

August 12, 2014

Via Fed Ex

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

RE: Petition of Bloom Energy Corporation, as agent for International Business Machine Corporation, for a Declaratory Ruling for the Location and Construction of a 1-megawatt Fuel Cell Customer-Side Distributed Resource at 150 Kettletown Road, Southbury, CT 06488

Dear Chairman Stein:

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

In the Petition, Bloom Energy Corporation ("Bloom"), as agent for International Business Machines Corporation ("IBM"), requests the Connecticut Siting Council approve the location and construction of an approximately 1-megawatt fuel cell and associated equipment (the "Facility"). The Facility will be located on the site of an IBM establishment at 150 Kettletown Road, Southbury, CT (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.

IBM was selected by United Illuminating Company (UI) as a winning bidder in the "Low and Zero Emissions Renewable Energy Credit Program" established under Sections 107, 108, & 110 of Public Act No. 11-80. As a result of that selection, IBM has entered into a Standard Contract for the Purchase and Sale of Connecticut Class I Renewable Energy Credits with UI, which was approved by the Connecticut Public Utilities Regulatory Authority.

Should you have any questions, concerns, or require additional information, please do not hesitate to contact me at 908-462-9719.

Sincerely,

Core States Group



Richard Procanik
Project Manager

I:\Bloom Energy\BEC-17437 (IBM, Southbury, CT)\Project Manager\08 Calcs and Reports\Connecticut Siting Council\2014.08.11_IBM (Southbury, CT)_CSC Cover Letter.doc

**STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL**

PETITION OF BLOOM ENERGY : PETITION NO. ____
CORPORATION AS AGENT FOR :
INTERNATIONAL BUSINESS MACHINES :
CORPORATION FOR A DECLARATORY :
RULING FOR THE LOCATION AND :
CONSTRUCTION OF A 1-MEGAWATT FUEL : August 11, 2014
CELL CUSTOMER-SIDE DISTRIBUTED
RESOURCE AT 150 KETTLETOWN ROAD,
SOUTHURY, CONNECTICUT

PETITION OF BLOOM ENERGY CORPORATION AS AGENT FOR INTERNATIONAL
BUSINESS MACHINES CORPORATION 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 International Business Machines Corporation (“IBM”), 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 1-megawatt (“MW”) (net) Bloom solid oxide fuel cell Energy Server facility and associated equipment (the “Facility”), located on the site of a IBM at 150 Kettletown Road Southbury, Connecticut (the “Site”). *See* Exhibit 1. The facility will be installed by Bloom and operated by IBM.

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:

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Brown Rudnick LLP
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Hartford, CT 06103
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Email: psmall@brownrudnick.com

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

Richard N. Procanik
Core States Group
58 Mount Bethel Road
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Warren, NJ 07059
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Fax: (908) 548-0875
Email: rprocanik@core-eng.com

II. DISCUSSION

A. Background

The Facility will be a 1MW customer-side distributed resources facility consisting of four (4) state-of-the-art Bloom Energy Server and associated equipment. The Facility will be interconnected to an existing switchgear section located inside the electrical room, near the

northeast corner of the Central Services building (the “Building”), which is owned by Kettletown LLC and leased by IBM. *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.

IBM was selected by The Connecticut Light and Power Company (“CL&P”) as a winning bidder in CL&P’s and The United Illuminating Company’s joint request for proposals for their “Low and Zero Emissions Renewable Energy Credit Program” established under Sections 107, 108, and 110 of Public Act No. 11-80, *An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut’s Energy Future* (codified at Conn. Gen. Stat. §§ 16-244r, -244s, and -244t, respectively). As a result of that selection, IBM has entered into a *Standard Contract for the Purchase and Sale of Connecticut Class I Renewable Energy Credits* (“Standard Contract”) with CL&P, under which IBM will sell, and CL&P will purchase, Connecticut Class I Renewable Energy Credits generated by the Facility for a 15-year term. The PURA approved IBM’s selection by CL&P and its Standard Contract on October 22, 2013 in PURA Docket No. 11-12-06.

