

**CALIFORNIA ALTERNATIVE ENERGY AND  
ADVANCED TRANSPORTATION FINANCING AUTHORITY**

*Consideration of Bloom Energy Corporation’s Request to Approve a Time Extension for the  
Three Year Initial Term of the Title Conveyance Agreement*

**Tuesday, October 15, 2013**

Prepared By: *Alejandro Ruiz*

**Applicant** – Bloom Energy

**Location** – San Jose (Santa Clara County)

**Industry** – Fuel cells

**Project** – Expansion of fuel cell manufacturing facility

**Value of Project Equipment** – \$37,447,693

**Estimated Sales and Use Tax Exclusion Amount**<sup>1</sup> – \$3,407,740

**Amount of Time Requested:**

- 2 years (November 17, 2015) for the Initial Term of the Title Conveyance Agreement (5 years from the date of initial CAEATFA Board approval)

**SUMMARY**

In November 2010, the CAEATFA Board approved a sales use tax exclusion (“STE”) for Bloom Energy Corporation, (“Bloom” or the “Applicant”) for the purchase of \$37,447,693 of Qualified Property for the expansion of its fuel cell manufacturing facility (the “Project”). The Master Regulatory and Title Conveyance Agreement (“Agreement”) initial term provides the Applicant with three years from the date of Board Approval to utilize its STE award. The initial term of the Agreement can be extended by the Board upon a finding that an extension is in the public interest and advances the purposes of the Program.<sup>2</sup>

As of October 1, 2013, Bloom has conveyed \$15,450,109.80 (41%) of Qualified Property. In August 2013, CAEATFA staff sent the Applicant a courtesy reminder of the end of the three-year initial term. Bloom responded by requesting a 24-month extension of the Agreement to November 17, 2015 to accommodate slower than anticipated capital outlays due to increased manufacturing and product efficiency, which have allowed the company to meet demand for its product (Attachment A).

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<sup>1</sup> As presented in the staff summary from November 17, 2010, equivalent to a sales tax rate of 9.1%.

<sup>2</sup> Regulation Section 10035(b)(1)(A)

The Applicant has not made any previous waiver requests. Bloom met the 25% purchase requirement where Applicants are required to purchase 25% of the approved Qualified Property within one year of Board approval.

### **About the Applicant**

Bloom Energy Corporation (“Bloom”) was incorporated on January 18, 2001 in Delaware. Bloom manufactures on-site power generation systems (“Energy Servers”) that according to the Applicant utilize a new fuel cell technology with roots in NASA’s Mars program. The Applicant claims that “by leveraging breakthrough advances in materials science, Bloom Energy Servers are among the most efficient energy generators, providing for significantly reduced operating costs and dramatically lower greenhouse gas emissions.” Bloom Energy Servers are capable of running on both renewable and fossil fuels. By using fossil fuels more efficiently, without combustion and by supporting renewable fuels like biogas, Bloom claims its systems produce fewer emissions than other fuel cell technologies.

### **Project Description**

The Project has expanded Bloom’s existing manufacturing line, which is used to produce its Energy Server product. The expansion of the manufacturing line has included new automated process steps and upgrading manufacturing technology, resulting in an expanded manufacturing capacity.

Energy Servers are devices that directly convert fuel into electricity, and can do so on an on-site, distributed generation basis which reduces the need for the transmission and distribution of electricity. Distributed generation refers to power generation at the point of consumption. Each Energy Server consists of thousands of Bloom’s fuel cells. Each cell is a flat solid ceramic square made from a common sand-like “powder.” In an Energy Server, multiple stacks are aggregated into a “power module,” and then multiple power modules, along with a common fuel input and electrical output are assembled as a complete system. Each Energy Server provides power in 100kW increments. The Energy Servers can use either natural gas or biogas as the fuel base.

### **Agreement Term Extension Request**

Bloom has requested that the initial term of the Agreement be extended from November 17, 2013 to November 17, 2015 in order to allow the company to continue the expansion of its manufacturing facility. The Applicant has not made Qualified Property purchases as quickly as initially anticipated because of the increased life of manufacturing equipment due to diligent maintenance and retrofitting of equipment. Bloom has also been able to increase its manufacturing efficiencies as well as the energy density of its products, which have allowed it to meet customer demand without expanding its manufacturing footprint as quickly as originally anticipated.

Although the extended life of manufacturing equipment and increased manufacturing and product efficiencies have allowed Bloom to reduce its rate of capital purchases, the Applicant still intends to utilize the full award amount awarded in November 2010. Bloom reports it will need an additional 24 months to continue its research and development efforts that will result in improved manufacturing processes and, over time, additional purchases of manufacturing equipment.

