

March 17, 2023

Melanie Bachman, Esq. Executive Director Connecticut Siting Council 10 Franklin Square New Britain, CT 06051

RE: Petition of Bloom Energy Corporation for a Declaratory Ruling for the Location and Construction of a 250-Kilowatt Fuel Cell Customer-Side Distributed Resource at Manchester Community College, 14 Great Path, Manchester, Connecticut

Dear Attorney Bachman:

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") requests the Connecticut Siting Council approve the construction and operation of a 250-kilowatt fuel cell and associated equipment at Manchester Community College ("MCC") in Manchester, Connecticut (the "Facility"). The Facility will be installed at 14 Great Path within the parcel known as 60 Bidwell Street. Electricity generated by the Facility will benefit MCC's operation, 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 (917) 803-4511.

Sincerely, Bloom Energy

Kristen Grillo

kristen.grillo@bloomenergy.com

(917) 803-4511



# STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

PETITION OF BLOOM ENERGY CORPORATION : PETITION NO.	
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FOR A DECLARATORY RULING FOR THE

LOCATION AND CONSTRUCTION OF A 250KILOWATT FUEL CELL CUSTOMER-SIDE

DISTRIBUTED RESOURCE AT MANCHESTER

COMMUNITY COLLEGE, MANCHESTER, CT : MARCH 17, 2023

### PETITION OF BLOOM ENERGY CORPORATION FOR A DECLARATORY RULING

### I. INTRODUCTION

Pursuant to Conn. Gen. Stat. §§ 4-176 and 16-50k(a) and Conn. Agencies Regs. § 16-50j-38 et seq., Bloom Energy Corporation ("Bloom") requests that the Connecticut Siting Council ("Council") approve by declaratory ruling the location and construction of a customer-side distributed resources project at Manchester Community College ("MCC"), 14 Great Path, Manchester, Connecticut¹ (the "Site"). Bloom will install a fuel cell consisting of one (1) ES-5 Bloom Energy Server solid oxide fuel cell and associated equipment (the "Facility") that will provide a total of 250 kilowatts ("kW") (net) of power to the Site. *See* Exhibits 1 and 3. The Facility will be installed, maintained and operated by Bloom under a 20-year power purchase agreement with the Connecticut State Colleges & Universities ("CSCU") owned by a third-party financing source. The Facility has been selected as part of the LREC program.

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

<sup>&</sup>lt;sup>1</sup> 14 Great Path is within the parcel identified by the Town of Manchester as 60 Bidwell Street.

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 fuel cell 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 for the proposed Facility, as the installation would not have a substantial adverse environmental effect in the immediate vicinity of the Site or in the State of Connecticut.

### II. COMMUNICATIONS

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

Kristen Grillo George Gaydos

Bloom Energy Corporation
4353 North First Street
San Jose, CA 95134
Telephone: (917) 803-4511
Bloom Energy Corporation
4353 North First Street
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Telephone: (610) 742-8792

Fax: (408) 543-1501 Fax: (408) 543-1501

Email: Kristen.Grillo@bloomenergy.com Email: George.Gaydos@bloomenergy.com

### III. DISCUSSION

### A. The Facility

The Facility will be a 250-kW customer-side distributed resource consisting of one (1) Bloom solid oxide fuel cell Energy Server, model ES5-EAXAAL, and associated equipment. As shown on Exhibits 2 and 3, the fuel cell and associated equipment (utility cabinets, water deionizers, telemetry cabinets, and disconnect switches) will be installed at the rear of the Student Services Center in the central portion of the Site. A new asphalt equipment area will be installed on the north side of the driveway to the rear parking and loading dock area.

Connections to existing electric, communication, and water utilities within the building will extend underground from the equipment area to points of connection within the building.

The Facility will be fueled by natural gas supplied by Connecticut Natural Gas from a point to be determined, underground and west of the Facility. Exhibits 1 and 2 depict the Facility location; Exhibit 3 contains plans; Exhibit 4 contains photographs and equipment specifications.

Bloom has sized the system at 250 kW based on consultation with MCC's representatives and analysis of MCC's operational needs. The Facility will replace a portion of the average baseload of the Site with a Class I renewable energy source and improve reliability of electrical systems and equipment. The Facility has been sized to provide at least 41% of MCC's average annual baseload. Exhibit 4. Electricity generated by the Facility will be consumed primarily at the Site and any excess electricity will be exported to the grid.

The operational life of the Facility is for the life of the 20-year contract with CSCU. At the conclusion of the 20-year contract, CSCU may renew the contract, return the Facility at no cost, or buy the Facility at a fair market value.

The interconnection application for the Facility is anticipated to be filed with Eversource in late March, 2023; approval is anticipated in the third quarter of 2023.

### B. Public Health and Safety

The Facility will be installed in compliance with applicable building, plumbing, electrical, and fire codes. The Facility is enclosed, factory-assembled and tested prior to installation on the Site. Solid oxide media in the fuel cells are exchanged at roughly five-year intervals. Extensive hardware, software and operator safety control systems are utilized, and will be controlled from a Bloom Energy Remote Monitoring Control Center ("RMCC"). Internal sensors continuously monitor system operation and provide for system components to shut down if safety circuits detect a condition outside normal operating parameters; the RMCC operator can

initiate an emergency shutdown if warranted. Bloom will provide Town of Manchester ("Town")

Fire Department personnel and MCC's operations/emergency personnel with an Emergency

Response Plan and will offer to provide training. Exhibit 6.

The Facility will be installed in accordance with NFPA 853.<sup>2</sup> The Facility does not burn natural gas; it is used in a chemical reaction to generate electricity, and is digested almost immediately upon entering the unit and is no longer combustible. Before commissioning, the fuel lines (pipes) are cleaned in accordance with Conn. Gen. Stat. Section 16-50ii<sup>3</sup>.

### C. Existing and Proposed Environment

### i. The Site

The Site is an approximately 159-acre parcel located in the southwestern part of the Town that hosts Manchester Community College. It occupies most of the area south of Interstate 384, west of Bidwell Street, east of Hillstown Road, and north of Wetherell Street. It is within the RR – Rural Residential zoning district.

The Site is developed with multiple educational and administrative buildings and structures. Associated drives and parking areas are interspersed. Solar arrays have been installed in the northern portion of the Site. An Eversource transmission line extends north-south in the eastern portion of the Site. The surrounding area contains residential development, a cemetery and Town recreational property.

The fuel cell installation will be located in the central portion of the Site north of the paved rear driveway to the Student Services Center and loading area. The Facility is designed to take advantage of existing infrastructure, with little or no impact on the building and surroundings. Two (2) evergreen trees will be removed to provide for required separation from

<sup>3</sup> Public Act 11-101, An Act Adopting Certain Safety Recommendations of the Thomas Commission

<sup>&</sup>lt;sup>2</sup> Standard for the Installation of Stationary Fuel Cell Power Systems, 2015 Edition

the fuel cell installation. The parking area and driveway at the rear of the Student Services

Center experience relatively low traffic volume; no effect on traffic patterns or Site logistics is anticipated. There is no regular pedestrian flow in the area of the proposed Facility. A playground to the north is at a higher elevation and fenced, is accessed from the north, and should be unaffected by the fuel cell installation and operation.

### ii. Wildlife and Habitat

Based on a review of the publicly available Connecticut Department of Energy and Environmental Protection (DEEP) Natural Diversity Database (NDDB) December 2022 data, the proposed Facility is not within an NDDB area, an identified location of endangered, threatened and special concern species or significant natural community. Exhibit 5. Therefore, no consultation with DEEP NDDB is required.

The Site and the immediate surrounding vicinity are heavily developed with buildings and paved surfaces. The addition of the Facility within a limited area adjacent to paved surfaces and a large building will have no effect on wildlife habitat.

### iii. Wetlands and Watercourses

Wetlands are identified on DEEP state wetland mapping as extending into the northwest and southeast corners of the Site. The mapped wetlands are in undeveloped areas of the Site, and more than 1100 feet northwest of and 1300 feet southeast of the proposed fuel cell installation, with roadways and structures intervening. Given the distance, there would not be any direct or indirect effect on the mapped wetland or watercourse resources. As described herein, appropriate erosion and sedimentation control measures will be employed during construction.

### iv. Flood Zones and Aquifer Protection Area

A review of the flood hazard mapping data from the Federal Emergency Management Agency's ("FEMA") National Flood Insurance Program ("NFIP") shows the Facility would not be located in either a 100-year or 500-year flood zone. *See* Exhibit 5.

The Site was also reviewed for proximity to Aquifer Protection Areas. According to GIS data provided by DEEP, the Facility is approximately 1.09 miles southwest of the nearest Aquifer Protection Area.

### v. Cultural Resources

The Site, including the Facility location, has been previously developed and disturbed.

Construction and operation of the Facility is therefore not expected to have an adverse effect on cultural (archaeological and historical) resources.

### D. Environmental Effects and Mitigation

### i. Natural Gas Desulfurization Process

Sulfur compounds that are added to natural gas as an odorant are removed in the first step of electricity production in a Bloom Energy Server. Sulfur is separated from the natural gas by filtering in a specialized canister within the Energy Server (the "Desulf Unit") that uses a copper catalyst to remove the sulfur. The Desulf Units are periodically removed and replaced. The spent units are transported to ShoreMet, L.L.C. (ShoreMet) in Indiana, 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. Handling and transportation are performed in accordance with hazardous waste restrictions.

### 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.

The Facility is designed to operate without water discharge under normal operating conditions. There are no connections or discharge points to the proposed Facility. The Facility uses no water after start-up, which requires a 96-gallon injection.

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 exempts fuel cells from air permitting requirements. Accordingly, no permits, registrations, or applications are required based on the actual emissions from the Facility. 4 It should be noted, however, that Bloom Energy fuel cells do meet the emissions standards of Section 22a-174-42.

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<sup>5</sup>, 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, and VOCs emissions from the energy production process. Similarly, there are no CH<sub>4</sub>, SF<sub>6</sub>, HFC or PFC emissions.

**Table 1: Connecticut Thresholds for Greenhouse Gases** 

<b>Emission Type</b>	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) <sup>6</sup>	679-833 lbs/MWh	Not Listed

<sup>&</sup>lt;sup>4</sup> See Conn. Agencies Regs. §§ 22a-174-42(b) and (e).

<sup>&</sup>lt;sup>6</sup> Carbon dioxide is measured at Bloom's stated lifetime efficiency level of 53-60%.

The proposed Facility will ultimately displace less efficient fossil fueled marginal generation on the ISO New England system. Based upon the most recent US Environmental Protection Agency (EPA) "eGrid" data (2020), the proposed Facility is expected to reduce carbon emissions by approximately 13.6% while essentially eliminating local air pollutants like NOx and SOx.

The Town's Plan of Conservation and Development ("POCD"), effective January 14, 2013, addresses the concept of sustainability in general terms; development or use of renewable energy sources is not specifically addressed. The current draft of an updated POCD encourages use of renewable energy in the context of housing sustainability and green job creation. The Town's Zoning Regulations do not address renewable energy sources other than solar energy systems.

### iii. Sound Levels

The Facility will comply with both State of Connecticut and Town regulations for the control of noise.

Bloom retained Veneklasen Associates to evaluate the impact of noise from the proposed Facility on nearby sensitive noise receptors, specifically residences along Wetherell Street and Hillstown Road. *See* Exhibit 7, Veneklasen Associates Property Line Noise Analysis ("Report"). As indicated in the Report, calculated noise levels at nearby receptors are within the limits established by the Town. They are also within the limits of State regulations.

Bloom typically performs project construction Monday through Friday, 7:00 a.m. to 5:00 p.m.

### iv. Visual Effects

The visual effect of the Facility will be limited to portions of the Site. The Facility will be installed in an area that includes utility and mechanical infrastructure; two trees will be removed

to provide required separation distances. The Student Services Center building will block views from the south and southeast. Elevated ground and mature trees will minimize views from the north and west, including a parking area and playground to the north. The incremental visual effect of the Facility is anticipated to be minimal.