B. Description of the Site and the Facility

1. The Site

The Facility will be installed within the Kettletown LLC facility, a large commercial development located on Kettletown Road. Specifically, the Facility will be constructed on the 227-acre property (“the Site”) that surrounds the IBM building. The Site is owned by Kettletown LLC. The Site is zoned “Residential/Corporate Park R-60C District” (“R-60C”) under the zoning regulations of the Town of Southbury (the “Town”).

The majority of the surrounding areas to the northeast, east, and south are residential uses located within zone “Residential R-60 District” (“R-60”). To the north and northwest lots are primarily residential and commercial uses zoned under “Residential R-30 District” (“R-30”). The closest residential properties on the opposite side of Route 6 are approximately 1,500 feet to the northwest of the Facility.

The facility will be located on a concrete service pad at the rear of building within a landscaped area. 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 Land Use Administrator, DeLoris Curtis, during early August, 2014. See Exhibit 4.

2. The Facility

The Facility will consist of four (4) Bloom solid oxide fuel cell Energy Server and associated equipment. The dimensions of the Energy Server are approximately 26’-5” 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 1 MW 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. The interconnection to CL&P will be provided from the existing switchgear section located inside the electrical room near the northeast portion of the Building. At the time of this report, the CL&P interconnection application is currently 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 Facility. The new service line will branch off of the existing YGC line located on Bullet Hill Road to the south 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 on a new concrete service pad at the rear of the building within a grassed area. All utilities will be installed within the concrete service pad and landscaped area along the rear face 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

Compound	Connecticut Emission Standard (lbs/MW-hr)¹	Bloom Energy Server (lbs/MW-hr)
Oxides of Nitrogen (NO _x)	0.15	<0.01
Carbon Monoxide (CO)	1	<0.10
Carbon Dioxide (CO ₂)	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. The area for the proposed Facility will require some clearing and associated maintenance to ensure that proper clearance is met from the Energy Server to the surrounding greenery. However, due to the limited disturbance required for the Facility's installation, no construction-related storm water permits will be required. Further, de minimis 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 a landscaped area on a lot that was previously developed and disturbed during construction of the IBM building. 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

¹ Conn. Agencies Regs. § 22a-174-42, Table 42-2.

will be approximately 1,500 feet to the east of the nearest residential properties. Bloom has engaged a sound engineer to determine whether the Facility, as designed, will satisfy DEEP noise regulations. It has been determined that the Facility satisfies DEEP noise regulations without the need for sound remediation devices.

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).² 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.

² 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 IBM, respectfully requests that the Council approve the location and construction of the Facility by declaratory ruling.

