

June 25, 2015

***Via First Class Mail and Email***

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

**RE: Petition No. 1144 - Petition of Bloom Energy Corporation, as agent for Home Depot, for a Declaratory Ruling for the Location and Construction of a 200 kW Fuel Cell Customer-Side Distributed Resource at 104 Danbury Road, New Milford, CT 06776.**  
***Request for Approval - The Relocation of Fuel Cell***

Dear Chairman Stein:

On April 20, 2015, The Connecticut Siting Council approved Bloom Energy Corporation's ("BE") Petition No. 1144 for installation of a 200 kilowatt fuel cell and associated equipment (the "Facility"). The Facility will be located on the site of the Home Depot at 104 Danbury Road, New Milford (the "Site"). Recently, Home Depot has re-assessed the location of the Council-approved fuel cell project and determined that an alternate location, within their leased area, would be best suited for the fuel cell and auxiliary equipment ("Facility").

Per Home Depot's request, the Facility has been relocated 100 feet to the west, still within the confines of the same existing parking lot as the Council-approved location. The same amount of parking will be displaced with this new location, and no additional impervious coverage will be created. The equipment dimensions, electrical design, points-of-connection, etc. will remain as described within the Council-approved petition. A revised site plan has been prepared and is attached for the Council's review.

Core States respectfully requests approval of this minor modification to the previously approved project. Should you have any questions or concerns regarding the proposed facility, please contact Matt DeWitt at (732) 754-0932 or [mdewitt@core-eng.com](mailto:mdewitt@core-eng.com).

Sincerely,  
**Core States Group**



Matthew S. DeWitt, PE  
Project Manager

STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

PETITION OF BLOOM ENERGY : PETITION NO. \_\_\_\_\_  
CORPORATION AS AGENT FOR HOME :  
DEPOT USA, INC. FOR A DECLARATORY :  
RULING FOR THE LOCATION AND :  
CONSTRUCTION OF A 200-KILOWATT FUEL :  
CELL CUSTOMER-SIDE DISTRIBUTED :  
RESOURCE AT 104 DANBURY ROAD, NEW :  
MILFORD, CONNECTICUT : June 25, 2015

PETITION OF BLOOM ENERGY CORPORATION AS AGENT FOR HOME DEPOT USA,  
INC. 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 Home Depot USA, Inc. (“Home Depot”), requests that the Connecticut Siting Council (“Council”) approve by declaratory ruling the location and construction of a customer-side distributed resources project comprised of an approximately 200-kilowatt (“kW”) (net) Bloom solid oxide fuel cell Energy Server facility and associated equipment (the “Facility”), located on the site of a Home Depot at 104 Danbury Road, New Milford, Connecticut (the “Site”). See Exhibit 1. The Facility will be installed by Bloom and owned and operated by 2015 Project Company, LLC, a wholly owned subsidiary of Bloom under agreement with Home Depot USA.

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 Protection.”

As discussed fully in this petition, in addition to being a fuel cell facility, the Facility will be a customer-side distributed resources facility under 65 megawatts (“MW”) that complies with the air and water quality standards of the Connecticut Department of Energy and Environmental Protection (“DEEP”). Additionally, the Facility will not have a substantial adverse environmental effect in the State of Connecticut.

## **I. COMMUNICATIONS**

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

Matthew DeWitt  
Core States Group  
58 Mount Bethel Road  
Suite 301  
Warren, NJ 07059  
Telephone: (908) 462-9700  
Fax: (908) 548-0875  
Email: [mdewitt@core-eng.com](mailto:mdewitt@core-eng.com)

Amy Shanahan  
Bloom Energy Corporation  
1299 Orleans Drive  
Sunnyvale, CA 94089  
Telephone: (408) 543-1746  
Fax: (408) 543-1501  
Email: [Amy.Shanahan@bloomenergy.com](mailto:Amy.Shanahan@bloomenergy.com)

## **II. DISCUSSION**

### **A. Background**

The Facility will be a 200kW customer-side distributed resources facility consisting of one state-of-the-art Bloom Energy Server and associated equipment. The Facility will be interconnected to the existing switchgear located inside the electrical room, near the southeast corner of the Home Depot building (the “Building”). *See Exhibit 2.* Electricity generated by the Facility will be consumed primarily at the Site, and any excess electricity will be exported to the grid.

The Facility will be a “customer-side distributed resources” project because it will be “a unit with a rating of not more than sixty-five megawatts [and is located] on the premises of a retail end user within the transmission and distribution system including, but not limited to, fuel cells . . . .” Conn. Gen. Stat. § 16-1(a)(40)(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)(26)(A). *See* Exhibit 3.

## **B. Description of the Site and the Facility**

### **1. The Site**

The Facility will be installed within the Home Depot property located at 104 Danbury Road, New Milford, Connecticut. Specifically, the Facility will be constructed on the 10.3-acre property (“the Site”) that surrounds the Home Depot store. The Site is zoned “General Business Zone 2” (“B2”) under the zoning regulations of the Town of New Milford (the “Town”).

The majority of the surrounding areas to the north, south and east are retail and commercial uses located within zone “B2.” To the west of the site a ballpark located within the “R40 Residential” zone. The nearest structure is a commercial site that lies approximately 270 feet southeast of the Facility. The residential properties on the opposite side of Danbury Road are approximately 356 feet to the east of the Facility.

The facility will be located within an asphalt parking area to the northeast of the building. The portion of the Site that will be used for the Facility is shown in Exhibit 2. Four (4) parking

stalls will be removed by the installation of the facility. The overall parking area for the Building is over parked; therefore, the removal of spaces will not impact customer parking.

Prior to filing this petition, representative from Core States Group, Bloom's engineering consultant, discussed the proposed Facility with the Town's Zoning Enforcement Officer, Laura Regan, on February 5, 2015. To date no comments have been provided from the Town. See Exhibit 4.

## 2. The Facility

The Facility will consist of one Bloom solid oxide fuel cell Energy Server and associated equipment. The dimensions of the Facility are approximately 32'-8" long, 8'-7" wide and 6'-9" high. The Energy Server module is enclosed, factory-assembled and tested prior to installation on the Site. *See Exhibit 5.*

The Facility will be capable of producing 200 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 under CL&Ps net metering tariff. The interconnection to CL&P will be provided from the existing switchgear located inside the electrical room near the southeast side of the Building. At the time this petition was filed, the CL&P interconnection application for the Facility is being prepared.

The Energy Server will be fueled by natural gas supplied by Yankee Gas Company ("YGC"). Gas service will be delivered to the Energy Server via a new YGC gas meter assembly located adjacent to the existing building meter. A gas shut off valve is being provided

adjacent to the facility. The new service line will branch off of the existing YGC line at the southeast side of the Building.

The Bloom Energy Server will have extensive hardware, software and operator safety control systems, designed into the system in accordance with ANSI/CSA America FC 1-2004, the American National Standards Institute and Canadian Standards Association standard for Stationary Fuel Cell Power Systems. The Facility is remotely monitored by Bloom Energy 24 hours a day, seven days a week. If software or hardware safety circuits detect an unsafe condition, variation in temperature or gas pressure outside of operational parameters, fuel supply is automatically stopped and the system is shut down. Two manual fuel shut-off valves are provided at each installation site, and two normally closed, safety shut-off rated isolation valves are installed within the system. The Facility will be installed in compliance with all applicable building, plumbing, electrical, fire and other codes.

The risk of fire related to the operation of the Energy Server is very low. In the Bloom fuel cell, 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.

**C. The Facility Complies with DEEP's Air and Water Quality Standards and Will Not Have a Substantial Adverse Environmental Effect**

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.

Construction-related impacts will be minimal. The Facility will be located within an existing asphalt parking area within the parking area to the north of the Building. The facility will not extend beyond the limits of the existing curbed area. All utilities will be installed within the asphalt drive aisle at the northeast corner of the Building and continue along the east face of the Building to connect with the electrical room near the southeast corner of the Building. All utility trenches will be restored in-kind.

