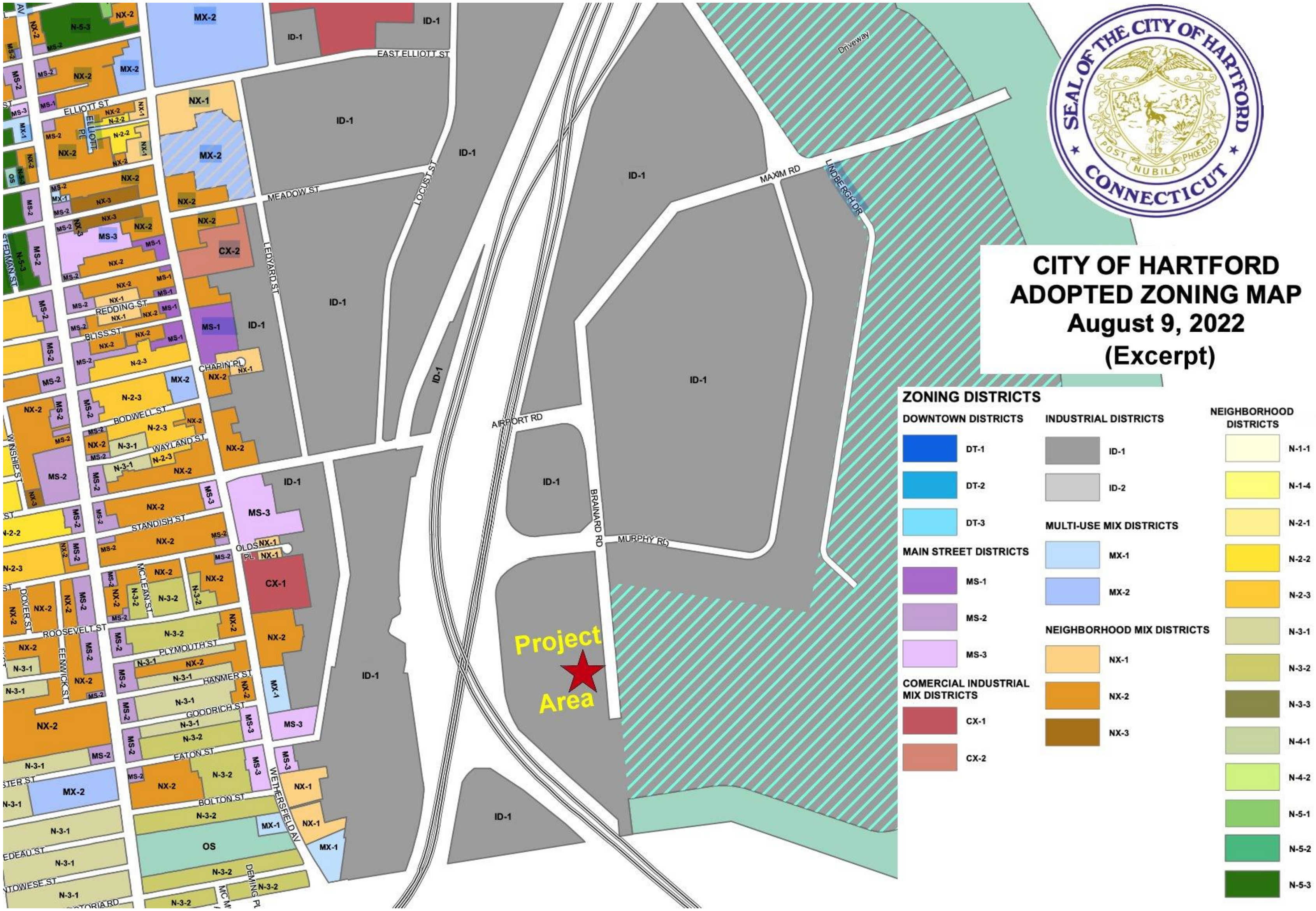


Figure 2: **Project Area Excerpt from the Hartford Zoning Map**

Existing Community Sound Levels

A site survey and noise measurement study were conducted for the facility May 29-30, 2025. While the ambient sound typically fluctuates through the day and night, the industry and freeway influence make the sound levels in the project area more similar through the night. The sound from the proposed facility is expected to be also very steady. Nevertheless, the measurements were scheduled to avoid peak morning or evening traffic, periods of rain and the use of heavy construction equipment at the MDC Tunnel project.

