

July 31, 2015

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

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

**RE: Petition No. 1146 - 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 1580 Litchfield Turnpike, New Hartford, CT.  
*Request for Approval – One Additional Module for Fuel Cell Equipment***

Dear Chairman Stein:

On May 1, 2015, The Connecticut Siting Council approved Bloom Energy Corporation's ("BE") Petition No. 1146 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 1580 Litchfield Turnpike, New Hartford (the "Site"). Recently, Home Depot conducted additional coordination with the local gas utility for the Council-approved fuel cell project and determined that additional gas mechanical equipment is required for the fuel cells to operate properly.

The Council-approved energy server area measures 38'-11" in length by 16'-7" in width, situated on a 32'-8" long concrete pad. The revised energy server area provided in the attached Site Plan measures 42'-6" in length by 16'-7" in width, situated on a 36'-3" long concrete pad. Based on the revised layout, the additional equipment and 3'-7" expansion of the facility will take place on the north side of the energy server area.

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 : July 31, 2015  
RESOURCE AT 1580 LITCHFIELD TURNPIKE,  
NEW HARTFORD, CONNECTICUT

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 1580 Litchfield Turnpike, New Hartford, 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 north side 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 1580 Litchfield Turnpike, New Hartford, Connecticut. Specifically, the Facility will be constructed on the 25.4-acre property (“the Site”) that surrounds the Home Depot store. The Site is zoned “Business” (“B”) and a portion of the site is in the “MDC Nepaug Watershed District” under the zoning regulations of the Town of New Hartford (the “Town”).

The west side of the Site borders the jurisdiction of the City of Torrington. There are residential and commercial property along this border zoned “Residential, 15,000 SF Lot Size, Single Family” (“R15S”) and “Local Business” (“LB”) respectfully. Across Litchfield Turnpike to the south of the Site is zoned “Industrial” (“S”) under the Town of New Hartford. The residential properties to the north and east are within the “Residence 2 Acre” (“R2”) within the Town of New Hartford. The nearest structure is a residential house that lies across Harrison Road and is approximately 293 feet east of the facility.

The facility will be located within an existing concrete and asphalt area on the northwest side of the building. The portion of the Site that will be used for the Facility is shown in Exhibit 2.

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, Steve Sadlowski, during February 2105. At the time this petition was prepared, no comments were provided. 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 is approximately 36'-3" 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&P's net metering tariff. The interconnection to CL&P will be provided from the existing switchgear located inside the electrical room located on the central north side of the Building. At the time this petition was filled, 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 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 within the sidewalk area near 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 concrete and asphalt area on the northeast side of the Building. The facility will not extend beyond the limits of the existing concrete area. All utilities will be installed within the concrete and asphalt area. 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 impervious 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 proposed Facility will be approximately 293 feet to the south of an existing residential property. It has been determined that the Facility satisfies DEEP noise regulations without the need for sound remediation devices.

---

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

### **III. 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.

### **IV. BASIS FOR GRANTING OF THE PETITION**

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

---

<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].”

