# STATE OF CONNECTICUT

***CONNECTICUT SITING COUNCIL***

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**VIA ELECTRONIC MAIL**

November 16, 2016

Dawn Mahoney, Esq.
General Counsel
Doosan Fuel Cell America Inc.
195 Governor's Highway
South Windsor, CT 06074

RE: **PETITION NO. 1262** - Doosan Fuel Cell America, Inc. petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the construction, maintenance, and operation of 1380-kilowatt customer-side combined heat and power fuel cell facility to be located at the Borough of Naugatuck Waste Water Treatment Plant, 500 Cherry Street Extension, Naugatuck, Connecticut.

Dear Attorney Mahoney:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than November 30, 2016. To help expedite the Council's review, please file individual responses as soon as they are available.

Please forward an original and 15 copies to this office, as well as send a copy via electronic mail. In accordance with the State Solid Waste Management Plan and in accordance with Section 16-50j-12 of the Regulations of Connecticut State Agencies the Council is requesting that all filings be submitted on recyclable paper, primarily regular weight white office paper. Please avoid using heavy stock paper, colored paper, and metal or plastic binders and separators. Fewer copies of bulk material may be provided as appropriate.

Yours very truly,

Melanie Bachman
Acting Executive Director

MB/MP

c: Council Members

**Petition No. 1262**
**Doosan Fuel Cell America, Inc.**
**500 Cherry Street Extension**
**Naugatuck, CT**
**Interrogatories**

1. In Doosan Fuel Cell America, Inc.'s (Doosan) Petition received on October 25, 2016, in the heading of the filing, Doosan notes that the proposed site is located at 500 Cherry Street. Is the correct address 500 Cherry Street Extension?

2. Confirm that notice was provided via certified mail to recipients including the host property owner, abutters, and state and local officials. Provide certified mail receipts.

3. Provide a detailed site plan that includes but is not limited to location and dimensions of the fuel cells, cooling modules, concrete pads, fence design and bollards (if applicable), utility connections, nearby utility building, and retaining wall.

4. What is the projected service life of the proposed fuel cells?

5. Would the proposed project be surrounded by a fence? If a chain link fence is being proposed, provide the height of the fence and mesh size. Has Doosan considered the installation of an anti-climb fence design? Would bollards be used to protect the fuel cell facility from being accidentally struck by vehicles?

6. Is the 20-foot high concrete retaining wall noted on pages one and five of the Petition existing or proposed? If the retaining wall is existing, would there be any modifications or additions to the existing concrete retaining wall to accommodate the proposed fuel cell facility? Explain.

7. Is the project located outside of the 100-year and 500-year flood zones? If no, would the proposed fuel cells and cooling module(s) be elevated as a flood mitigation measure, e.g. one foot above the 100-year flood elevation? Provide a Federal Emergency Management Agency flood zone map.

8. What is the zoning designation of the subject property? What are the surrounding land uses for areas abutting the site?

9. Provide a decommission plan, including the fuel cell facility infrastructure removal plans and site restoration plans.

10. What is the distance and direction from the proposed fuel cell facility to the nearest wetland?

11. What is the distance and direction from the proposed fuel cell facility to the nearest residence?

12. Is the fuel cell facility located with an Aquifer Protection Area as designated by the Connecticut Department of Energy and Environmental Protection (DEEP)?

13. Is the fuel cell facility located within any environmentally sensitive areas such as DEEP Natural Diversity Database (NDDB) Area, flood zones, wetlands, Connecticut Critical Habitat Area, etc.?

14. How many trees six inches diameter or greater would be removed to construct the proposed fuel cell facility, if any?

15. What is the closest distance from the proposed fuel cell facility location to the Naugatuck River?

16. Would any waste heat from the fuel cells be used for the building's internal use such as to provide or supplement domestic heating and/or hot water?

17. Would the fuel facility only consume water during the initial commissioning start-up or every time the unit cycles on? How much water is used for a start-up? Would the fuel cell run on mostly a 24/7 basis as a baseload facility and thus have infrequent start-ups?

18. Would the fuel cell facility provide backup power in the event of a power outage? If yes, would the fuel cell first shut down and then automatically "black start" to restore power, or would it continue running seamlessly despite the loss of grid power (i.e. provide uninterruptible power)? Please explain.

19. Would any surplus power be sold to the grid? What percentage of the building's energy usage would be provided by the proposed facility under normal conditions?

20. Please provide an Emergency Response Plan for the proposed facility in accordance with Public Act 11-101, An Act Adopting Certain Safety Recommendations of the Thomas Commission.

21. Please identify media to be used for pipe cleaning procedures at the proposed facility in accordance with Public Act 11-101, An Act Adopting Certain Safety Recommendations of the Thomas Commission.

22. Which National Fire Protection Association (NFPA) or other codes and standards apply to fuel cell construction, installation and/or modification?

23. Please submit a noise analysis report to demonstrate compliance with DEEP noise control standards.

24. In the Petition, Doosan predicts a noise level of not more than 62 dBA at 100+ feet away for the fuel cell. Does that include the cooling module(s) and the cumulative noise effects of having three fuel cell units instead of one? If no, please update this noise prediction accordingly in response to question 23.

25. Provide a table showing state criteria thresholds and projected emissions from the proposed facility for all greenhouse gasses listed in the Regulations of Connecticut State Agencies Section 22a-174-1(49) with or without the use of waste heat. Provide cumulate emissions from all three units.

26. Which emission rate in pounds of $CO_2$ per megawatt-hour (MWh) did Doosan use for the eGRID non-baseload generation for the ISO New England, Inc. electric system? Doosan estimates that annual carbon emissions would be reduced by about 1,300 metric tons per year. Is this only for displacement of non-baseload electric generation, or would the total carbon reduction be potentially higher, for example, because the use of waste heat would reduce the runtime of the building's heating system, if applicable?

27. Does the amount of phosphoric acid in each fuel cell (or cumulatively for all three fuel cells) comply with the applicable State and federal regulations?

28. Natural gas has sulfur dioxide injected as an odorant. Is desulfurization required, e.g. to protect the fuel cell stack from sulfur? Explain. If yes, 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 their containment and transport;
    b) How much solid sulfur oxide would result from the desulfurization process, and 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 DEEP limits regarding discharge of these gasses.

29. If the project is approved by the Council, approximately when would construction commence and when would it be completed? What are the estimated work hours and days of the week, e.g. Monday through Friday 7:00 a.m. to 5:00 p.m.?