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April 15, 2019

Attn: Robert Stein, Chairman
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: Petition of Bloom Energy Corporation, as agent for the City of Milford, for a Declaratory Ruling for the Location and Construction of a 900-kilowatt Fuel Cell Customer Side Distributed Resource at 75 Deerwood Avenue, Milford, CT

Dear Chairman Stein:

We are submitting an original and fifteen (15) copies of the above-captioned Petition, together with the filing fee of $625.

In the Petition, Bloom Energy Corporation ("Bloom"), as agent for the City of Milford, requests the Connecticut Siting Council approve the location and construction of a 900 kilowatt fuel cell and associated equipment (the "Facility"). The Facility will be located at the Beaverbrook Wastewater Treatment Plant at 75 Deerwood Avenue, Milford, CT (the "Site"). Electricity generated by the Facility will benefit the City of Milford, and any excess electricity will be exported to the electric grid. The Facility will be fueled by natural gas.

Should you have any questions, concerns, or require additional information, please contact me at (860) 839-8373.

Sincerely,
Bloom Energy

Justin Adams

Justin Adams
justin.adams@bloomenergy.com
(860) 839-8373

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STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

PETITION OF BLOOM ENERGY CORPORATION, AS AGENT FOR THE CITY OF MILFORD, FOR A DECLARATORY RULING FOR THE LOCATION AND CONSTRUCTION OF A 900 KILOWATT FUEL CELL CUSTOMER-SIDE DISTRIBUTED RESOURCE AT 75 DEERWOOD AVENUE, MILFORD, CT	:	PETITION NO. ____
	:	APRIL 15, 2019

PETITION OF BLOOM ENERGY CORPORATION, AS AGENT FOR THE CITY OF MILFORD, FOR A DECLARATORY RULING

Pursuant to Conn. Gen. Stat. §§ 4-176 and 16-50k(a) and Conn. Agencies Regs. § 16-50j-38 et seq., Bloom Energy Corporation ("Bloom"), as agent for the City of Milford ("City"), requests that the Connecticut Siting Council ("Council") approve by declaratory ruling the location and construction of a customer-side distributed resources project comprised of four (4) new ES-5 Bloom Energy Server solid oxide fuel cells and associated equipment (the "Facility"), providing 900 kilowatts ("kW") (net) of power to the Beaverbrook Wastewater Treatment Plant ("Beaverbrook WWTP") located at 75 Deerwood Avenue, Milford, CT (the "Site"). *See* Exhibits 1A and 1B. The Facility will be installed, maintained and operated by Bloom. It will be owned by a third-party financing source of Bloom under an agreement with the City.

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.

The proposed Facility will be a customer-side distributed resources facility under 65 MW that complies with the air and water quality standards of the State of Connecticut Department of Energy and Environmental Projection ("DEEP"). Bloom submits that no Certificate is required because the proposed modifications would not have a substantial adverse environmental effect in the immediate vicinity of the Facility as well as in the State of Connecticut.

I. COMMUNICATIONS

Correspondence and other communication regarding this petition should be directed to the following parties:

Justin Adams
Bloom Energy Corporation
1299 Orleans Drive
Sunnyvale, CA 94089
Telephone: (860) 839-8373
Fax: (408) 543-1501
Email: justin.adams@bloomenergy.com

Mohammed Abu-Raida
Bloom Energy Corporation
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Sunnyvale, CA 94089
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Fax: (408) 543-1501
Email: Mohammed.AbuRaida@bloomenergy.com

II. DISCUSSION

A. Project Description and Purpose

The Facility will be a 900 kW customer-side distributed resource consisting of four (4) state-of-the-art Bloom Energy Servers and associated equipment. The Facility will be interconnected to an existing telephone/intercom cabinet within the nearby operations building. *See* Exhibits 1B and 2.

The proposed Facility is a "customer-side distributed resources" project because it will be "a unit with a rating of not more than sixty-five megawatts [located] on the premises of an industrial end user within the transmission and distribution system including, but not limited to, fuel cells . . .." Conn. Gen. Stat. § 16-1(a)(34)(A). Further, in its Final Decision in Docket No. 12-02-09, dated September 12, 2012, the Connecticut Public Utilities Regulatory Authority ("PURA") determined that Bloom's Energy Server qualifies as a Class I renewable energy source fuel cell as defined in Conn. Gen. Stat. §16-1(a)(20)(A). *See* Exhibit 3.

The purpose of the proposed project is to replace the average baseload of the Site with a Class I renewable energy source, achieve the municipality's sustainability goals, and improve reliability of electrical systems and equipment. Beaverbrook WWTP will consume about 20% of the power generated by the Facility. The remaining approximately 80% will be exported back to the utility grid. Through the virtual net metering subsidy offered by the local electric utility company (UI) and the PURA, the City is able to offset electric bills of five other municipal facilities, leveraging the kilowatt hours exported from Beaverbrook WWTP. Foran High School, the Housatonic Waste Water Treatment, the Police Department and two pump stations will receive substantial credits on their electricity bills based on the power generated by the fuel cell.

B. The Facility

The Facility will consist of three (3) 200 kW ES5-BABAAA model and one (1) 300 kW ES5-YA1AAA model Bloom solid oxide fuel cell Energy Servers and associated equipment to be located at the Beaverbrook WWTP at 75 Deerwood Avenue in Milford. As shown in Exhibit 2, the fuel cells and associated equipment will be placed on concrete pads, approximately 55' x 9', within the developed portion of the property adjacent to the access drive. The pads will be

raised to 13' AMSL, which is 2' above the 100-year flood elevation. The associated equipment includes water deionizers, telemetry cabinets, disconnect switches and utility cabinets. The Facility is enclosed, factory-assembled and tested prior to installation on the Site. See Exhibit 4 for Bloom Energy Server Product Datasheets.

The operational life of the Facility is for the life of the 20-year contract and the solid oxide media in the fuel cells are exchanged at roughly five-year intervals. The Facility, the connections, and associated equipment will be installed in compliance with applicable building, plumbing, electrical, and fire codes. At the conclusion of the 20-year contract, the City may renew the contract, return the Facility at no cost, or buy the Facility at a fair market value. If the Facility is to be removed at the end of the contract or if there is a default in the contract, the Energy Servers, associated equipment and components will be dismantled and removed, the concrete pads will remain unless requested to be removed, and the site will be restored as nearly as practicable to its effective original condition.

The Facility will be capable of producing 900 kW of continuous, reliable electric power. The Facility will interconnect to the Site's distribution system and operate in parallel with the grid to provide the Site's electrical requirements. Any electricity generated in excess of the Site's requirement will be exported to the grid in accordance with the UIL interconnection technical requirements. This installation will not have an uninterruptible power module ("UPM") and thus will not have any means to output power in a grid independent capacity at any time. The grid-parallel output will interconnect with the utility power system at the Beaverbrook WWTP main switchboard. Each Energy Server is equipped with a UL-1741 listed inverter set that complies with IEEE-1547 standards for interconnection of inverter-based distributed generation. It is UL

Recognized under UL Category QIKH2 and UL File Number E310552. The interconnection will be provided from the existing cabinet within the nearby operations building. The interconnection application for the Facility has been submitted and UIL has conducted a preliminary screen and provided contingent approval. The impact study agreement and cost determination are pending. The Facility will be fueled by natural gas supplied by Southern Connecticut Gas.

The Facility will have extensive hardware, software and operator safety control systems, designed in accordance with American National Standards Institute and Canadian Standards Association for Stationary Fuel Cell Power Systems ("ANSI/CSA"). It is Listed by UL as a "Stationary Fuel Cell Power System" to ANSI/CSA FC1-2014 under UL Category IRGZ and UL File Number MH45102. The Facility would be controlled remotely and have internal sensors that continuously monitor 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. A Bloom Energy Remote Monitoring Control Center (RMCC) operator can also remotely initiate any emergency sequence. An emergency stop alarm initiates an automatic shutdown sequence that puts the system into "safe mode" and causes it to stop exporting power. Bloom operators can assess different situations and take the necessary actions to mitigate impacts on the fuel cells during maintenance work, shutdowns or outages and enable them come back online smoothly and efficiently when the disruption is completed. In addition, Beaverbrook WWTF employees are provided with an Emergency Response Plan (Exhibit 5).

The Facility will be installed in accordance with NFPA 853[1]. This standard provides fire prevention and fire protection requirements for safeguarding life and physical property associated with buildings or facilities that employ stationary fuel cell systems of all sizes. The risk of fire related to the operation of the Facility is therefore very low. Furthermore, in the Facility, natural gas is not burned; it is used in a chemical reaction to generate electricity. The natural gas is digested almost immediately upon entering the unit and is no longer combustible. As stated above, any variation in heat outside of the operational parameters will trigger an automatic shutdown of the energy server. Before commissioning, the fuel lines (pipe) are cleaned in accordance with Conn. Gen. Stat. Section 16-50ii[2].

C. Existing Environment

i. The Site

The Facility would be installed at the Beaverbrook WWTP located at 75 Deerwood Avenue, Milford, CT. The Facility will be constructed on the 9.12-acre parcel that houses the treatment plant, including five buildings and associated treatment facilities, as well as paved parking and driveways. The Site is in the southwestern portion of the City, within the One Family Residential District (R-12.5) under the City's Zoning Regulations. The Housatonic River estuary and the Charles Wheeler Wetland Management Area are to the west. The parcels to the north, south, and east are residential uses. The closest residential property is located approximately 150 feet to the east of the Facility.

[1] Standard for the Installation of Stationary Fuel Cell Power Systems, 2015 Edition
[2] Public Act 11-101, An Act Adopting Certain Safety Recommendations of the Thomas Commission,

The Facility was strategically placed to take advantage of the existing utility functions within the Beaverbrook WWTP property while minimizing impact on the plant operations and infrastructure.

ii. Wildlife and Habitat

A review of the publicly available Natural Diversity Database (NDDB) December 2018 data shows that the host parcel is within a Natural Diversity Database Area and portions of the host parcel are identified as CTDEEP Critical Habitat (Nells Island Intertidal Salt Marsh). *See* Exhibit 7. A Request for Natural Diversity Data Base (NDDB) State Listed Species Review is being submitted concurrently to the Connecticut DEEP Bureau of Natural Resources Wildlife Division. Bloom will adhere to any state-listed species protection measures recommended by CTDEEP, as necessary. Any recommended measures will be incorporated into Bloom's BMPs during construction to avoid any adverse impacts to state-listed rare species.

iii. Wetlands and Watercourse

The proposed Facility would be located in a cleared and disturbed area adjacent to the existing access drive within a developed portion of the property. While the host parcel contains tidal wetlands and an unnamed intertidal watercourse tributary to the Housatonic River, the proposed location of the Facility would be located approximately 20 feet from the nearest tidal wetland boundary. *See* Exhibit 8. Due to the existing developed and disturbed character of the proposed Facility location, impacts to nearby tidal wetlands and watercourses are not anticipated during the construction and operation of the Facility. Temporary environmental effects from construction will be mitigated by appropriate erosion and sedimentation controls that will be employed throughout the construction period, and maintained in place through stabilization of

the Facility area in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

iv. Cultural Resources

The Facility is proposed in a previously disturbed area and the construction and operation of the Facility will therefore not have a substantial adverse effect on cultural (archaeological and historical) resources.

v. Flood Zones and Aquifer Protection Area

A review of the flood hazard mapping data from Federal Emergency Management Agency's ("FEMA") National Flood Insurance Program ("NFIP") has shown the Facility would be located within a 100-year flood Zone AE Elevation 11. *See* Exhibit 9. The City of Milford has adopted regulations that require structures to exceed Elevation 11 by two (2) feet. The Facility will be raised to comply with that requirement.

The Site was also reviewed for proximity to Aquifer Protection Areas. According to GIS data provided by CTDEEP, the closest Aquifer Protection Area is located in Shelton, CT approximately nine miles to the north of the proposed Facility.

D. Environmental Effects and Mitigation

i. Natural Gas Desulfurization Process

The first step in the production of electricity in a Bloom Energy server is desulfurization – the removal of the sulfur compounds, which have been added to the natural gas as an odorant by the natural gas suppliers. This step occurs in the desulfurization unit ("Desulf Unit") – a canister which contains a filter made for this purpose. Sulfur is not "produced" in this process,

but is separated from the natural gas in which it was contained. In this process, trace levels of sulfur oxides and other naturally occurring elements, may also absorb to the filter.

The desulfurization process takes place entirely within the Desulf Unit. Because they are built to hold natural gas, their structural integrity is essential. That integrity is assured by around the clock monitoring of the Energy Servers to detect any leak. Were there a leak, the Server (including the desulfurization operation) would shut down automatically. There has never been a leak from one of the desulfurization canisters. The structural integrity and leak prevention continue after the desulfurization canisters are removed from service. At that point, the entry and exit points for the natural gas automatically seal shut. The desulfurization canister remains sealed and is not opened at the Site, or anywhere in the State of Connecticut. No gaseous substances are released or vented at any point during the desulfurization process.

The Desulf Unit contains a composite copper catalyst that includes copper. This catalyst removes non-hazardous sulfur odorants from the natural gas feedstock. The sulfur, if not removed, would rapidly and irreversibly damage the fuel cells, bringing the production of electricity to a halt. Although the Desulf Unit is not intended to capture benzene or any other hazardous material, a small amount of benzene adheres to the adsorbent in the Unit.

The Desulf Units are periodically removed from service and replaced with Units containing fresh composite copper catalyst. Upon disconnection, the Desulf Unit automatically seals shut—to assure there is no release of natural gas. The Desulf Units are certified by the U.S. Department of Transportation (DOT) as meeting the hazardous waste shipment standards of the United Nations, DOT, IATA, ICAO and IMO Hazardous Materials Distribution and Packaging requirements.

The spent units are transported to ShoreMet, L.L.C. (ShoreMet) in Indiana, a facility 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.

The Indiana Department of Environmental Management (IDEM) reviewed ShoreMet's management of Bloom's spent desulfurization units. IDEM issued a letter concluding that the spent desulfurization units sent to ShoreMet are excluded from hazardous waste requirements because the contents (i.e., spent media) are used to make copper products (Code of Federal Regulation, title 40, section 261.2(e)(1)(i)). The US Environmental Protection reviewed IDEM's findings and agreed. The California Department of Toxic Substances Control (DTSC) reviewed these decisions and concluded that the Desulf Units are excluded recyclable material (ERM) under California Health and Safety Code, section 25143.2, subsection (b). There are number of conditions that apply to this exemption; Bloom satisfies those conditions.

ii. 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.

With respect to water discharges, the Facility is designed to operate without water discharge under normal operating conditions. There are no connections or discharge points to the proposed Facility. Additionally, the Facility would use no water during normal operation beyond a 376-gallon injection at 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, which governs air emissions from new distributed generators, exempts fuel cells from air permitting requirements. Accordingly, no permits, registrations, or applications are required based on the actual emissions from the Facility[3]. Even though the fuel cell systems are exempt from the emissions requirements, Bloom Energy fuel cells do meet the emissions standards of Section 22a-174-42. Per Section 22a-174-42(e)(1)(A) a certification by the California Air Resources Board (CARB) pursuant to Title 17, sections 94200 through 94214 of the California Code of Regulations meets the requirements of Conn. Agencies Regs. § 22a-174-42. The Bloom Energy fuel cells are certified under the CARB distributed generation program. A current list of certified applications is provided on the CARB's distributed generation certification website (http://www.arb.ca.gov/energy/dg/eo/eo-current.htm).

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[4], and compares them to emissions generated from the proposed Facility. By virtue of the non-combustion process the Bloom Energy fuel cells virtually eliminate NOx, SOx, CO, VOCs and particulate matter emissions from the energy production process. Similarly, there are no CH_4, SF_6, HFC or PFC emissions. The CH_4 is broken down in the reforming process. Reforming is the type of process where if you have sufficient catalyst, the

[3] See Conn. Agencies Regs. §§ 22a-174-42(b) and (e).
[4] Sec. 16-244t

reaction can go all the way to completion. That is the case for the Bloom Energy Server. The fuel is reformed in the hot box – with a significant excess catalyst for reaction.