Respectfully submitted,

Bloom Energy Corporation, as agent for
International Business Machines

By: _____


Amy Shanahan

Bloom Energy Corporation

1299 Orleans Drive

Sunnyvale, CA 94089

Telephone: (408) 543-1746

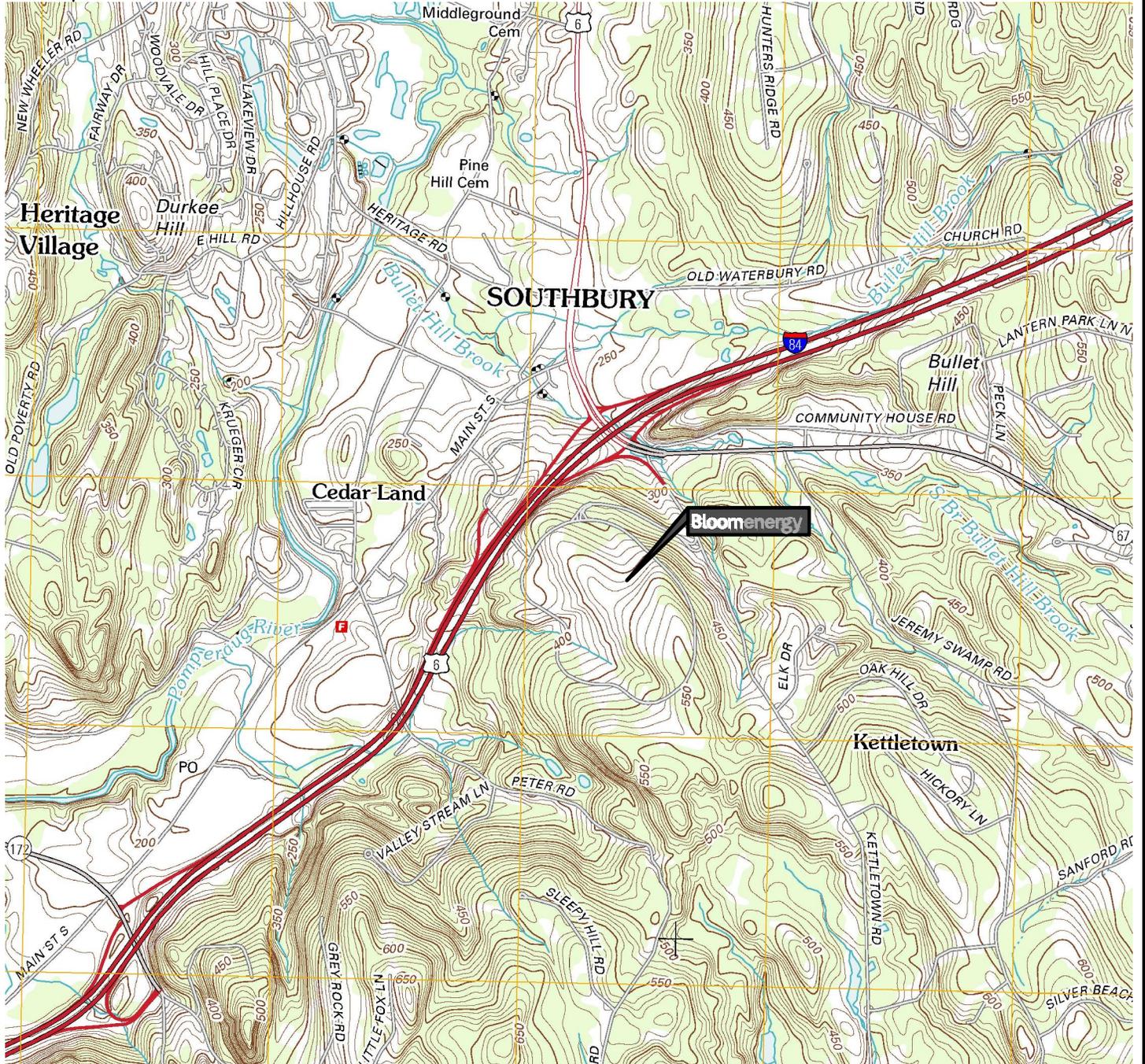
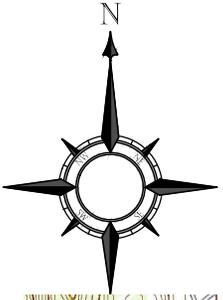
Fax: (408) 543-1501

Email: Amy.Shanahan@bloomenergy.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-17437
 Scale: 1" ≈ 2,000'
 Date: 07/22/2014
 Drawn By: MVW

CORE STATES

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 Warren, NJ 07059
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energy™ 1252 Orleans Drive, Sunnyvale CA, 94089
 Tel: 408 543 1500 Fax: 408 543 1501

150 Kettletown Road
 Southbury, CT 06488

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 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 CO₂ reductions due to its high efficiency, the energy server emits virtually no NO_x, SO_x, or other smog forming particulates since the conversion of gas to electricity in a Bloom Energy Server is done through an electrochemical reaction rather than combustion. Id., p. 4.

III. AUTHORITY ANALYSIS

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

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

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

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

IV. CONCLUSION

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

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. 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. 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

August 11, 2014

Town of Southbury
Planning Department
501 Main Street South
Southbury, CT 06488

Attn: DeLoris Curtis

RE: Bloom Energy Server Project
150 Kettletown Road - IBM

Ms. Curtis,

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 IBM facility at 150 Kettletown Road.