### E. Project Construction and Maintenance

Bloom anticipates construction to start in the second quarter of 2024 with approximately four months of total construction time (4 - 6 weeks of site prep, 4 - 6 weeks of installation, and 4 - 6 weeks of commissioning).

Construction of the Facility would conform to best management practices for erosion and sedimentation ("E&S") controls, including those provided for in the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. 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 effects 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.

If there is a default in the contract or the Facility is to be removed at the end of the contract, the Energy Server, associated equipment and components will be dismantled and removed and the site will be restored as nearly as practicable to its effective original condition.

### IV. NOTICE AND CONSULTATION

Bloom has provided notice of this petition via certificate of mailing to abutting property owners and appropriate municipal officials and governmental agencies to whom notice is required to be given pursuant to Conn. Agencies Regs. § 16-50j-40(a). Lists of officials and abutting property owners, a copy of the notice letter and documentation of mailing are provided in Exhibit 8.

A representative of Bloom contacted Mr. Gary Anderson, Director of Planning and Economic Development for the Town, by email on February 27, 2023 and provided plans for the proposed Facility for review and comment. Neither Mr. Anderson nor any other municipal official has provided comments or questions to date. *See* Exhibit 9.

### V. CONCLUSION

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 quality standards. The proposed Facility meets each of these criteria.

The proposed project will replace a portion of the Site's baseload with a Class I renewable energy source, assist in achieving the State's sustainability goals, and improve reliability of electrical systems and equipment.

Bloom submits that no Certificate is required for the proposed Facility, as the installation would not have a substantial adverse environmental effect in the immediate vicinity of the Site or in the State of Connecticut. Accordingly, Bloom respectfully requests that the Council approve the proposed Facility by declaratory ruling.

Respectfully submitted,

**Bloom Energy Corporation** 

Bv:

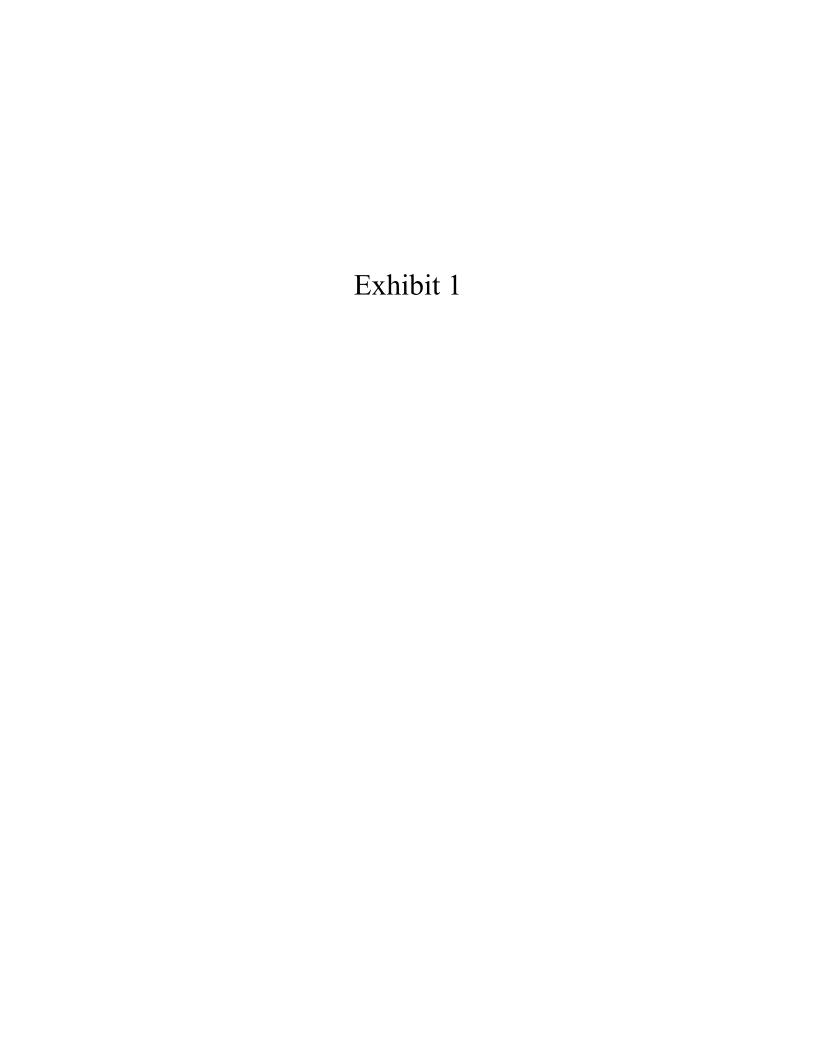
Kristen Grillo

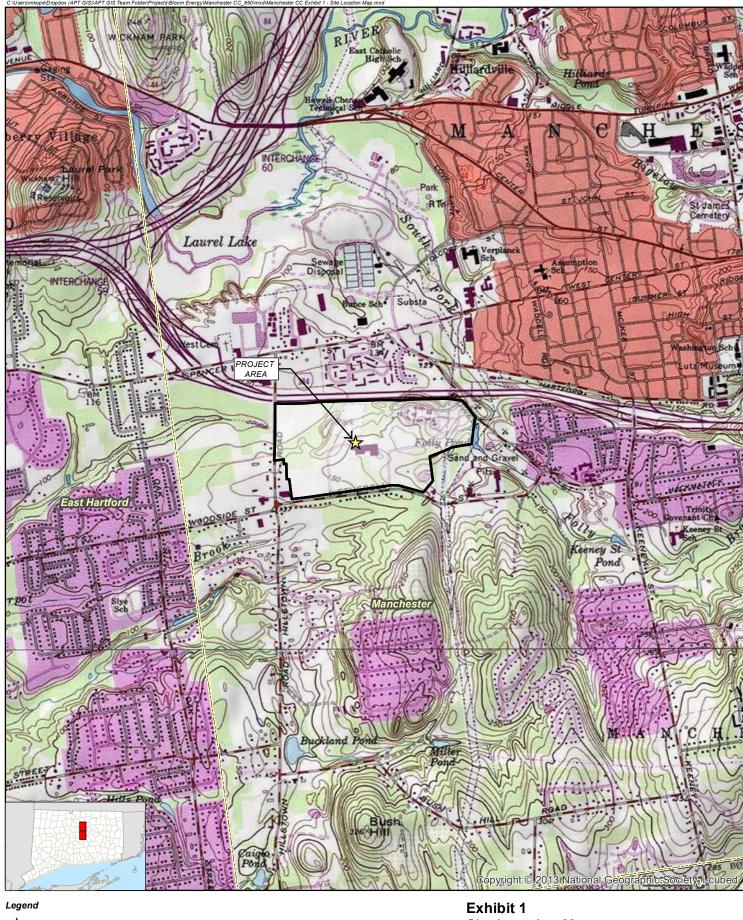
Bloom Energy Corporation 4353 North First Street

San Jose, CA 95134

Telephone: (917) 803-4511

Email: kristen.grillo@bloomenergy.com







Municipal Boundary (CTDEEP)

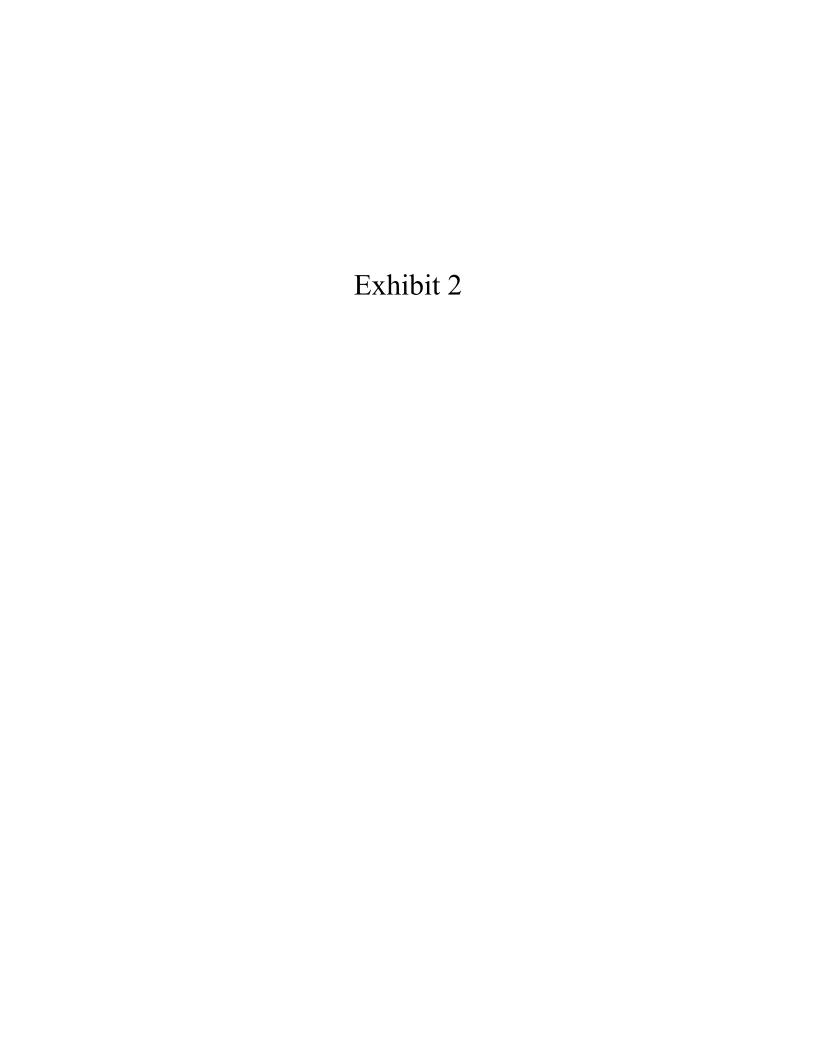
Map Notes:
Base Map Source: USGS 7.5 Minute
Topographic Quadrangle Map: Glastonbury, CT (1984)
and Manchester, CT (1992)
Map Scale: 1:24,000
Map Date: March 2023

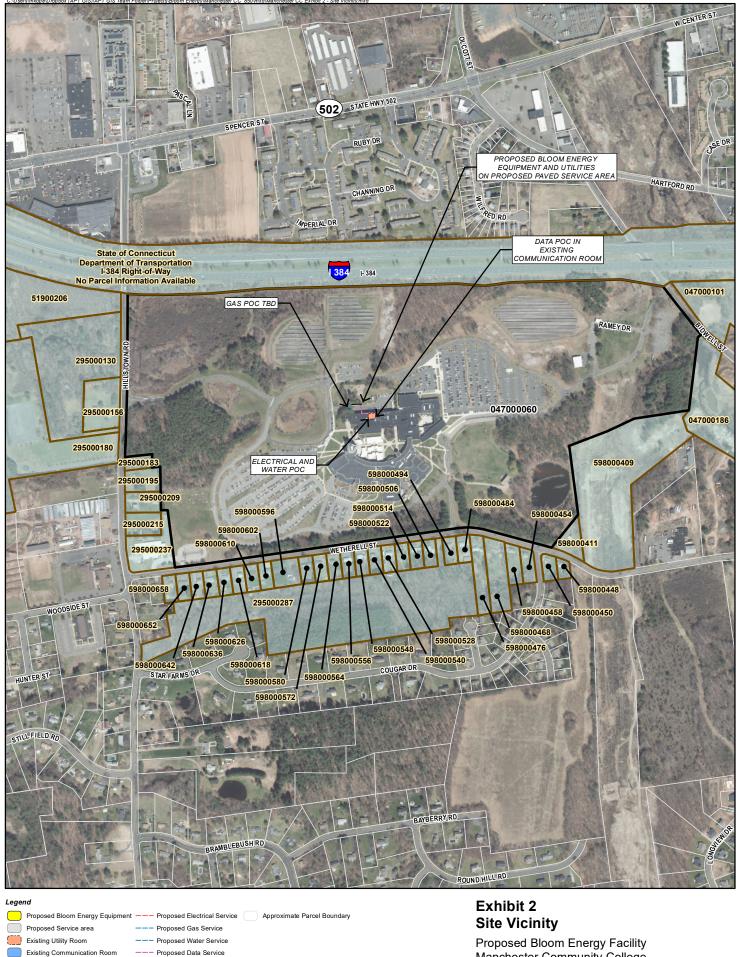


## **Site Location Map**

Proposed Bloom Energy Facility Manchester Community College 14 Great Path Manchester, Connecticut