Table 1: Connecticut Thresholds for Greenhouse Gases

Emission Type	Bloom Output	LREC allowance
Nitrous Oxides (NOx)	<0.01 lbs/MWh	0.07 lbs/MWh
Carbon Monoxide (CO)	<0.05 lbs/MWh	0.10 lbs/MWh
Sulfur Oxides (SOx)	Negligible	Not Listed
Volatile Organic Compounds (VOCs)	<0.02 lbs/MWh	0.02 lbs/MWh
Carbon Dioxide (CO2)[5]	679-833 lbs/MWh	Not Listed

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 air pollutants like NOx, SOx, and particulate matter.

iii. Sound Levels

The nearest parcel boundary is with a residential property located to the east of the WWTF property and defined as a Class A noise zone[6]. The results of the sound model predicting noise levels at the property boundary located 150 feet to the east are provided as Exhibit 10. The proposed Facility would be defined as "Scenario 2" in the model. Scenario 2 models noise for a Bloom Energy Server installed with no structures behind it to reflect sound from either side. The results of the Scenario 2 sound model at 150 feet are 42.2 dBa, which is in compliance with noise criteria set forth in Connecticut regulations for the Control of Noise[7]. The City does not have a Noise Ordinance.

[5] Carbon Dioxide is measured at Bloom's stated lifetime efficiency level of 53-60%
[6] Sec. 22a-69-2.3. Noise zone standards
[7] Sec. 22a-69-3.5. Noise zone standards

iv. Visual Effects

The overall visual effect of the Facility would be mitigated by locating the Facility in the developed area of the Beaverbrook WWTP. The Facility would be screened by landscaping and existing mature trees along the eastern property boundary and existing vegetation to the south.

E. Project Construction and Maintenance

Bloom anticipates construction to start in the third quarter of 2019 with 12-14 weeks of total construction time (4 weeks of site prep, 4 weeks of installation, and 4 weeks of commissioning). While the City does not have a noise ordinance, Bloom anticipates that construction will take place only during daytime hours, between the hours of 7:00 a.m. and 8:00 p.m., Monday through Saturday.

During construction, appropriate erosion and sedimentation (E&S) controls will be installed and areas of disturbance will be promptly stabilized in order to minimize the potential for soil erosion and the flow of sediments off site. Temporary E&S control measures will be maintained and inspected throughout construction to ensure their integrity and effectiveness. The temporary E&S control measures will remain in place until the work is complete and all disturbed areas have been stabilized. No effect to drainage patterns or stormwater discharges are anticipated. Due to the limited disturbance required for the Facility's installation, no construction-related storm water permits will be required.

Soils that are generated during construction activities would not be stored or stockpiled inside of wetlands or adjacent to a watercourse and appropriate E&S control measures would be employed and maintained for any temporary soil stockpiles. Any excavated soils compatible for reuse will be used as backfill in proximity to the same excavation area from where it originated.

Any excess excavated soils not suitable for reuse would be trucked off-site and managed in accordance with applicable regulations. Rock, concrete and other debris would be removed and trucked off-site.

Areas affected by construction would be re-graded as practical and stabilized using revegetation or other measures before removing temporary E&S controls. Construction-related impacts will therefore be minimal.

III. COMMUNITY OUTREACH

Bloom has provided notice of this petition via certified mail to all persons and appropriate municipal officials and governmental agencies to whom notice is required to be given pursuant to Conn. Agencies Regs. § 16-50j-40(a)[8]. A copy of the notice letter and a service list are provided in Exhibit 11 and the corresponding abutters map is provided in Exhibit 12. The site plan and installation are the result of a collaborative design effort with City personnel. The City's Board of Aldermen voted unanimously on March 4, 2019 to enter into an energy services agreement with Bloom Energy for the purchase of electricity from the Facility. *See* Exhibit 13.

IV. BASIS FOR GRANTING OF THE PETITION

Under Conn. Gen. Stat. § 16-50k(a), the Council is required to approve by declaratory ruling the construction or location of a customer-side distributed resources project or facility with a capacity of not more than 65 MW, as long as the facility meets DEEP air and water

[8] Conn. Agencies Regs. § 16-50j-40(a) requires that "[p]rior to submitting a petition for a declaratory ruling to the Council, the petitioner shall, where applicable, provide notice to each person other than the petitioner appearing of record as an owner of property which abuts the proposed primary or alternative sites of the proposed facility, each person appearing of record as an owner of the property or properties on which the primary or alternative proposed facility is to be located, and the appropriate municipal officials and government agencies [listed in Section 16-50*l* of the Connecticut General Statutes]."

quality standards. The proposed Facility meets each of these criteria. The Facility is a "customer-side distributed resources" project, as defined in Conn. Gen. Stat. § 16-1(a)(34)(A), because the Facility is "a unit with a rating of not more than sixty-five megawatts [located] on the premises of a retail end user within the transmission and distribution system including, but not limited to, fuel cells" and, as demonstrated herein, will meet DEEP air and water quality standards. In addition, as demonstrated above, the construction and operation of the Facility will not have a substantial adverse environmental effect in the State of Connecticut.

V. CONCLUSION

For the reasons stated above, Bloom, as agent for the City, respectfully requests that the Council approve the location and construction of the Facility by declaratory ruling.

Respectfully submitted,
Bloom Energy Corporation

By: Justin Adams

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Bloom Energy Corporation
1299 Orleans Drive
Sunnyvale, CA 94089
Telephone: (408) 338-7452
Email: justin.adams@bloomenergy.com

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EXHIBITS

Exhibit 1A: Site Location Map

Exhibit 1B: Site Schematic

Exhibit 2: Site and Permit Plans

Exhibit 3: Final Decision, PURA Docket No. 12-02-09, *Petition of Bloom Energy Corporation for a Declaratory Ruling that Its Solid Oxide Fuel Cell Energy Server Will Qualify as a Class I Renewable Energy Source* (Sept. 12, 2012)

Exhibit 4: Bloom Energy Server System Background Documentation

Exhibit 5: Emergency Response Plan

Exhibit 6: Photos of the Proposed Location

Exhibit 7: DEEP Costal Boundary, Natural Diversity Data Base (NDDB), Critical Habitats

Exhibit 8: DEEP Wetlands and Watercourse Map

Exhibit 9: FEMA Map

Exhibit 10: Sound Model

Exhibit 11: Notice Pursuant to Conn. Agencies Regs. § 16-50j-40(a)

Exhibit 12: Abutters Map

Exhibit 13: Municipal Approval

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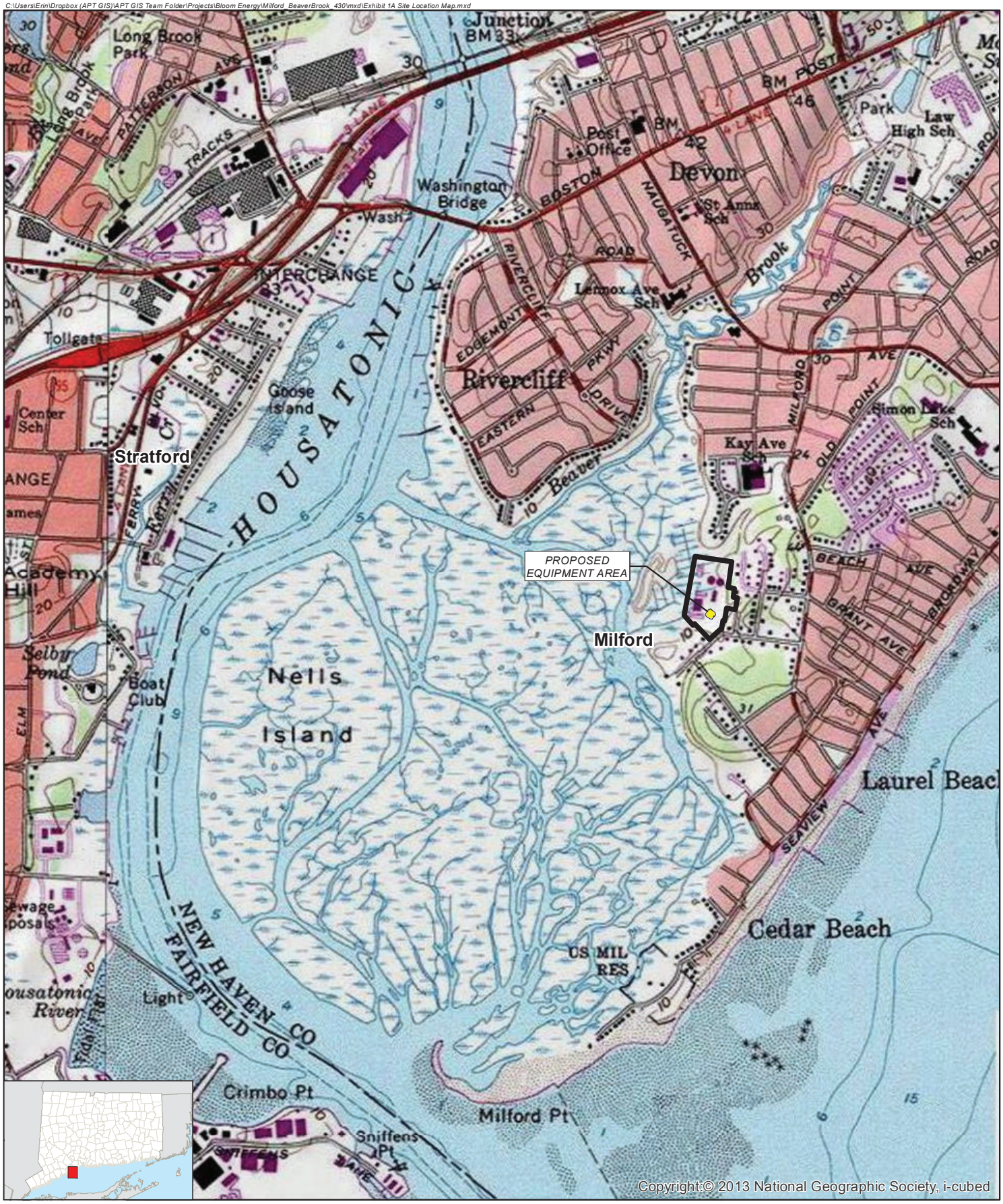
Exhibit 1A

C:\Users\Erin\Dropbox (APT GIS)\APT GIS Team Folder\Projects\Bloom Energy\Milford_BeaverBrook_430\mxd\Exhibit 1A Site Location Map.mxd



Legend

- Subject Property
- Proposed Equipment Area

N
W E
S

1,500 750 0 1,500 Feet

Exhibit 1A
Site Location Map

Proposed Bloom Energy Facility

75 Deerwood Avenue
Milford, Connecticut

Bloomenergy

ALL-POINTS TECHNOLOGY CORPORATION

Map Notes:
Base Map Source: USGS 7.5 Minute Topographic Quadrangle Maps: Milford (2018), CT
Map Scale: 1 inch =1,500 feet
Map Date: April 2019

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Exhibit 1B

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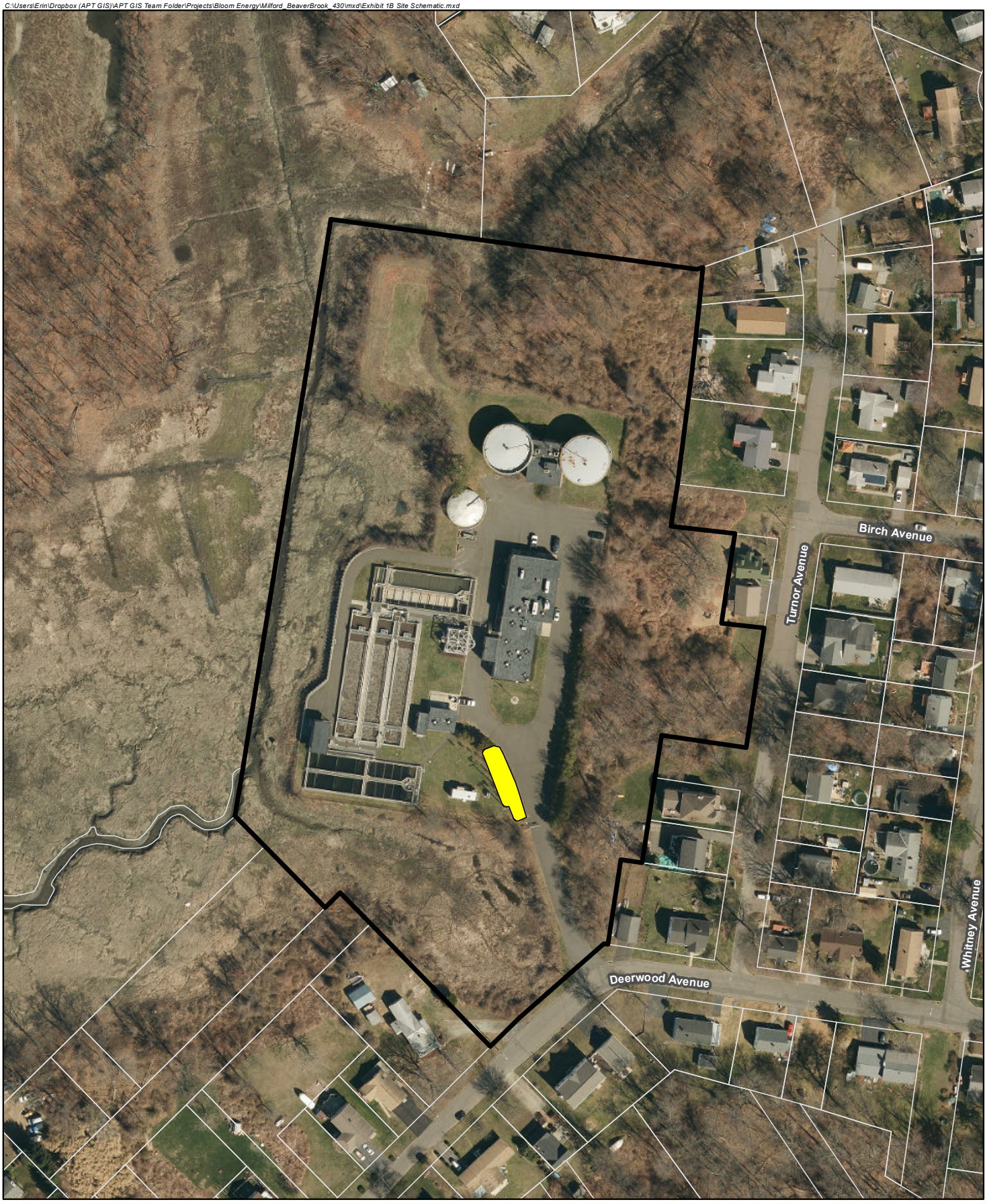

Legend

- Subject Property
- Approximate Assessor Parcel Boundary (CTDEEP)
- Proposed Equipment Area

N
W E
S

150 75 0 150
Feet

Exhibit 1B
Site Schematic

Proposed Bloom Energy Facility

75 Deerwood Avenue
Milford, Connecticut

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ALL-POINTS TECHNOLOGY CORPORATION

Map Notes:
Base Map Source: CTECO 2016 Aerial Photograph
Map Scale: 1 inch = 150 feet
Map Date: April 2019

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Exhibit 2

Know what's below. Call before you dig.