This IBM project proposes to install four (4) new Bloom Energy Server, ES-5710; a new class of distributed power generator which produces clean, reliable and affordable electricity at the customer site. Each Bloom Energy Server contains solid oxide fuel cells which provide 250 kW of power, utilizing a non-combustive chemical process. The Clean Energy Server are mounted onto a 25'6" x 7'8" concrete pad. Placement of the Clean Energy Server and related ancillary equipment is being proposed eastern face of the Central Services Building (please see attached site plan).

The ES-5710 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.

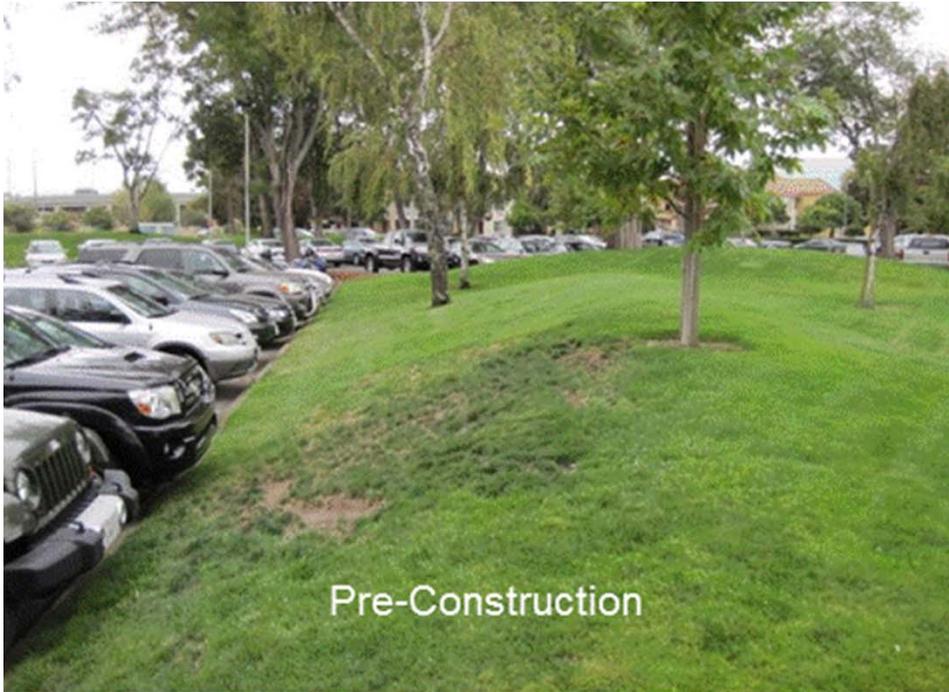
All-Electric Solution

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	
Fuel	Natural Gas
Fuel pressure	15 psig
Fuel required per 100 kW generated	0.661 MMBtu/hr of natural gas
Outputs	
Nominal power output (net AC)	Per 100 kW generated
Electrical efficiency (LHV net AC)	50 - 60%
Electrical connection	480V @ 60 Hz
Emissions	
NOx	< 0.01 lbs/MW-hr
SOx	negligible
CO	< 0.10 lbs/MW-hr
VOCs	< 0.02 lbs/MW-hr
CO2 @ specified efficiency	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





Pre-Construction



Install Preparations – Trenching & Underground Utility



Set Pads



Site Completion

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 21st day of September, 2016.

Executed at Sacramento, California, this 21st day of September 2011.