**Staff Evaluation**

Bloom has indicated that the requested time extension will allow for the full purchase of Qualified Property as approved on November 17, 2010. Extending the initial term of the Agreement will allow Bloom to purchase the remaining Qualified Property to expand its existing manufacturing facilities. Based on the information presented, staff believes that extending the term of the Agreement is in the public interest and advances the purpose of the original award.

**Staff Recommendation**

Staff recommends that the Board approve Bloom’s request to extend the initial term of the Agreement to November 17, 2015 as it is in the public interest and advances the purpose of the original award.

**Attachments**

- Attachment A: Bloom’s Letter Requesting Waiver (September 24, 2013)
- Attachment B: Staff Summary on November 17, 2010

**A RESOLUTION OF THE  
CALIFORNIA ALTERNATIVE ENERGY AND ADVANCED TRANSPORTATION  
FINANCING AUTHORITY APPROVING A TIME EXTENSION FOR  
BLOOM ENERGY CORPORATION'S INITIAL TERM FOR THE MASTER  
REGULATORY AND TITLE CONVEYANCE AGREEMENT**

**October 15, 2013**

WHEREAS, on November 17, 2010 the California Alternative Energy and Advanced Transportation Financing Authority (the "Authority"), a public instrumentality of the State of California, approved a Sales Tax Exclusion ("STE") in the amount of \$37,447,693 of Qualified Property for **Bloom Energy Corporation** (the "Applicant"); and

WHEREAS, within three years of the approval by the Authority, the Applicant must make all purchases of the total amount of Qualified Property listed in the approval resolution (Regulations Section 10035(c)(1));

WHEREAS, upon a finding that it is in the public interest and advances the purposes of the Program, the Authority may waive the requirement that all purchases of Qualified Property be made within three years of Application approval (Regulations Section 10035(c)(1)(B));

WHEREAS, the Applicant has requested a waiver of the requirement to purchase all of the Qualified Property within three years, due to a slower than anticipated purchase schedule resulting from increases in manufacturing and product efficiency, and requests extension of the term from November 17, 2013 to November 17, 2015; and

WHEREAS, granting the waiver will allow the Project to proceed and the state to receive the anticipated environmental and economic benefits that justified the initial approval of the Project in accordance with the law, thereby advancing both the public interest and the purposes of the Program.

NOW THEREFORE BE IT RESOLVED by the California Alternative Energy and Advanced Transportation Financing Authority, as follows:

Section 1. The Authority finds that it is in the public interest and advances the purposes of the Authority to extend the initial term of the Agreement to November 17, 2015.

Section 2. This resolution shall take effect immediately upon its passage.

**Attachment A: Bloom's Letter Requesting Waiver**

**Bloomenergy**

September 24, 2013

Mr. Saúl Gómez  
CAEATFA  
915 Capitol Mall, Room 457  
Sacramento, CA 95814

Dear Mr. Gomez,

Thank you for your letter regarding Bloom's CAEATFA Qualified Property (QP) conveyance to date, and for CAEATFA's consideration of an extension of Bloom Energy's timeline to convey our remaining QP.

Over the past three years, Bloom Energy has continued to advance both the technology of the Alternative Source energy generation products that we sell to our customers, and the technology of the manufacturing equipment with which we develop those products. As a growing California based company, Bloom Energy has very much appreciated CAEATFA's support while we have worked to scale our business.

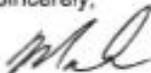
As of July 16th, 2013 Bloom Energy had conveyed 41% of the QP identified in our CAEATFA application. By the end of next week, Bloom Energy expects to convey an additional \$5.5 million of QP, taking the total conveyance to 56% of approved QP. At this rate, Bloom Energy does not anticipate that we will complete the conveyance of our \$37.4 million in QP by November 17th, 2013 as originally forecasted.

I am pleased to report that over the past three years Bloom Energy's development plans have been in line with what was expected in 2010 when the company originally considered the CAEATFA program. However, since the program began in 2010, a couple of primary factors have extended the timeline across which the company has acquired the capital required to build our business: First, by diligently maintaining and retrofitting equipment as necessary, the company has been able to extend the life of a number of the Bloom Energy's manufacturing assets. In addition, as both the energy density of Bloom Energy's products has increased and as manufacturing process efficiency has improved, the company has been able to meet the growth in customer demanded with both a greater capital efficiency and a smaller manufacturing footprint than initially anticipated. While these points are good news for Bloom Energy's business, we recognize that they have resulted in a lower QP conveyance rate than initially projected.