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. *See* Conn. Agencies Regs. §§ 22a-174-42(b) and (e). Notwithstanding this exemption, as shown below in Table 1, the Facility meets the Connecticut emissions standards for a new distributed generator. Further, Bloom's Energy Server has passed the stringent California Air Resources Board Distributed Generation Certification Regulation 2007 Fossil Fuel Emission Standards. *See* Exhibit 6.

**Table 1: Connecticut Emissions Standards for a New Distributed Generator**

<b>Compound</b>	<b>Connecticut Emission Standard (lbs/MW-hr)<sup>1</sup></b>	<b>Bloom Energy Server (lbs/MW-hr)</b>
Oxides of Nitrogen (NO <sub>x</sub> )	0.15	<0.01
Carbon Monoxide (CO)	1	<0.10
Carbon Dioxide (CO <sub>2</sub> )	1,650	773

With respect to water discharges, the Energy Servers are designed to operate without water discharge under normal operating conditions. During construction, appropriate soil erosion prevention techniques will be incorporated around the disturbed areas to minimize soil erosion. Due to the limited disturbance required for the Facility's installation, no construction-related storm water permits will be required. Further, no additional impervious area will be added to the Site and will not affect drainage patterns or stormwater discharge.

The proposed Facility will be located in an existing paved area on a lot that was previously developed and disturbed during construction of the Home Depot store. Therefore, the construction and operation of the Facility will not have any adverse effects on endangered species, historical resources or surrounding areas.

The acoustical impact of the Facility will be minimal, and the Facility will meet the applicable requirements for off-site noise receptors. As discussed above, the nearest structure is a commercial site that lies approximately 270 feet southeast of the Facility and the residential properties on the opposite side of Danbury Road are approximately 356 feet to the east of the Facility. It has been determined that the Facility satisfies DEEP noise regulations without the need for sound remediation devices.

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<sup>1</sup> Conn. Agencies Regs. § 22a-174-42, Table 42-2.

## NOTICE

Bloom has provided notice of this petition 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).<sup>2</sup> A copy of the notice letter and a service list is attached as Exhibit 7.

### **III. 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 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)(40)(A), because the Facility is “a unit with a rating of not more than sixty-five megawatts [and is 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.

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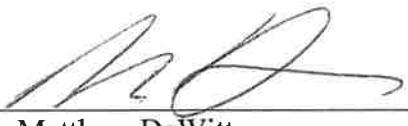
<sup>2</sup> Conn. Agencies Regs. § 16-50j-40(a) requires that “[p]rior to submitting a petition for a declaratory ruling to the Council, the petitioner shall, where applicable, provide notice to each person other than the petitioner appearing of record as an owner of property which abuts the proposed 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 16-50l of the Connecticut General Statutes].”

#### **IV. CONCLUSION**

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

Respectfully submitted,

BE 2012 W LLC

By: 

Matthew DeWitt  
Core States Group  
58 Mount Bethel Road  
Warren, NJ 07059  
Telephone: (908) 462-9700  
Fax: (908)-462-9909  
Email: mdewitt@core-eng.com

## EXHIBITS

- Exhibit 1: Site Location Map
- Exhibit 2: Site Plan
- 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: Correspondence with the Town
- Exhibit 5: Bloom Energy Server Product Datasheet and General Installation Overview
- Exhibit 6: California Air Resources Board Distributed Generation Certification
- Exhibit 7: Notice Pursuant to Conn. Agencies Regs. § 16-50j-40(a)

## Exhibit 1



Job#: BEC-17968

Scale: 1" ≈ 2,000'

Date: 01/07/2015

Drawn By: MDS

**CORE STATES**



58 Mount Belial Boulevard, Suite 301,  
Warren, NJ 07059  
Tel: (908) 462-9719 Fax: (908) 462-9909  
rprocnik@core-eng.com

**Bloom**energy™

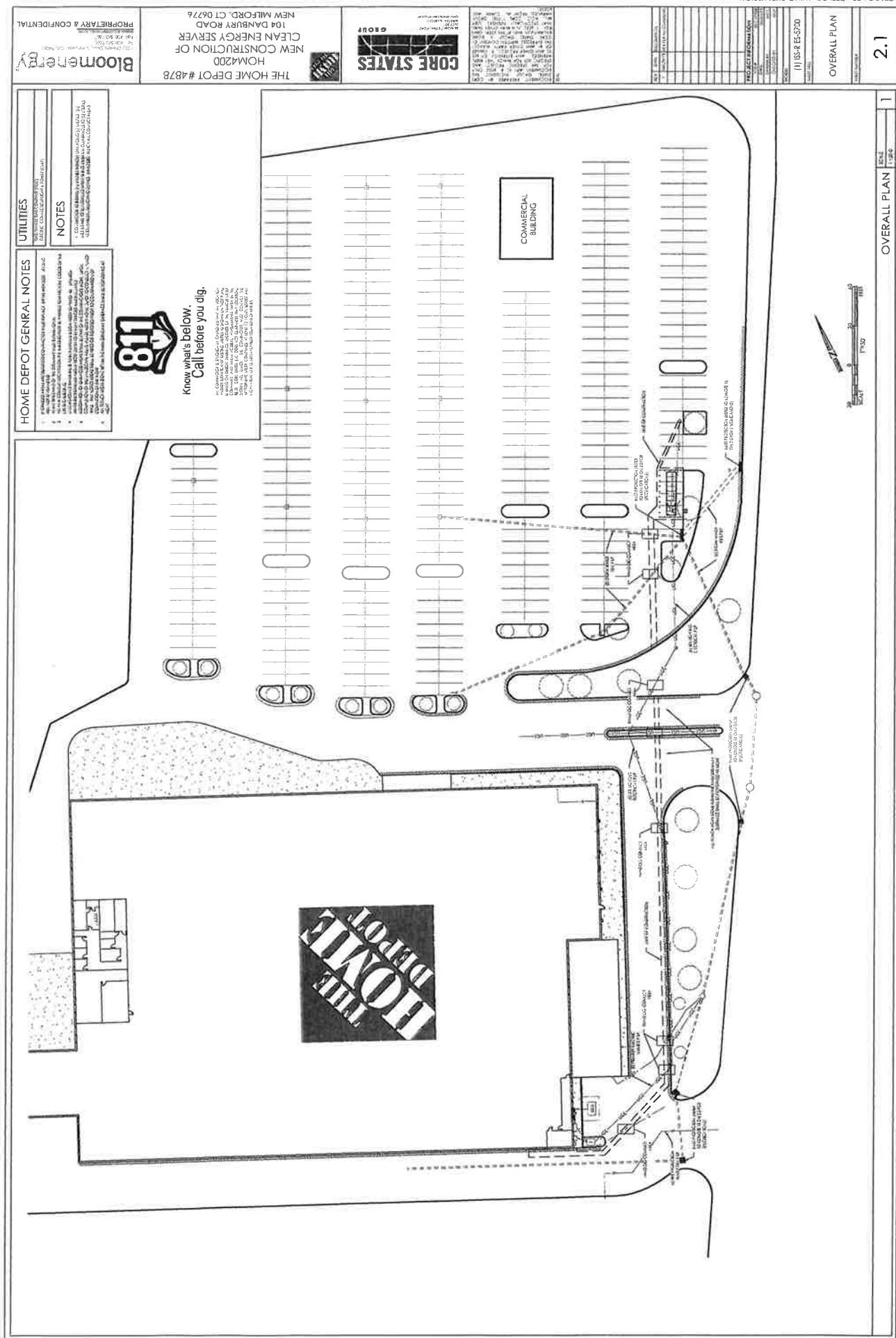
1252 Orleans Drive, Sunnyvale CA, 94089  
Tel: 408 543 1500 Fax: 408 543 1501

104 Danbury Road  
New Milford, CT 06776

**SITE LOCATION MAP**  
**USGS MAP (BRIDGEPORT QUADRANGLE)**

## Exhibit 2





## 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<sub>2</sub> reductions due to its high efficiency, the energy server emits virtually no NO<sub>x</sub>, SO<sub>x</sub>, 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.