PRIOR TO COMMENCING ANY EXCAVATION OR DEMOLITION, THE CONTRACTOR SHALL CONTACT LOCAL UTILITIES, INCLUDING BUT NOT LIMITED TO ELECTRICAL, GAS, WATER, CABLE, AND TELEPHONE, REQUESTING A UTILITY MARK OUT AND AS NECESSARY RETAIN THE SERVICES OF A PRIVATE UTILITY MARK OUT COMPANY TO PERFORM SUCH MARK OUT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND VERIFY THE LOCATION OF UTILITIES, IRRIGATION, SITE LIGHTING, AND ELECTRICAL LINES IN THE VICINITY OF THE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR ANY AND ALL UTILITIES DAMAGED BY THE CONTRACTOR'S OPERATION AT NO ADDITIONAL EXPENSE.

EXTERIOR FUEL CELL INSTALLATION FOR CITY OF MILFORD, CT

75 DEERWOOD AVE
MILFORD, CT 06460

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SITE INFORMATION

PARCEL INFORMATION

PROPERTY OWNER	CITY OF MILFORD
COUNTY	NEW HAVEN
TAX MAP #	12/67/10//

PROPERTY DESCRIPTION

PROPERTY TYPE	GOVERNMENT
PROPERTY AREA	397,267.2 S.F.
DISTURBED AREA	2000 S.F.

PARKING INFORMATION

EXISTING PARKING*	12
REQUIRED PARKING	XXX
REMOVED PARKING	0
ADDED PARKING	0
FINAL PARKING COUNT	12

*BASED ON GOOGLE EARTH PARKING COUNT

PERMITTING INFORMATION

MUNICIPAL

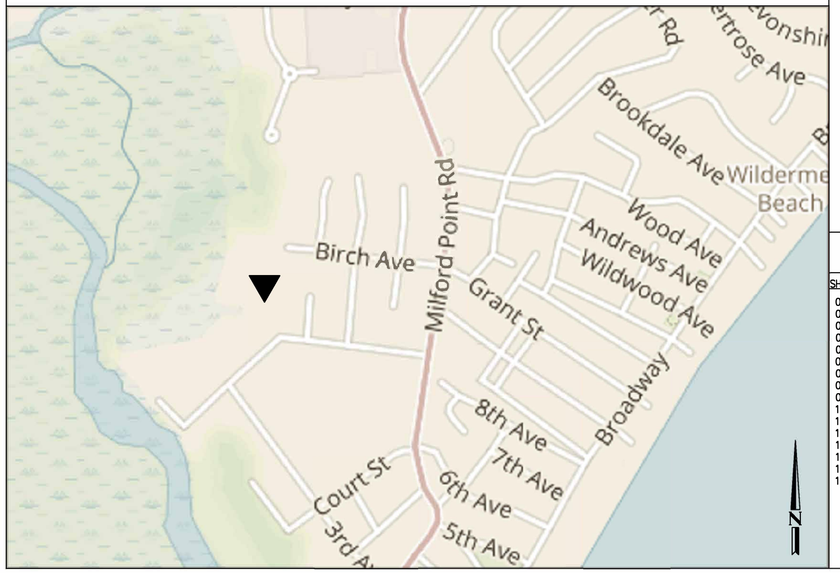
AGENCY	DEPARTMENT	CONTACT INFO
PLANNING	CITY OF MILFORD	203-783-3234
BUILDING	CITY OF MILFORD	203-783-3374
FIRE	CITY OF MILFORD	203-874-6321

UTILITY

TYPE	COMPANY	CONTACT INFO
NATURAL GAS	SOUTHERN CONNECTICUT GAS	(866) 268-2887
ELECTRICAL	UNITED ILLUMINATING	(800) 722-5584
WATER	CITY OF MILFORD	(508) 473-5110

VICINITY MAP (NTS)

PROJECT SITE



CODES

BUILDING	2012 INTERNATIONAL BUILDING CODE
BUILDING	2018 CONNECTICUT STATE BUILDING CODE
ENERGY	2012 INTERNATIONAL ENERGY CONSERVATION CODE
PLUMBING	2015 INTERNATIONAL PLUMBING CODE
FUEL GAS	2012 INTERNATIONAL FUEL GAS CODE
ELECTRICAL	2014 NATIONAL ELECTRICAL CODE (NFPA 70)
FIRE	2018 CONNECTICUT STATE FIRE SAFTY CODE)
MECHANICAL	2012 INTERNATIONAL MECHANICAL CODE

PROJECT TEAM CONTACTS

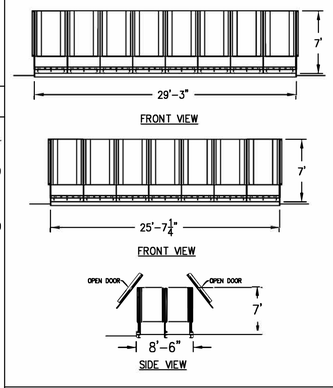
FIRM	ADDRESS	CONTACT INFO
MANUFACTURER		
BLOOM ENERGY	4353 N 1ST STREET, SAN JOSE, CA 95134	(408) 543-1500
CUSTOMER		
CITY OF MILFORD	75 DEERWOOD AVE MILFORD, CT 06460	(203) 783-3200

DRAWING INDEX

SHT#	DWG#	SHEET TITLE
01	G0.1	COVER SHEET
02	G0.2	GENERAL CONSTRUCTION NOTES
03	G1.1	OVERALL SITE PLAN
04	C1.1	DETAILED SITE PLAN
05	C2.1	DETAILS SHEET 1
06	C2.2	DETAILS SHEET 2
07	C2.3	DETAILS SHEET 3
08	S1.0	STRUCTURAL GENERAL NOTES
09	S1.1	EQUIPMENT PAD DETAILS – PRECAST
10	S2.1	EQUIPMENT PAD DETAILS – CAST IN PLACE
11	E0.1	ELECTRICAL SPECIFICATIONS
12	E2.1	ELECTRICAL DUCT BANK DETAILS
13	E3.1	ELECTRICAL SINGLE LINE DIAGRAM
14	M0.1	MECHANICAL SPECIFICATIONS
15	M1.1	PLACARD PLAN
16	R0.1	BLOOM ENERGY PRODUCT DATA SHEET

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE INSTALLATION OF FOUR (4) BLOOM ENERGY ES5 OUTDOOR NATURAL GAS CLEAN ENERGY SERVER. THE CLEAN ENERGY SERVER IS SUPPORTED ON A CONCRETE PAD. THE WORK INCLUDES ALL ITEMS LISTED IN THE SCOPE OF WORK.



SCOPE OF WORK

THE SCOPE OF THIS PROJECT WILL CONSIST OF THE FOLLOWING:

1. CIVIL WORK
   - EXISTING LANDSCAPE SHALL BE CUT FOR NEW EQUIPMENT PAD FOR BLOOM ENERGY SERVER.
   - EXISTING SUBGRADE AT LANDSCAPE CUT WILL BE PREPARED FOR THE NEW EQUIPMENT WEIGHT.
   - NEW TRENCH FROM BLOOM ENERGY SERVER TO BUILDING FOR GAS, WATER AND ELECTRICAL CONNECTIONS BETWEEN BLOOM ENERGY SERVER AND BUILDING. TRENCH TO BE BACKFILLED AND NEW LANDSCAPE COVER TO BE PROVIDED.
   - NEW ENERGY SERVER PRECAST CONCRETE PAD AND ANCILLARY PRECAST CONCRETE PAD TO BE PLACED AT PREPARED SURFACE AT ASPHALT CUT OUT.
   - NEW BOLLARDS TO BE INSTALLED TO PROTECT BLOOM ENERGY SERVER.
2. ELECTRICAL WORK
   - NEW ELECTRICAL FEEDERS BETWEEN BLOOM ENERGY SERVER AND EXISTING MAIN SERVICE SWITCHBOARD.
3. PLUMBING WORK
   - NEW WATER CONNECTION FROM POTABLE WATER SOURCE IN FACILITY TO BLOOM ENERGY SERVER.
   - NEW NATURAL GAS CONNECTION. NEW METER AND REGULATOR REQUIRED.

BLOOM ENERGY FAQ's

Q: WHAT IS A BLOOM ENERGY SERVER?
A: THE BLOOM ENERGY SERVER IS A STATIONARY FUEL CELL POWER SYSTEM.
Q: IS THE BLOOM ENERGY SERVER PRODUCT LISTED OR CERTIFIED?
A: YES. ES-5XXX SERIES:
- THE FUEL CELL IS UL LISTED AS A "STATIONARY FUEL CELL POWER SYSTEM" TO ANSI/CSA AMERICA FC 1-2004.
- IT IS UL LISTED UNDER UL CATEGORY IRGZ AND UL FILE NUMBER MH45102.

ES5 SERIES:
- THE FUEL CELL IS UL LISTED AS A "STATIONARY FUEL CELL POWER SYSTEM" TO ANSI/CSA FC 1-2014.
- IT IS UL LISTED UNDER UL CATEGORY IRGZ AND UL FILE NUMBER MH45102.

Q: WHERE ARE FUEL CELLS COVERED IN THE NATIONAL ELECTRICAL CODE (NEC)?
A: FUEL CELLS ARE COVERED IN ARTICLE 692 OF THE NEC (NFPA 70). FUEL CELLS HAVE BEEN INCORPORATED INTO THE NEC SINCE 2002.
Q: WHAT IS THE MODEL NUMBER OF THIS PRODUCT?
A: PLEASE SEE THE DATA SHEET PROVIDED WITH THIS FAQ.
Q: WHAT IS THE NOISE LEVEL OF THE FUEL CELL SYSTEM?
A: FOR SPECIFIC DB RANGES, PLEASE REFER TO THE DATA SHEET PROVIDED WITH THIS FAQ.
Q: DO BLOOM ENERGY FUEL CELL SYSTEMS PROVIDE LIFE SAFETY POWER?
A: NO. WE ARE NOT LIFE SAFETY AND DO NOT PROVIDE LIFE SAFETY POWER, EVEN WHEN A UPM IS INSTALLED. WE ARE NOT ALTERING WHATEVER LIFE SAFETY IS CURRENTLY PRESENT AT THE FACILITY.
Q: IS THE BLOOM ENERGY FUEL CELL SYSTEM TAMPER-PROOF?
A: YES. THE FUEL CELLS ARE SECURED IN PLACE AND DOORS ARE SECURED AND LOCKED. ONLY BLOOM SERVICE PERSONNEL HAVE THE KEYS AND CAN BE ON-SITE WITHIN 24 HOURS.
Q: WHAT HAPPENS TO THE CUSTOMER FACILITY POWER IF THE FUEL CELLS SHUT DOWN?
A: THE FUEL CELL SYSTEM IS OPERATED IN GRID-PARALLEL MODE. IF THE UTILITY GRID IS OPERATIONAL, THE CUSTOMER FACILITY WILL RECEIVE POWER FROM THE GRID AND NOTICE NO DIFFERENCE.
Q: WHAT HAPPENS TO THE FUEL CELL SYSTEM WHEN THE UTILITY POWER SHUTS DOWN?
A: IF UTILITY PROVIDED POWER IS LOST FOR ANY REASON, THE FUEL CELL SYSTEM WILL ALSO STOP PRODUCING POWER. THE FUEL CELL SYSTEM WILL REMAIN IN STAND-BY MODE UNTIL IT AUTOMATICALLY SENSES THE UTILITY GRID HAS BEEN RESTORED.
Q: WHAT HAPPENS TO THE FUEL CELL SYSTEM WHEN THE UTILITY GAS SHUTS DOWN?
A: IF THE UTILITY GAS IS INTERRUPTED, THE FUEL CELL SYSTEM WILL AUTOMATICALLY SHUT DOWN AS WELL.
Q: CAN THE FUEL CELL SYSTEM BE SHUT DOWN LOCALLY IN CASE OF AN EMERGENCY?
A: YES. IF THE FUEL CELL MUST BE SHUT DOWN RIGHT AWAY--FOR EXAMPLE, IN CASE OF A BUILDING FIRE OR ELECTRICAL HAZARD--TWO SHUTOFF CONTROLS ARE INSTALLED AT THE FACILITY EXTERNAL TO THE SYSTEM. THE LOCATIONS OF THESE TWO CONTROLS SHOULD BE KNOWN TO THE FACILITIES MANAGER BEFORE OPERATION AND SHOULD BE NOTED ON THE SITE DIAGRAM THAT IS CREATED FOR EACH SITE DURING INSTALLATION. THE TWO SHUTOFFS ARE:
(1) THE ELECTRICAL DISCONNECT SWITCH AND
(2) THE MANUAL NATURAL GAS SHUTOFF VALVE. A THIRD SHUTOFF, AN EMERGENCY POWER OFF (EPO) BUTTON, MAY BE PROVIDED ON-SITE.
Q: DOES THE BLOOM ENERGY FUEL CELL SYSTEM OPERATE 24/7?
A: YES.
Q: ARE THE BLOOM ENERGY FUEL CELL SYSTEMS MONITORED?
A: YES. BLOOM ENERGY FUEL CELL SYSTEMS ARE CONTROLLED REMOTELY AND HAVE INTERNAL SENSORS THAT CONTINUOUSLY MONITOR 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. A BLOOM ENERGY REMOTE OPERATOR CAN ALSO REMOTELY INITIATE ANY EMERGENCY SEQUENCE. AN EMERGENCY STOP ALARM INITIATES AN AUTOMATIC SHUTDOWN SEQUENCE THAT PUTS THE SYSTEM INTO "SAFE MODE" AND CAUSES IT TO STOP EXPORTING POWER. IF YOU HAVE QUESTIONS ABOUT ANY OF THESE SAFETY FEATURES, PLEASE CONTACT BLOOM ENERGY AT CUSTOMERCARE@BLOOMENERGY.COM.
Q: WHAT ARE THE EMISSIONS GENERATED BY BLOOM ENERGY FUEL CELL SYSTEMS?
A: THE SPECIFIC PERCENTAGE OF CARBON EMISSION REDUCTIONS ARE DEPENDENT ON YOUR STATE'S GENERATION MIX, BUT BLOOM ENERGY FUEL CELL SYSTEMS VIRTUALLY ELIMINATE NOX, SOX, AND OTHER CRITICAL AIR POLLUTANTS THAT ARE FOUND IN TRADITIONAL ELECTRICITY GENERATION METHODS. FOR SPECIFIC EMISSIONS RANGES, PLEASE REFER TO THE DATA SHEET PROVIDED WITH THIS FAQ.
Q: WHAT IS THE SUSTAINABILITY IMPACT OF BLOOM ENERGY FUEL CELL SYSTEMS?
A: BLOOM ENERGY FUEL CELL SYSTEMS GENERATE ELECTRICITY ON-SITE THROUGH AN EFFICIENT ELECTROCHEMICAL REACTION WITHOUT COMBUSTION. DUE TO THE HIGH EFFICIENCY (60%-53% COMPARED TO A COMBINED CYCLE NATURAL GAS PLANT WITH EFFICIENCY OF 40-45% OR COAL PLANTS AT 35%) BLOOM ENERGY SERVERS REDUCE CARBON EMISSIONS BY 20-50% COMPARED TO THE US GRID EMISSION RATES. THE VARIATION IN EMISSIONS REDUCTION IS DUE TO THE VARIATION IN HOW DIFFERENT STATES GENERATE ELECTRICITY. IN ADDITION, BLOOM ENERGY FUEL CELL SYSTEMS USE NO WATER DURING NORMAL OPERATION

