



January 26, 2017

Justin Adams
Bloom Energy Corporation
1299 Orleans Drive
Sunnyvale, CA 94089

RE: PETITION NO. 1284 - Bloom Energy Corporation, as an agent for FedEx Ground, petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the construction, operation and maintenance of a Customer-Side 250-Kilowatt Fuel Cell Facility to be located at the FedEx Ground building, 40 Kennedy Road, South Windsor, Connecticut.

Dear Ms. Bachman,

We are submitting an original and fifteen (15) copies of the interrogatories response for Petition NO. 1284.

Sincerely,

Justin Adams
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(860) 839-8373

Petition No. 1284
Bloom Energy Corporation
40 Kennedy Road, South Windsor, CT
Interrogatories

1. The certified mail receipts have been emailed to the Council to reduce the paper usage required to provide 16 copies.
2. The operational life is for the life of the 20 year contract. The solid oxide media in the fuel cells are exchanged at roughly 5 year intervals.
3. Based on a sound model performed by Bloom Energy, the anticipated sound levels at the nearest property line located approximately 340 feet to the west of the Facility would be approximately 38.1dBA. See Exhibit 13. The proposed Facility would be defined as "Scenario 2" in the model. Scenario 2 models noise for a Bloom Energy Server installed with no structures behind it to reflect sound from either side. This value is in compliance with noise criteria set forth in Connecticut regulations for the Control of Noise¹ and the Town of South Windsor Code of Ordinances².
4. The proposed facility will displace less efficient fossil fueled marginal generation on the NE ISO system. Based upon US EPA "eGrid" data the proposed facility is expected to reduce carbon emissions by more than 25% while essentially eliminating local air pollutants like NOx, SOx, and particulate matter.
5. No gaseous substances are released or vented at any point during the desulfurization process.
6. The options at the conclusion of the 20 year contract between Bloom and FedEx Ground ("FedEx") includes:
 - i. FedEx renews the contract,
 - ii. FedEx returns the Facility at no cost, or
 - iii. FedEx buys the Facility at a fair market value.

If the Facility is to be removed at the end of the contract or if there is a default in the contract;

- i. the Energy Servers, associated equipment and components will be dismantled and removed,
- ii. the concrete pads will remain unless requested to be removed, and
- iii. the site will be restored as nearly as practicable to its effective original condition.

¹ Sec. 22a-69-3.5. Noise zone standards

² Part II – Code of Ordinances Chapter 50 – Health and Sanitation – Article III. – Noise Control

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7. Bloom spoke by telephone and provided a copy of the site plan via email to Michele Lipe, Director of Planning for the Town of South Windsor on December 22, 2016. There were no concerns expressed during or as a follow-up to these communications.



Exhibit 13

Calculation of Yuma Sound Pressure Based On Distance

By Bob Hintz 1/16

All calculations are based on the following formula for sound pressure level (L_p):

$$L_p = L_w - |10 \cdot \log \left(\frac{Q}{4\pi \cdot r^2} \right)|$$

Sound power value (L_w) attained from V1 Yuma linear in DE reported on Feb. 4, 2015 by Mei Wu.

Scenario 1

ES is installed close to a building or tall wall so noise from the ES is reflected off of the structure and added to the noise from the other side of the ES making it sound louder than normal. This is represented by a directivity factor $Q = 4$

$$L_p = 41.1 \text{ dB}$$

Where:

$$L_w = 86.4 \text{ dB}$$

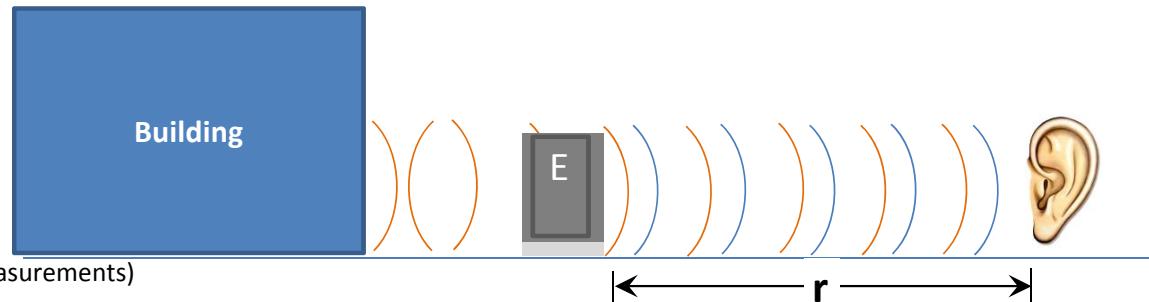
ES sound power (Calc. from measurements)

$$Q = 4$$

Directivity factor

$$r = 340 \text{ Feet}$$

Enter value here for both Scenarios



Input various values for r to approximate the perceived sound pressure at that distance from the ES door

Scenario 2

ES is installed with no structures behind it to reflect sound from either side. This is represented by a directivity factor $Q = 2$

$$L_p = 38.1 \text{ dB}$$

Where:

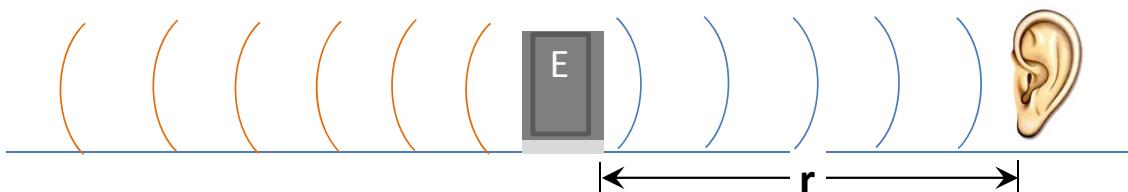
$$L_w = 86.4 \text{ dB}$$

ES sound power (Calc.)

$$Q = 2$$

Directivity factor

$$r = 340 \text{ Feet}$$



Input various values for r to approximate the perceived sound pressure at that distance from the ES door