**The Connecticut Department of Energy and Environmental Protection is an Affirmative Action/Equal Opportunity Employer that is committed to requirements of the Americans with Disabilities Act. Any person with a disability who may need information in an alternative format may contact the agency's ADA Coordinator at 860-424-3194, or at [deep.hrmed@ct.gov](mailto:deep.hrmed@ct.gov). Any person with limited proficiency in English, who may need information in another language, may contact the agency's Title VI Coordinator at 860-424-3035, or at [deep.aaoffice@ct.gov](mailto:deep.aaoffice@ct.gov). Any person with a hearing impairment may call the State of Connecticut relay number – 711. Discrimination complaints may be filed with DEEP's Title VI Coordinator. Requests for accommodations must be made at least two weeks prior to any agency hearing, program or event.**

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.

*K. Santopietro*

September 12, 2012

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

Date

## Exhibit 4

February 5, 2015

*Via electronic mail*  
Town Hall - Lower Level  
10 Main Street  
New Milford, CT 06776

Attn: Laura Regan

RE: Bloom Energy Clean Energy Server Installation  
The Home Depot - 104 Danbury Road

Ms. Regan,

On behalf of Bloom Energy we would like to provide you with information pertaining to the proposed clean energy server installation project located at The Home Depot, 104 Danbury Road.

This project proposes to install one (1) new Bloom Energy Server, ES-5700; a new class of distributed power generator which produces clean, reliable and affordable electricity at the customer site. Bloom Energy Server contains solid oxide fuel cells which provide 200 kW of power, utilizing a non-combustive chemical process. The Clean Energy Server are mounted onto a 32'8" x 7'4" steel skid. Placement of the Clean Energy Server equipment is being proposed to be installed in the parking area north of the building.

The ES-5700 equipment has been designed in compliance with Underwriters Laboratories (UL) in addition to various safety standards and requirements. There are no harmful off-gases or byproducts that will be produced by this equipment.

Please note that the energy server is monitored 24 hours a day, 7 days a week by Bloom Energy's communications network in Sunnyvale, CA. In the unlikely event the system will require attention, the system can be remotely shut off by Bloom. Additionally, the equipment will have several means to shut down the energy server locally.

We are submitting to the Connecticut Siting Council within the next two weeks and wanted to give you an opportunity to see the plans in advance. We would be happy to discuss any comments you may have either by phone or in person. If you have any questions or need further information, please feel free to call.

Thank you,  
Core States Group



Rich Procanik  
Project Manager

## Exhibit 5

### **Clean Base Load Power**

Bloom Energy Corporation is a provider of breakthrough solid oxide fuel cell (SOFC) technology that delivers clean power to meet base load electricity needs. Bloom Energy Servers™ are among the most efficient energy generators available, providing for significantly reduced electricity costs and dramatically lower greenhouse gas emissions. Bloom Energy Servers™ produce reliable and clean electricity using an environmentally superior non-combustion process. The result is a new option for energy infrastructure that combines increased electrical reliability and improved energy security with significantly lower environmental impact.

### **All-Electric Solution**

The Bloom Energy Server™ is an “all-electric” solution that utilizes waste heat internally to increase the efficiency of electrical power production. This characteristic allows Bloom systems to be deployed at sites where it is not necessary to match on-site thermal loads or develop complicated infrastructure to handle thermal energy outputs. The Energy Server’s superior electrical efficiency obviates the need for complicated CHP systems and expands the opportunity to deploy clean on-site power generation.

## **Technical Highlights**

### *Inputs*

<b>Fuel</b>	Natural Gas
<b>Fuel pressure</b>	15 psig
<b>Fuel required per 100 kW generated</b>	0.661 MMBtu/hr of natural gas

### *Outputs*

<b>Nominal power output (net AC)</b>	Per 100 kW generated
<b>Electrical efficiency (LHV net AC)</b>	50 - 60%
<b>Electrical connection</b>	480V @ 60 Hz

### *Emissions*

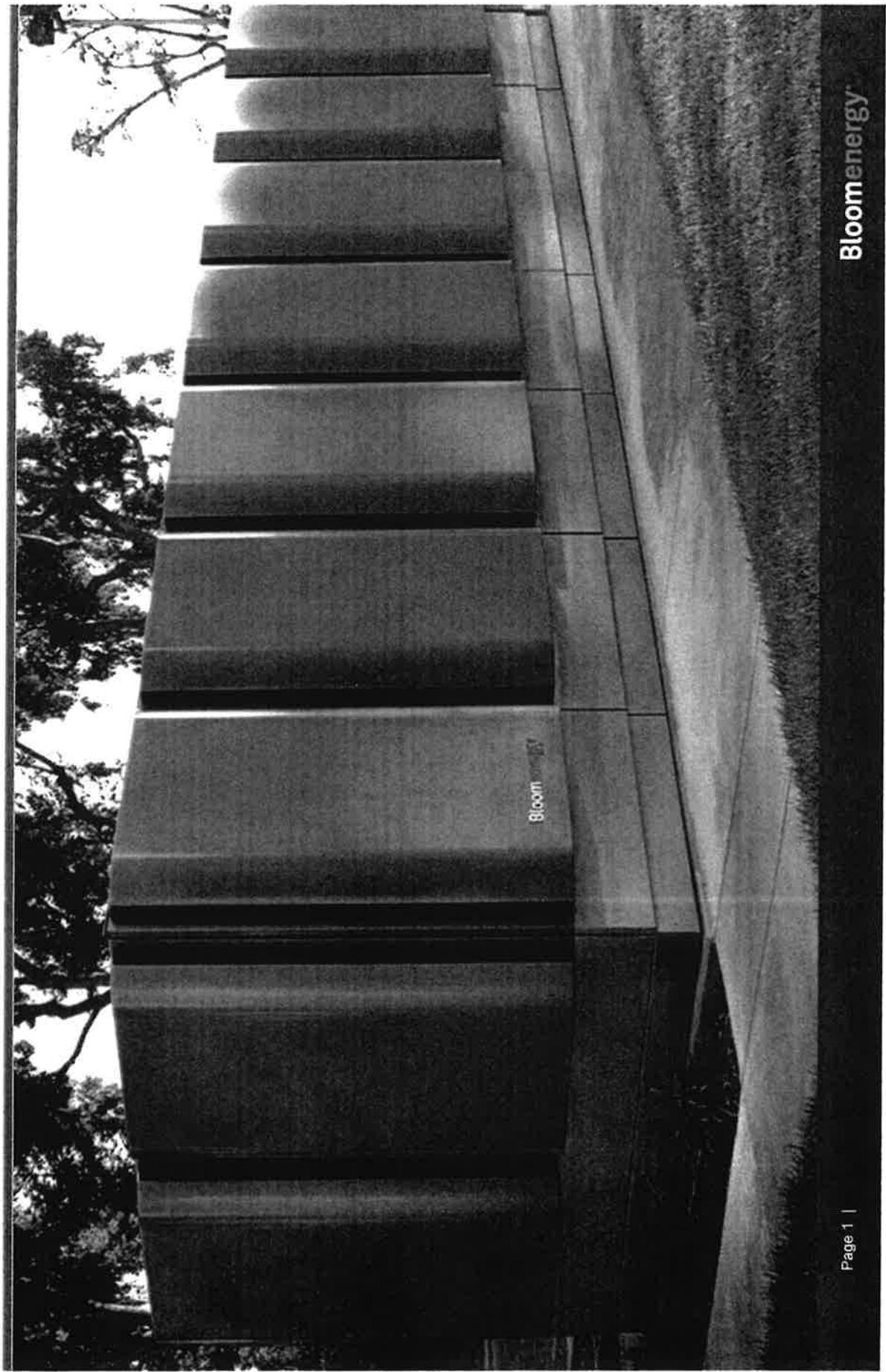
<b>NOx</b>	< 0.01 lbs/MW-hr
<b>SOx</b>	negligible
<b>CO</b>	< 0.10 lbs/MW-hr
<b>VOCs</b>	< 0.02 lbs/MW-hr
<b>CO2 @ specified efficiency</b>	773 lbs/MW-hr of natural gas