Bloomenergy®
4353 N 1ST STREET,
SAN JOSE, CA 95134

CUSTOMER SITE
CITY OF MILFORD
75 DEERWOOD AVE
MILFORD, CT 06460

REVISION HISTORY

REV	REVISION ISSUE	DATE

DESIGNED BY MARK.BERNARDI-REIS	REVIEWED BY
DRAWN BY NANDISH	APPROVED BY

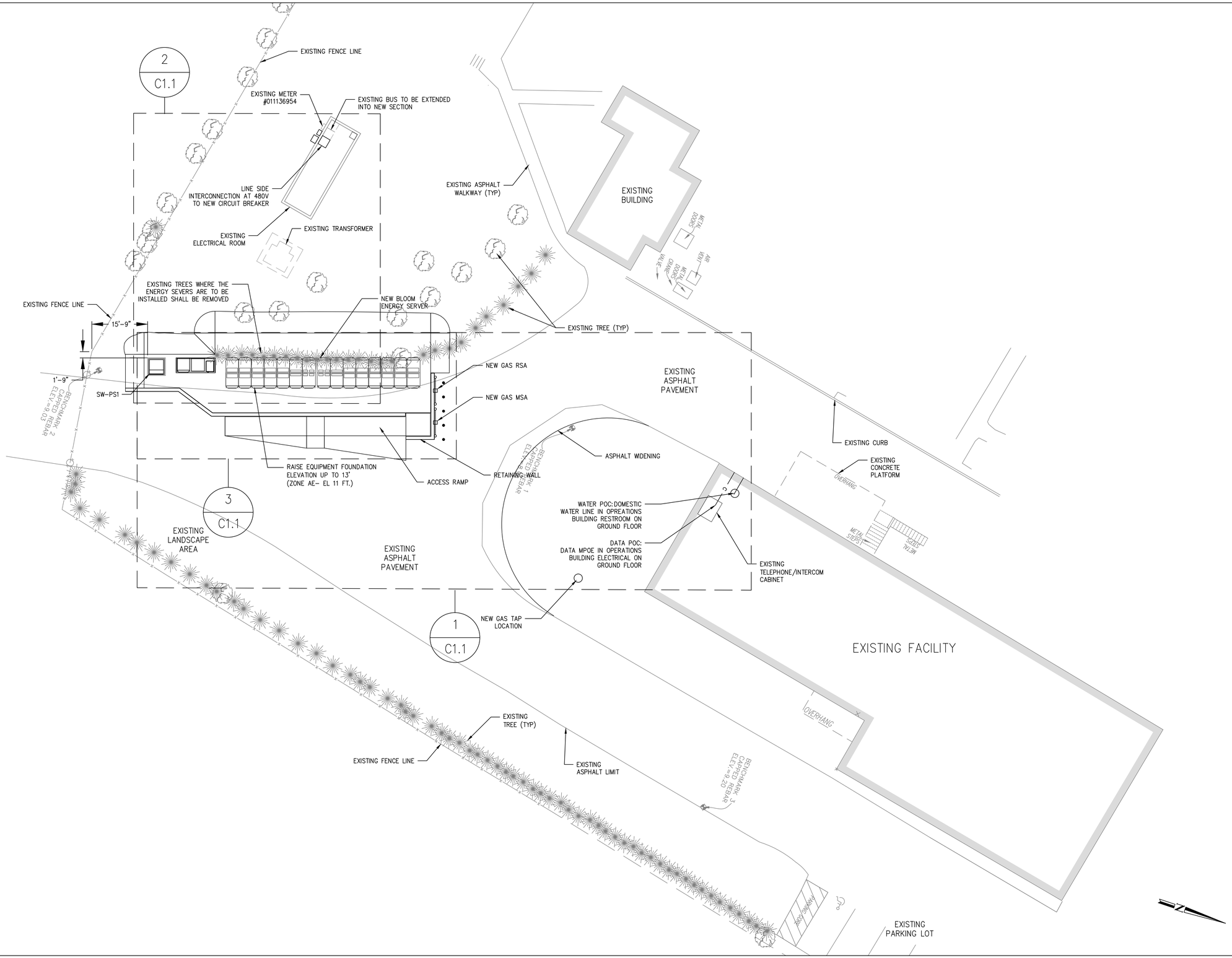
SHEET TITLE
COVER SHEET

DRAWING NUMBER
G0.1

BLOOM DOCUMENT
DOC-1011246

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: MFD000.0 | SHEET 01 OF 16



OVERALL SITE PLAN

SCALE: NTS

1
G1.1

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PROPRIETARY AND CONFIDENTIAL

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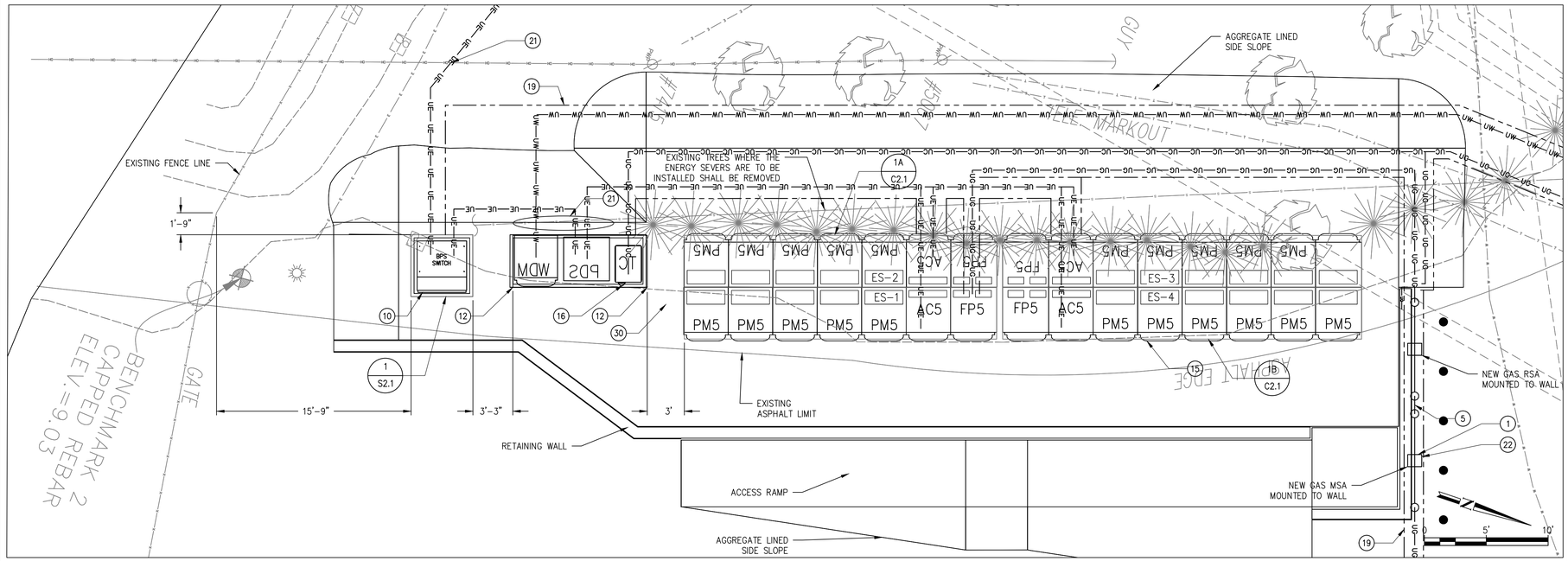
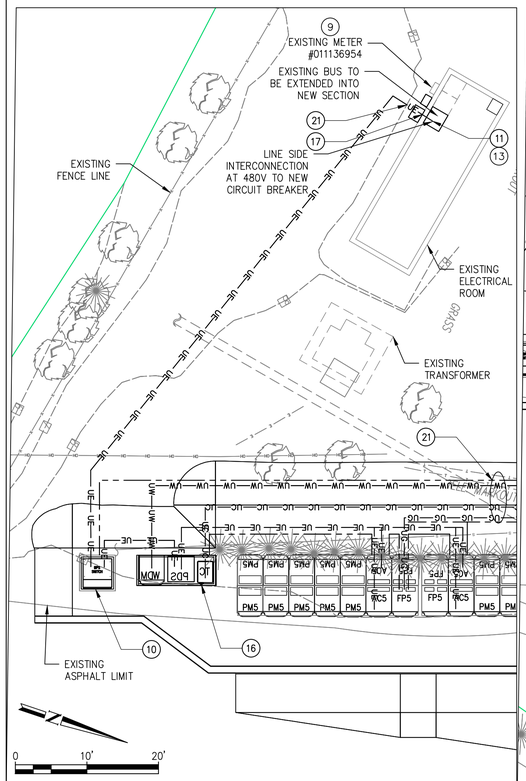
SITE ID: MFD000.0 | SHEET 03 OF 16



DETAILED SITE PLAN

SCALE: 1" = 5'

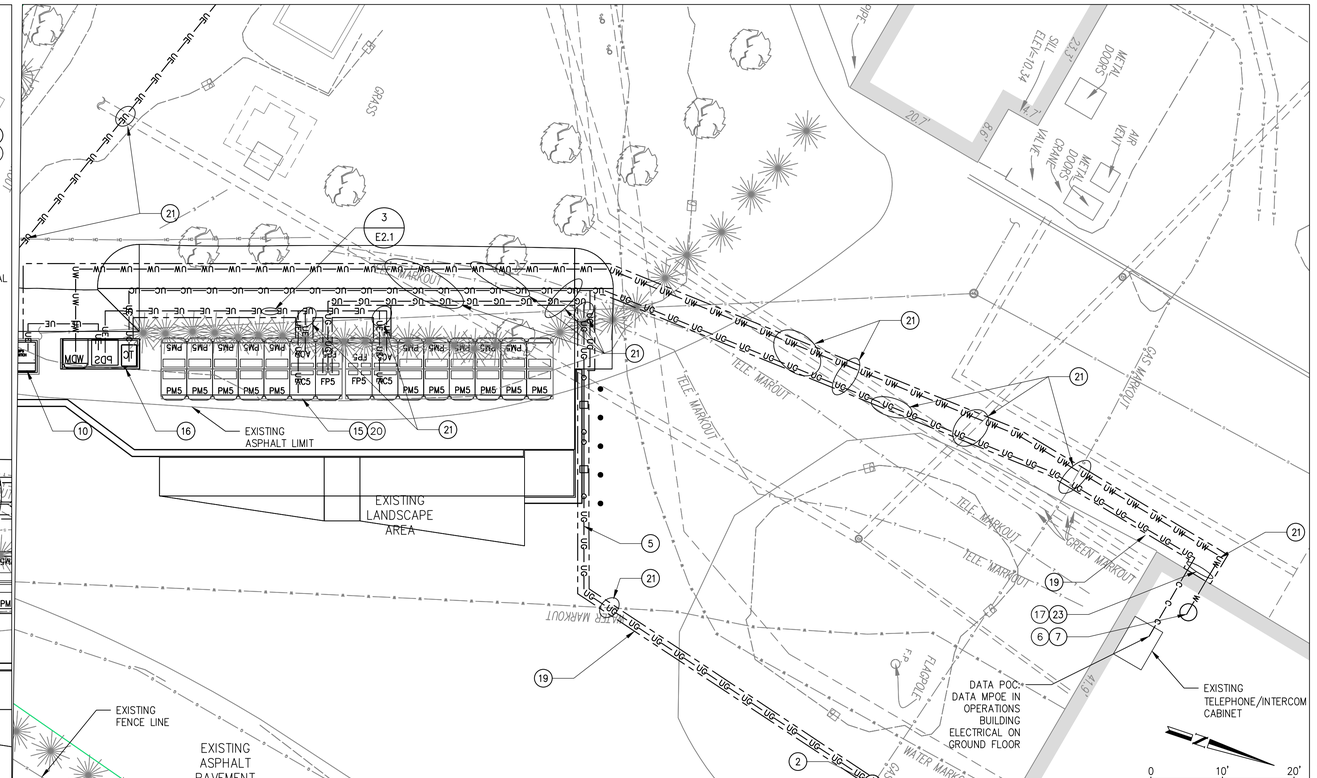
3 / C1.1



DETAILED SITE PLAN

SCALE: 1" = 10'

2 / C1.1



DETAILED SITE PLAN

SCALE: 1" = 10'

1 / C1.1

GENERAL NOTES

1. CLEAN AND PRIME ALL NEW WIRE MOUNTED PIPING AND CONDUIT. PIPING AND CONDUIT SHALL BE PAINTED WITH EXTERIOR GRADE PAINT TO MATCH EXISTING.
2. CONDUITS AND PIPES MOUNTED TO BUILDING WALL SHALL BE SUPPORTED AS PER LOCAL CODE, RUN AT HEIGHT ABOVE DOORWAYS, AND STAND OFF WALL TO AVOID EXISTING CONDUITS AND PIPES.
3. SLOPE LINES SHOWN ARE APPROXIMATE AND INTENDED TO SHOW THE GENERAL DIRECTION OF WATER RUN OFF; SLOPE LINES ARE DRAWN PER VISUAL SURVEY OF SURROUNDING AREA.
4. SEE BLOOM ENERGY PRODUCT INSTALLATION DRAWINGS FOR UTILITY CONNECTIONS TO ANCILLARY EQUIPMENT AND ENERGY SERVER.

REFERENCE SHEET NOTES

(1) NEW UTILITY PROVIDED AND INSTALLED GAS METER & REGULATOR ASSEMBLY WITH SHUT-OFF VALVE. CONTRACTOR SHALL PROVIDE PAD PER DETAILS IF REQUIRED BY UTILITY COMPANY. COORDINATE ALL CONNECTIONS WITH GAS UTILITY.

(2) NEW UNDERGROUND GAS SERVICE TAP BY UTILITY COMPANY. COORDINATE WITH GAS UTILITY. CONTRACTOR SHALL PERFORM COMPACTION AND MATCH EXISTING SURFACE AND GRADE. CONTRACTOR SHALL COORDINATE GAS PIPE SIZING AND INSTALLATION REQUIREMENTS WITH UTILITY.

(5) NEW GAS PIPE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.

(6) TAP EXISTING WATER LINE AT DOMESTIC WATER LINE IN OPERATIONS BUILDING RESTROOM ON GROUND FLOOR AS SHOWN WITH A LOCAL SHUT-OFF VALVE. REFER TO DOMESTIC WATER CONNECTION DETAIL FOR ADDITIONAL REQUIREMENTS.

(7) NEW WATER PIPE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO WATER RISER DETAIL FOR ADDITIONAL REQUIREMENTS.

(8) CONTRACTOR SHALL REPLACE EXISTING STORM DRAIN PIPE UNDER SYSTEM WITH DUCTILE IRON PIPE AND MATCH EXISTING SIZE EXTENDING A MINIMUM 4' BEYOND SYSTEM.

(9) EXISTING UTILITY ELECTRIC METER. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.

(10) NEW BLOOM PROVIDED, CONTRACTOR INSTALLED, BOLTED PRESSURE SWITCH. MOUNT TO PAD PER MANUFACTURER AND UTILITY SPECIFICATIONS.

(11) CONTRACTOR SHALL TERMINATE ELECTRIC FEEDER AS SHOWN. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.

(12) CONTRACTOR SHALL PROVIDE TWO GROUNDING RODS TO BE PLACED 6' APART MINIMUM. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.

(13) NEW ELECTRICAL FEEDER SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.

(15) NEW BLOOM ENERGY SERVER. REFER TO BLOOM STANDARD INSTALLATION DRAWING SET FOR ADDITIONAL ENERGY SERVER DETAILS.

(16) FACTORY WIRED ENERGY SERVER EMERGENCY POWER-OFF SWITCH (EPO).

(17) CONTRACTOR SHALL CORE CONDUIT AND/OR PIPE THROUGH WALL. SCAN WALL PRIOR TO CORING TO AVOID COLLATERAL DAMAGE TO EXISTING PLUMBING AND WIRING. REFER TO WALL PENETRATION DETAIL FOR ADDITIONAL REQUIREMENTS.

(19) CONTRACTOR SHALL PROVIDE SAWCUT TRENCH FOR UNDERGROUND UTILITIES IN THIS LOCATION AND HAND DIG TRENCHES WHERE THEY CROSS EXISTING UTILITIES. REFER TO UNDERGROUND/TRENCH CONDUIT AND PIPING DETAIL FOR ADDITIONAL REQUIREMENTS.

(21) PROTECT EXISTING UNDERGROUND UTILITY LINES FROM DAMAGE WHEN CROSSING WITH NEW UNDERGROUND UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY DAMAGED LINES.