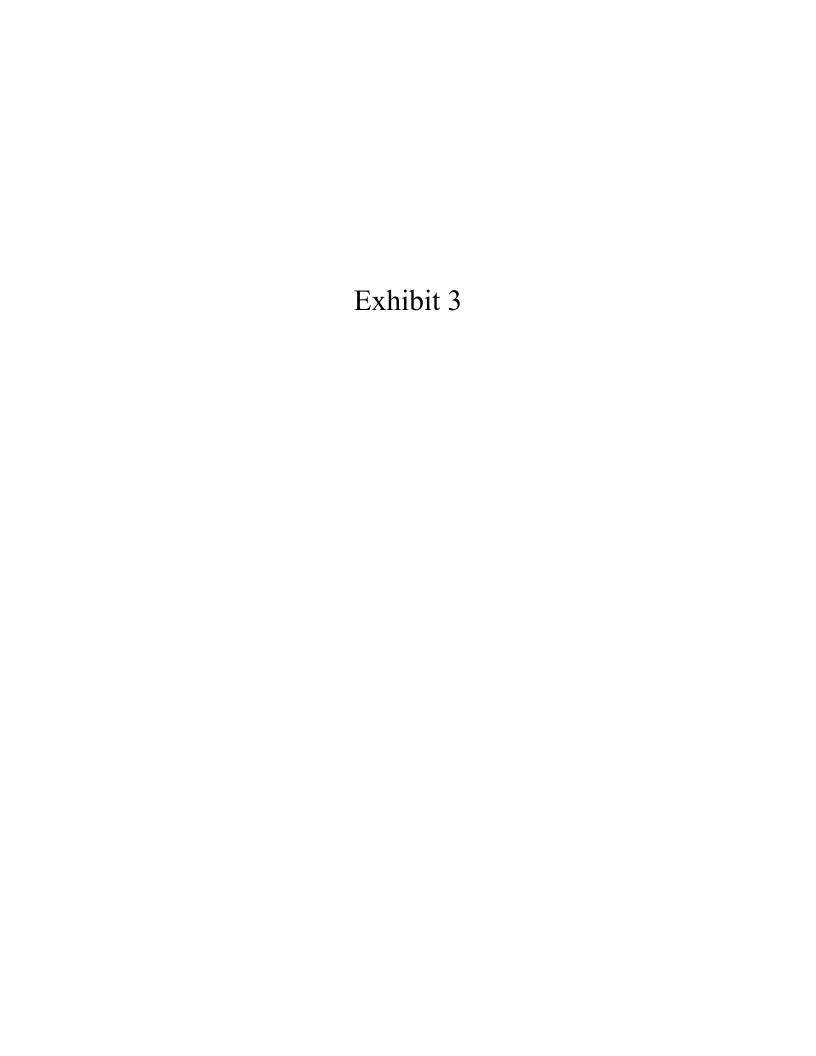


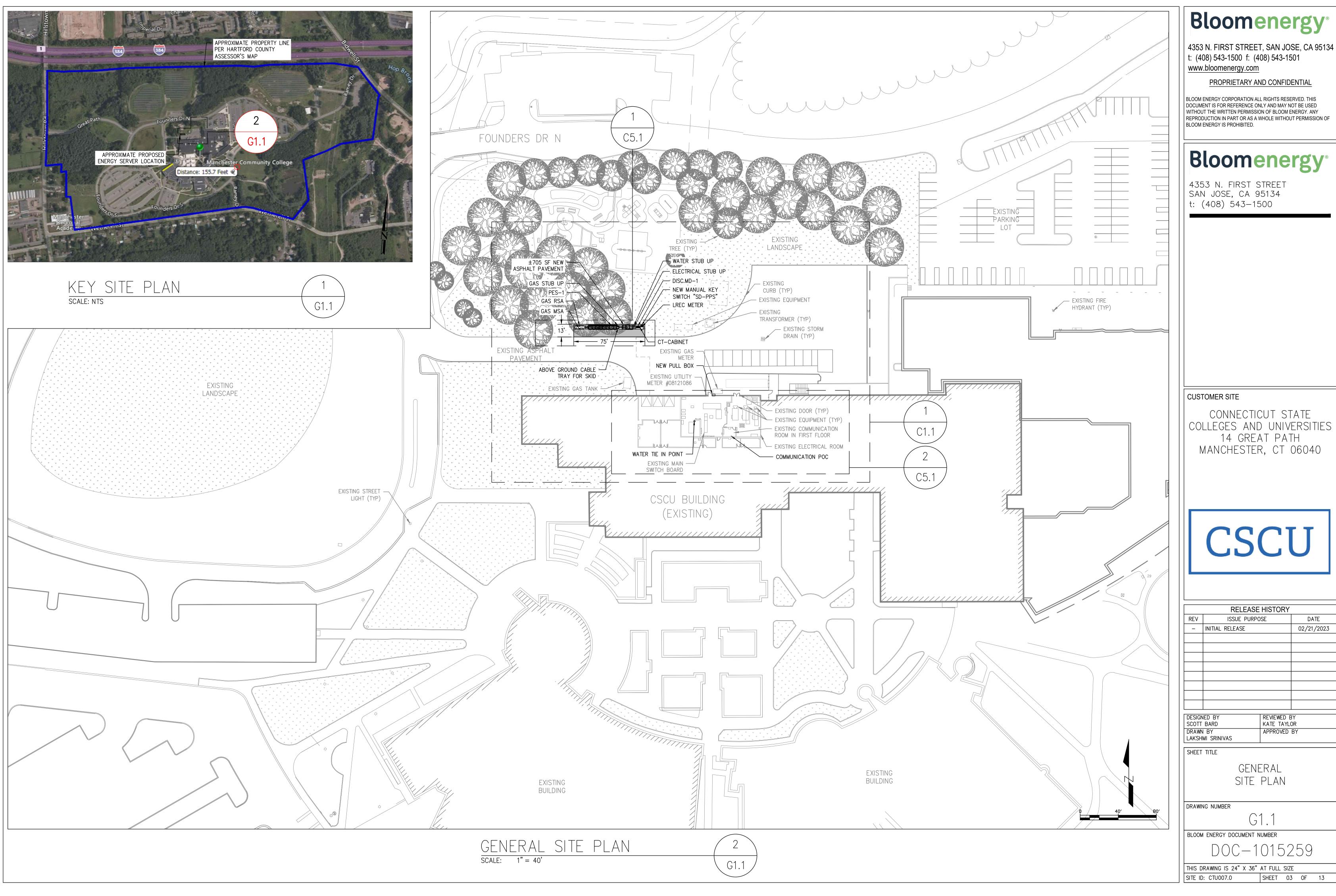
## Existing Communication Room Abutting Property

Map Notes: Base Map Source: 2019 CTECO Aerial Imagery Map Scale: 1 inch = 700 feet Map Date: March 2023

Manchester Community College 14 Great Path Manchester, Connecticut

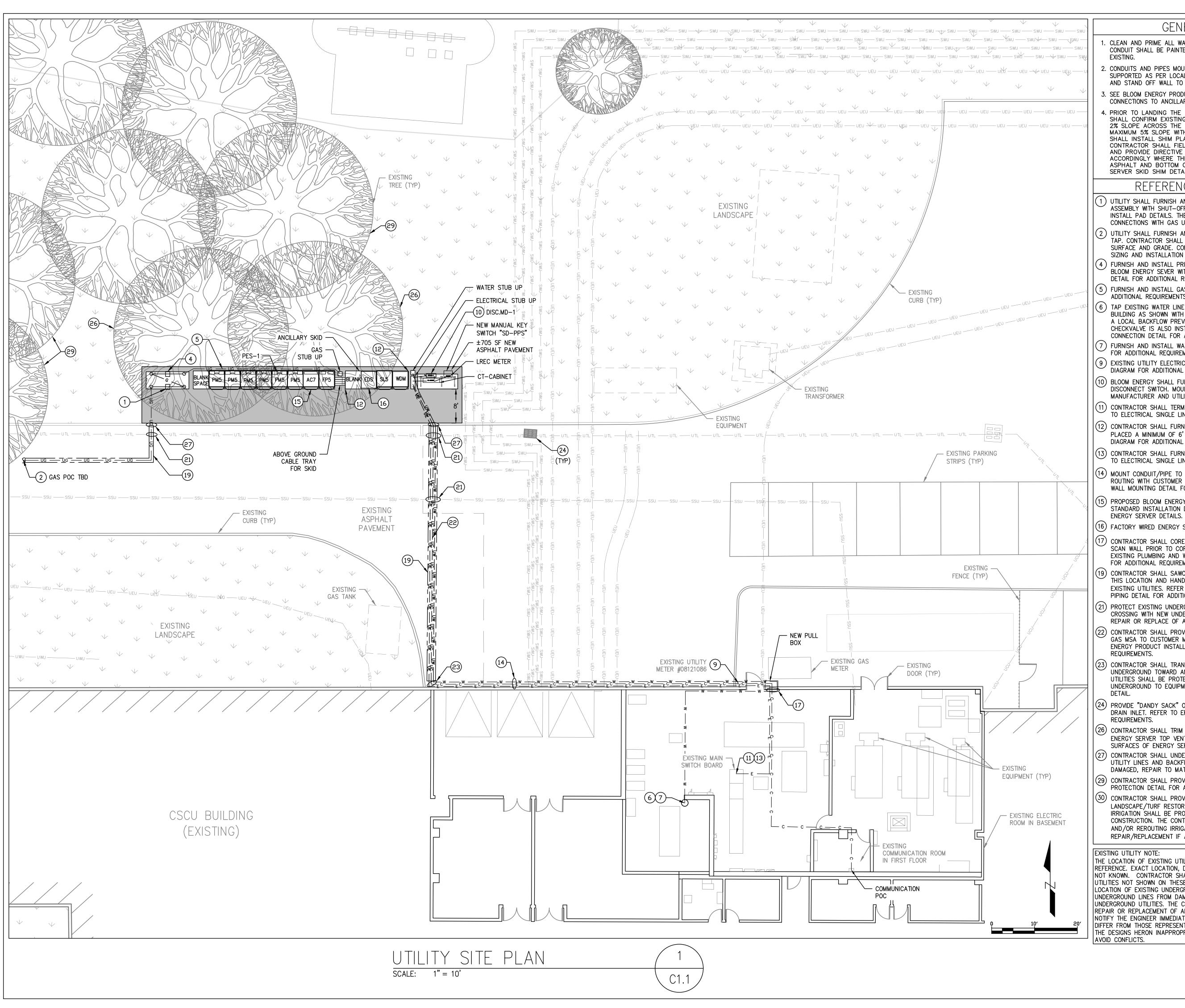






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REV	ISSUE PURPOS	Έ	DATE
_	INITIAL RELEASE		02/21/2023
DESICN	IED BY	REVIEWED B	V

SHEET 03 OF 13



### GENERAL NOTES

- CLEAN AND PRIME ALL WALL MOUNTED PIPING AND CONDUIT. PIPING AND CONDUIT SHALL BE PAINTED WITH EXTERIOR GRADE PAINT TO MATCH
- . 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.
- SEE BLOOM ENERGY PRODUCT INSTALLATION DRAWINGS FOR UTILITY CONNECTIONS TO ANCILLARY EQUIPMENT AND ENERGY SERVER.
- 4. PRIOR TO LANDING THE PACKAGED ENERGY SERVER, CONTRACTOR SHALL CONFIRM EXISTING GRADING IN INSTALL AREA IS MAXIMUM 2% SLOPE ACROSS THE ENERGY SERVER INSTALLATION AREA AND MAXIMUM 5% SLOPE WITHIN THE SERVICE AREA. THE CONTRACTOR SHALL INSTALL SHIM PLATES IF AND WHERE NECESSARY. CONTRACTOR SHALL FIELD VERIFY IF SHIM PLATES ARE REQUIRED AND PROVIDE DIRECTIVE TO THE ENGINEER OF RECORD ACCORDINGLY WHERE THERE ARE GAPS BETWEEN THE EXISTING ASPHALT AND BOTTOM OF STEEL SKID. SEE PACKAGED ENERGY SERVER SKID SHIM DETAIL FOR ADDITIONAL INFORMATION.