### *Codes & Standards*

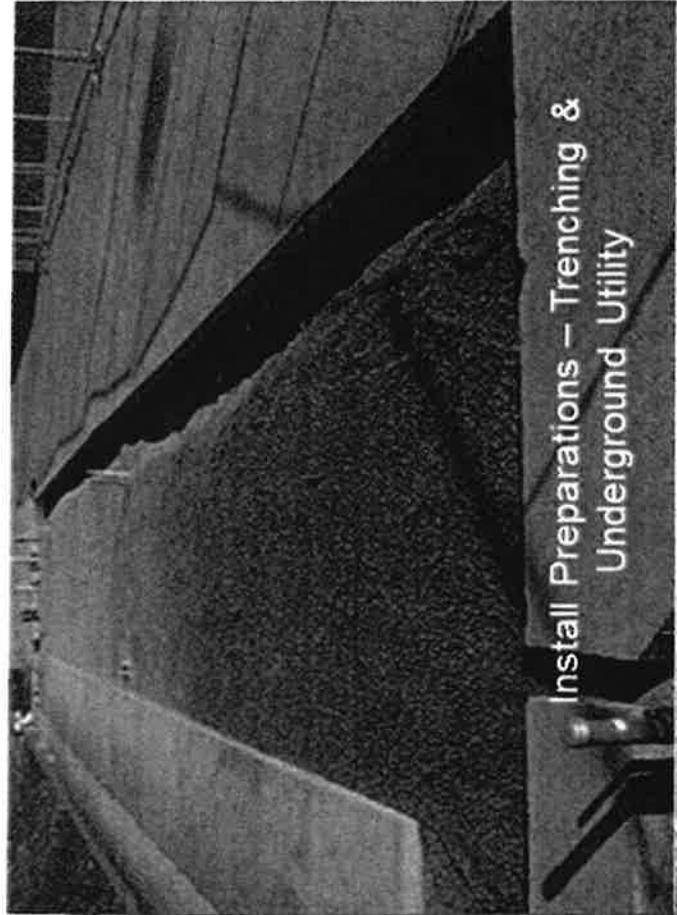
Designed to comply with NEC, NFPA, ANSI, CT DPUC and CT SIR utility interconnection standards.

**Exempt from Air District Permitting; meets stringent CARB 2007 emissions standards.**

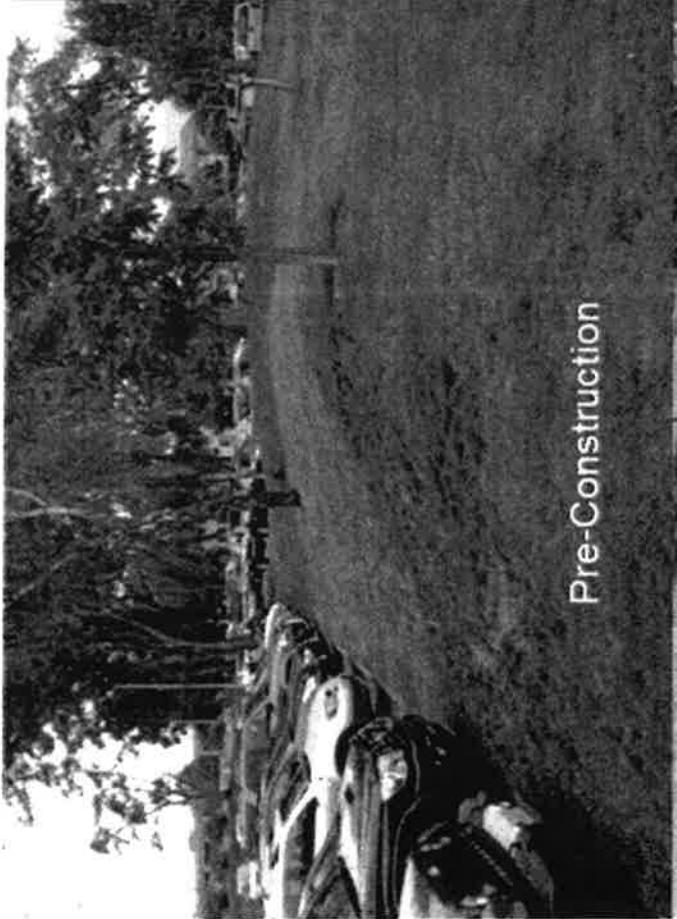
# Bloom Energy Server



Bloom energy



Pre-Construction



Install Preparations – Trenching &  
Underground Utility

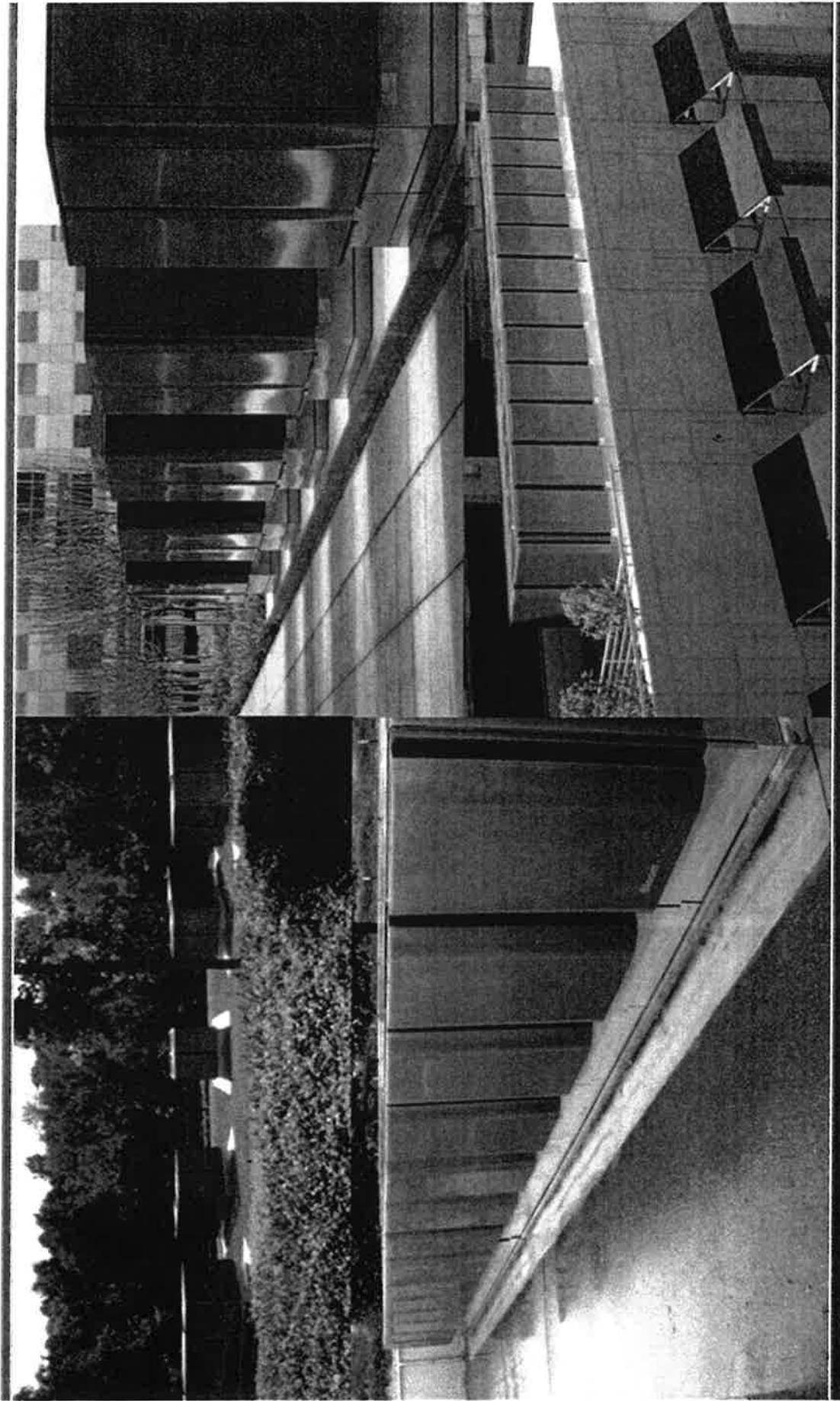


Site Completion  
Set Pads

# Bloom Energy Server Installation



## Representative Installations



## Exhibit 6

State of California  
AIR RESOURCES BOARD  
Executive Order DG-036  
Distributed Generation Certification of  
Bloom Energy Corporation  
ES-5700