(22) CONTRACTOR SHALL PROVIDE NEW CONDUIT AND CABLE FROM NEW UTILITY GAS MSA TO CUSTOMER MPOE FOR UTILITY BILLING. REFER TO BLOOM ENERGY PRODUCT INSTALLATION DRAWINGS FOR CONNECTION REQUIREMENTS.

(23) CONTRACTOR SHALL TRANSITION ALL ABOVEGROUND NEW LINES TO UNDERGROUND TOWARD ANCILLARY EQUIPMENT. ABOVE GROUND UTILITIES SHALL BE PROTECTED AS NECESSARY, THEN ROUTED UNDERGROUND TO EQUIPMENT STUB-UP LOCATIONS PER MECHANICAL DETAIL.

(24) PROVIDE "DANDY SACK" OR EQUAL WITH OUTFLOW PORTS AT STORM DRAIN INLET. REFER TO EROSION CONTROL DETAIL FOR ADDITIONAL REQUIREMENTS.

(27) CONTRACTOR SHALL UNDER-CUT EXISTING CURB FOR TRENCHING UTILITY LINES AND BACKFILL WITH CONCRETE SLURRY. IF CURB IS DAMAGED, REPAIR TO MATCH EXISTING.

(30) CONTRACTOR SHALL PROVIDE TURF RESTORATION. REFER TO TURF RESTORATION DETAIL FOR ADDITIONAL REQUIREMENTS.

(31) THE LOCATION OF EXISTING UTILITIES IS SHOWN FOR THE CONTRACTOR'S REFERENCE. EXACT LOCATION, DEPTH AND SIZE OF ALL EXISTING UTILITIES IS NOT KNOWN. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES NOT SHOWN ON THESE DRAWINGS

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DETAILED SITE PLAN

DRAWING NUMBER

C1.1

BLOOM DOCUMENT

DOC-1011246

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: MFD000.0 | SHEET 04 OF 16

Bloomenergy®

Exhibit 3

STATE OF CONNECTICUT

DEPARTMENT OF ENERGY AND ENVIRONMENTAL PROTECTION
PUBLIC UTILITIES REGULATORY AUTHORITY
TEN FRANKLIN SQUARE
NEW BRITAIN, CT 06051

DOCKET NO. 12-02-09 PETITION OF BLOOM ENERGY CORPORATION FOR A DECLARATORY RULING THAT ITS SOLID OXIDE FUEL CELL ENERGY SERVER WILL QUALIFY AS A CLASS I RENEWABLE ENERGY SOURCE

September 12, 2012

By the following Directors:

Arthur H. House
John W. Betkoski, III

DECISION

I. INTRODUCTION

By Petition dated February 14, 2012, pursuant to Section 4-176 in the General Statutes of Connecticut (Conn. Gen. Stat.) and Section 16-1-113 in the Regulations of Connecticut State Agencies, Bloom Energy Corporation requests that the Public Utilities Regulatory Authority (Authority) issue a declaratory ruling that its solid oxide fuel cell energy server qualifies as a Class I renewable energy source.

II. PETITIONER'S EVIDENCE

Bloom Energy Corporation (Bloom) has commercialized a scalable, modular fuel cell using Bloom's patented solid oxide fuel cell (SOFC) technology. A fuel cell is a device that uses a fuel and oxygen to create electricity by an electrochemical process. A single fuel cell consists of an electrolyte and two catalyst-coated electrodes (an anode cathode). Fuel cells are generally categorized by the type of electrolyte used. Petition, pp. 2 and 3.

Each Bloom Energy Server consists of thousands of Bloom's patented SOFCs. Each fuel cell is a flat, solid ceramic square capable of producing at least 25 watts. In an energy server, Bloom "sandwiches" the SOFCs between metal interconnect plates into a fuel cell "stack." Bloom aggregates multiple fuel cell stacks together into a "power module," and then multiple power modules, along with a common fuel input and electrical output, are assembled as a complete energy server fuel cell. Id., p. 3.

The Bloom Energy Server converts the chemical energy contained in fuel, such as natural gas, into electricity at an efficiency of approximately 50% - 60% (lower heating value net AC) without any combustion or multi-stage conversion loss. Fuel entering the energy server is processed using a proprietary catalytic method to yield a reformate gas stream, and the gaseous product and preheated air are introduced into the fuel cell stacks. Within the stacks, ambient oxygen reacts with the fuel to produce direct current (DC) electricity. The DC power produced by the energy server system is converted into 480-volt AC power using an inverter, and delivered to the host facility's electrical distribution system. Id.

SOFCs operate at very high temperatures, obviating the need for expensive metal catalysts. With low cost ceramic materials, and extremely high electrical efficiencies, SOFCs can deliver attractive economies without relying on combined heat and power. Id.

Bloom Energy Servers are a fraction of the size of a traditional base load power source, with each server occupying a space similar to that of a parking space. This small, low-impact, modular form of base load power does not pose the environmental challenges associated with a traditional base load power plant, significantly reducing environmental impacts. Moreover, Bloom's innovative design requires only an initial input of 120 gallons of water per 100 kW, after which no additional water is consumed during normal operation. Id., pp. 3 and 4.

Bloom Energy Servers deliver significant environmental benefits over conventional base load technologies. In addition to significant CO_2 reductions due to its high efficiency, the energy server emits virtually no NO_x, SO_x, or other smog forming particulates since the conversion of gas to electricity in a Bloom Energy Server is done through an electrochemical reaction rather than combustion. Id., p. 4.

III. AUTHORITY ANALYSIS

Conn. Gen. Stat. §16-1(a)(26) defines a Class I renewable energy source as:

> (A) energy derived from solar power; wind power; a fuel cell; methane gas from landfills; ocean thermal power; wave or tidal power; low emission advanced renewable energy conversion technologies; a run-of-the-river hydropower facility provided such facility has a generating capacity of not more than five megawatts, does not cause an appreciable change in the river flow, and began operation after the effective date of this section; or a biomass facility, including, but not limited to, a biomass gasification plant that utilizes land clearing debris, tree stumps or other biomass that regenerates or the use of which will not result in a depletion of resources**,** provided such biomass is cultivated and harvested in a sustainable manner and the average emission rate for such facility is equal to or less than .075 pounds of nitrogen oxides per million BTU of heat input for the previous calendar quarter, except that energy derived from a biomass facility with a capacity of less than five hundred kilowatts that began construction before July 1, 2003, may be considered a Class I renewable energy source, provided such biomass is cultivated and harvested in a sustainable manner; or (B) any electrical generation, including distributed generation, generated from a Class I renewable energy source.

Based on Bloom's assertions, the Authority finds that its Bloom Energy Server qualifies as a Class I renewable energy source "fuel cell" as defined in Conn. Gen. Stat. §16-1(a)(26)(A).

The Authority has created an electronic application process for generation owners to apply for a Connecticut Renewable Portfolio Standards registration. The application is available on the Authority's website at the web address **http://www.ct.gov/pura**. The application should be submitted electronically along with a single hard-copy filing. While the Authority concludes in this Decision that the Bloom Energy Server would qualify as a Class I renewable energy source pursuant to Conn. Gen. Stat. §16-1(a)(26), Bloom must still apply for registration of the aforementioned system once the facility becomes operational and is registered in the New England Generation Information System.

IV. CONCLUSION

Based upon the project as described herein, the Authority finds that, as proposed, the Bloom Energy Server would qualify as a Class I renewable energy source. However, since the energy server is not yet operational, it should apply for Class I registration once it begins operations.

DOCKET NO. 12-02-09 PETITION OF BLOOM ENERGY CORPORATION FOR A DECLARATORY RULING THAT ITS SOLID OXIDE FUEL CELL ENERGY SERVER WILL QUALIFY AS A CLASS I RENEWABLE ENERGY SOURCE

This Decision is adopted by the following Directors:

Arthur H. House

John W. Betkoski, III

CERTIFICATE OF SERVICE

The foregoing is a true and correct copy of the Decision issued by the Public Utilities Regulatory Authority, State of Connecticut, and was forwarded by Certified Mail to all parties of record in this proceeding on the date indicated.

September 12, 2012

Kimberley J. Santopietro
Executive Secretary
Department of Energy and Environmental Protection
Public Utilities Regulatory Authority

Date

Bloomenergy®

Exhibit 4

Bloomenergy®

Energy Server 5

Clean, Reliable, Affordable Energy

CLEAN, RELIABLE POWER ON DEMAND

Bloom Energy's Energy Server 5 delivers clean power that reduces emissions and energy costs. The modular architecture enables the installation to be tailored to the actual electricity demand, with a flexibility to add servers as the load increases. The Energy Server 5 actively communicates with Bloom Energy's network operations centers so system performance can be monitored and maintained 24 hours per day, 365 days per year.

INNOVATIVE TECHNOLOGY

Utilizing patented solid oxide fuel cell (SOFC) technology, the Energy Server 5 produces combustion-free power at unprecedented efficiencies, meaning it consumes less fuel and produces less CO_2 than competing technologies. Additionally, no water is needed under normal operating conditions.

ALL-ELECTRIC POWER

The Energy Server 5, which operates at a very high electrical efficiency, eliminates the need for complicated and costly CHP systems. Combining the standard electrical and fuel connections along with compact footprint and sleek design, the Energy Server 5 is the most deployable fuel cell on the market.

CONTROLLED AND PREDICTABLE COST

By providing efficient on-site power generation, the economic and environmental benefits are central to the Energy Server 5 value proposition. Bloom Energy customers can lock in their long term energy costs and mitigate the risk of electricity rate increases. The Energy Server 5 has been designed in compliance with a variety of safety standards and is backed by a comprehensive warranty.

About Bloom Energy

Bloom Energy is making clean, reliable energy affordable. Our unique on-site power generation systems utilize an innovative fuel cell technology with roots in NASA's Mars program. By leveraging breakthrough advances in materials science, Bloom Energy systems are among the most efficient energy generators, providing for significantly reduced operating costs and dramatically lower greenhouse gas emissions. Bloom Energy Servers are currently producing power for many Fortune 500 companies including Apple, Google, Walmart, AT&T, eBay, Staples, as well as notable non-profit organizations such as Caltech and Kaiser Permanente.

Headquarters:
Sunnyvale, California

For More Information:
www.bloomenergy.com

Energy Server 5

Technical Highlights (ES5-BABAAA)	
Outputs	
Nameplate power output (net AC)	210 kW
Base load output (net AC)	200 kW
Electrical connection	480 V, 3-phase, 60 Hz
Inputs	
Fuels	Natural gas, directed biogas
Input fuel pressure	10-18 psig (15 psig nominal)
Water	None during normal operation
Efficiency	
Cumulative electrical efficiency (LHV net AC)*	65-53%
Heat rate (HHV)	5,811-7,127 Btu/kWh
Emissions	
NOx	< 0.01 lbs/MWh
SOx	Negligible
CO	< 0.05 lbs/MWh
VOCs	< 0.02 lbs/MWh
CO_2 @ stated efficiency	679-833 lbs/MWh on natural gas; carbon neutral on directed biogas
Physical Attributes and Environment	
Weight	12.6 tons
Dimensions (variable layouts)	14' 9" x 8' 8" x 7' 0" or 25' 9" x 4' 5" x 7' 5"
Temperature range	-20° to 45° C
Humidity	0% - 100%
Seismic vibration	IBC site class D
Location	Outdoor
Noise	< 70 dBA @ 6 feet
Codes and Standards	
Complies with Rule 21 interconnection and IEEE1547 standards	
Exempt from CA Air District permitting; meets stringent CARB 2007 emissions standards	
An Energy Server is a Stationary Fuel Cell Power System. It is Listed by Underwriters Laboratories, Inc. (UL) as a 'Stationary Fuel Cell Power System' to ANSI/CSA FC1-2014 under UL Category IRGZ and UL File Number MH45102.	
Additional Notes	
Access to a secure website to monitor system performance & environmental benefits	
Remotely managed and monitored by Bloom Energy	
Capable of emergency stop based on input from the site	

* 65% LHV efficiency verified by ASME PTC 50 Fuel Cell Power Systems Performance Test

Bloomenergy®

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1299 Orleans Drive
Sunnyvale CA 94089
T 408 543 1500
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Bloomenergy®

Energy Server 5

Clean, Reliable, Affordable Energy

CLEAN, RELIABLE POWER ON DEMAND

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Headquarters:
Sunnyvale, California

For More Information:
www.bloomenergy.com

Energy Server 5

Technical Highlights (ES5-YA1AAA)	
Outputs	
Nameplate power output (net AC)	300 kW
Base load output (net AC)	300 kW
Electrical connection	480 V, 3-phase, 60 Hz
Inputs	
Fuels	Natural gas, directed biogas
Input fuel pressure	10-18 psig (15 psig nominal)
Water	None during normal operation
Efficiency	
Cumulative electrical efficiency (LHV net AC)*	65-53%
Heat rate (HHV)	5,811-7,127 Btu/kWh
Emissions	
NOx	< 0.01 lbs/MWh
SOx	Negligible
CO	< 0.05 lbs/MWh
VOCs	< 0.02 lbs/MWh
CO_2 @ stated efficiency	679-833 lbs/MWh on natural gas; carbon neutral on directed biogas
Physical Attributes and Environment	
Weight	13.6 tons
Dimensions (variable layouts)	14' 9" x 8' 8" x 7' 0" or 29' 4" x 4' 5" x 7' 5"
Temperature range	-20° to 45° C
Humidity	0% - 100%
Seismic vibration	IBC site class D
Location	Outdoor
Noise	< 70 dBA @ 6 feet
Codes and Standards	
Complies with Rule 21 interconnection and IEEE1547 standards	
Exempt from CA Air District permitting; meets stringent CARB 2007 emissions standards	
An Energy Server is a Stationary Fuel Cell Power System. It is Listed by Underwriters Laboratories, Inc. (UL) as a 'Stationary Fuel Cell Power System' to ANSI/CSA FC1-2014 under UL Category IRGZ and UL File Number MH45102.	
Additional Notes	
Access to a secure website to monitor system performance & environmental benefits	
Remotely managed and monitored by Bloom Energy	
Capable of emergency stop based on input from the site	

* 65% LHV efficiency verified by ASME PTC 50 Fuel Cell Power Systems Performance Test

Bloomenergy®

Bloom Energy Corporation
1299 Orleans Drive
Sunnyvale CA 94089
T 408 543 1500
www.bloomenergy.com

Bloomenergy®

Exhibit 5

Fire Prevention and Emergency Planning – Grid Parallel

Bloom Energy Corporation, 1299 Orleans Drive, Sunnyvale, CA 94089 USA

Table of Contents

1. FIRE PREVENTION AND EMERGENCY PLANNING OVERVIEW

The following document is provided only as a guide to assist you in complying with national and local codes and requirements, as well as to provide other helpful information. It is not intended to supersede the requirements of any standard. You should review the standards for particular requirements that are applicable to your individual situation, and make adjustments to this program that are specific to your company. You will need to add information relevant to your facility in order to develop an effective, comprehensive program.

2. FUEL CELL SYSTEM INSTALLATION SAFETY FEATURES

The fuel cell system has redundant safety features and in-system checks to ensure that the system will not harm certified technicians or bystanders near the unit. While the actual fuel cells operate at high temperatures, these components do not move, and are contained within many layers of insulation. During normal operation, the unit is cool to the touch and operates quietly.

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. A Bloom Energy Remote Monitoring and Control Center (RMCC) operator can also remotely initiate any emergency sequence. An Emergency Stop alarm condition initiates an automatic shutdown sequence that puts the fuel cell system into ―safe model‖ and causes it to stop exporting power. If you have questions about any of these safety features, please contact Bloom Energy.

If you have to shut down your fuel cell system right away—for example, in case of a building fire or electrical hazard—three shutoff controls are installed at your facility external to the system. The locations of these three controls should be known to your facilities manager before operation, and should be noted on your facility diagram that you created with your Bloom Energy account manager. The three shutoffs are the **EPO button**, the **electrical disconnect**, and the **natural gas shutoff valve**.