While the factors summarized above have enabled Bloom Energy to reduce the company's rate of capital purchases, we do anticipate procuring the full \$37.4 million originally identified in order to build the capacity that will be needed to meet future customer demand. An extension of Bloom Energy's conveyance deadline from November 17, 2013 to November 17, 2015 will allow Bloom Energy to continue to acquire our remaining QP under the CAEATFA program at a rate that is in line with our business expansion plans. We look forward to continuing to build our business in the State of California with CAEATFA's support.

Thank you for your consideration of this extension request.

Sincerely,



Mark Mesler  
Senior Director of Finance

**Attachment B: Staff Summary at Board Approval**

**CALIFORNIA ALTERNATIVE ENERGY AND  
ADVANCED TRANSPORTATION FINANCING AUTHORITY**

*Request to Approve Project for SB 71 Sales and Use Tax Exclusion<sup>3</sup>*

**BLOOM ENERGY CORPORATION  
Application No. 10-SM015**

**Wednesday, November 17, 2010**

Prepared By: *Heather Williams*

**SUMMARY**

**Applicant** – Bloom Energy Corporation

**Location** – Sunnyvale, Santa Clara County

**Industry** – Fuel Cells

**Project** – Expansion of fuel cell manufacturing Facility

**Value of Qualified Property** – \$37,447,693

**Estimated Sales and Use Tax Exclusion Amount<sup>4</sup>** – \$3,407,740

**Application Score** –

Fiscal Benefits Points:	3,270
<u>Environmental Benefits Points:</u>	<u>165</u>
<b>Net Benefits Score:</b>	<b>3,435</b>

<u>Additional Benefits Points:</u>	<u>80</u>
<b>Total Score:</b>	<b>3,515</b>

**Staff Recommendation** – Approval

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**THE APPLICANT**

Bloom Energy Corporation (“Bloom”) was incorporated on January 18, 2001 in Delaware. Bloom manufactures on-site power generation systems (“Energy Servers”) that according to the

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<sup>3</sup> All capitalized terms not defined in this document are defined in the Program’s statute and regulations.

<sup>4</sup> This amount is calculated based off of the average statewide sales tax rate of 9.1%.

**Agenda Item – 4.C.2**  
**Application No. 10-SM015**

Applicant utilize a new fuel cell technology with roots in NASA’s Mars program. The Applicant claims that “by leveraging breakthrough advances in materials science, Bloom Energy Servers are among the most efficient energy generators, providing for significantly reduced operating costs and dramatically lower greenhouse gas emissions.” Bloom Energy Servers are capable of running on both renewable and fossil fuels. By using fossil fuels more efficiently, without combustion and by supporting renewable fuels like biogas, Bloom claims its systems produce fewer emissions than other fuel cell technologies.

The major shareholders (10.0% or greater) of Bloom are:

Kleiner Perkins Caufield & Byers  
New Enterprise Associates

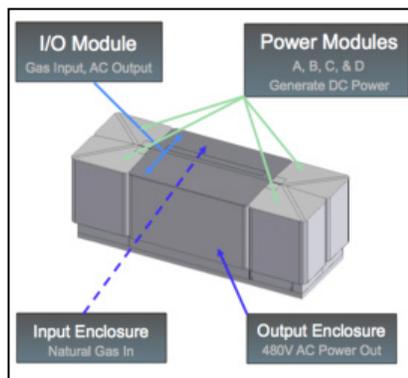
The corporate officers of Bloom are:

KR Sridhar – CEO  
William Kurtz – CFP  
George Nguyen – COO

**THE PROJECT**

Bloom is currently planning the expansion of its manufacturing output of its Energy Servers. Energy Servers are devices that directly convert fuel into electricity, and can do so on a distributed generation basis which avoids the need for transmission and distribution of electricity. Distributed generation refers to power generation at the point of consumption. Each Energy Server consists of thousands of Bloom’s fuel cells. Each cell is a flat solid ceramic square made from a common sand-like “powder.” In an Energy Server, multiple stacks are aggregated into a “power module,” and then multiple power modules, along with a common fuel input and electrical output are assembled as a complete system. Each Energy Server provides 100kW of power, enough to meet the baseload needs of 100 average homes or a small office building. The Energy Servers can use either natural gas or biogas as the fuel base. Bloom installs and handles all management and maintenance of their systems.

This technology has been developed and manufactured in California to date in large part because of the large market and favorable business environment in the State for manufacturers of clean technology. The high cost of business in the State has led to recent evaluation of alternative manufacturing locations overseas. However, the economic advantages brought through elimination in the sales tax is a strong incentive for Bloom to keep and expand its manufacturing located in California.