WHEREAS, the Air Resources Board (ARB) was given the authority under California Health and Safety Code section 41514.9 to establish a statewide Distributed Generation (DG) Certification Program to certify electrical generation technologies that are exempt from the permit requirements of air pollution control or air quality management districts;

WHEREAS, this DG Certification does not constitute an air pollution permit or eliminate the responsibility of the end user to comply with all federal, state, and local laws, rules and regulations;

WHEREAS, on July 11, 2011, Bloom Energy Corporation applied for a DG Certification of its 200 kW ES-5700 fuel cell and whose application was deemed complete on August 30, 2011;

WHEREAS, Bloom Energy Corporation has demonstrated, according to test methods specified in title 17, California Code of Regulations (CCR), section 94207, that its natural-gas-fueled ES-5700 fuel cell has complied with the following emission standards:

1. Emissions of oxides of nitrogen no greater than 0.07 pounds per megawatt-hour;
2. Emissions of carbon monoxide no greater than 0.10 pounds per megawatt-hour; and
3. Emissions of volatile organic compounds no greater than 0.02 pounds per megawatt-hour.

WHEREAS, Bloom Energy Corporation has demonstrated that its ES-5700 fuel cell complies with the emission durability requirements in title 17, CCR, section 94203(d);

WHEREAS, I find that the Applicant, Bloom Energy Corporation, has met the requirements specified in article 3, title 17, CCR, and has satisfactorily demonstrated that the ES-5700 fuel cell meets the DG Certification Regulation 2007 Fossil Fuel Emission Standards;

NOW THEREFORE, IT IS HEREBY ORDERED, that a DG Certification, Executive Order DG-036 is granted.

This DG Certification:

- 1) is subject to all conditions and requirements of the ARB's DG Certification Program, article 3, title 17, CCR, including the provisions relating to inspection, denial, suspension, and revocation;
- 2) shall be void if any manufacturer's modification results in an increase in emissions or changes the efficiency or operating conditions of a model, such that the model no longer meets the DG Certification Regulation 2007 Fossil Fuel Emission Standards; and
- 3) shall expire on the 21<sup>st</sup> day of September, 2016.

Executed at Sacramento, California, this 21<sup>st</sup> day of September 2011.

James Goldstene  
Executive Officer  
by

/S/

Richard Corey, Chief  
Stationary Source Division

## Exhibit 7

engineering  
architecture  
project management  
construction management  
permitting  
development services



March 4, 2015

VIA FIRST CLASS MAIL

**RE: Application for Core States Group, as Agent for Home Depot, for the construction of a 200 kW Fuel Cell Customer-Side Distributed Resource at 104 Danbury Road – New 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 Home Depot intends to file on or shortly after March 4, 2015, a petition for declaratory ruling with the Council. The petition will request the Council's approval of the location and construction of an approximately 200 kilowatt Bloom Energy Corporation fuel cell facility and associated equipment (the "Facility"), located at the site of a Home Depot building at 104 Danbury Road in New Milford, Connecticut (the "Site"). 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 facility will be located in front of the Home Depot store, in the asphalt parking area, near the easterly corner of the building. The fuel cell is approximately 32'-8" long, 8'-7" wide, and 6'-9" high.

If you have any questions regarding the proposed Facility, please contact the undersigned or the Council.

Respectfully,

A handwritten signature in black ink, appearing to read "Richard N. Procanik".

Richard N. Procanik  
[rprocanik@core-eng.com](mailto:rprocanik@core-eng.com)  
(908) 462-9919

Municipal Official/Agency	Name/Address
New Milford Mayor	Patricia A. Murphy New Milford Town Hall 10 Main Street New Milford, CT 06776
New Milford Planning Department	Joseph Girardot, Chairman Planning Department 10 Main Street, Lower Level New Milford, CT 06776
New Milford Zoning Commission	Laura Regan, Zoning Enforcement Officer Zoning Department 10 Main Street, Lower Level New Milford, CT 06776
New Milford Inland Wetlands Agency	James Ferlow, Wetlands Enforcement Office Inland Wetlands Agency 10 Main Street, Lower Level New Milford, CT 06776
New Milford State Senator	Clark Chapin Senate District 30 105 Cappin Road New Milford, CT 06776
New Milford State Representative	Cecilia Buck-Taylor House District 67 105 Cappin Road New Milford, CT 06776
New Milford State Representative	Richard Smith House District 108 105 Cappin Road New Fairfield, CT 06776

Connecticut Attorney General	George Jesen Attorney General 55 Elm Street Hartford, CT 06106
State Development of Energy and Environmental Protection	Rob Klee Commissioner 79 Elm Street Hartford, CT 06106
State Department of Public Utility Regulatory Authority	Arthur House Chairman 10 Franklin Square New Britain, CT 061051
State Department of Public Health	Dr. Jewel Mullen Commissioner 410 Capital Avenue Hartford, CT 06134
State Council on Environmental Quality	Susan D. Merrow Chair 79 Elm Street Hartford, CT 06106
State Department of Agriculture	Steven K. Reviczky Commissioner 165 Capital Avenue Hartford, CT 06106
Office of Policy & Management	Benjamin Barnes Secretary of OPM 450 Capital Avenue Hartford, CT 06106

State Department of Economic & Community Development	Catherine Smith Commissioner 505 Hudson Street Hartford, CT 06106
State Department of Transportation	James P. Redeker Commissioner 2800 Berlin Turnpike Newington, CT 06111
Abutter Property	Abutter Name/Mailing Address
3102 Route 9	108 Danbury Road LLC & Unicorn Contracting Corp Cold Spring, NY 10516
358 Saw Mill River Road	Rhinbeck Realty LLC & Mavis Tire Supply Millwood, NY 10546
94 Danbury Road	Bruzzi Real Estate LLC New Milford, CT 06776
10 Main Street	New Milford Town of New Milford, CT 06776

## RESPONSIBILITY NOTES

1. THE FOLLOWING EQUIPMENT SHOWN ON THESE PLANS WILL BE PROVIDED AND DELIVERED BY BLOOM ENERGY. APPLICABLE TRADES TO MOUNT AND MAKE FINAL CONNECTIONS:
  - POWER DISTRIBUTION SECTION (PDS)
  - WATER DEBONITATION MODULE (WDM)
  - TELEMETRY CABINET (TC)
  - SIGNAGE (SEE SAVET SIGNAGE)
  - SITE KIT (SEE SITE KIT NOTES)
2. THE FOLLOWING EQUIPMENT SHOWN ON THESE PLANS WILL BE PROVIDED, DELIVERED AND MOUNTED BY BLOOM ENERGY. APPLICABLE TRADES TO MAKE FINAL CONNECTIONS:
  - CLEAN ENERGY SERVER
  - INTEGRATED STEEL SKID (ISS)

## SITE KIT NOTES

1. BLOOMENERGY TO PROVIDE AND DELIVER THE SITE OF ELECTRICAL AND PLUMBING CONTRACTOR TO INSTALL SITE HITS, CONSISTING OF PAD PLUMBING AND BUS BARS, ON THE PRECAST CONCRETE PAD PER MANUFACTURER SPECIFICATIONS.
2. PVM DEFLECTORS ARE NOT REQUIRED ON THIS SITE.