- An **Emergency Power Off (EPO) Button** cuts all power to all systems and stops them from exporting power to your building. All natural gas flow is also stopped within the systems. (The EPO button is on the front/side of the EDM, if an EDM is installed.) Lift the protective cover and break the glass seal that covers the button with the attached hammer. After the glass seal is broken, the shutdown sequence will automatically begin.

Figure 1: Emergency Power Off Button

- An **electrical disconnect** manually disconnects systems from the grid if needed. Pressing the EPO button should already stop any power transmission, but it does not hurt the systems to also open this disconnect if you believe it is needed. The location of this disconnect will vary, however it is typically located near the point of interconnection where the wires from the fuel cell installation meet the facility's electrical framework. This may be inside your facility's electrical room, or if the fuel cell installation is near the electrical room, it may be found within the switchgear that Bloom Energy installs. This location of this disconnect is shown on the Site Map (see below) and is labeled "(name of electrical utility) Lockable Visible Generator Disconnect Switch".


Figure 2: Electrical Disconnect

- A **manual natural gas valve** shuts down all natural gas to the system. If the valve operator is perpendicular to the pipe, the valve is shut. If it is parallel with the pipe, the valve is open.

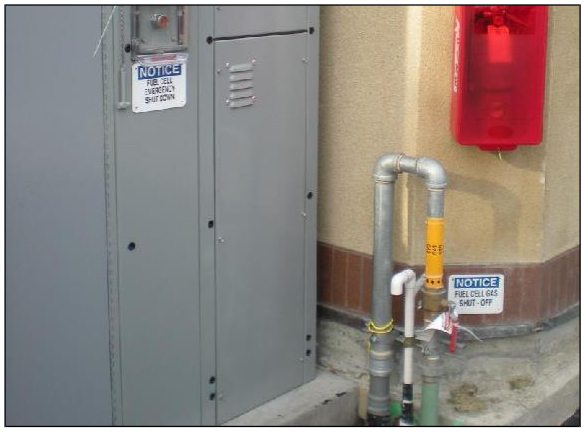

Figure 3: Manual Natural Gas Valve

Site map:

- An overhead site map showing the location of all safety features will be posted throughout the fuel cell installation
- Electronic copies are available to you for use in your site planning

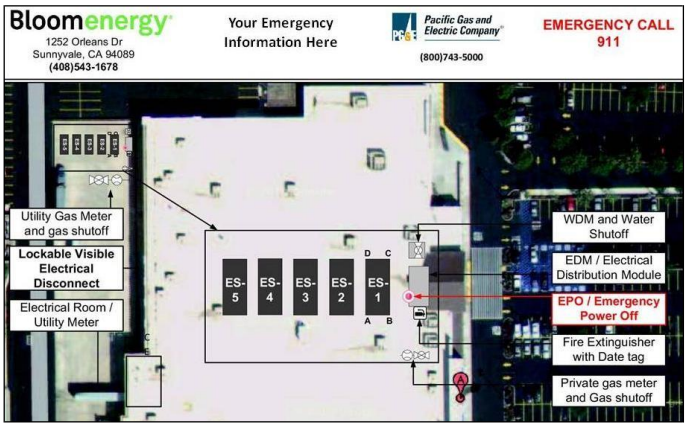

Figure 4: Sample Site Map

Manual controls:

- Clearly marked emergency stop button labeled —Fuel Cell Emergency Shut Downll located at site
- Two manual fuel shutoff valves outside the system, and two isolation valves inside the system

Fire hazard mitigation:

- System is plumbed directly to utility-provided natural gas
- If system input gas pressure is compromised, a pressure switch triggers an emergency system shutdown and fuel input is isolated
- System does not use fuel compressors or pumps
- System has virtually no stored fuel (internal capacity is < 5 scf)

Electrical hazard and mitigation:

- System operates at 480V
- Signs inside the system warn of the risk of electric shock
- System has backfeed protection
- System inverter prevents grid backfeed during a power outage

Mechanical hazard and mitigation:

- Finger/hand guard protection is provided on all fans
- All moving parts are located behind secured doors

Material hazard mitigation:

- Desulfurizer bed (to remove fuel impurities) are fully enclosed
- Maintained and serviced by licensed vendors

3. EMERGENCY NOTIFICATION PROCEDURES

Life-Threatening Emergencies

To report life-threatening emergencies, immediately call:

Fire:	**911**
Ambulance:	**911**
Police:	**911**

Conditions that require automatic emergency notification include:

- Unconscious Victim
- Seizure
- Major Trauma
- Chest Pains
- Difficulty Breathing
- Flames

Non-Life-Threatening Emergencies

For non-life-threatening emergencies, report the incident to the local safety control center.

When you report an emergency, give the following information:

- Exact nature of the emergency (describe as clearly and accurately as possible).
- Exact location (i.e., address, building, floor, area, department, etc.).
- Telephone number from which you are calling.
- Your full name.
- ***Do not hang up***, as additional information may be needed.

To assist in any subsequent investigation or determination of corrective actions, it is recommended to record the following items as close to the incident time as possible:

- Summary of any violation

- Identification of responsible parties
- Identification of victims and witnesses
- Description of evidence
- Description of general conditions
- Description of any vehicles involved
- Narratives from witnesses
- Any photographs

4. FIRE OR SMOKE PROCEDURES

This section describes the procedures involving a fire or smoke. A major fire is one that requires the use of more than one fire extinguisher or takes more than one minute to extinguish.

If you discover a fire or smoke:

1. Activate the nearest fire alarm if not activated already.
2. Activate the fuel cell Emergency Stop if possible.
3. Shut off the fuel cell installation natural gas line if possible.
4. If the fire is small and does not pose an immediate risk to personal safety, you may attempt to extinguish it with a portable fire extinguisher **only if trained to do so.**
5. Avoid using water on electrical fires.
6. Report every fire, regardless of size, immediately. Smoke or the smell of smoke should be reported.
   - From a safe location dial **911**.
   - Report the incident to the local security safety center.

5. MEDICAL EMERGENCY PROCEDURES

This section describes the necessary procedures for injuries or illnesses that may occur under extreme conditions.

A serious injury can be life-threatening and will require immediate medical attention. Injuries can include head injuries, spine injuries, broken bones, heart attack, stroke, loss of consciousness, excessive bleeding, chemical exposure, etc.

A non-serious injury is not immediately life-threatening but may still require the attention of a medical doctor. These can include headaches, nausea, itching, cuts, burns, etc.

Life-Threatening Medical Emergency

1. Remain calm.
2. Immediately dial 911.
3. Report the incident to local security safety center.
4. Do not move the victim unless it is absolutely necessary.
5. Call out for personnel trained in first aid and/or CPR which may include Building Evacuation or Emergency Response team members.

6. Ask someone to bring the area first aid kit and Automated External Defibrillator.
7. Assist if capable or asked to do so.

Non-Life-Threatening Medical Emergency

1. Remain calm.
2. Report the incident to the local security safety center.
3. Do not move the victim unless it is absolutely necessary.
4. Call out for personnel trained in first aid.
5. Ask someone to bring the area first aid kit.
6. If the victim requires further medical attention, then direct them to the nearest approved medical clinic or hospital – Contact Security or Human Resources for assistance if needed.
7. The injured employee's supervisor/manager is responsible for ensuring injury forms are properly filled out. Complete the forms within 24 hours of incident and submit to the injury reporting system for follow-up. Follow company protocols.

6. MATERIALS RELEASE PROCEDURES

The fuel cell system does not pose a hazard to health or environment. However, some internal materials when released, may pose a irritation risk to people and a possible risk of fire if not properly handled. This section was designed to address potential material release events:

In case of a material release that poses a direct threat to health, safety, or the environment:

1. Report the incident to local safety/security office.
2. If extremely life-threatening immediately dial **911** followed with a call to Security.
3. Contain the spill.
4. Evacuate the area or building if the material release is determined to be life-threatening.

In the event of an unknown indoor smell or odor, report the incident to authorities responsible for HAZMAT and spills.

7. NATURAL DISASTERS AND SEVERE WEATHER

7.1 Earthquake

This section provides information and procedures for earthquake emergencies.

The fuel cell system is designed to automatically shut off if the natural gas supply is compromised.

The natural gas supply line has an external, manual shut-off valve that should be activated if it is safe to do so. This valve will be labeled, "Notice – Fuel Cell Gas Shut

Off". The natural gas line will be labeled with the word "gas" on a yellow background with an arrow pointing in the direction of flow.

The nearby Emergency Stop can be activated to stop the flow of fuel and power to/from the fuel cell system.

A Bloom Energy Field Engineer will validate site safety and system operation during/after severe weather as necessary.

7.2 Flood

The fuel cell system support pad is designed to divert water flow. However, if flooding conditions exist, or threaten to exist due to heavy rainfall, creek bank overflows, or pipe breakage, then immediately report the incident to the local safety/security office.

Do not use the fuel cell power system if any part has been under water. If it is safe to reach the Emergency Power Off button for the site without entering the water, stop all systems until a Bloom Energy representative can assess the site.

Precautions to follow after a flood:

- Stay out of flooded areas. Flooded areas remain unsafe. Entering a flooded area places you at risk.
- Notify Bloom Energy. A Bloom Energy Field Engineer will validate site safety and system operation during/after severe weather as necessary

8. UTILITY OUTAGE

The fuel cell system is operated in "Grid-Parallel" mode. If utility provided power is lost for any reason, the fuel cell system will go "off-line". The fuel cell system will remain in stand-by mode until it automatically senses the utility grid has been restored. If utility gas is shut down, the fuel cell system will begin to shut down completely.

The Bloom Energy Remote Monitoring Control Centers monitor the fuel cells 24 hours per day and will be alerted to utility grid interruptions via its controls software. A Field Service Engineer will be dispatched to restart the fuel cell system if necessary. Customer personnel should NOT attempt to start up or operate the fuel cell system.

Before a Planned Outage

- Notify the Bloom Energy Remote Monitoring Control Center at 1-408-543-1678 at least 24 hours before planned outage.
- Bloom Energy Remote Monitoring Engineers will reduce power generated by the fuel cell system and take the fuel cell off-line.
- Abrupt fuel cell system shutdowns may cause significant system damage.

During a Utility Power Loss

- The fuel cell system will automatically go off-line.
- The Bloom Energy Remote Monitoring Control Centers will monitor the fuel cell system.
- Bloom Energy Field Service will be dispatched to start up the fuel cell system as necessary.
- If the fuel cell system has been automatically shut down and utility power is restored, there will be no impact to building power delivery: primary power will come from the utility rather than the fuel cells.

9. GOOD HOUSEKEEPING AND MAINTENANCE

9.1 Good Housekeeping

Although extremely unlikely, to minimize the risk of fire and any incidents, Facility Managers should take the following precautions around the fuel cell installation:

- What to do if you smell gas:
  - Do not try to light any appliance
  - Do not touch any electrical switch; do not use any phone in the area
  - Leave the area immediately
  - Immediately call your gas supplier. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department

- Notify Bloom Energy Remote Monitoring Control Center at 1-408-543-1678 of any condition that would impair the safety of the fuel cell installation so that mitigation measures could be determined and placed into effect.
- Prohibit smoking within the area of the fuel cell installation. Bloom Energy will furnish No Smoking signs for the area.
- Ensure only Bloom Energy Service Providers are permitted access inside the system.
- Keep the area around the fuel cell installation clear for ten feet in all directions, for safety and ease of maintenance.
- Keep the area around the fuel cell power system clear and free of combustible materials, gasoline, and other flammable vapors and liquids.
- Shut the system down and call Bloom Energy immediately if you suspect a fuel line rupture.
- **Never enclose an operating system** in a tarp, tent, shed, or other structure that would allow air to become trapped. This system runs on natural gas, and produces trace amounts of CO and CO2. The amounts of these gases are safe for normal outdoor operation but could gather in an enclosed place.
- Do not block or obstruct air openings on the fuel cell power system. This system requires air flow in order to operate.

- Do not use this fuel cell power system if any part has been under water. Immediately call qualified service personnel to inspect the fuel cell power system and to replace any functional part which has been under water.
- Please contact Bloom Energy at 408-543-1678 with as much advance notice as possible if you plan, detect, or suspect a prolonged Internet outage.
- The Bloom Energy Field Service team will periodically clean the equipment; do not spray with pressurized hoses.

9.2 Maintenance

Your site has specific Field Service personnel assigned to it for both routine maintenance and troubleshooting. Your site project manager will introduce you to the designated Bloom Energy Field Service team assigned to your site prior to operation.

Bloom Energy Field Service personnel are trained in state Safety Law. They are trained in all the procedures required for the fuel cell installation, and their toolkit includes all the safety equipment required to work around the fuel components and high voltage in our system (480VAC).

Bloom Energy also requires its employees to follow all necessary safety precautions, including:

- Every time a Field Service technician arrives at a site for the first time and opens a service panel, the technician will use a leak detector to determine whether there is any gas buildup in the system and determine that it is safe to work on it.
- Whenever a Field Service technician is removing and replacing a component on a fuel or exhaust line, the technician must keep a CO detector nearby to make sure that no CO is present in the line even after the system has been shut down.

The Field Service team expects to conduct quarterly and yearly preventative maintenance for certain types of consumable or cleanable components such as replacement of air filters, water filters, and desulfurizer beds. Other maintenance will be performed as required. During such times, inspections for any hazards will be conducted including quarterly fire extinguisher inspection (if applicable).

10. TRAINING

Prior to system startup, a Bloom Energy representative will provide training on the fuel cell installation to include the location and operation of safety features as well as actions to take during emergencies. We desire this training to provide lasting value and are more than happy to work with you to customize the experience to suit your needs.

