



September 14, 2015

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

**RE: Response to Interrogatories (Petition No. 1190)**

Dear Chairman Stein:

Please find the attached response to interrogatories relating to Petition No. 1190, the Hyatt Bloom Energy Fuel Cell Project. Included is an original and fifteen copies. Also attached are sixteen copies of the abutter map, as requested.

Should you have any questions or concerns regarding the proposed Facility, please contact Amy Shanahan at (408) 543-1746 or [amy.shanahan@bloomenergy.com](mailto:amy.shanahan@bloomenergy.com).

Sincerely

**Bloom Energy**

A handwritten signature in blue ink, appearing to read "Amy Shanahan".

Amy Shanahan  
Planning and Permitting Manager

**Petition No. 1190**  
**Response to Interrogatories**

**Questions**

- 1) Natural gas has sulfur dioxide injected as an odorant. Please submit a desulfurization plan narrative for the proposed fuel cell facility containing the following information
  - a. Chemical reaction overview concerning what substances are produced from the desulfurization process, as well as plans for the containment and transport;
  - b. Specifically, how much sulfur oxide would result from the desulfurization process, as well as methods and locations for containment, transport, and disposal;
  - c. Whether any of these desulfurization substances are considered hazardous, and if so, plans for the containment, transport, and disposal of hazardous substances;
  - d. Anticipated method of disposal for any other desulfurization substances; and
  - e. Whether any gaseous substances resulting from desulfurization can be expected to vent from the fuel cells, as well as the applicable CT DEEP limits regarding discharge of these gasses,
- 2) Would the fuel cells shut down in the event of a power outage, and if so, does it have "black start" (automatic restart) capability?
- 3) Will the fuel cells have an uninterruptible power module?

**Responses**

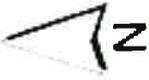
- 1) Desulfurization Plan Narrative

The fuel cells proposed for the Hyatt project will utilize natural gas from the utility pipeline that delivers gas to homes and to commercial businesses in the area. This is the very same natural gas that Greenwich residents use in their homes for heating and for cooking over a gas range. The fuel cells planned for deployment in Greenwich do not create sulfur. Gas suppliers add sulfur compounds to the natural gas as a safety precaution to smell the gas in the event there is a pipeline leak. The sulfur compounds, however, impede the function of the fuel cell and their removal ensures longer system life and enhanced productivity. A sulfur removal unit consisting of sealed metal canisters containing sorbent beds is included with each fuel cell to remove sulfur compounds from the natural gas stream before it enters the fuel cell system.

Periodically these sealed desulfurization canisters are removed and replaced as sorbent material is used up.

The sulfur compounds captured in this process are not considered hazardous waste per the EPA Resource Conservation and Recovery Act (RCRA) regulations. At the time of replacement, the filter materials have essentially the same make up as when they were new. In addition, they have adsorbed a small amount of sulfur compounds, which are filtered from the natural gas stream and accumulated in the sorbent, representing an estimated 0.3 wt.% of the filter materials. The sorbent materials may also contain trace amounts of hydrocarbons or other organic compounds which are naturally present in natural gas. Out of an abundance of caution, the canisters remain sealed until they are opened and treated at an EPA licensed facility. During shipment the canisters remain sealed and we adhere to all applicable federal, state and local environmental requirements. Our transportation protocol has also been verified by the Department of Transportation. The elements that are filtered out and handled responsibly in connection to the fuel cell are the same elements that are burned in the home and released into the atmosphere every day during normal home heating and cooking.

- 2) The Hyatt Fuel Cell project is a grid parallel installation, which means that the fuel cell provides primary power to the building with additional load provided by the utility. In the event of a power outage, the Bloom Energy fuel cell will automatically go into stand-by mode and disconnect from the grid. The system will automatically start up again when the grid is normal.
- 3) No, the Hyatt Fuel Cell project will not have an Uninterruptible Power Module (UPM).



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