**Bloom Energy Server**

**ANTICIPATED COSTS OF QUALIFIED PROPERTY**

The anticipated Qualified Property purchases are listed below:

Coating equipment for SOFC component manufacturing	\$ 664,877
Furnaces for the manufacture of SOFC-based electricity generators	16,380,943
Equipment to monitor required product and assembly environment specifications	2,692,658
SOFC generator assembly equipment	465,422
Repair and overhaul capital equipment	562,156
Manufacturing engineering equipment	7,704,819
Manufacturing information technology	3,879,631
Manufacturing facilities capital expenditure upgrades	3,661,898
Guards, screens and fences for worker safety	<u>1,435,290</u>
<b>Total</b>	<b><u>\$37,447,693</u></b>

*Note: The Qualified Property purchases reported in the Application and shown here in staff's report are estimated costs. At the termination of the conveyance/reconveyance agreement a finalized project equipment list will be prepared detailing the value of the Project equipment conveyed and reconveyed and detailing the actual tax benefit realized pursuant to Revenue and Tax Code Section 6010.8. Variations from the costs shown in the Application and in this report may occur prior to the closing due to increased costs of certain components of the Project from original estimates, and other reasons. In addition, such costs may vary after closing due also to increased costs, as well as common design and equipment modifications during construction, differences in equipment due to future changes in law or regulation or for other reasons.*

**TIMELINE**

Bloom Energy is in the process of rolling out its manufacturing capacity in multiple stages. After the passage of SB 71, Bloom decided to embark upon the initial round of manufacturing expansion, forecasted to be completed in early 2011. The total Qualified Property identified in this application will be used in additional manufacturing expansion efforts, beginning on 11/17/2010 and concluding by 12/31/2013.

**PROJECT EVALUATION**

**NET BENEFITS**

The total cost of the Qualified Property purchases is anticipated at \$37,447,693 and the total net benefits are valued at \$8,298,503 for the Project. The Project received a Total Score of 3,515 which exceeds the required 1,000 point threshold and a total Environmental Benefits Score of 165 which exceeds the 100 point threshold.

- A. Fiscal Benefits (3,270 points):** The net present value of the total fiscal benefits over the lifetime of the Qualified Property is derived from the Company' s sales taxes,

personal income taxes, firm taxes on profits, property taxes and other indirect fiscal benefits of the Applicant which amounts to \$11,144,189 resulting in a Fiscal Benefits Score of 3,270 points for the Project.

- B. Environmental Benefits (165 points):** The project results in \$562,054 of total pollution benefits over the life of the Facility resulting in an Environmental Benefits Score of 165 points for the Project. These benefits derive from the capacity of the fuel cells to generate electricity from alternative sources, thereby reducing the need for traditionally generated electricity.
- C. Additional Benefits (80 of 200 points):** Applicants may earn up to 200 additional points for their Total Score. The Applicant submitted information and received 80 additional points.
- a. Permanent Jobs (40 of 40 points).** The Applicant’s Project will support a total of 994 permanent jobs at their Facility. CAEATFA estimates that approximately 82 of these jobs will be attributable to a marginal increase in jobs created due to the approved STE resulting in a Permanent Jobs Score of 40 points for the Project.
  - b. Construction Jobs (0 of 20 points).** The Applicant’s Project will support a total of 10 construction jobs at their Facility. CAEATFA estimates that approximately 1 of these jobs will be attributable to a marginal increase in jobs created due to the approved STE. 0 points were awarded because the marginal increase in jobs created does not meet the required threshold.
  - c. Process Improvement (0 of 40 points):** The Applicant provided documentation in which they certify the Project had substantial process improvement in the areas of energy use, water use and atmospheric emissions. Documentation included information provided in the Applicant Notes section of the Application worksheet. CAEATFA has not evaluated this documentation further, as the Applicant has already obtained the minimum point threshold necessary to qualify. Thus no additional points were awarded in this category.
  - d. Non-CA Environmental Benefits (40 of 40 points).** The Applicant’s total value of out-of-state non-greenhouse gas pollution benefits are valued at \$321,558 resulting in a Non-CA Environmental Benefits Score of 40 points for the Project.

**STATUS OF PERMITS/OTHER REQUIRED APPROVALS**

Bloom currently has all of the necessary permits to put the Qualified Property into operation.

**LEGAL QUESTIONNAIRE**

Staff reviewed the Applicant’s responses to the questions contained in the Legal Status portion of the Application. The responses did not disclose any information that raises questions concerning the financial viability or legal integrity of this applicant.

**CAEATFA FEES**

In accordance with CAEATFA regulations,<sup>5</sup> the Applicant has paid CAEATFA an Application Fee of \$5,000 and will pay CAEATFA an Administrative Fee of up to \$149,790.