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Exhibit 6

Birds Eye View of Site Area

From Access Drive off of Deerwood Avenue

Looking Toward Proposed Facility Location (Generator in Background)

Looking East, Proposed Facility Location at Right

Looking toward Proposed Facility Location at Left

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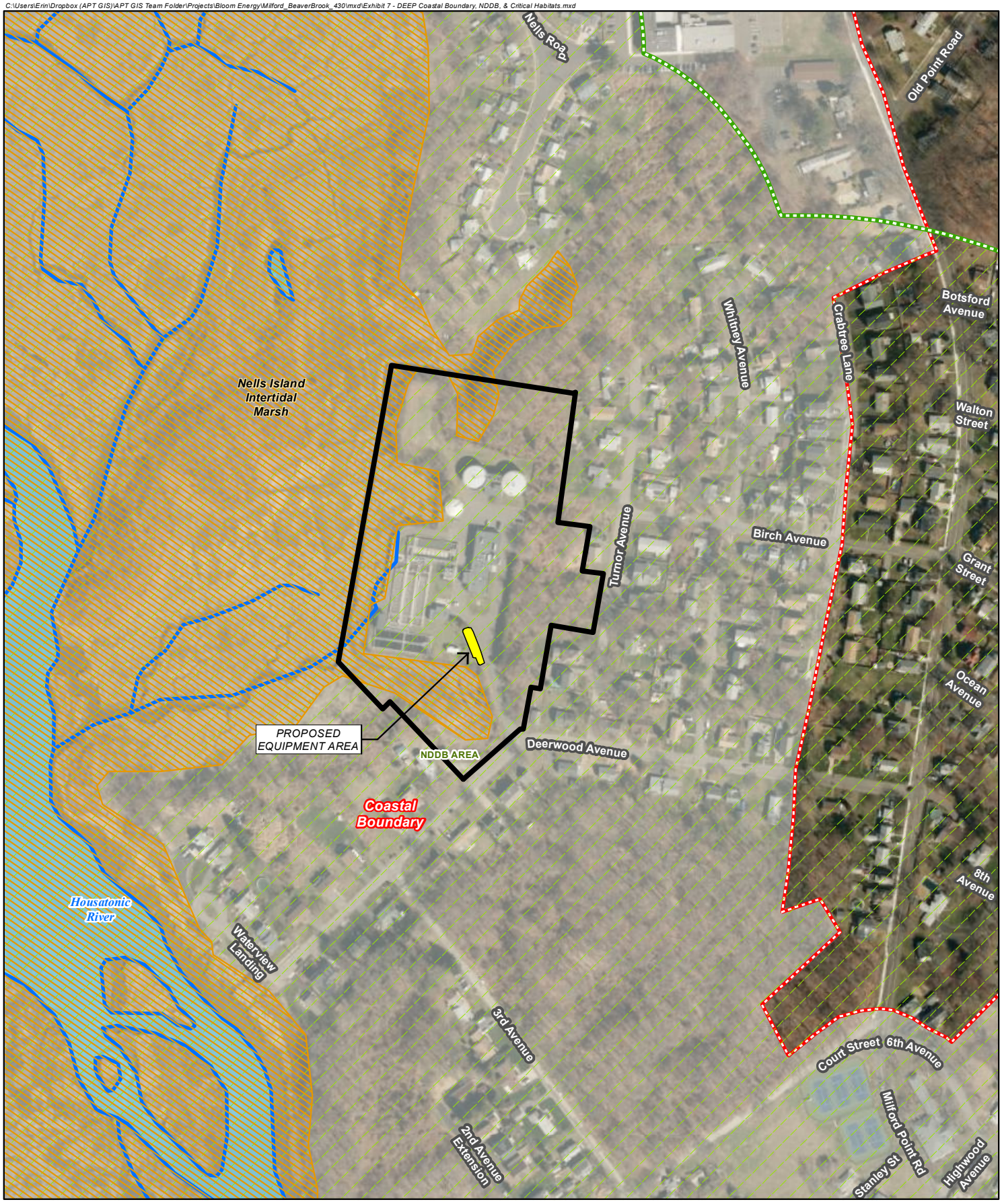
Exhibit 7

C:\Users\Erin\Dropbox (APT GIS)\APT GIS Team Folder\Projects\Bloom Energy\Milford_BeaverBrook_430\mxd\Exhibit 7 - DEEP Coastal Boundary, NDDB, & Critical Habitats.mxd



Legend

- Subject Property
- Coastal Boundary (CTDEEP)
- CTDEEP Critical Habitat (none in mapped extent)
- Natural Diversity Database Area (Dec 2018)
- CTDEEP Watercourse
- CTDEEP Waterbody

N
W E
S

300 150 0 300
Feet

Map Notes:
Base Map Source: CTECO 2016 Aerial Photograph
Map Scale:1 inch = 300 feet
Map Date: April 2019

Exhibit 7
CTDEEP Coastal Boundary, NDDB, & Critical Habitats

Proposed Bloom Energy Facility

75 Deerwood Ave.
Milford, Connecticut

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ALL-POINTS TECHNOLOGY CORPORATION

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Exhibit 8

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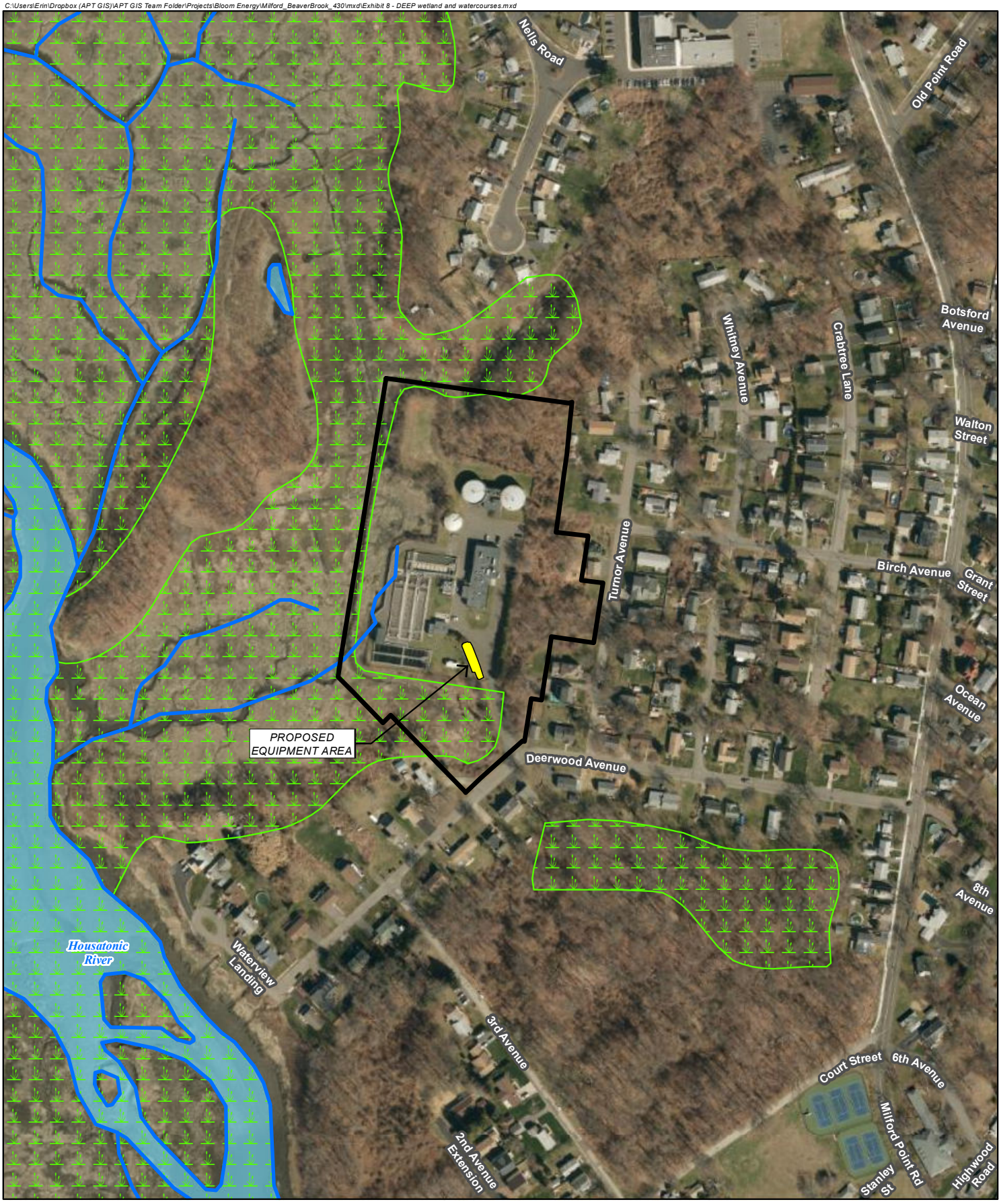

Legend

- Subject Property
- CTDEEP Watercourse
- CTDEEP Wetlands
- CTDEEP Waterbody

N
W E
S

300 150 0 300
Feet

Exhibit 8
CTDEEP Wetland and Watercourses

Proposed Bloom Energy Facility

75 Deerwood Avenue
Milford, Connecticut

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ALL-POINTS TECHNOLOGY CORPORATION

Map Notes:
Base Map Source: CTECO 2016 Aerial Photograph
Map Scale: 1 inch = 300 feet
Map Date: April 2019

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Exhibit 9

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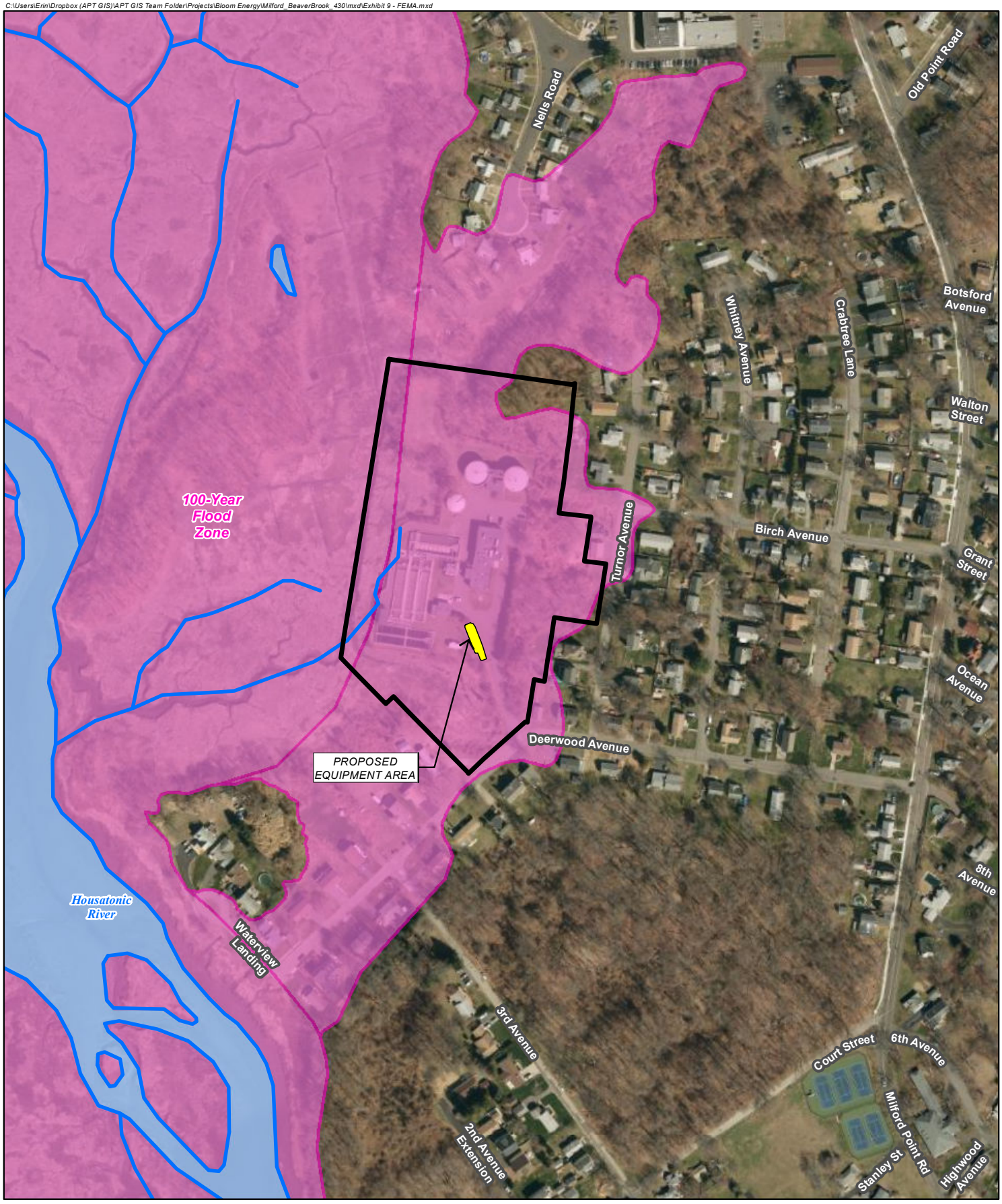

Legend

- Subject Property
- CTDEEP Watercourse
- CTDEEP Waterbody

FEMA Flood Zones (FEMA NFHL)

- 100-Year Flood Zone
- 500-Year Flood Zone
- Floodway

N W E S

300 150 0 300 Feet

Map Notes:
Base Map Source: CTECO 2016 Aerial Photograph
Map Scale: 1 inch = 300 feet
Map Date: April 2019

Exhibit 9
FEMA Flood Zones

Proposed Bloom Energy Facility

75 Deerwood Avenue
Milford, Connecticut

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Exhibit 10

Calculation of **Yuma** Sound Pressure Based On Distance

By Bob Hintz 1/16

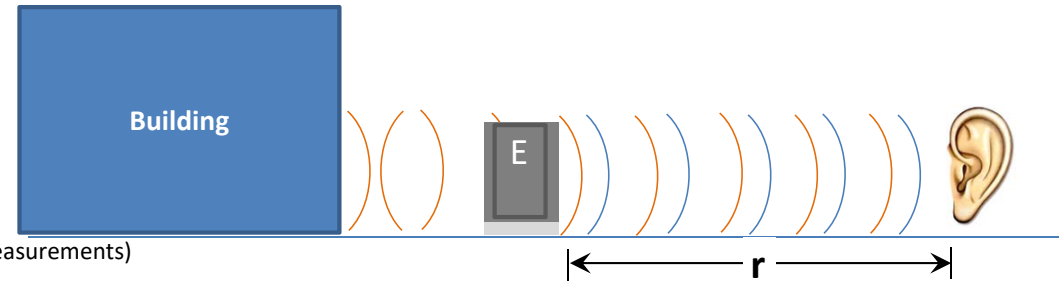
All calculations are based on the following formula for sound pressure level (L_p):

$$L_p = L_W - |10 \cdot \log\left(\frac{Q}{4\pi \cdot r^2}\right)|$$

Sound power value (L_W) attained from V1 Yuma linear in DE reported on Feb. 4, 2015 by Mei Wu.

Scenario 1

ES is installed close to a building or tall wall so noise from the ES is reflected off of the structure and added to the noise from the other side of the ES making it sound louder than normal. This is represented by a directivity factor Q = 4



L_P = 45.2 dB

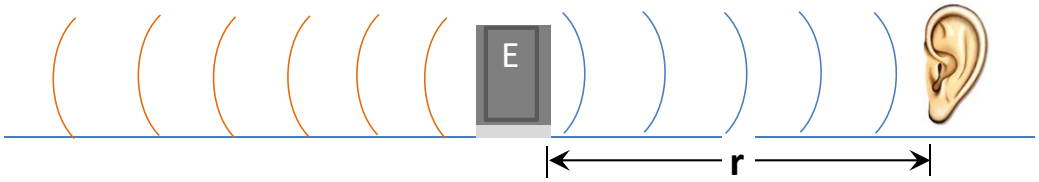
Where:

L_W =	86.4 dB	ES sound power (Calc. from measurements)
Q =	4	Directivity factor
r =	150 Feet	**Enter value here for both Scenarios**

Input verious values for r to approximate the percieved sound pressure at that distance from the ES door

Scenario 2

ES is installed with no structures behind it to reflect sound from either side. This is represented by a directivity factor Q = 2



L_P = 42.2 dB

Where:

L_W =	86.4 dB	ES sound power (Calc.)
Q =	2	Directivity factor
r =	150 Feet	

Input verious values for r to approximate the percieved sound pressure at that distance from the ES door

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Exhibit 11

Bloomenergy

VIA CERTIFIED MAIL
RETURN RECEIPT REQUESTED

March 18, 2019

RE: Application of Bloom Energy, as agent for the City of Milford, for the location and construction of four (4) new ES-5 Bloom Energy Server solid oxide fuel cells which would provide 900 kilowatts of Customer-Side Distributed Resource at 75 Deerwood Avenue, Milford, Connecticut

Dear Ladies and Gentlemen:

Pursuant to Section §16-50j-40 of the Connecticut Siting Council's (the "Council") regulations, we are notifying you that Bloom Energy, as agent for the City of Milford, intends to file in the next two weeks a petition for declaratory ruling with the Council. The petition will request the Council's approval of the location and construction of a 900 kilowatt (KW) fuel cell installation and associated equipment. The Facility will be located at the Beaverbrook Wastewater Treatment Plant at 75 Deerwood Avenue, a/k/a Birch Avenue (the "Site").

The purpose of the proposed Facility is to replace the average baseload of the treatment plant with a renewable energy source[1] and improve reliability of electrical systems and equipment. Electricity generated by the Facility will be consumed primarily at the Site, and any excess electricity will be exported to the electric grid. The Facility will be fueled by natural gas. The City's Board of Aldermen voted unanimously on March 4, 2019 to enter into an energy services agreement with Bloom Energy for the purchase of electricity from the Facility.