### REFERENCE SHEET NOTES

- (1) UTILITY SHALL FURNISH AND INSTALL GAS METER & REGULATOR ASSEMBLY WITH SHUT-OFF VALVE. CONTRACTOR SHALL FURNISH AND INSTALL PAD DETAILS. THE CONTRACTOR SHALL COORDINATE ALL CONNECTIONS WITH GAS UTILITY.
- (2) UTILITY SHALL FURNISH AND INSTALL UNDERGROUND GAS SERVICE TAP. CONTRACTOR SHALL PERFORM COMPACTION AND MATCH EXISTING SURFACE AND GRADE. CONTRACTOR SHALL COORDINATE GAS PIPE SIZING AND INSTALLATION REQUIREMENT WITH UTILITY.
- (4) FURNISH AND INSTALL PRIVATE GAS REGULATOR SET ASSEMBLY FOR BLOOM ENERGY SEVER WITH SHUT-OFF VALVE. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
- 5 FURNISH AND INSTALL GAS PIPE. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
- (6) TAP EXISTING WATER LINE AT NEAREST ACCESSIBLE LOCATION IN BUILDING AS SHOWN WITH A LOCAL SHUT-OFF VALVE. IF INSTALLING A LOCAL BACKFLOW PREVENTION DEVICE PLEASE ENSURE THAT A CHECKVALVE IS ALSO INSTALLED. REFER TO DOMESTIC WATER CONNECTION DETAIL FOR ADDITIONAL REQUIREMENTS.
- 7 FURNISH AND INSTALL WATER PIPE, REFER TO WATER RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
- (9) existing utility electric meter. Refer to electrical single line DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- (10) BLOOM ENERGY SHALL FURNISH AND CONTRACTOR SHALL INSTALL DISCONNECT SWITCH. MOUNT DISCONNECT SWITCH TO THE WALL 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 FURNISH AND INSTALL TWO GROUNDING RODS PLACED A MINIMUM OF 6' APART. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- (13) CONTRACTOR SHALL FURNISH AND INSTALL ELECTRICAL FEEDER. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
- (14) MOUNT CONDUIT/PIPE TO EXTERIOR WALL. COORDINATE EXACT ROUTING WITH CUSTOMER REPRESENTATIVE IN THE FIELD. REFER TO WALL MOUNTING DETAIL FOR ADDITIONAL REQUIREMENTS.
- (15) PROPOSED BLOOM ENERGY SERVER. REFER TO BLOOM ENERGY STANDARD INSTALLATION DRAWING SET FOR ADDITIONAL BLOOM
- 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 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 REPAIR OR REPLACE OF ANY DAMAGED LINES.
- (22) CONTRACTOR SHALL PROVIDE 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 LINES TO UNDERGROUND TOWARD ANCILLARY EQUIPMENT. ABOVE GROUND UTILITIES SHALL BE PROTECTED AS NECESSARY, THEN ROUTED UNDERGROUND TO EQUIPMENT STUB-UP LOCATIONS PER MECHANICAL
- (24) PROVIDE "DANDY SACK" OR EQUAL WITH OUTFLOW PORTS AT STORM DRAIN INLET. REFER TO EROSION CONTROL DETAIL FOR ADDITIONAL
- (26) CONTRACTOR SHALL TRIM EXISTING TREES FOR 10'-0" CLEARANCE TO ENERGY SERVER TOP VENTS AND 6'-0" CLEARANCE TO ALL OTHER SURFACES OF ENERGY SERVER.
- (27) CONTRACTOR SHALL UNDER-CUT EXISTING CURB FOR TRENCHING UTILITY LINES AND BACKFILL WITH CONCRETE SLURRY. IF CURB IS DAMAGED, REPAIR TO MATCH EXISTING.
- (29) CONTRACTOR SHALL PROVIDE TREE PROTECTION. REFER TO TREE PROTECTION DETAIL FOR ADDITIONAL REQUIREMENTS.
- 30 CONTRACTOR SHALL PROVIDE LANDSCAPE/TURF RESTORATION. REFER TO LANDSCAPE/TURF RESTORATION DETAIL FOR ADDITIONAL REQUIREMENTS. IRRIGATION SHALL BE PROTECTED AND REMAIN OPERATIONAL DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR EXTENDING AND/OR REROUTING IRRIGATION LINES AS NECESSARY AND THE REPAIR/REPLACEMENT IF ANY DAMAGE OCCURS.

### EXISTING UTILITY NOTE:

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. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING UNDERGROUND UTILITIES AND PROTECT THE EXISTING UNDERGROUND LINES FROM DAMAGE WHEN CROSSING WITH NEW UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY DAMAGED LINES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER FROM THOSE REPRESENTED HERON. SUCH CONDITIONS COULD RENDER THE DESIGNS HERON INAPPROPRIATE AND MAY REQUIRE ADJUSTMENTS TO

# **Bloomenergy**®

4353 N. FIRST STREET, SAN JOSE, CA 95134 t: (408) 543-1500 f: (408) 543-1501 www.bloomenergy.com

PROPRIETARY AND CONFIDENTIAL

BLOOM ENERGY CORPORATION ALL RIGHTS RESERVED. THIS DOCUMENT IS FOR REFERENCE ONLY AND MAY NOT BE USED WITHOUT THE WRITTEN PERMISSION OF BLOOM ENERGY. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT PERMISSION OF BLOOM ENERGY IS PROHIBITED.

# Bloomenergy

4353 N. FIRST STREET SAN JOSE, CA 95134 t: (408) 543-1500

### CUSTOMER SITE

CONNECTICUT STATE COLLEGES AND UNIVERSITIES 14 GREAT PATH MANCHESTER, CT 06040



	RELEASE HISTORY	
REV	ISSUE PURPOSE	DATE
_	INITIAL RELEASE	02/21/2023
DESIGN	JFD BY   REVIEWED F	RY

	KENEMED BA
SCOTT BARD	KATE TAYLOR
DRAWN BY	APPROVED BY
LAKSHMI SRINIVAS	

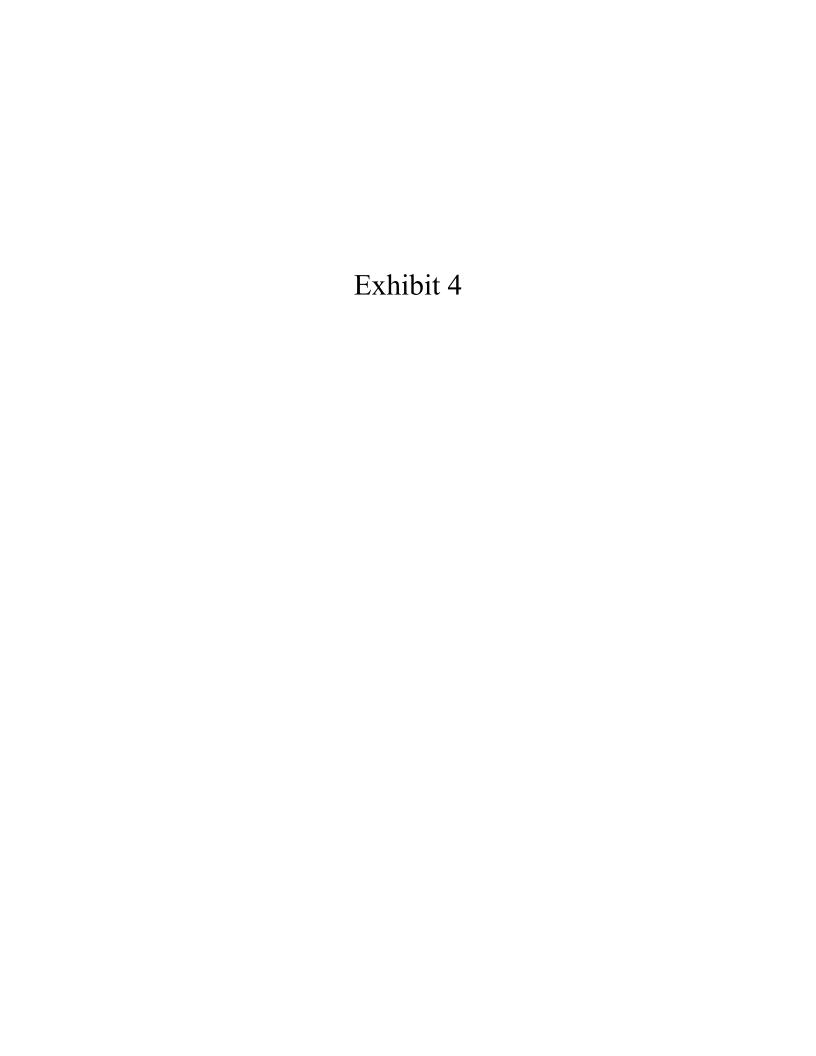
SHEET TITLE

UTILITY SITE PLAN

BLOOM ENERGY DOCUMENT NUMBER

DOC-1015259

THIS DRAWING IS 24" X 36" AT FULL SIZE SITE ID: CTU007.0 SHEET 04 OF 13

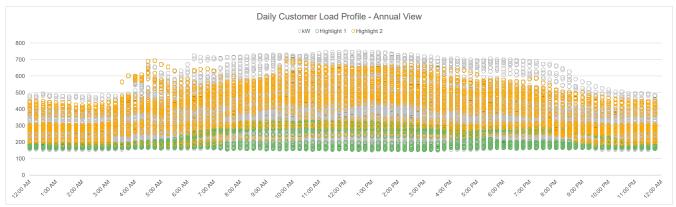


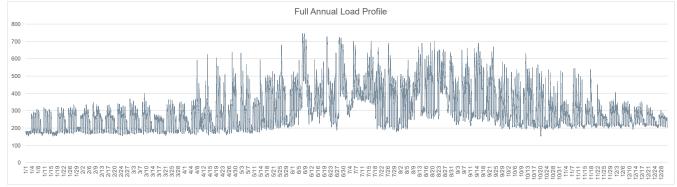
SITE DETAILS	
Utility Tariff	CT - EVR-CT 58-P
Customer Name	Manchester Community
Site Name or Address	GREAT PATH MANCHESTER CT 0604
Utility Account Number	
Meter Number	445552060, 537715039
NOTES	
[Notes here]	

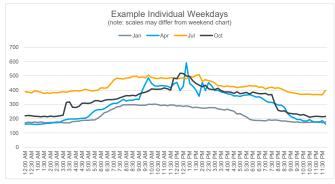
SIZING SUMMARY			POWER FACTOR SUMMARY [NOT PRINTED]	
Total Days of Complete, Non-Zero Data	365		Power Factor from Customer Bill	90%
Annual Load Factor	41%		kVars at Peak Demand	63.18
Total Customer Usage	2,668,954	kWh	Inverter Nameplate Required	100
Average 15-Min kW	305	kW		
Average Peak Demand	569	kW		
Absolute Minimum kW (non-zero)	153	kW		
Estimated Average Baseload	250	kW		
Proposed System Size	250	kW		
Estimated Resulting Net Metering	5.68%			

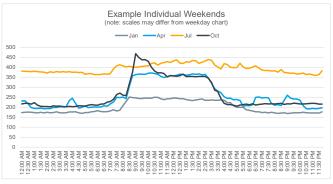
Manchester Community - GREAT PATH MANCHESTER CT 0604 (Acct; Meter 5039) - New Sizing Tool

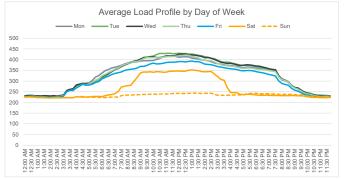
MONTH	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Highlight Color (0/1/2)	1	0	0	0	0	0	0	2	0	0	0	0











## **Bloomenergy**®

## Energy Server 5

Always On, Clean Energy Using Patented Solid Oxide Fuel Cell Technology PRODUCT DATASHEET



The Energy Server 5 provides combustion-free electric power with these benefits



### Clean

Our systems produce near zero criteria pollutants (NOx, SOx, and particulate matter) and far fewer carbon emissions than legacy technologies.