Attended sound level measurements were made using a Rion NA-28 sound level meter. The measurements create a baseline community sound level and captured the frequency-specific character of the sound. The meter was mounted on a tripod approximately 5 feet above the ground. The microphone was fitted with factory recommended foam windscreen. The meter was programmed to take measurements for 20 minutes and then store processed statistical levels. The meter meets the requirements of ANSI S1.4 Type 1 – Precision specification for sound level meters. The meter was calibrated in the field using a Larsen Davis Cal-250 acoustical calibrator before and after the sessions. The field calibrations indicated that the meters did not drift during the study. The spectrum analyzer complies with the requirements of the ANSI S1-11 for octave band filters.

The primary source of sound in the area is from traffic on the elevated I-91 roadway. It is not only the main north-south connector in this area, but the ramps for Route 5 and I-84 forms a large area of fast-moving traffic. There is a railroad ROW between the I-91 Freeway and Wethersfield Ave, but only a single train was measured during the surveys. Hartford Brainard ground operation sounds are shielded from the project area but occasional small craft overhead may be associated with the airport. There are widespread areas between the roadways that are industrially zoned Open Space that contributed no noticeable source of sound.

Results of the Ambient Survey

The results of the ambient sound level measurements are summarized in Table 2. The community sensitivity is usually based on the lower background levels. Comparing the Leq levels (includes all sounds) to the L90 levels (quietest 10% of samples) illustrates the sound character of the area. Baseline levels are affected by community conditions, meteorology, seasons, insects and air and roadway traffic patterns. Despite a relatively active environment, it is noted that levels along Wethersfield have background values consistent with the CDEEP residential goals.

Table 2: Ambient Sound Levels Measured on May 29-30, 2025

Ambient Measurement Locations	Time	Period	L_{eq}	L_{90}
A-1 Brainard Rd @ Fence	9:22 AM	Day	55 dBA	53 dBA
A-2 Wethersfield Ave @ Church	12:20 PM	Day	56 dBA	53 dBA
A-1 Brainard Road @ Fence	12:39 AM	Night	57 dBA	54 dBA
A-2 Wethersfield Ave @ Church	1:10 AM	Night	50 dBA	44 dBA

Expected Sounds from the Proposed Installation

The proposed installation has been designed with significant attention to protecting the community sound environment. The fuel cell technology does not require many of the heavy mechanical sound sources that are typical of power generation facilities. This analysis represents the most likely sound levels to be expected as a result of the normal operation of the facility using manufacturer's data and measurements of similar equipment at other fuel cell installations.

A computer model was developed for the facility's sound levels based on conservative sound propagation principles prescribed in the acoustics literature. Most of the equipment sources will produce broadband sound of a continuous nature. Each of the potential sources during routine operation of the facility was identified. The sound from each facility-related source is estimated at the source and at the community receptors. The sum of the contributing sources (three fuel cell blocks) is used to represent the predicted sound level at the modeled location. Identifying specific receiving locations is a key element of the noise modeling since sound levels decrease exponentially with increasing distance. The distances used in this study represent the distance between the nearest source(s) and the nearest representative sensitive building. Several residential receptors (R1-R-4) were located along Wethersfield Avenue, since they are the nearest residentially zoned receptors. A commercial receptor (C1) was located at the Best Western Hartford Inn and Suites on Brainard Road north of the site since people sleep there. However, Motels are often allowed to be developed in Commercial or Industrial Zones or near freeways because they service those areas and are designed to protect their customers from higher environmental sound. The McKinney shelter was not modeled because it is fully shielded by the Rossi Building. Finally, an industrial property (I-1) just north of the airport taxiway was modeled as a receptor. Since the Rossi Building provides shielding to land uses to the north, this Connecticut Lighting warehouse is the nearest fully exposed facility not associated with the MDC.