## UTILITIES

1. GAS-YANKEE GAS COMPANY (YGC)  
ELECTRIC, CONNECTICUT LIGHT & POWER (CL&P)

## CONDUIT & PIPE LENGTHS

TYPE	TOTAL DISTANCE FROM TIE-IN TO ES UNIT (LINEAR)
GAS PIPE	4645
ELECTRICAL CONDUIT	4575
DATA CONDUIT TO GAS METER	+535
DATA CONDUIT TO REC METER	+585
DATA CONDUIT TO TELEMETRY	WIRELESS
WATER PIPE	+625

## LEGEND OF UTILITY LINES

DATA LINE  
WATER LINE  
FIBER OPTICS & PHONE  
GAS LINE  
JOINT TRENCH  
OVERHEAD ELECTRICAL  
SANITARY LINE  
TELEVISION LINE  
UNDERGROUND ELECT.

## KEYNOTES

1. (I) IN UTILITY GAS SET ASSEMBLY (MSA) FOR CLEAN ENERGY SERVER. COORDINATE LOCATION & INSTALLATION REQUIREMENTS WITH UTILITY COMPANY PRIOR TO INSTALLATION. MAINTAIN MINIMUM 3'-0" CLEARANCE FROM ALL EXISTING SOURCES. MSA & INTERCONNECTION PER GAS METER DETAILS (SHEET 1.50) AND ONE LINE DIAGRAM (SHEET 6.0). ADD IMPACT PROTECTION AS INDICATED BY UTILITY COMPANY.
2. (I) IN PRIVATE GAS SHUT-OFF VALVE (SOV) FOR CLEAN ENERGY SERVER. MAINTAIN MINIMUM 3'-0" CLEARANCE FROM ALL EXISTING SOURCES. CONTRACTOR TO PROVIDE SOV, PDS, PDM, PDM, SOV, VALVE, AND SOV VALVE AS INDICATED ON DETAIL 4/5.0. CONTRACTOR TO PROVIDE REER & REINTERCONNECTION PER CLEAN ENERGY NATURAL GAS SUPPLY DIAGRAM (DET 1.50). SEE DETAIL 3/5.0 FOR SOV REER.
3. (I) IN GAS SERVICE BIFURCATION BY UTILITY COMPANY. EXACT LOCATION TO BE COORDINATED WITH UTILITY. REQUIREMENTS PER UTILITY COMPANY.
4. (I) IN GAS PIPE FROM (I) GAS TAP TO TERMINATE AT (I) UTILITY MSA INSTALLED BY UTILITY COMPANY. SIZES & TRENCHING REQUIREMENTS PER UTILITY COMPANY.
5. (I) IN GAS PIPE FROM (I) UTILITY MSA TO TERMINATE AT (I) ES UNIT INSTALLED BY CONTRACTOR. STUB-UP DETAILS PER DETAILS & SECTIONS (SHEET 4.0). SEE (I) SIDE GAS METER DETAILS (SHEET 5.0).
6. (I) IN ELECTRICAL CONDUIT & WIRES FROM (I) LIGHT POLE TO (I) LIGHT POLE.
7. (I) IN DATA CONDUIT & CABLE FROM (I) GAS METER TO TERMINATE AT (I) PHONE BOARD. ADDITIONAL INFORMATION PER DETAILS & SECTIONS (SHEET 4.0). SEE (I) SIDE GAS METER DETAILS (SHEET 6.0).
8. (I) IN DATA CONDUIT & CABLE FROM (I) REC METER TO TERMINATE AT (I) MPOE. ADDITIONAL INFORMATION PER DETAILS & SECTIONS (SHEET 4.0). SEE (I) SIDE GAS METER DETAILS (SHEET 6.0).
9. (I) IN WATER PIPE FROM BUILDING DOMESTIC WATER SYSTEM TO (I) WDM. CONNECT TO NEAREST AVAILABLE LOCATION. UNDERGROUND WATERLINE TO BE INSTALLED BELOW FROST DEPTH OF 48". EXTERIOR WATERLINE INSTALLED ABOVE FROST DEPTH TO BE HEATED AND INSULATED. DETAILS & SIZES PER DETAILS & SECTIONS (SHEET 4.0 & SHEET 5.0).
10. (I) IN DISCONNECT SWITCH IN NEMA 3R ENCLOSURE. DISCONNECT SPECIFICATIONS PER ONE LINE DIAGRAM (SHEET 6.0). MOUNT TO BUILDING WALL & PER MANUFACTURER SPECIFICATIONS. ENSURE LOCATION MEETS ALL REQUIRED N.E.C. CLEARANCES ON THE OUTSIDE OF THE FRONT PANEL. COMPLETE SPECIFICATION PER ELECTRICAL SPECIFICATIONS. RELOCATE (I) LOOSE WIRE ON BUILDING EXTERIOR AND NO PARKING SIGN IF AS NECESSARY.
11. (I) IN BLOOMENERGY ES-5700 ENERGY SERVER. INTEGRATED STEEL SKID PLATFORM MOUNTED TO (I) GRADE BEAMS PER DETAILS & SECTIONS (SHEET 4.0). CONDUIT STUB-UP LOCATIONS & DETAILS PER DETAILS & SECTIONS (SHEET 4.0). SEE SHEET CS1 FOR STEEL PLATFORM.
12. (I) IN POWER DISTRIBUTION SECTION (PDS). CONDUIT STUB-UP LOCATIONS PER DETAILS & SECTIONS (SHEET 4.0).
13. (I) IN TELEMETRY CABINET (TC) WITH FACTORY WIRED CLEAN ENERGY SERVER EMERGENCY POWER-OFF SWITCH (EPO). CONDUIT STUB-UP LOCATIONS PER DETAILS & SECTIONS (SHEET 4.0).
14. (I) IN WATER DEBONITATION MODULE (WDM). PIPE & CONDUIT STUB-UP LOCATIONS PER DETAILS & SECTIONS (SHEET 4.0).
15. (I) IN WATER TAP. IF PRESSURE EXCEEDS 150 PSI, COORDINATE WITH BLOOMENERGY, PURCHASE & INSTALL PRESSURE REGULATOR PRIOR TO WDM.
16. (I) IN 10'-0" COPPER GROUNDING RODS 6'-0" APART. SPECIFICATIONS FOR ONE LINE DIAGRAM (SHEET 6.0).
17. (I) IN BOLLARD (IVP). TYPE, SIZE AND LOCATION PER IMPACT PROTECTION PLAN & DETAILS (SHEET 3.0). ENSURE SLEEVES FLUSH WITH GRADE AND NO ANGLES OR HOOKS EXIST THAT IMPEDES FORK LIFT ACCESS.
18. (I) PROVIDE SECURITY BOXES OF CONDUIT & WIRE AT ALL ELECTRICAL STUB UP LOCATIONS.
19. (I) CORE CONDUIT AND/OR PIPE THROUGH WALL. SCAN WALL PRIOR TO CORING. DETAILS PER DETAILS & SECTIONS (SHEET 4.0).
20. (I) IN INLET AMP. INSTALL "DANDY SACK" WITH OVERFLOW PORTS (BY DANDY PRODUCTS) OR APPROVED EQUAL WITH OUTFLOW PORTS. INSTALL PRIOR TO CONSTRUCTION START AND REMOVE WHEN SITE IS STABILIZED.
21. (I) IN UTILITY APPROVED REC METER IN NEMA 3R ENCLOSURES. SPECIFICATIONS PER ONE LINE DIAGRAM (SHEET 6.0). MOUNT TO BUILDING WALL & PER MANUFACTURER SPECIFICATIONS. ENSURE LOCATION MEETS ALL REQUIRED N.E.C. CLEARANCES. PROVIDE MODEL NUMBER ON THE OUTSIDE OF THE FRONT PANEL. COMPLETE SPECIFICATION PER ELECTRICAL SPECIFICATIONS.
22. (I) IN STRIPLINE TO BE REMOVED. (TOTAL 4 PARKING SPACES)
23. (I) SAWCUT LINE
24. (I) CONTRACTOR TO INSTALL (I) UTILITIES WITHOUT DAMAGING (I) UTILITIES. (I) UTILITIES ARE TO BE INSTALLED MAINTAINING MINIMUM CLEARANCES TO (I) UTILITIES AS IDENTIFIED IN TRENCHING DETAILS. HAND DIG TRENCH ALL CONFLICT AREA'S.