James Goldstene
Executive Officer
by

/S/

Richard Corey, Chief
Stationary Source Division

Exhibit 7

August 08, 2014

VIA FIRST CLASS MAIL

RE: Application for Core States Group, as Agent for International Business Machines Corporation, for a variance for the construction of a 1-Megawatt Fuel Cell Customer-Side Distributed Resource at 150 Kettletown Road, Southbury, 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 International Business Machines Corporation ("IBM") intends to file on or shortly after August 08, 2014, a petition for declaratory ruling with the Council. The petition will request the Council's approval of the location and construction of an approximately 1-Megawatt Bloom Energy Corporation fuel cell facility and associated equipment (the "Facility"), located at the site of a IBM building at 150 Kettletown Road in Southbury, 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 on a concrete service pad at the rear of the building within a landscaped rea. Each of the four (4) fuel cells are approximately 26'-5" 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
(908) 462-9919

Municipal Official/Agency	Name/Address
Southbury First Selectman	Ed Edelson Town Hall 501 Main Street Southbury, CT 06488
Southbury Planning Commission	Ed Gore, Planning Chairman Planning Commission Town Hall 501 Main Street Southbury, CT 06488
Southbury Zoning Commission	Gary Giroux, Zoning Chairman Zoning Commission Town Hall 501 Main Street Southbury, CT 06488
Southbury Inland Wetlands & Watercourses Agency	Scott Martin, Wetlands & Watercourses Chairman Inland Wetlands & Watercourses Agency Town Hall 501 Main Street Southbury, CT 06488
Southbury State Senator	The Honorable Rob Kane State Senate - 32nd District Legislative Office Building, Room 3400 Hartford, CT 06106
Southbury State Representative	The Honorable Arthur O'Neill State Representative - 69th District Legislative Office Building, Room 4200 Hartford, CT 06106
Southbury State Representative	The Honorable David Labriola State Representative - 131th District Legislative Office Building, Room 4200 Hartford, CT 06106

Connecticut Attorney General	George Jepsen, Attorney General Office of the Attorney General 55 Elm Street Hartford, CT 06106
State Development of Energy and Environmental Protection	Daniel C. Etsy, Commissioner Department of Energy and Environmental Protection 79 Elm Street Hartford, CT 06106-5127
State Department of Public Utility Control	Arthur House, Chairman Department of Energy & Environmental Protection Public Utilities Regulatory Authority 10 Franklin Square New Britain, CT 06051
State Department of Public Health	Dr. Jewel Mullen, Commissioner Department of Public Health 410 Capitol Avenue Hartford, CT 06134
State Council on Environmental Quality	Susan D. Mellow, Chair Council on Environmental Quality 79 Elm Street Hartford, CT 06106
State Department of Agriculture	Steven K.Reviczky, Commissioner Department of Agriculture 165 Capitol Avenue Hartford, CT 06106
Office of Policy & Management	Benjamin Barnes, Secretary Office of Policy and Management 450 Capitol Avenue Hartford, CT 06106
State Department of Economic &	Catherine Smith, Commissioner

Community Development	Department of Economic and Community Development 505 Hudson Street Hartford, CT 06106
State Department of Transportation	James P. Redeker, Commissioner Department of Transportation 2800 Berlin Turnpike Newington, CT 06111
Any Federal Agencies with Jurisdiction Over the Site	None
Abutter Property	Abutter Name/Mailing Address
451 Peter Road	Owen Lee A & Evelyn Southbury, CT 06488
1 North Castle Drive	Kettletown LLC C/O IBM Corp Armonk, NY 10504
409 Peter Road	Vanderlaan John 111 Southbury, CT 06488
17225 Palomas Drive	Zakrzewski Philip & Duane Perris, CA 92570
321 Peter Road	Thompson Richard W

	Southbury, CT 06488
1 North Castle Drive	International Business Machines Armonk, NY 10504
287 Peter Road	Lenahan John T & Sharon M Southbury, CT 06488
477 Peter Road	Gallagher Alison Southbury, CT 06488
221 Old Field Road	215 Peter Rd LLC Southbury, CT 06488
385 Peter Road	Olmstead Erik & Dubois Janet E Southbury, CT 06488
354 Kettle town Road	Zakrewski Stanley T & Patricia L Southbury, CT 06488
680 Bullet Hill Road	Bracco Catherine L & William F Southbury, CT 06488