**V. 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,

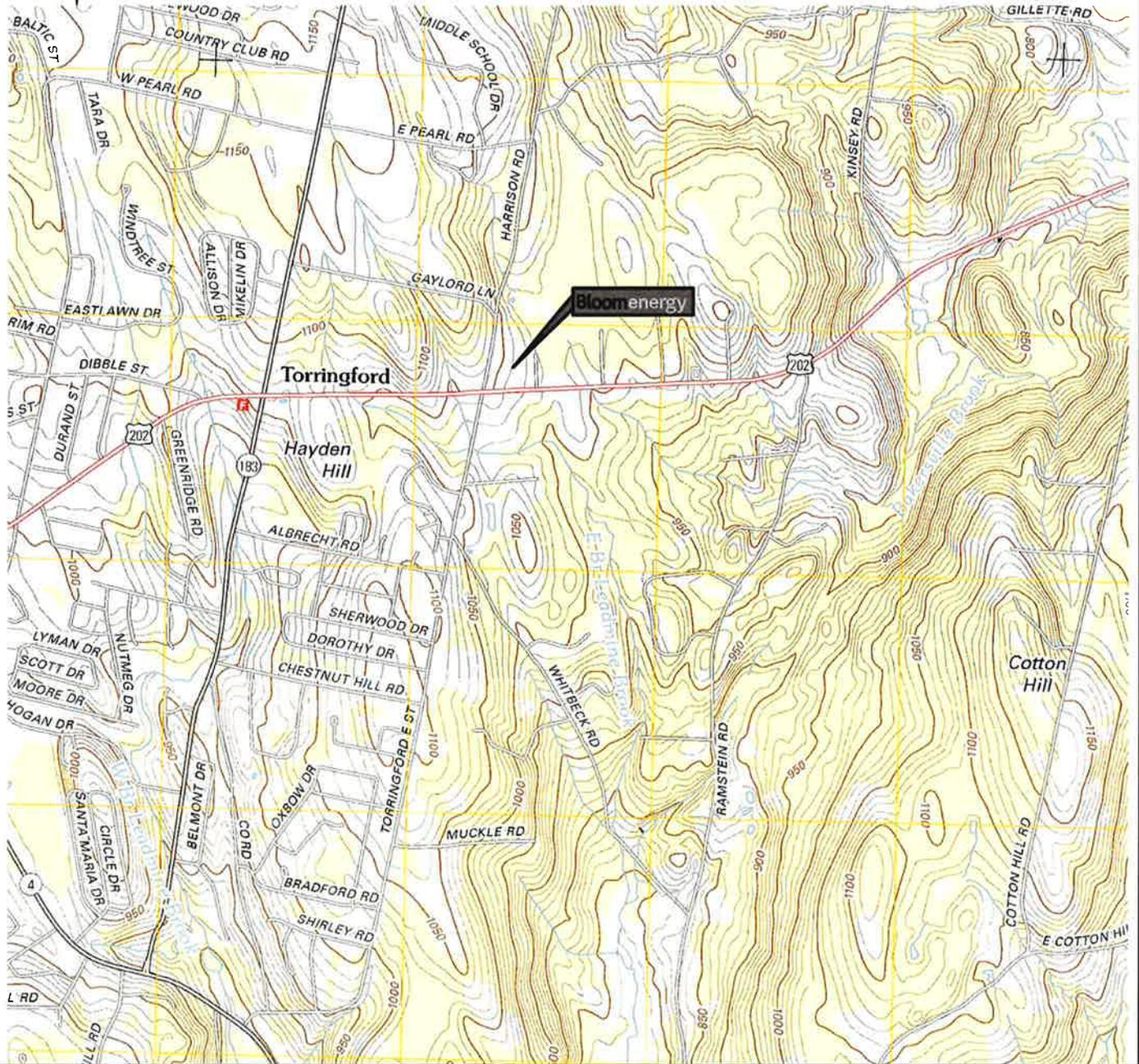
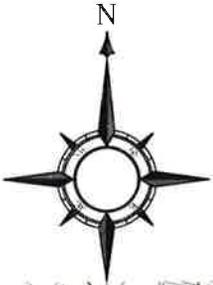
By: 

Matthew DeWitt, PE  
Core States Group  
58 Mount Bethel Road  
Warren, NJ 07059  
Telephone: (908) 462-9700  
Fax: (908) 462-9909  
Email: [mdewitt@core-eng.com](mailto: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-17971  
 Scale: 1" = 2,000'  
 Date: 01/07/2015  
 Drawn By: MDS

**CORE STATES**  
  
**GROUP**

59 Mount Bethel Boulevard, Suite 301,  
 Warren, NJ 07059  
 Tel: (908) 462-9719 Fax: (908) 462-9909  
 rprocanik@core-eng.com

**Bloom energy**™

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

1580 Litchfield Turnpike  
 New Hartford, CT 06057

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

## Exhibit 2

**RESPONSIBILITY NOTES**  
 1. THE DESIGNER'S OBLIGATION IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT AS SHOWN ON THESE PLANS. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 2. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 3. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 4. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.