Keeping the lines of communication open is an important part of our work in your community. If you have questions about this work, please contact the undersigned or the Council.

Respectfully,

Justin Adams
justin.adams@bloomenergy.com

Be

[1]Connecticut General Statutes §16-1(a)(26)(A) identifies fuel cells as a "Class I renewable energy source"

Notice and Service List Pursuant to Conn. Agencies Regs. § 16-50j-40(a)

Municipal and Elected Officials

Last Name	First Name	Title	Address	City	State	Postal Code
Blake	Benjamin G.	Mayor, City of Milford	70 West River St.	Milford	CT	06460
Sulkis	David B.	City Planner	70 West River St.	Milford	CT	06460
		Planning and Zoning Board	70 West River St.	Milford	CT	06460
		Inland Wetlands Agency	70 West River St.	Milford	CT	06460
		Conservation Commission	70 West River St.	Milford	CT	06460
Blumenthal	Richard	U.S. Senator	702 Hart Senate Office Building	Washington	DC	20510
Murphy	Chris	U.S. Senator	B40A Dirksen Senate Office Building	Washington	DC	20510
DeLauro	Rosa	U.S. Representative	2413 Rayburn House Office Building	Washington	DC	20515
Maroney	James J.	State Senator, 14th District	Legislative Office Building, Room 2000	Hartford	CT	06106-1591
Rose	Kim	State Representative, 118th District	Legislative Office Building, Room 4002	Hartford	CT	06106-1591
Tong	William	Connecticut Attorney General	55 Elm Street	Hartford	CT	06106
Dykes	Katie	Commissioner, Department of Energy and Environmental Protection	79 Elm Street	Hartford	CT	06106
Betkoski III	John W.	Vice-Chairman, Public Utilities Regulatory Authority	10 Franklin Square	New Britain	CT	06051
Rino	Raul	Commissioner, Department of Public Health	410 Capitol Avenue, PO Box 340308	Hartford	CT	06134
Merrow	Susan	Chair, Council on Environmental Quality	79 Elm Street	Hartford	CT	06106
Currey	Melody A.	Acting Commissioner, Department of Agriculture	410 Columbus Blvd., Suite 701	Hartford	CT	06103

McCaw	Melissa	Secretary, Office of Policy and Management	450 Capitol Avenue	Hartford	CT	06106
Giulietti	Joseph	Commissioner, Department of Transportation	2800 Berlin Turnpike	Newington	CT	06111
Lehman	David	Commissioner, Department of Economic and Community Development	450 Capitol Avenue	Hartford	CT	06106
Rush-Kittle	Regina	Deputy Commissioner, Division of Emergency Management and Homeland Security (DEMHS)	1111 Country Club Road	Middletown	CT	06457
Seagull	Michelle H.	Commissioner, Department of Consumer Protection	450 Columbus Boulevard, Suite 901	Hartford	CT	06103
Geballe	Josh	Commissioner, Department of Administrative Services	450 Columbus Boulevard	Hartford	CT	06103
Westby	Kurt	Commissioner, Department of Labor	200 Folly Brook Boulevard	Wethersfield	CT	06109
		South Central Regional Council of Governments	127 Washington Ave.	North Haven	CT	06473

Abutter Properties

Map ID Number	Site Address	Owner Name	Street	City	State	Zip
012 - 67 - 10	0 Birch Avenue	City of Milford	70 West River St.	Milford	CT	06460
012 - 66 - 82	0 Nells Road	City of Milford	River St.	Milford	CT	06460
012 - 66 - 19	68 Turnor Avenue	Steven L. Raucci	68 Turnor Ave.	Milford	CT	06460
012 66 18	54 Turnor Avenue	Christopher & Cheryl Williams & Surv.	54 Turnor Ave.	Milford	CT	06460
012 66 17	98 Turnor Avenue	Jason S. Springer	98 Turnor Ave.	Milford	CT	06460
012 66 16	40 Turnor Avenue	Curtis E. Fogler	40 Turnor Ave.	Milford	CT	06460
012 66 10	66 Birch Avenue	Jeffrey S. Pastor	66 Birch Ave.	Milford	CT	06460
012 65 12	29 Turnor	Janet C. , aka	29 Turnor Ave.	Milford	CT	06460

	Avenue	Janet L. Ryan				
012 65 13	25 Turnor Avenue	Steve & Lynn Kinross & Surv	25 Turnor Ave.	Milford	CT	06460
012 65 14	0 Turnor Avenue	Lakeview Loan Servicing LLC, c/o M&T	1 Fountain Plaza	Buffalo	NY	14203
012 65 15	19 Turnor Avenue	Thomas W. & Kelly A. Hanson & Surv.	19 Turnor Ave.	Milford	CT	06460
012 67 14	16 Turnor Avenue	Elaine R. Bataille	16 Turnor Ave.	Milford	RI	06460
012 67 13	10 Turnor Avenue	Maria F. Knapp	245 Ford St.	Milford	CT	06461
012 67 12	65 Deerwood Avenue	Raymond W. Swift III	65 Deerwood Ave.	Milford	CT	06460
009 68 41	64 Deerwood Avenue	Ismailbhai K. & Aminaben I. Vohra & Surv.	64 Deerwood Ave.	Milford	CT	06460
009 68 42	82 Deerwood Avenue	James M. & Symantha E. Galasso & Surv.	82 Deerwood Ave.	Milford	CT	06460
009 68 43	86 Deerwood Avenue	Tammy L. Ward	86 Deerwood Ave.	Milford	CT	06460
012 67 09	87 Deerwood Avenue	Joseph Gallo	87 Deerwood Ave.	Milford	CT	06460
012 67 UNK	Parcel Under Review	Parcel Under Review	Parcel Under Review		CT	
009 66 06	0 Bluff Street	City of Milford	River St.	Milford	CT	06460
009 0066 OPENS	Parcel Under Review	Parcel Under Review	Parcel Under Review		CT	
012 66 13	0 Nells Road	Martha Merk, Harriett Ackerman & James R. Beard, Tenants in Common	762 Wheelers Farms Rd.	Milford	CT	06461

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Exhibit 12

Legend

- Subject Property
- Proposed Equipment Area
- Abutting Properties
- Approximate Assessor Parcel Boundary (CTDEEP)

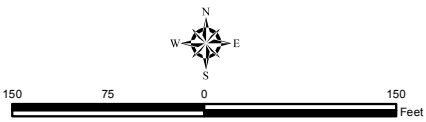

Exhibit 12
Abutters Map

Proposed Bloom Energy Facility

75 Deerwood Avenue
Milford, Connecticut

Bloomenergy

ALL-POINTS TECHNOLOGY CORPORATION

Map Notes:
Base Map Source: CTECO 2016 Aerial Photograph
Map Scale: 1 inch = 150 feet
Map Date: April 2019

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Exhibit 13

BOARD OF ALDERMEN
REGULAR MEETING
MARCH 4, 2019

The Board of Aldermen of the City of Milford held their Regular Meeting on Monday, March 4, 2019 in the aldermanic chambers of City Hall. Chairman P. Vetro called the meeting to order at 7:43 p.m. Chairman Vetro asked those present to join in saluting our flag and reciting the Pledge of Allegiance.

1. Roll Call

Board Members Present

B. Anderson
E. Beatty
K. Fortunati
C. Gaynor
D. German
A. Giannattasio
J. Grant
F. Smith
A. Sutton
J. Tranquilli
N. Veccharelli
P. Vetro
R. Vitali

Also Present

J. Berchem, City Attorney
P. Erodici, Finance Director
J. Rohrig, City Clerk
J. Rosen, Chief of Staff

Excused:

J. Golden

2. Public Statements

Public statements are limited to the legislative function of the Board of Aldermen. He stated only residents; taxpayers or electors may address the Board. The time limit granted to each speaker shall be three (3) minutes. He asked each speaker to adhere to the three-minute limit.

Alan Brewster, 115 Housatonic Drive, Chairman of the Milford Energy Advisory Board read from a prepared statement regarding the reduction of energy us in public buildings. He discussed energy saving devices installed by the City and other energy saving measures. Mr. Brewster reviewed programs for homeowners to install solar. He stated that approximately 800 households have installed solar to date. Mr. Brewster stated the advisory board will be sponsoring a workshop on how to save energy on Saturday, March 23rd from 2:00 to 4:00 at the Milford Public Library.

3. Consideration of the Minutes of the Regular Meeting of the Board of Aldermen held on February 4, 2019.

Ald. Veccharelli and Ald. Hardiman made and seconded a motion to approve the minutes of the Regular Meeting held on February 4, 2019. Motion carried unanimously.

4. Consideration of the Minutes of the Special Meeting.

None.

5. Chairman's Report and Communications.

Chairman Vetro reminded everyone that the 29th annual St. Patrick's Day parade is this Saturday, March 9th. He turned the floor to Ald. Hardiman who stated this second largest parade in Connecticut. He reminded everyone the parade steps off at 1:00 p.m. and the roads will be closed at 12:45 p.m. Ald. Hardiman invited all to come and march.

6. Mayor's Report and Recommendations:

None.

7. Unfinished Business

None.

8. New Business (from Mayor's Report Items 8a-8d)

8a. Ald. Veccharelli and Ald. Hardiman made and seconded a motion for the appointment of (D) Sandra Cohen, 65 Beechwood Avenue, 0646, as an alternate member of the Board of Assessment Review, to fill vacant position, term to expire 12/31/21.

Motion carried unanimously.

9. New Business not on the Agenda which may be introduced by a two-thirds (2/3) vote of those present and voting.

None.

10. Budget Memo Transfers

(a) Ald. Veccharelli and Ald. Hardiman made and seconded a motion to approve consideration of budget memo transfers #7 and #8, Fund 10, FY 19. Motion carried unanimously.

11. Refunds

(a) Ald. Veccharelli and Ald. Hardiman made and seconded a motion to approve consideration of refunds in the amount of $324,057.67.

Ald. Anderson asked such a large refund for the Connecticut Post Mall. Peter Erodici, Finance Director stated the reason was due to a tax appeal settlement. Ald. Anderson asked if there would be any other appeals coming up in regard to the appeal. Mr. Erodici stated he was not aware of any at this time, but the Assessor may have some other tax appeals on a smaller scale.

Motion carried unanimously.

12. Report of Standing Committees:

a. Ordinance Committee - Ald. Smith reported the Committee met earlier in the evening to consider one (1) ordinance and voted to forward the ordinance, as amended, to the full Board of Aldermen with a favorable recommendation.

Ald. Smith and Ald. Beatty made and seconded a motion to approve an ordinance authorizing the city to enter into an energy services agreement for the purchase of electricity. Motion carried unanimously.

Ald. Smith stated there were representatives from Bloom Energy present this evening and ask that they provide a short presentation.

John Carbone with Greenpoint Energy provided a short presentation. Ald. Smith asked what municipalities Bloom Energy serves. Mr. Carbone stated Hartford has an 800 kW system that supplies 4 locations. He also stated that are a number of regional school districts and municipal buildings that are served.

Ald. Vitali state this is a 20 year commitment with a penalty should the City not meet its goal or opt out. He asked for the fee structure. Mr. Carbone stated he does not see an issue with the City meeting the required loads. He further stated there is a schedule in the contract should the City opt out and the fees decrease each year.

Ald. German asked if there was any way to use the methane gas created by the digesters. Mr. Carbone stated that is not possible at this time.

Ald. Veccharelli asked what the other 5 areas for the fuel cell are. Mr. Carbone stated Beaverbrook is the host site with virtual net metering at Housatonic treatment plant, 2 pump station, police department and Foran High School.

Ald. Giannattasio asked what Greenpoint's relationship is to Bloom Energy. Mr. Carbone stated they worked with the City to identify savings opportunities and grants. He also stated they provided a feasibility study. Ald. Giannattasio asked how they were able to negotiate the digesters into the program. Mr. Carbone stated there was maintenance that was not being met and they packaged it into the agreement to address those issues. Ald. Giannattasio asked if the City would realize a savings. Mr. Carbone discussed the LREC's had been awarded in 2017 but it had been delayed by the State. Ald. Giannattasio asked that now we are able to move forward it was possible to package in the digesters. Mr. Saley stated that when the City partnered with Greenpoint they looked for benefits and the program included funds to fix the digesters. Ald. Giannattasio stated the digesters

had been bonded. Mr. Saley stated that the amount bonded also included anticipated funds to be received from the program. Attorney Berchem stated that when bonded, they were still negotiating. Now that this has been approved it will offset those costs. Mr. Saley discussed how Greenpoint has worked with the City and the Board of Education.

Ald. Smith asked why Beaverbrook was chosen as the host location. Mr. Saley stated during negotiation both treatment plants were considered and Beaverbrook was the one selected.

b. Public Safety and Welfare Committee – no report.
c. Public Works Committee – no report.
d. Claims Committee – no report
e. Rules Committee – no report.
f. Personnel Committee – no report.

13. Report of Special Committees:

a. Liaison Sub-Committee – Board of Education – no report.
b. Liaison Sub-Committee – Flood & Erosion Board – no report.
c. Liaison Sub-Committee – Park, Beach & Recreation Comm. – no report
d. Liaison Sub-Committee – Planning & Zoning Board – no report.
e. Liaison Sub-Committee – Sewer Commission – no report.
f. Liaison Sub-Committee – Harbor Management Commission – no report.
g. Liaison – Council on Aging – no report.
h. Permanent School Facility Building Committee – no report.
i. Liaison Sub-Committee – Library Board – no report
j. Liaison Sub-Committee – Fowler Memorial building – no report
k. Liaison Sub-Committee – Milford Redevelopment & Housing Partnership – no report.
l. Golf Course Commission – no report.
m. Inland Wetlands Agency – no report.
n. Liaison Health Department – no report.
o. Devon Revitalization Committee – no report.
p. Human Services Commission – no report
q. Liaison Pension & Retirement Board – no report.
r. Milford Government Access Television (MGAT) – no report.
s. Liaison – Milford Progress, Inc. – no report.

14. Executive Session. A two-thirds (2/3) vote of those present and voting is required for any item to be considered in executive session. A two-thirds (2/3) vote of those present and voting is required to go into executive session.

The Chairman shall announce, in public session, those items to be covered in executive session and call for a vote to enter executive session. If a two-thirds (2/3) vote, to enter executive session, is obtained, the hall shall be cleared and executive session declared.

Chairman Vetro stated item 14(c) has been withdrawn from the agenda. He stated he would entertain a motion to adjourn to Executive Session on the following items.

14(a) Matthew LaVecchia v. City of Milford – Discussion concerning pending litigation. . He stated the full Board along with City Attorney Jonathan Berchem, Assistant City Attorney Debra Kelly and Fire Chief Doug Edo would join them.

14(b) Consideration of settlement of Milprop Realty, LLC v. City of Milford, RE: 70 Bridgeport Avenue. He stated the full Board along with City Attorney Jonathan Berchem and Assessor Dan Thomas would join them.

Ald. Veccharelli and Ald. Beatty made and seconded a motion to approve to enter Executive Session. Motion carried unanimously.

The Board adjourned to Executive Session at 8:19 p.m.

Chairman Vetro reconvened the meeting in public session at 8:55 p.m.

14(a) Ald. Veccharelli and Ald. Hardiman made and seconded a motion to approve the settlement of Matthew LaVecchia v. City of Milford in accordance with the recommendations of the City Attorney as discussed in Executive Session. Motion carried unanimously.

14(b) Ald. Veccharelli and Ald. Hardiman made and seconded a motion to approve the settlement of Milprop Realty, LLC v. City of Milford, RE: 70 Bridgeport Avenue in accordance with the recommendations of the City Attorney as discussed in Executive Session. Motion carried unanimously.

Being no further business to discuss, Ald. Veccharelli and Ald. Hardiman moved to adjourn. Motion carried unanimously.

The Board adjourned at 8:56 p.m.

Respectfully submitted,

Toni Jo Weeks
Recording Secretary