SEAL

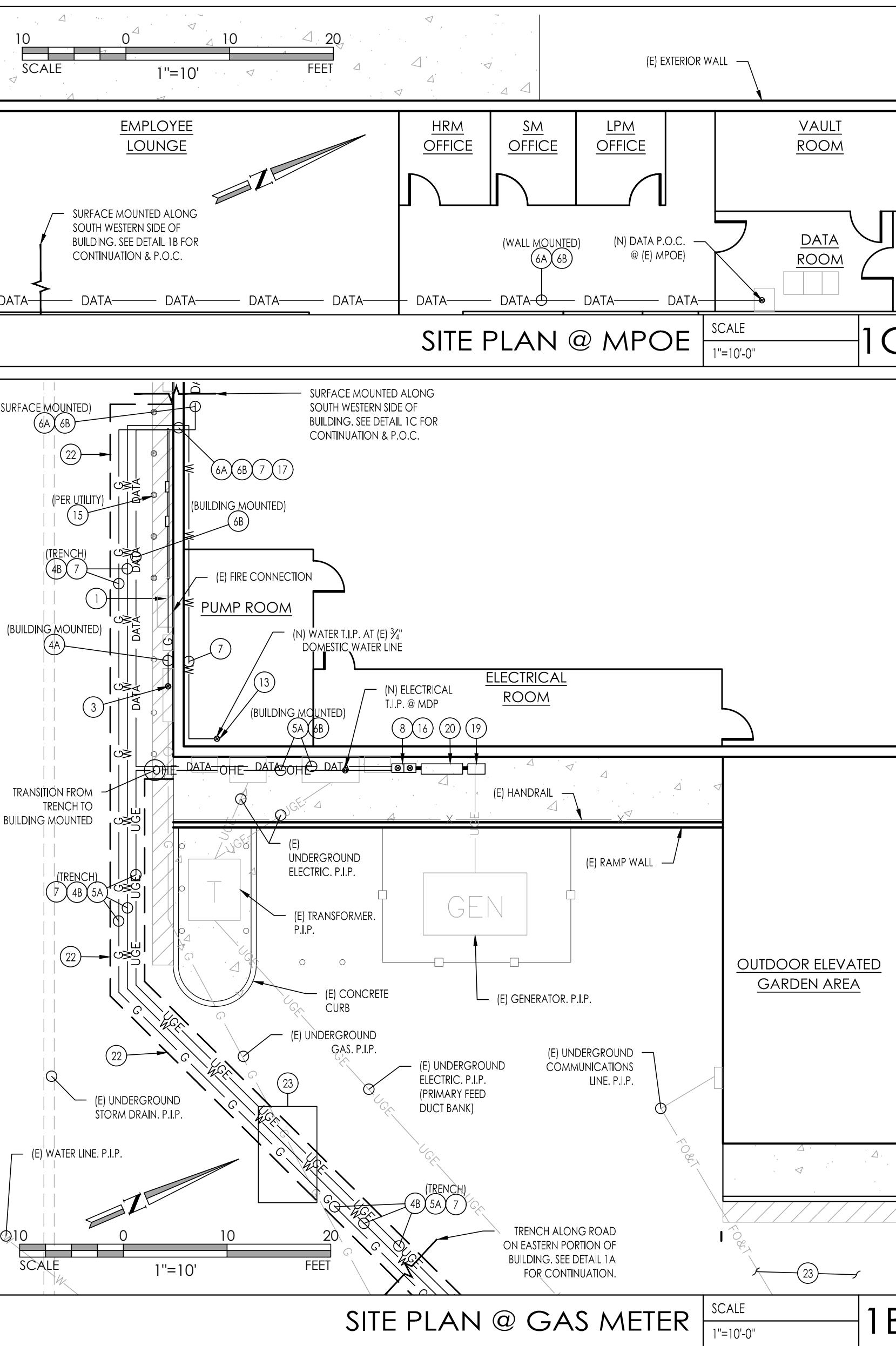
REV	DATE	DESCRIPTION
1	04/29/15	REV PER HD COMMENTS

PROJECT INFORMATION
JOB # BEC-17968
DATE: 01/07/15
DRAWN BY: MDS
CHECKED BY: RNP

MODEL
(1) ISS-R ES-5700

SHEET TITLE
SITE PLAN

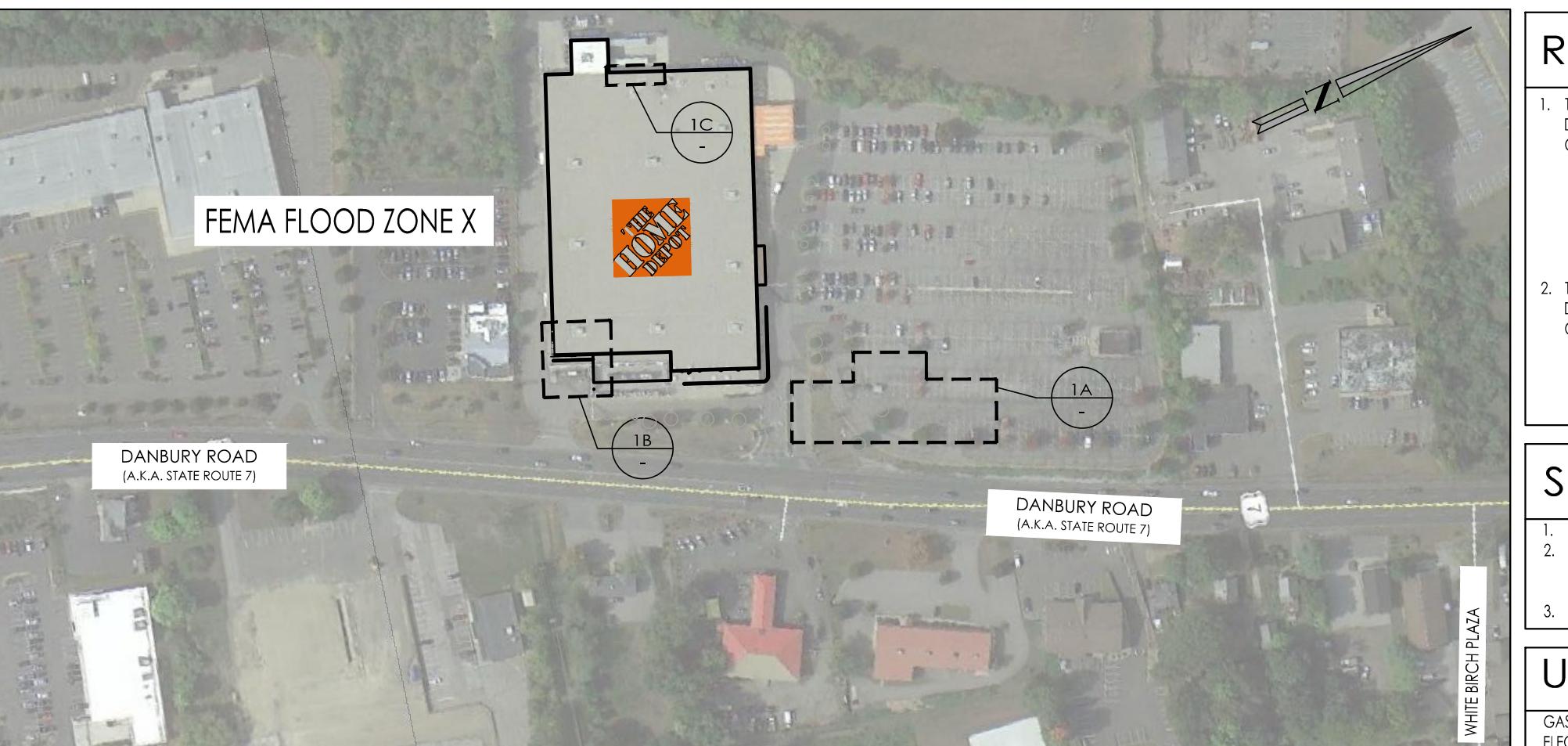
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2.0