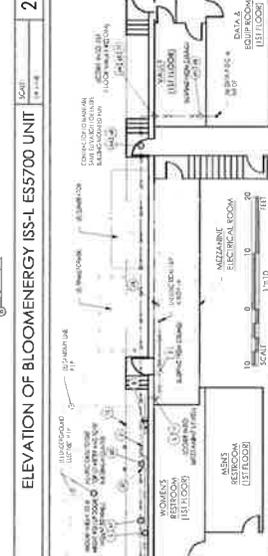
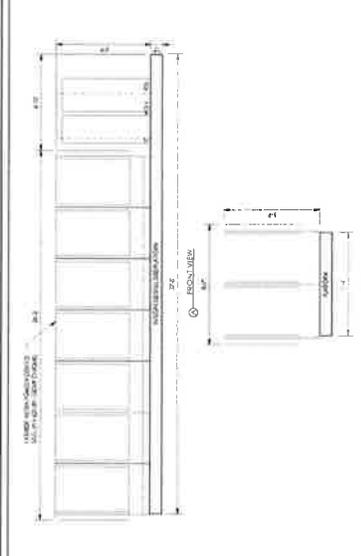
**SITE KIT NOTES**  
 1. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 2. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 3. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 4. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.

**UTILITIES**  
 1. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 2. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 3. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 4. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.

**CONDUIT & PIPE LENGTHS**  
 1. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 2. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 3. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 4. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.

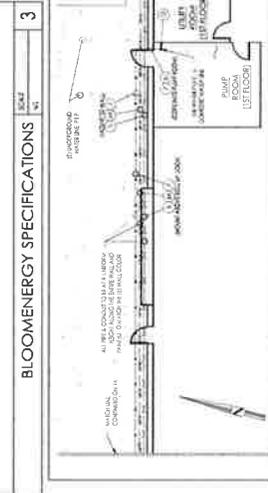
**LEGEND OF UTILITY LINES**  
 1. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 2. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 3. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 4. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.

**KEYNOTES**  
 1. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 2. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 3. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 4. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.