#### Reliable

Bloom Energy Servers are designed around a modular architecture of simple repeating elements. This enables us to generate power 24 x 7 x 365 and can be configured to eliminate the need for traditional backup power equipment.



### Resilient

Our system operates at very high availability due to its fault-tolerant design and use of the robust natural gas pipeline system. Bloom Energy Servers have survived extreme weather events and other incidences and have continued providing power to our customers.



### Simple Installation and Maintenance

Our Energy Servers are 'plug and play' and have been designed in compliance with a variety of safety standards. Bloom Energy manages all aspects of installation, operation and maintenance of the systems.

Energy Server 5	Technical Highlights (ES5-EAXAAL)
Outputs	
Nameplate power output (net AC)	250kW
Load output (net AC)	250kW
Electrical connection	480V, 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) <sup>1</sup>	65-53%
Heat rate (HHV)	5,811-7,127 Btu/kWh
Emissions <sup>2</sup>	
NOx	0.0017 lbs/MWh
SOx	Negligible
CO	0.034 lbs/MWh
VOCs	0.0159 lbs/MWh
CO <sub>2</sub> @ 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)	14'4" x 8'8" x 6'9" or 28'8" x 4'4" x 7'2"
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

#### **About Bloom Energy**

Bloom Energy's mission is to make reliable, clean energy affordable for everyone in the world. The company's product, the Bloom Energy Server, delivers highly reliable and resilient, Always On electric power that is clean and sustainable. Bloom's customers include twenty-five of the Fortune 100 companies and leaders in cloud services and data centers, healthcare, retail, financial services, utilities and many other industries.

 $<sup>^{\</sup>rm 1}$  65% LHV efficiency verified by ASME PTC 50 Fuel Cell Power Systems Performance Test

 $<sup>^{\</sup>rm 2}$  NOx and CO measured per CARB Method 100, VOCs measured as hexane by SCAQMD Method 25.3



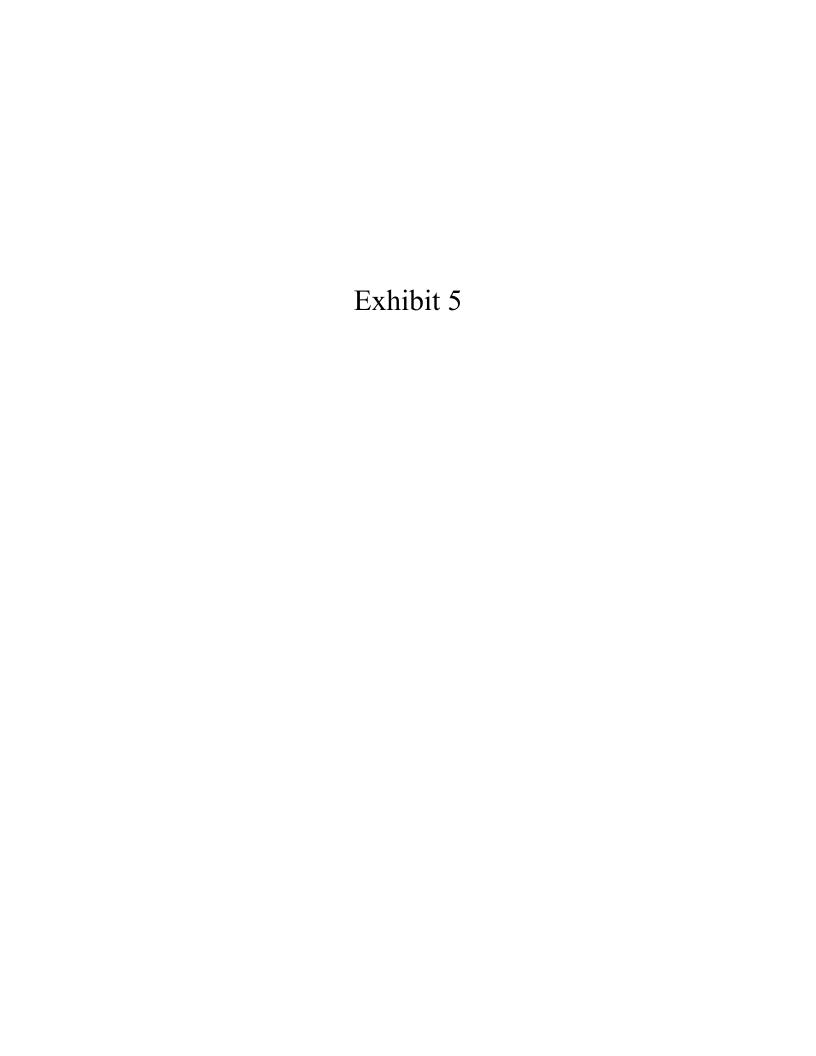
Looking north toward Facility location

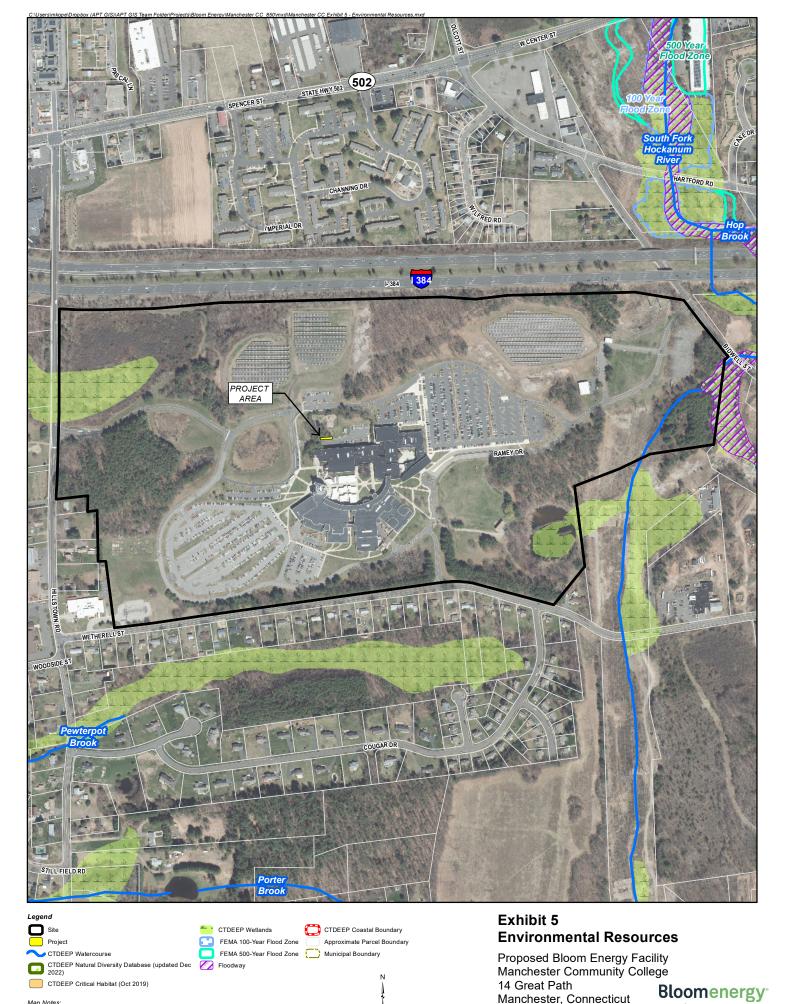


Looking east; Facility location at left



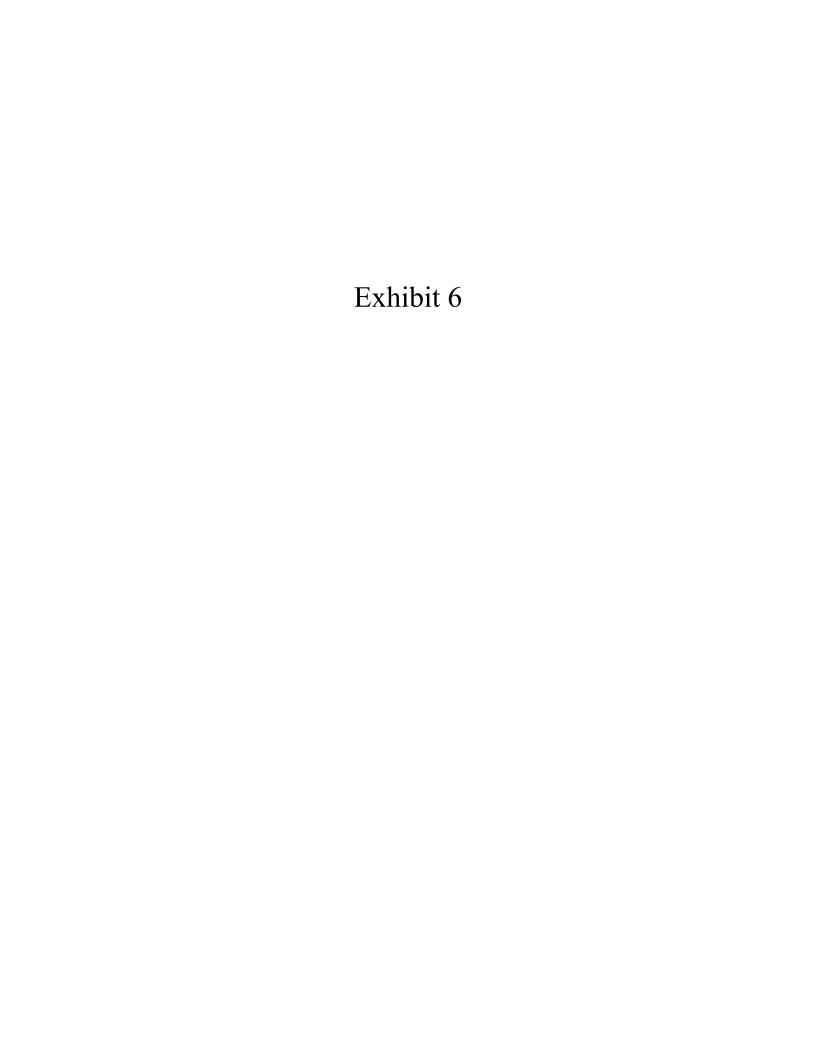
Looking west; Facility location beyond generator





ALL-POINTS TECHNOLOGY CORPORATION

# Map Notes: Not All Legend Items May Be Located Within Map Extent Base Map Source: 2019 CTECO Aerial Imagery Map Scale: 1 inch = 600 feet Map Date: March 2023



# **Bloomenergy**

Fire Prevention and Emergency Planning – Grid Parallel

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Bloom Energy Corporation, 1299 Orleans Drive, Sunnyvale, CA 94089 USA
Dogo 2 of 12

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- 3. Emergency Notification Procedures
- 4. Fire and Smoke Procedures
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- 9. Good Housekeeping and Maintenance9.1 Good Housekeeping9.2 Maintenance
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### 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 modell 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

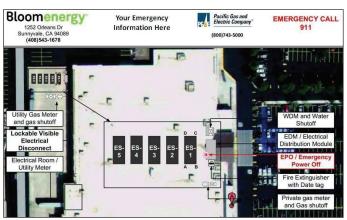


Figure 4: Sample Site Map

### **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)</li>

### **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 <u>life-threatening</u> emergencies, immediately call:

Fire: 911 Ambulance: 911 Police: 911

Conditions that require automatic emergency notification include:

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

### **Non-Life-Threatening Emergencies**

For <u>non-life-threatening</u> 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 <u>life-threatening</u> 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 <u>is not immediately life-threatening</u> 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 <u>unknown indoor smell or odor</u>, 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:

- <u>Stay out of flooded areas</u>. 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 standby 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
  - o Do not touch any electrical switch; do not use any phone in the area
  - Leave the area immediately
  - o Immediately call your gas supplier. Follow the gas supplier's instructions.
  - o 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).