**RECOMMENDATION**

Staff recommends approval of Resolution No. 10-SM015 for Bloom Energy Corporations purchase of Qualified Property in an amount not to exceed \$37,447,693 anticipated to result in an approximate sales and use tax exclusion value of \$3,407,616.

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<sup>5</sup> California Code of Regulations Title 4, Division 13, Article 2, Section 10036.

**RESOLUTION APPROVING AND AUTHORIZING EXECUTION OF A TITLE  
CONVEYANCE AGREEMENT WITH BLOOM ENERGY CORPORATION**

WHEREAS, the California Alternative Energy and Advanced Transportation Financing Authority (the “Authority”) has received the application of **Bloom Energy Corporation** (the “Applicant”), for financial assistance in the form of a conveyance/reconveyance of title agreement (the “Agreement”) regarding tangible personal property for the design, manufacture, production or assembly of Advanced Transportation Technologies or Alternative Source products, components, or systems (“Qualified Property”) as more particularly described in the staff summary and in the Applicant’s Application to the Authority (collectively, the “Project”); and

WHEREAS, the Applicant has requested the Authority to enter into the Agreement transferring title of Project equipment with an cost not to exceed \$37,447,693 over a period of three years; and

WHEREAS, the Agreement will provide that the Applicant will, prior to any use of the Qualified Property, transfer title at no cost to the Authority from time to time as purchases of Qualified Property are made and the Authority will then transfer title back to the Applicant without having taken possession of the Qualified Property; and

WHEREAS, the Applicant believes that this form of financial assistance will enable it to avail itself of the benefits of an exclusion from sales and use taxes relative to the Qualified Property pursuant to California Revenue and Taxation Code Section 6010.8; and

WHEREAS, approval of the terms of the Agreement and authority for the Executive Director, Deputy Executive Director or Chair, to execute the necessary documents to effectuate the Agreement is now sought;

NOW, THEREFORE, BE IT RESOLVED by the California Alternative Energy and Advanced Transportation Financing Authority, as follows:

Section 1. The Project constitutes a “project” within the meaning of Public Resources Code Section 26003(g)(2).

Section 2. The requested conveyance agreement constitutes “financial assistance” within the meaning of Public Resources Code Section 26003(e)(2).

Section 3. The Applicant is a “participating party” within the meaning of Public Resources Code Section 26003(f).

**Agenda Item – 4.C.2**  
**Application No. 10-SM015**

Section 4. The Executive Director, Deputy Executive Director, or Chair, of the Authority (the “Authorized Signatories”) are hereby authorized for and on behalf of the Authority to approve any changes to the Project as the Executive Director shall deem appropriate, provided that the amount of the Qualified Property to be purchased may not be increased above the amount approved by the Authority.

Section 5. The proposed form of the Agreement between the Applicant and the Authority, as filed with the Authority prior to this meeting, is hereby approved. The Authorized Signatories are hereby authorized and directed, for and on behalf and in the name of the Authority, to execute, acknowledge and deliver to the Applicant the Agreement in substantially the form filed with or approved by the Authority, with such insertions, deletions or changes therein as the Authorized Signatory executing the same, may require or approve, and with particular information inserted therein in substantial conformance with the staff summary and in the Applicant’s Application to the Authority, such approval to be conclusively evidenced by the execution and delivery thereof. The Authority understands and agrees that pursuant to the terms of the Agreement, the obligations of the Applicant may, under some circumstances be carried out or assumed by a successor or assignee entity, or by an affiliate of the Applicant.

Section 6. Each of the Authorized Signatories, acting alone, is hereby authorized and directed to do any and all ministerial acts, including (without limitation) the execution and delivery of any and all documents and certificates they may deem necessary or advisable in order to consummate the Agreement and otherwise effectuate the purposes of this resolution.

Section 7. The Applicant shall assure CAEATFA that all Qualified Property conveyance pursuant to the Agreement shall be installed, maintained and operated in compliance with all applicable local, state and federal laws.

Section 8. The Agreement shall only apply to Qualified Property that the Applicant certifies will be installed, maintained and operated at facilities within the State of California.

Section 9. The adoption by the Authority of this Resolution for the Applicant shall not be referred to in any application before any governmental agency as evidence of the feasibility, practicality or suitability of the Project or in any application for any required permission or authority to acquire, construct or operate the Project.

Section 10. This Resolution is effective immediately and will remain in full force and effect unless the Regulatory Agreement, as defined in CAEATFA Regulations Section 10035(A), is not executed within thirty (30) days of the date of this Resolution. The Executive Director may extend the thirty days if necessary.