Sources of Project Sound

There are several sources of modest sound at the facility. Under normal conditions, most of those sources will produce consistent sound through the day and night. Several sources will ramp up and down as required by the facility operation. There is a cooling unit on the Water Processing Skid that provides cooling only when needed. But in this conservative study, all sources are analyzed as continuous full-time sources.

The fuel cell equipment is manufactured in Connecticut by FuelCell Energy, Inc. The design of this facility is based on three (3) 3000 blocks of fuel cell equipment. Each block will be similar to the graphic overview shown in Figure 3. The entire proposed facility was sketched in Figure 1. Much of the equipment is acoustically inert such as the water treatment enclosure, fuel de-sulfurizing units and nitrogen system. The utilities and fuel lines are underground. Other equipment produces some sound that can only be distinguished in the near field of the equipment like the electrical equipment, transformers, the fuel cell modules and the electrical balance of plant (EBOP) units. The primary sources of equipment sound that can be heard from outside the compound are the fresh air blower and the piping that delivers air and fuel to the modules.

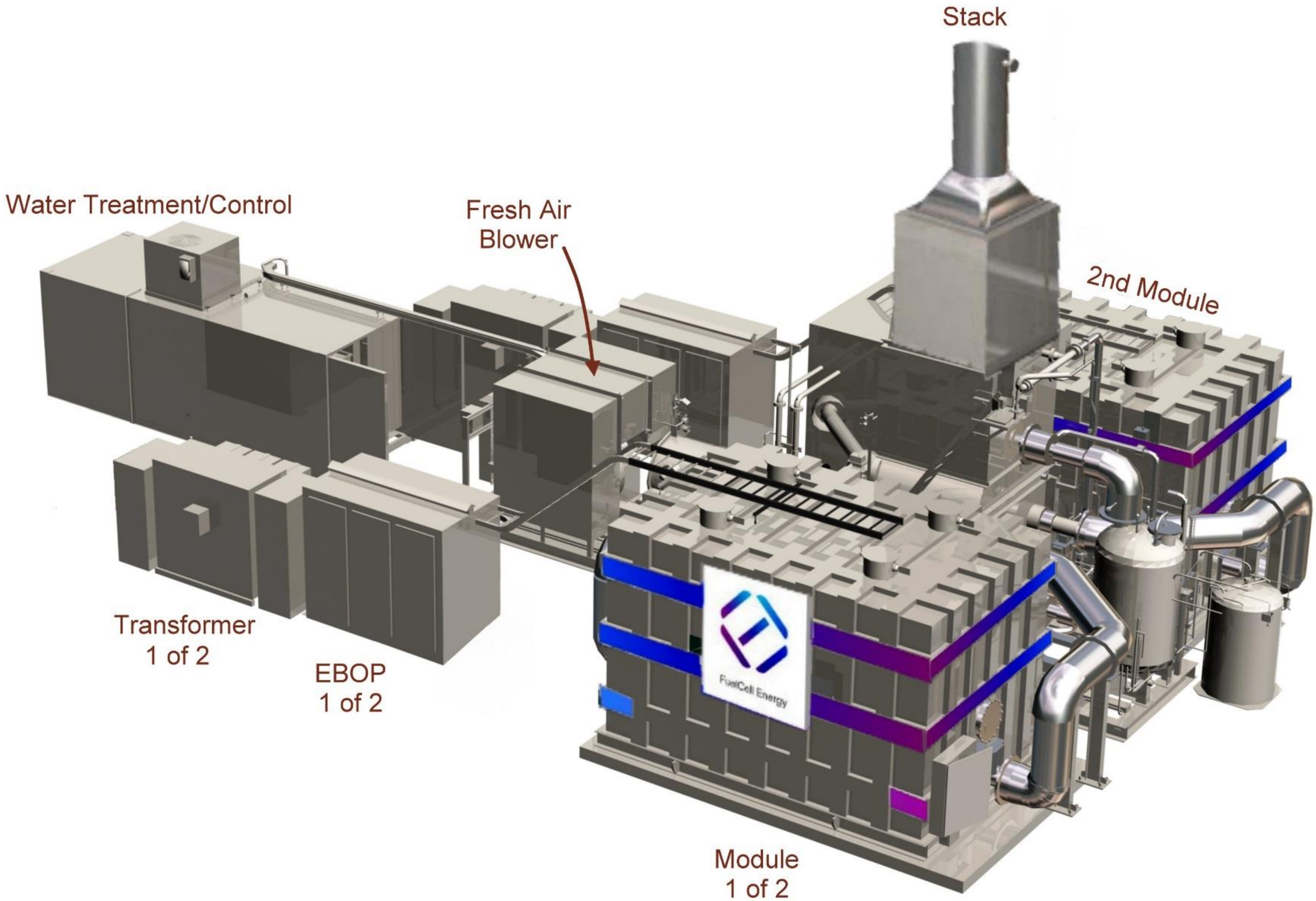


Figure 3: **Annotated 3-Dimensional Layout of Typical Components of 3000 Block Fuel Cell Unit**

By the time the air has moved through the process and is gathered in the exhaust system, it has a steady air movement sound, and has lost any blower sound character. Each source of sound was quantified and included in the model. The analysis of sound is based on the contributions of individual sources and propagation losses to the analyzed receptors in various general directions from the sources. The modeling accounts for the worst-case equipment sound under quiet ambient conditions consistent with the regulatory criteria. Results of the modeling are shown in Table 3 and are provided in graphic form in Figure 4.

Table 3: Summary of Noise Modeling Results

Modeled Receptors	Distance (ft)	Project Sound (dBA)	Criterion (dBA)	Comply?