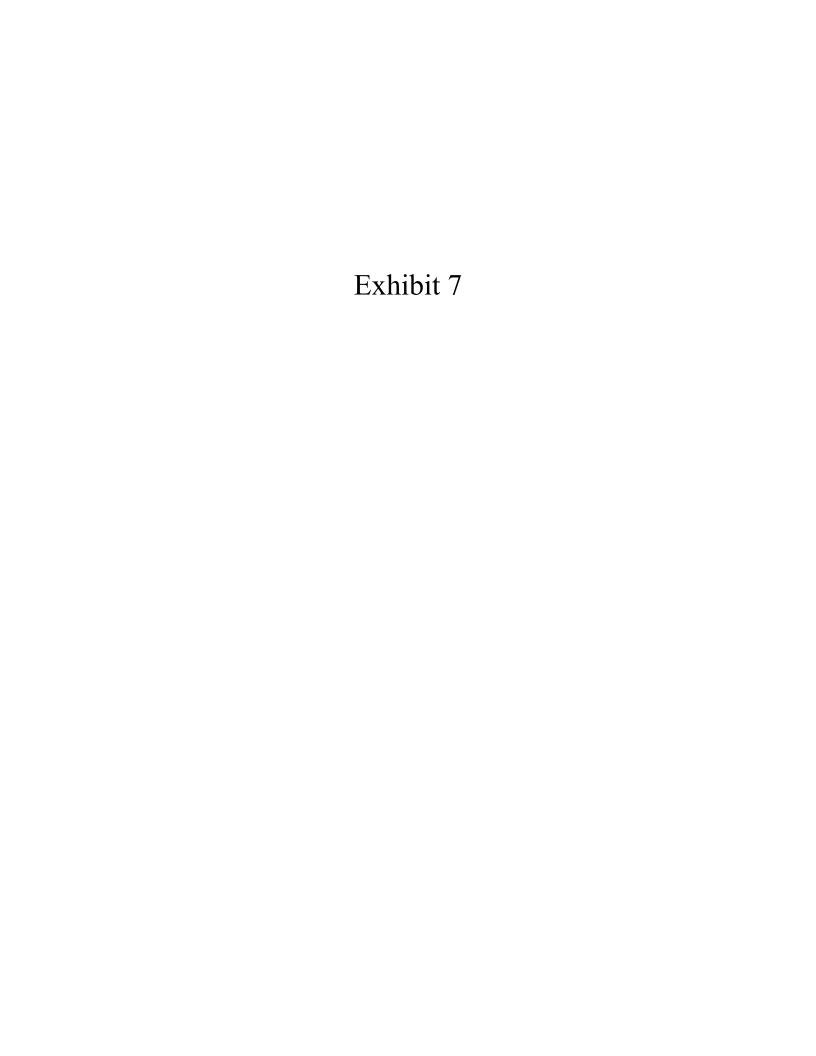
Bloom Energy also requires its employees to follow all necessary safety precautions, including:

- 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.



February 16, 2023

### **Bloom Energy** 4353 North 1<sup>st</sup> Street San Jose, California 95134

Attention: Brandon Leaverton | Supply Chain Specialist - Construction

Subject: Manchester Community College; CTU007.0; Manchester, Connecticut

Property Line Noise Analysis Veneklasen Project No. 4631-046

### Dear Brandon:

Veneklasen Associates, Inc. (Veneklasen) was contracted to evaluate noise impact of proposed fuel cells for the subject project in Manchester, Connecticut. This report includes predicted noise levels at adjacent property lines and an evaluation of necessary mitigation, if warranted, to comply with the local noise ordinance in the surrounding community. This report documents our acoustical comments.

### **Noise Criteria**

The Town of Manchester Code, Section 223-6.B.1, provides property line noise limits for various property types. These are summarized in Table 1.

i a	DIC 1. IOWII	or ivialichester	NOISE LITTIES	
		Recept	or Zone	
Emitter Zone	Industrial	Commercial	Residential (Day)	Residential (Night)
Residential	62 dB(A)	55 dB(A)	55 dB(A)	45 dB(A)
Commercial	62 dB(A)	62 dB(A)	55 dB(A)	45 dB(A)
Industrial	70 dB(A)	66 dB(A)	61 dB(A)	51 dB(A)

**Table 1. Town of Manchester Noise Limits** 

Additionally, Section 223-6.C.1 states the following:

In those individual cases where the background noise levels caused by sources not subject to this chapter exceed the standards contained herein, a source shall be considered to cause excessive noise if the noise emitted by such source exceeds the background noise levels by 5 dBA, provided that no source subject to this chapter shall emit noise in excess of 80 dBA at any time, and provided that this section shall not be interpreted as decreasing the noise level standards of Subsection B of this chapter.

The Town's Zoning Map indicates that both the subject property and all receptor properties analyzed are zoned RR for Rural Residential.

In the following analysis, fuel cell noise levels are compared to the applicable limits described above. Veneklasen assumes proposed fuel cells will run 24 hours per day.

### **Existing Ambient Noise**

Because noise levels anticipated as a result of the proposed fuel cell project were found to comply with Town regulations, an analysis of ambient noise was not performed. See the following section for further detail.



### **Property Line Noise Analysis**

Drawings received January 26, 2023 indicate that proposed fuel cells will be installed at the location shown in green in Figure 1 below. The nearest sensitive receptors are annotated in blue.



The current fuel cell installation method includes a foam dampening material that is installed at the doors and exhaust to the fuel cells. Measurement data of these units when compared to units without foam indicate that the foam compound reduces noise levels produced by the fuel cells by approximately 5 decibels. See Appendix A below for fuel cell sound power data and foam compound reduction data used in the following analysis.

The calculated fuel cell noise levels as compared with State noise level limits are presented in Table 2 below. Note that the reported distances between property lines and the fuel cells are taken from the closest face of the fuel cell nearest to the associated property line.

Table 2. Fuel Cell Property Line Noise Levels: No Mitigation

Sensitive Receptor	Distance from Fuel Cell, ft	Applicable Noise Limit, dBA	Calculated Fuel Cell Noise Level, dBA	Code Compliant?
195 Hillstown Rd.	1440	45	< 20	Yes
237 Hillstown Rd.	1635	45	< 20	Yes
610 Wetherell St.	1360	45	< 20	Yes
506 Wetherell St.	1090	45	< 20	Yes
411 Wetherell St.	1690	45	< 20	Yes
Interstate 384	900	N/A	23	N/A



Residences are also found north of Interstate 384 but are not shown in Figure 1. A calculation was performed at the shortest distance to the interstate edge to demonstrate that, to the north of the fuel cell installation, noise levels are sufficiently attenuated by distance well before the property line is reached. Thus, no property north of Interstate 384 requires analysis.

As shown in the table above, fuel cell noise levels at all receptors will meet allowable Town noise limits. Mitigation is therefore not required.

### Summary

Veneklasen has reviewed the subject project proposed fuel cell property line noise levels as they pertain to the applicable design goals. Town regulations provide maximum allowable noise levels according to the zoning of the emitting and receiving properties. Nighttime maximum noise levels, which are the most stringent, were used as the design standard to be met.

As currently designed, fuel cell noise levels comply with Town requirements at all surrounding properties analyzed. No mitigation is required to comply with municipal requirements.

If you have any questions, please do not hesitate to call.

Sincerely,

Veneklasen Associates, Inc.

Kevin Patterson Associate

Principal

John LoVerde, FASA



### A. Appendix A – Sound Power Levels

Sound power data was taken from the Mei Wu Acoustics (MWA) Report titled "Bloom Energy – ES5 Linear Sound Power Measurement", dated June 21, 2016. These reported levels were measured without the sound dampening foam described above.

**Table 3. Fuel Cell Measured Sound Power Levels** 

Dampening		Mea	sured Soul	nd Power L	evel [dB] –	1/1 Octave	Bands	
Product Installed?	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	LwA
No	77.9	80.9	84.1	82.3	80.5	76.9	69.4	84.9
Yes	77.9	80.9	81.0	77.9	73.7	67.2	64.8	79.3

In a study conducted at an existing installation of the fuel cell systems, measurements were taken of the fuel cell banks with and without the dampening product. The Noise Reduction (NR) of the dampening product was calculated by taking the difference of these measured values at octave band frequencies. Note that no significant reduction was shown at the 63 Hz and 125 Hz bands. The modified sound levels for the fuel cells that were utilized in calculations shown in this report are shown in Table 3.

**Table 4. Measured Sound Dampening Foam Mitigation** 

Condition -	M	easured Sound Pre	ssure Level [dB] @1	0ft – 1/1 Octave Bai	nd
Condition	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
No Foam	70.8	66.8	65.5	62.4	53.6
Foam	67.8	62.5	58.7	52.8	49.0
Difference (NR)	3.1	4.4	6.8	9.7	4.6



### B. Appendix B - Calculation Methods

Sound level attenuates over distance by a factor of -6 dB per doubling of distance. For example, if a sound source was measured to be 60 dBA at a distance of 10 feet, the measured sound level at 20 feet would be 54 dBA. Sound level reduction due to distance is calculated according to the following equation:

$$L_p = L_w + 10\log_{10}Q - 20\log_{10}d - 0.7$$

### Where:

d = The distance between the center of the fuel cell unit to the property line in feet.

 $L_p$  = The sound pressure level at a distance d in decibels.

 $L_w$  = The sound power level from the fuel cell. Sound power levels are reported above in Appendix A in decibels.

Q = The directivity factor which dictates how sound radiates outward from the source. See Figure 2 below from the 2015 American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE) Handbook, Chapter 48 describing Q factors and their associated sound radiation patterns.