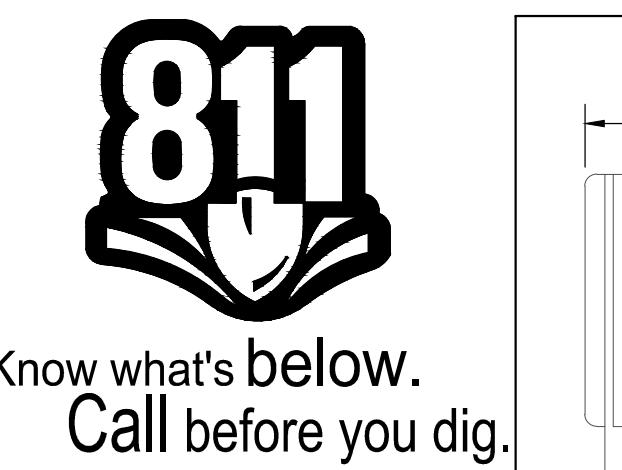
OVERALL	
GROSS OUTPUT POWER	210 kW
NET OUTPUT POWER	200 kW
VOLTAGE	480 VAC
MAXIMUM OUTPUT CURRENT	252 Amps
FREQUENCY	60 Hz
CONDUIT SIZE	CAT5e WITH RJ-45 (MALE/MALE) ENDS
SPEED	10'0" SHARED WITH DATA TO TC & CONTROL SIGNAL TO TC
CONDUIT SIZE	120 VAC
WEIGHT - INTEGRATED EQUIPMENT (I) & TC	1,514 LBS
WEIGHT - INPUT/OUTPUT MODULE (I)	4,850 LBS
WEIGHT - STEEL SUPPORT FRAME	3,250 LBS
TOTAL SYSTEM WEIGHT	43,814 LBS
AIR EXHAUST - POWER MODULE (I)	5,700 LBS
AIR EXHAUST - INPUT/OUTPUT MODULE (I)	1200 CFM
AIR EXHAUST - INPUT/OUTPUT MODULE (I)	1200 CFM
ELECTRICAL REQUIREMENTS	
LOW VOLTAGE - DATA TO TC	
CONNECTION	RJ-45 FEMALE
CABLE TYPE	1 WIRE
CABLE SIZE	CAT5e WITH RJ-45 (MALE/MALE) ENDS
LOW VOLTAGE - HEAT TRACE TO PDS	
CONNECTION	120 VAC
CABLE TYPE	2 WIRE - GROUND
CABLE SIZE	GROUND
HIGH VOLTAGE - POWER TO PDS	
CONNECTION	3 PHASE, 480 VAC
CABLE TYPE	3 WIRE - GROUND
CABLE SIZE	400 MCM (G)
MODULE SIZE	#10 AWG (G)
CONDUIT SIZE	3"Ø

WATER REQUIREMENTS	
WATER TYPE	MUNICIPAL GRADE
MINIMUM PRESSURE	35 psi
MAXIMUM PRESSURE	150 psi
SPEED	70 KPS/EAACH
CONDUIT SIZE	1"Ø SHARED WITH CONTROL SIGNAL TO TC & GAS ANALYZER TO TC
LOW VOLTAGE - CONTROL SIGNAL TO TC	
CONNECTION	2 WIRE
CABLE TYPE	2 WIRE
CABLE SIZE	2 CAT5e SHIELDED
SPEED	1"Ø SHARED WITH DATA TO TC & GAS ANALYZER TO TC
NATURAL GAS REQUIREMENTS	
FUEL TYPE	NATURAL GAS
PRESSURE	15 (13'-3") psig
AVERAGE CONSUMPTION RATE (60° F, 1 atm)	1.32 MMBTU/hr
MAXIMUM CONSUMPTION RATE (60° F, 1 atm)	2.00 MMBTU/hr
CONNECTION	1"Ø PNP
PIPE SIZE - SUPPLY	SIZE SITE DEPENDENT, USE STAINLESS STEEL OR PVC
PIPE SIZE - RISER	3/4"Ø
PIPE SIZE - ISOLATION	1"Ø CGA BALL VALVE
PIPE SIZE - EXTENSION	1"Ø PNP
QUICK DISCONNECT COUPLER (QDC)	BE03003

APPROXIMATE FLOOD ZONE BOUNDARIES TAKEN FROM FEMA MAP ENTITLED "THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE MAP FOR THE TOWN OF NEW MILFORD, CONNECTICUT, LITCHFIELD COUNTY, CONNECTICUT, COMMUNITY-PANEL NUMBER 0904900120" DATED JUNE 4, 1987.



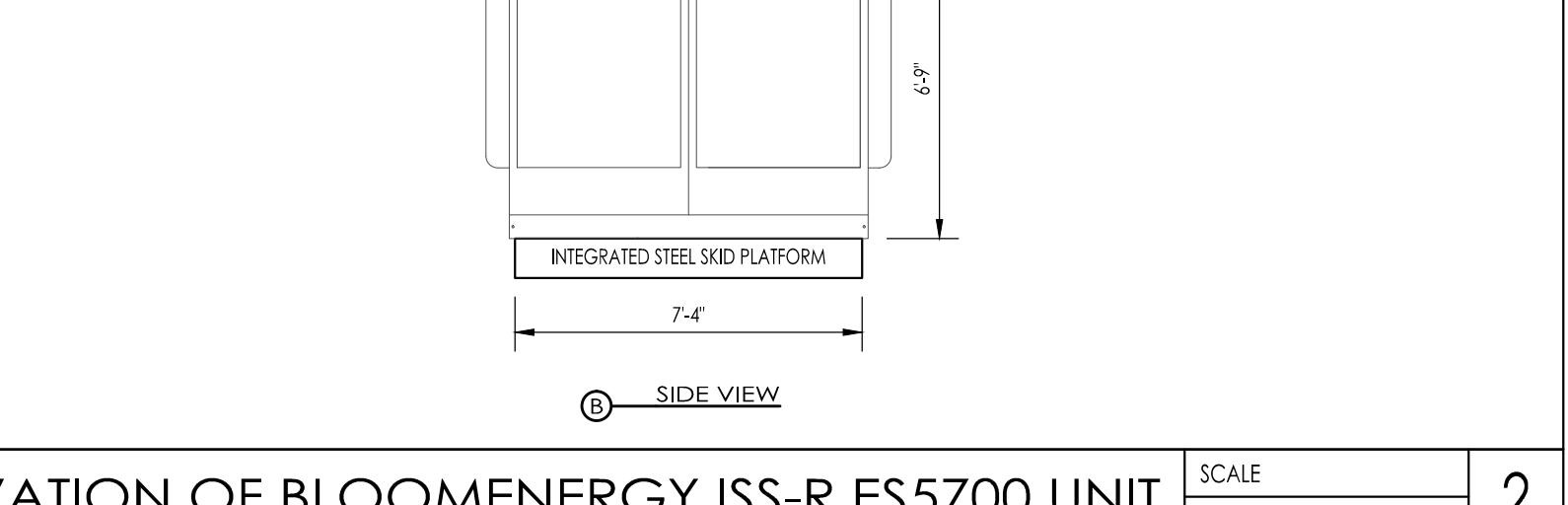
**OVERALL SITE PLAN** 4  
SCALE 1'=200'-0"



**BLOOMENERGY ES-5700 SPECIFICATION**  
SCALE 1'=10'-0"

**BLOOMENERGY SPECIFICATIONS** 3  
SCALE NTS

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND LOCATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON DESIGN DRAWINGS RECEIVED FROM THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. CORE STATES, INC. DOES NOT GUARANTEE THAT LOCATIONS SHOWN ARE EXACT. THE CONTRACTOR MUST CONTACT THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS OF UTILITIES.



**ELEVATION OF BLOOMENERGY ISS-R ES5700 UNIT** 2  
SCALE 1/4'=1'-0"