R-1 Residential, NW	2480	27	61/51	Yes
R-2 Residential, W1	2660	26	61/51	Yes
R-3 Residential, W2	2800	25	61/51	Yes
R-4 Residential, SW	2410	27	61/51	Yes
C-1 Hotel, N	550	39	66	Yes
I-1 Industrial	1025	37	70	Yes

Mitigation Measures

The proposed fuel cell equipment is inherently quiet compared to other forms of electrical generation. Most of the equipment is essentially silent, such as the desulfurization, nitrogen storage, water treatment room, utilities and infrastructure. The main processing areas are configured with partial enclosure of the fresh air blower, motor and outlet pipe. This configuration includes lagging on many of the pipes to reduce the sound from gas and air flow. The cooling unit above the water treatment room will only operate as needed to protect the environmentally sensitive equipment inside. Other electronic components were configured to require a minimum of external cooling. In this way, sound mitigation is engineered into the equipment configuration to make the FuelCell Energy products suitable for a wider range of site settings.

Conclusions

The proposed fuel cell equipment packages inherently lack the heavy mechanical equipment that is commonly associated with electrical generation. There will be several sources of modest sound such as blowers, pumps, condenser and fans. The size of the equipment and character of the sound is more typical of commercial building mechanical equipment than of typical electrical generating sources.

The ambient baseline was established by measurements that statistically exclude short term ambient sounds (fleeting sources like nearby cars & trucks) so it represents quiet conditions for the area. The potential sources of sound at the facility were identified and quantified. Sound level modeling techniques were employed to estimate the sound levels at the nearest receptor locations of varied land uses. The results of the modeling indicate that the facility levels will meet the CDEEP noise criteria at all modeled receptors by a large margin due to distances and shielding available at the MDC Hartford site.

Figure 4: **Graphical Summary of the Predicted Facility Sound Levels at Receptor Locations**