Figure 2. ASHRAE Handbook: Q Factor Sound Radiation Patterns

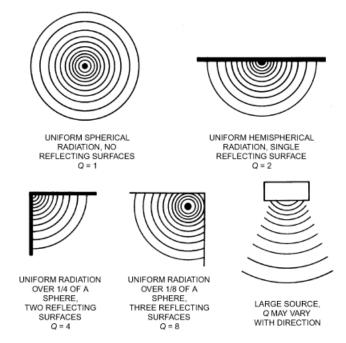
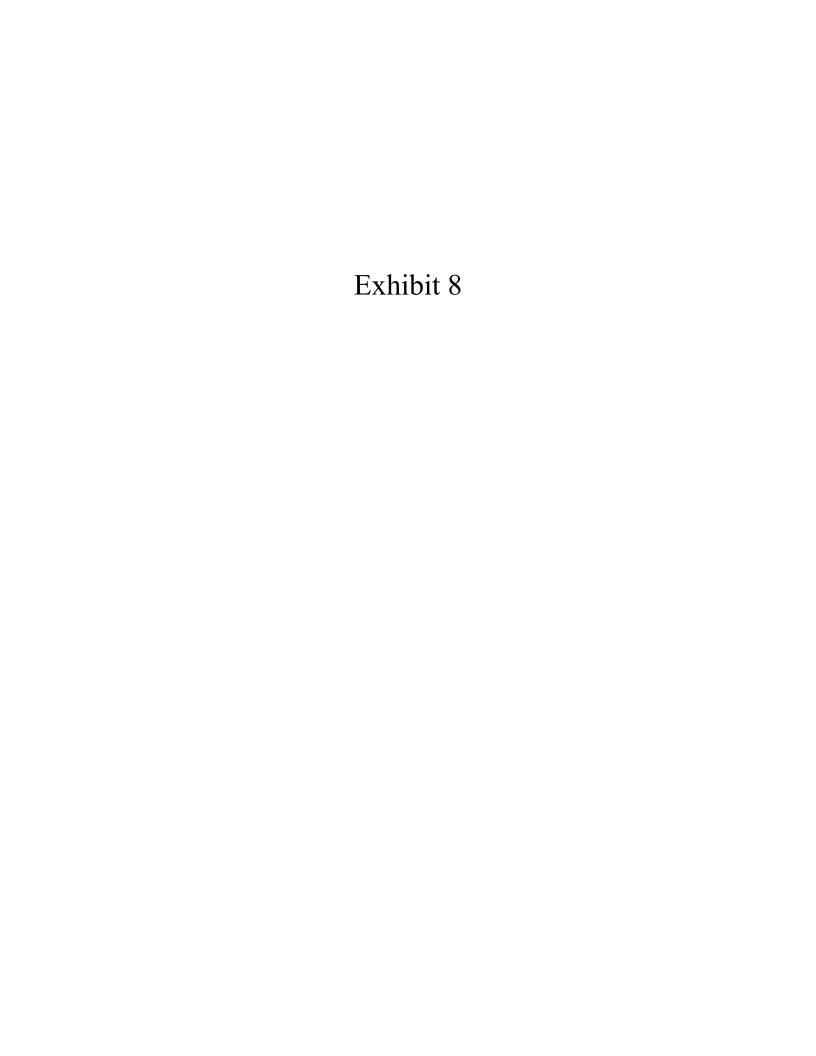


Fig. 30 Directivity Factors for Various Radiation Patterns

In the equation above, the greater the distance away from the sound source (*d*), the lower the sound level. This is intuitive and most people would consider this common knowledge.

In general, the more reflecting surfaces there are adjacent to a noise source, the more sound will bounce off these surfaces and radiate outward. In other words, larger Q factors will increase the noise level. For example, a fuel cell sitting on the ground, with nothing else around, would have a Q factor of 2 because the ground that the fuel cell is sitting on acts as a single reflecting surface. Another example would be a fuel cell sitting on the ground with a retaining wall on one side of it; this system would have a Q factor of 4 because both the ground and the retaining wall act as reflecting surfaces. A doubling of the Q factor increases the receiver noise level,  $L_D$ , by 3 dB.





### VIA CERTIFICATE OF MAILING

March 8, 2023

RE:

Application of Bloom Energy for the location and construction of a Bloom Energy Server fuel cell installation to provide 250 kilowatts of Customer-Side Distributed Resource at Manchester Community College, 60 Bidwell Street (Great Path), Manchester, 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 intends to file, on or about March 17, 2023, a petition for declaratory ruling with the Council. The petition will request the Council's approval of the location and construction of a 250-kilowatt fuel cell installation and associated equipment. The Facility will be located at Manchester Community College ("MCC") in Manchester, Connecticut (the "Site").

The purpose of the proposed Facility is to replace a portion of MCC's annual load with a renewable energy source<sup>1</sup> 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.

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,

Kristen Grillo

Senior Permitting Specialist

Kristen.grillo@bloomenergy.com

<sup>&</sup>lt;sup>1</sup>Connecticut General Statutes §16-1(a)(26)(A) identifies fuel cells as a "Class I renewable energy source".

### **ABUTTING PROPERTY OWNERS**

### subject parcel

Property ID	Property Address	Owner Name	Mailing Address	Town	State	Zip
34/ 470/60	60 Bidwell Street	State of Connecticut Community College	165 Capitol Ave., DPW	Hartford	СТ	06106
unidontified	L 204 Dight of Wov	State of CT Dont of Transportation	2800 Berlin Turnpike, P.O.	Nousington	СТ	06131 7546
unidentified	I-384 Right-of-Way	State of CT Dept. of Transportation	Box 317546	Newington	СТ	06131-7546
49/470/101	101 Bidwell Street	The Andrew Ansaldi Co.	186 Bidwell St.	Manchester	СТ	06040-6412
49/470/186	186 Bidwell Street	The Andrew Ansaldi Co.	186 Bidwell St.	Manchester	СТ	06040-6412
35/5980/409	409 Wetherell Street	Connecticut Light & Power Co	P.O. Box 270	Hartford	СТ	06141-0270
35/5980/411	411 Wetherell Street	State of Connecticut	165 Capitol Ave., DPW	Hartford	СТ	06106
35/5980/450	450 Wetherell Street	Linda J. Therrien	450 Wetherell St.	Manchester	СТ	06040
35/5980/454	454 Wetherell Street	Joesph I. & Angela D. Okwuazi	454 Wetherell St.	Manchester	CT	06040
35/5980/458	458 Wetherell Street	Daniel D. Cyr & Joni Hubbard	458 Wetherell St.	Manchester	СТ	06040
35/5980/468	468 Wetherell Street	Carol I. Champ	468 Wetherell St.	Manchester	СТ	06040
35/5980/476	476 Wetherell Street	Stephen David Bruno	476 Wetherell St.	Manchester	СТ	06040
35/5980/484	484 Wetherell Street	Thomas Manager	484 Wetherell St.	Manchester	СТ	06040
35/5980/494	494 Wetherell Street	Karen D. Lumpkin & Ronald J. Lumpkin	494 Wetherell St.	Manchester	СТ	06040
21/2950/287	287 Hillstown Road	Robert F. Blanchard	37 Pondview Dr.	Manchester	СТ	06040
35/5980/506	506 Wetherell Street	Chantee Miller	506 Wetherell St.	Manchester	СТ	06040
35/5980/514	514 Wetherell Street	Sharon R. Madore	514 Wetherell St.	Manchester	СТ	06040
35/5980/522	522 Wetherell Street	Grace Rettburg & Wayne S. Rettburg	522 Wetherell St.	Manchester	СТ	06040
35/5980/528	528 Wetherell Street	George R. Prasser Jr. & Susan E. Prasser	528 Wetherell St.	Manchester	СТ	06040
35/5980/540	540 Wetherell Street	Mark S. Stone	540 Wetherell St.	Manchester	СТ	06040
35/5980/548	548 Wetherell Street	Jacqueline R. Gent & Ainsworth O'Neil Brown, Jr.	548 Wetherell St.	Manchester	СТ	06040
35/5980/556	556 Wetherell Street	Gary & Deborah Fournier	556 Wetherell St.	Manchester	СТ	06040
21/5980/564	564 Wetherell Street	Ryan A. & Karen B. Sirois	564 Wetherell St.	Manchester	СТ	06040
21/5980/572	572 Wetherell Street	Kitsha O. Alvarado & Reylin Camilo	572 Wetherell St.	Manchester	СТ	06040
21/5980/580	580 Wetherell Street	John A. Schneider	580 Wetherell St.	Manchester	СТ	06040
21/5980/596	596 Wetherell Street	Michael F. Menditto	596 Wetherell St.	Manchester	СТ	06040
21/5980/602	602 Wetherell Street	Lisa M. Henault & Michael J. Laurent	602 Wetherell St.	Manchester	CT	06040
21/5980/610	610 Wetherell Street	Linda j. Buckland	610 Wetherell St.	Manchester	CT	06040
21/5980/618	618 Wetherell Street	Helen S. Vilga	618 Wetherell St.	Manchester	CT	06040
21/5980/626	626 Wetherell Street	Nathan P. Fox	626 Wetherell St.	Manchester	СТ	06040
21/5980/636	636 Wetherell Street	Lisa B. Smith	636 Wetherell St.	Manchester	CT	06040
21/5980/642	642 Wetherell Street	Hemonto F. Palma & Rikta W. Palma	642 Wetherell St.	Manchester	CT	06040
21/5980/652	652 Wetherell Street	Hemonto & Rikta Palma	652 Wetherell St.	Manchester	CT	06040
21/5980/658	658 Wetherell Street	James E. Stoveken III & Jennifer L. Stovek	658 Wetherell St.	Manchester	CT	06040
21/2950/237	237 Hillstown Road	Town of Manchester	41 Center St.	Manchester	CT	06040-5096
21/2950/215	215 Hillstown Road	Frederick E. Cannon	215 Hillstown Rd.	Manchester	CT	06040
21/2950/209	209 Hillstown Road	Henry L. Botticello Est., Ellen M. Oechsler Ex. & Anthony Botticello Ex.	103 Levita Rd	Lebanon	СТ	06249
20/2950/195	195 Hillstown Road	Angel Luis Gonzalex	195 Hillstown Rd.	Manchester	СТ	06040
20/2950/183	183 Hillstown Road	Thomas L. Stringfellow	183 Hillstown Rd.	Manchester	СТ	06040-6308
20/2950/180	180 Hillstown Road	Town of Manchester	41 Center St.	Manchester	CT	06040-5096

20/2950/156	156 Hillstown Road	Town of Manchester	41 Center St.	Manchester	СТ	06040-5096
20/2950/130	130 Hillstown Road	Town of Manchester	41 Center St.	Manchester	СТ	06040
8/5190/206	206 Spencer Street	Crossroads Community Cathedral	1492 Silver Lane	East Hartford	СТ	06118

### **OFFICIALS**

Name	Title	Mailing Address	Town	State	Zip
William Tong	Attorney General	165 Capitol Ave.	Hartford	СТ	06106
Katie Dykes	Commissioner, Dept. of Energy and	79 Elm St.	Hartford	СТ	06106-5127
	Environmental Protection				
Marissa Gillett	Chairman, Public Utilities Regulatory	10 Franklin Square	New Britain	СТ	06051
	Authority				
Dr. Manisha Juthani	Commissioner, Dept. of Public Health	410 Capitol Ave.	Hartford	СТ	06134
Susan D. Merrow	Chair, Council on Environmental Quality	79 Elm St.	Hartford	СТ	06106
Bryan P. Hurlburt	Commissioner, Dept. of Agriculture	450 Columbus Blvd., Suite 701	Hartford	СТ	06103
Jeffrey R. Beckham	Secretary, Office of Policy and Management	450 Capitol Ave.	Hartford	СТ	06106
Garrett Eucalitto	Commissioner, Dept. of Transportation	2800 Berlin Turnpike	Newington	СТ	06111
Alexandra Daum	Commissioner, Dept. of Economic and	450 Columbus Blvd.	Hartford	СТ	06103
	Community Development				
Brenda Bergeron	Deputy Commissioner, Dept. of Emergency	1111 Country Club Rd.	Middletown	СТ	06457
	Management and Homeland Security				
Michelle H. Seagull	Commissioner, Dept. of Consumer	450 Columbus Blvd., Suite 901	Hartford	СТ	06103
	Protection				
Michelle Gilman	Commissioner, Dept. of Administrative	450 Columbus Blvd.	Hartford	СТ	06103
	Services				
Danté Bartolomeo	Commissioner, Dept. of Labor	200 Folly Brook Blvd.	Wethersfield	СТ	06109
Richard Blumenthal	Senator	706 Hart Senate Office Building	Washington	DC	20510
Chris Murphy	Senator	136 Hart Senate Office Building	Washington	DC	20510
John B. Larson	U.S. Representative	1501 Longworth House Office Building	Washington	DC	20515
MD Rahman	State Senator, 4th District	Legislative Office Building, Room 2100	Hartford	СТ	06106-1591
Jason Rojas	Representative, 9th District	Legislative Office Building, Room 4100	Hartford	СТ	06106-1591
	Capitol Region Council of Governments	241 Main St.	Hartford	СТ	06106-5310
Jay Moran	Mayor, Town of Manchester	41 Center St.	Manchester	CT	06040
Steve Stephanou	General Manager	41 Center St.	Manchester	СТ	06040
Gary Anderson, AICP	Director of Planning and Economic	494 Main St., PO Box 191	Manchester	СТ	06045-0191
	Development				
David Laiuppa	Environmental Planner/Wetlands Agent	494 Main St., PO Box 191	Manchester	СТ	06045-0191
Eric Prause	Chairman, Planning & Zoning Commission,	494 Main St., PO Box 191	Manchester	СТ	06045-0191
	Inland Wetlands Commission/Aquifer				
	Protection				
James R. Stevenson	Chair, Zoning Board of Appeals	494 Main St., PO Box 191	Manchester	СТ	06045-0191

Michael Walsh	Mayor, Town of East Hartford	50 Chapman Place, B12D	East Hartford	СТ	06108
Eileen Buckheit	Development Director	50 Chapman Place, B12D	East Hartford	СТ	06108
John Ryan	Chair, Inland Wetland Commission	50 Chapman Place, B12D	East Hartford	СТ	06108
Daniel O'Dea	Chair, Planning and Zoning Commission	50 Chapman Place, B12D	East Hartford	СТ	06108
James McElroy	Chair, Zoning Board of Appeals	50 Chapman Place, B12D	East Hartford	СТ	06108

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Name and Address of Sender  Kristen Grillo	Waterford, CT 06385	USPS® Tracking Number Firm-specific Identifier	1,	2.	3.	4.	5.	9.