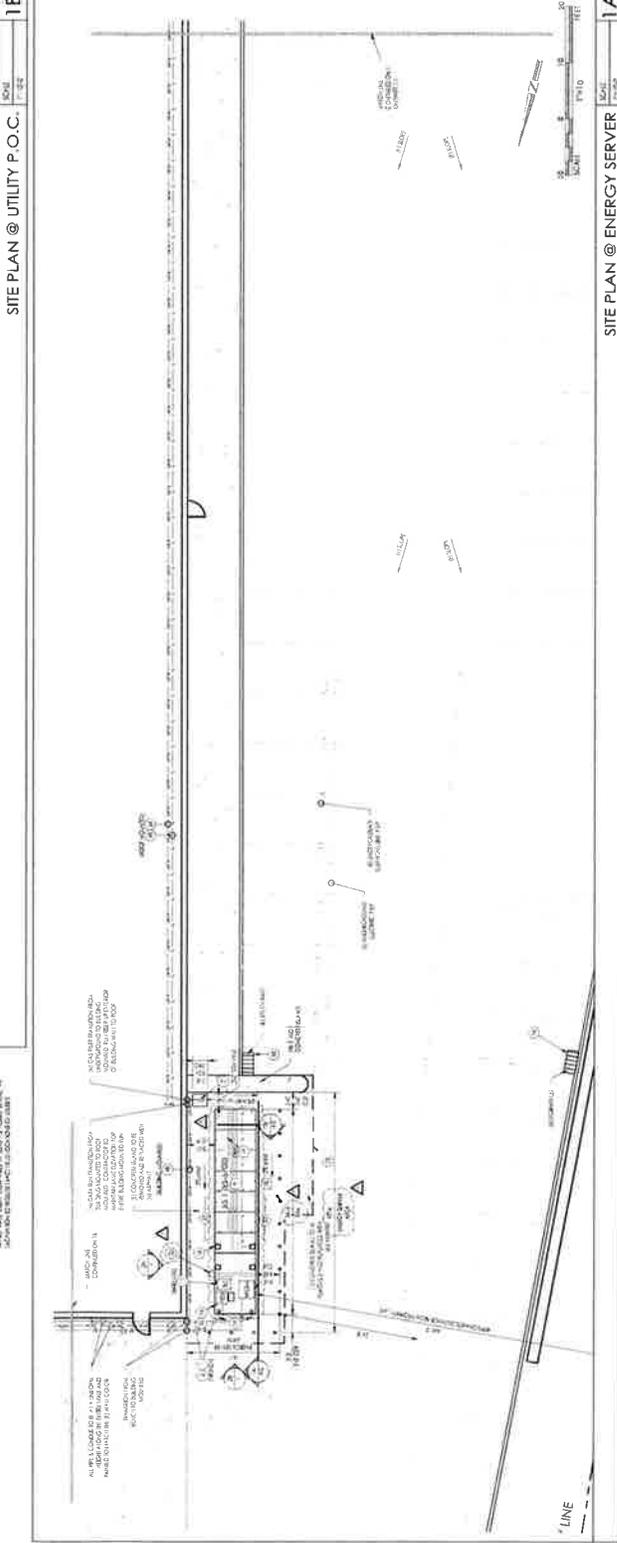


**BLOOMENERGY ES5700 SPECIFICATIONS**

ITEM	DESCRIPTION	QUANTITY	UNIT	NOTES
1	ES5700 UNIT	1	EA	
2	CONDUIT	100	FT	
3	PIPE	50	FT	
4	VALVE	2	EA	
5	FLANGE	4	EA	
6	ELBOW	8	EA	
7	TEE	4	EA	
8	CAP	2	EA	
9	ADAPTER	2	EA	
10	REDUCER	2	EA	
11	COUPLER	2	EA	
12	UNION	2	EA	
13	WELDED END	2	EA	
14	FLANGING END	2	EA	
15	WELDED END	2	EA	
16	FLANGING END	2	EA	
17	WELDED END	2	EA	
18	FLANGING END	2	EA	
19	WELDED END	2	EA	
20	FLANGING END	2	EA	



**HOME DEPOT GENERAL NOTES**  
 1. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE INTERNATIONAL BUILDING CODE (IBC) AND THE INTERNATIONAL MECHANICAL AND ELECTRICAL CODE (IMC).  
 2. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 3. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.  
 4. THE DESIGNER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF ANY INFORMATION PROVIDED BY OTHER PROFESSIONALS OR AGENCIES.



## 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 reformat 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.aao@ct.gov](mailto:deep.aao@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.



---

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

September 12, 2012

---

Date

## Exhibit 4

March 2, 2015

*Via electronic mail*

Town of New Hartford, CT  
530 Main Street  
New Hartford, CT 06057

Attn: Steve Sadlowski

RE: Bloom Energy Clean Energy Server Installation  
The Home Depot – 1580 Litchfield Turnpike

Mr. Sadlowski,

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, 1580 Litchfield Turnpike.

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 northwest corner 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

Municipal Official/Agency	Name/Address
New Hartford First Selectman	Daniel V. Jerram Town Hall 530 Main Street, P.O. Box 316 New Hartford, CT 06057
New Hartford Planning Department	Laura White Land Use Clerck 530 Main Street, P.O. Box 316 New Hartford, CT 06057
New Hartford Zoning Department	Steve Sadlowshki Zoning Enforcement Officer 530 Main Street, P.O. Box 316 New Hartford, CT 06057
New Hartford Conservation Commission	Alison Murdock Zoning Enforcement Officer 530 Main Street, P.O. Box 316 New Hartford, CT 06057
New Hartford State Senator	Kevin Witkos Senate District 8 15 Highledge Rd Canton, CT 06019
New Hartford State Representative	Bill Simanski House District 62 12 kilmer Lane Granby, CT 06035
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
Township of Torrington, CT	Joseph L. Quartiero, CMC City Clerk 140 Main Street, City Hall 1st Torrington, CT 06790
<b>Abutter Property</b>	<b>Abutter Name/Mailing Address</b>
41 woodland Road	Bourgoin, James A & Elaine M New Hartford, CT 06057
46 harrison Road	Thibulat, Mary C New Hartford, CT 06057
PO Box 125	Geiger, Roger L & Dawn M New Hartford, CT 06057
810 7TH Avenue	FB New Hartford LLC New York, NY 10019

## 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.

<b>Technical Highlights</b>	
<i>Inputs</i>	
<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
<i>Outputs</i>	
<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
<i>Emissions</i>	
<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
<i>Codes &amp; Standards</i>	
<b>Designed to comply with NEC, NFPA, ANSI, CT DPUC and CT SIR utility interconnection standards.</b>	
<b>Exempt from Air District Permitting; meets stringent CARB 2007 emissions standards.</b>	

## 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

March 23, 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 1580 Litchfield Turnpike – New Hartford, 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 1580 Litchfield Turnpike in New Hartford, 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 adjacent to the building near the North West corner. 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,



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