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1.	Jeffrey R. Beckham, Secretary Office of Policy and Management 450 Capitol Ave. Harford, CT 06106	ıry ment				
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2.	Department of Transportation 2800 Berlin Tpke PO Box 317546	ritation 7546				
	Nowington, O					
3.	Alexandra Daum, Commissioner Department of Economic and Community Development 450 Columbus Blvd. Hartford, CT 06103	nd nd				
4.	Brenda Bergeron. Dep. Division of Emergency I 1111 Country Club Rd. Middletown, GT	Brenda Bergeron, Dep. Commissioner. Division of Emergency Management and Homeland Security 1111 Country Club Rd. Middletown, CT	ecurity			
5.	Michelle H. Seagull, Commissioner Department of Consumer Protection 450 Columbus Blvd., Suite 901 Hartford, CT 06103	Seagull, Commissioner of Consumer Protection vus Blvd., Suite 901 F06103				
9	Michelle Gilman, Commissioner Department of Administrative Services 450 Columbus Blvd. Hartford, CT 06103	s Services				

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Name and Address of Sender  Kristen Grillo  c/o All-Points Technology Corp., P.C.	TOTAL NO.  of Pieces Listed by Sender of Pieces Received at Post Office <sup>TM</sup>	Affix Stamp Here   Postmark with Date of Receipt.	of Receipt.		
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1	Dante Bartolomeo, Commissioner Department of Labor				
	200 Folly Brook Blvd. Wethersfield, CT 06109				
2.	Hon, Richard Blumenthal Senator				
	706 Hart Senate Office Building Washington, DC 20510				
3.	Hon. Chris Murphy Senator				
	136 Hart Senate Office Building Washington, DC 20510				
4.	Hon. John B. Larson U.S. Representative 1501 Longworth House Office Building Washington, DC 20515				
5.	Hon MD Rahman State Senator, 4th District Legislative Office Building, Room 2100 Hartford, CT 06106-1591				
9.	Hon. Jason Rojas Representative, 9th District Legislative Office Building, Room 4100 Hartford, CT 06106-1591				

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1.	Capitol Region Council of Governments 241 Main St.	overnments				
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2,	Mayor, Town of Manchester					
	41 Center St. Manchester, CT 06040					
	Steve Stephanou					
<i>.</i> .	General Manager					
	41 Center St. Manchester, CT 06040					
	Gary Anderson, AICP					
4	Dir. of Planning and Economic Development	mic Development				
	Manchester, CT 06045-0191	31				
и	David Laiuppa					
ò	Environmental Planner/Wetlands Agent	tlands Agent				
	494 Main St., PO Box 191					
	Manchester, CT 00045-0191					
œ	Eric Prause, Chairman					
	Planning & Zoning Commission/Inland	sion/Inland				
	Wetlands Commission/Aquifer Protection 494 Main St., PO Box 191	quiter Protection				
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	James R. Stevenson, Chair				W (P-2)	
	494 Main St., PO Box 191  Manchester, CT 06045-0191					
7	The Honorable Michael Walsh, Mayor	Valsh, Mayor				
	Town of East Hartford					
	East Hartford, CT 06108					
ઈ.	Eileen Buckheit					
	Development Director					
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j.	Inland Wetland Commission	ion				
	50 Chapman Place, B12D	٥				
	East Hartford, CT 06108					
ц	Daniel O'Dea, Chair					
ń	Planning and Zoning Commission	mmission				
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ထ်	James McElroy, Chair					
	Zoning Board of Appeals					
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	State of Connecticut Community College	munity College				
	Hartford, CT 06106					
2.	State of CT Dept. of Transportation  2800 Berlin Turnpike, P.O. Box 317546  Newington, CT 06131-7546	nsportation O. Box 317546 546				
3.	The Andrew Ansaldi Co.					
4.	Manchester, CT 06040-6412  Connecticut Light & Power Co	6412 wer Co				
	P. O. Box 270 Hartford, CT 06141-0270	0.				
5.	State of Connecticut 165 Capitol Ave., DPW Hartford, CT 06106	W				
9	Linda J. Therrien 450 Wetherell St. Manchester, CT 06040					

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Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here Postmark with Date of Receipt.	of Receipt.		
Kristen Grillo c/o All-Points Technology Corp., P.C. 567 Vauxhall St. Ext., Suite 311 Waterford, CT 06385						
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	Joseph I. & Angela D. Okwuazi	ıkwuazi				
	Manchester, CT 06040					
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2.	458 Wetherell St.					
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<del>'</del>	476 Wetherell St.					
	Manchester, CT 06040					
	Thomas Manager					
5.	484 Wetherell St.					
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			Special Handling Parcel Airlift								
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Name and Address of Sender	Kristen Grillo c/o All-Points Technology Corp., P.C. 567 Vauxhall St. Ext., Suite 311 Waterford, CT 06385		USPS® Tracking Number Firm-specific Identifier	1.		2.		3.	4.	5.	9

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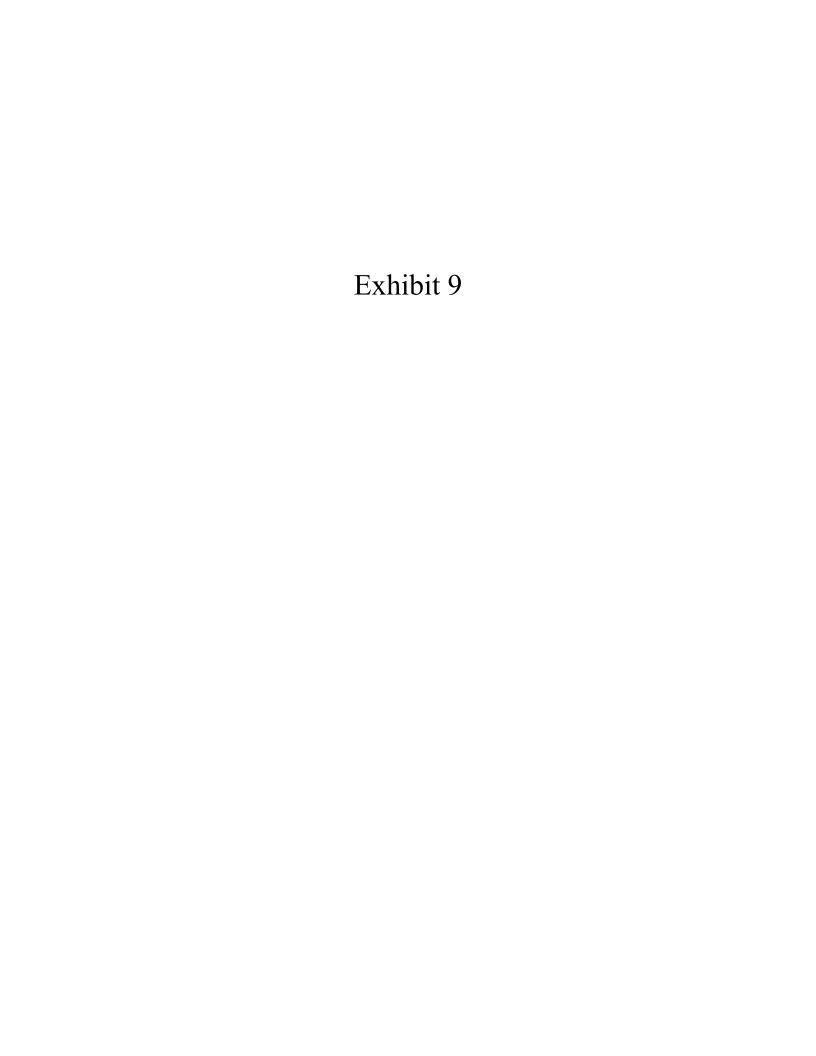
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-	Lisa M. Henault & Michael J. Laurent	nael J. Laurent				
1	602 Wetherell St. Manchester, CT 06040					
2.	Linda J. Buckland					
	610 Wetherell St.					
	Manchester, CT 06040					
ď	Helen S. Vilga					
D						
	Manchester, CT 06040					
	Nathan P. Fox					
.4						
	Manchester, CT 06040					
5.	Lisa B. Smith					
	Manchastar CT 06040	C				
u	Hemonto F. Palma &	Palma & Rikta W. Palma				
Ö	642 Wetherell St.					
	Manchester, CT 06040	0				

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Kristen Grillo c/o All-Points Technology Corp., P.C. 567 Vauxhall St. Ext., Suite 311 Waterford, CT 06385						
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Firm-specific Identifier  1.	Hemonto & Rikta Palma 652 Wetherell St. Manchester, CT 06040	na 0				
2.	James E. Stoveken III & Jennifer L. Stoveken 658 Wetherell St. Manchester, CT 06040-5096	ten III & Jennifer L. Stoveken t. 06040-5096				
3.						
4.	Henry L. Botticello Es Anthony Botticello Ex 103 Levita Rd.	Henry L. Botticello Est., Ellen M. Oechsler Ex. & Anthony Botticello Ex. 103 Levita Rd.				
5.	Angel Luis Gonzalez 195 Hillstown Rd. Manchester, CT 06040	40				
Ö	Frederick E. Cannon 215 Hillstown Rd. Manchester, CT 06040	40				
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USPS® Tracking Number Firm-specific Identifier	nd ZIP Code™
2	Manchester, CT 05040-5096  Manchester, CT 05040-5096  Town of Manchester
4.	41 Center St.  Manchester, CT 06040  Manchester, CT 06040  Crossroads Community Cathedral  T492 Silver Lane  East Hartford, CT 06118
٠, ک	
Form <b>3665</b> , January 2017 (Page of	See Reverse for Instructions   See Reverse for Instructions



From: <u>Jennifer Young Gaudet</u>

To: <u>"ganderson@manchesterct.gov"</u>

**Subject:** Bloom Energy - proposed fuel cell installation at Manchester Community College

**Date:** Monday, February 27, 2023 5:09:00 PM

Attachments: image001.png

CTU007.0 Preliminary Draft Plan.pdf

### Dear Mr. Anderson:

I am writing on behalf of Bloom Energy in connection with a planned fuel cell installation at Manchester Community College. Attached are plans depicting the proposed installation, which will consist of one Energy Server and associated equipment and be fueled by natural gas. As shown, it will be located behind the Student Services Center, adjacent to the driveway that accesses a rear parking area and loading dock.

Bloom will be submitting a petition to the Connecticut Siting Council for approval. In preparation for the filing, we are seeking any comments you or other appropriate Town departments may have on the proposed plans.

I am available to discuss the plans or answer any questions you may have. I can be reached by phone at 860 798-7454 or by e-mail.

Thank you.

Jennifer Young Gaudet



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