STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL
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VIA ELECTRONIC MAIL

August 30, 2018

Matthew S. Cote, Esq.
Sherin and Lodgen LLP
101 Federal Street
Boston, MA 02110

RE: **PETITION NO. 1348** – Safari Energy, LLC, as agent for West Farms Mall, LLC, petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 2.019-megawatt AC solar photovoltaic electric generating facility located at West Farms Mall, 1500 New Britain Avenue, West Hartford and 500 South Road, Farmington, Connecticut.

Dear Attorney Cote:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than September 13, 2018. 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 a copy via electronic mail. In accordance with the State Solid Waste Management Plan, 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.

Any request for an extension of time to submit responses to interrogatories shall be submitted to the Council in writing pursuant to §16-50j-22a of the Regulations of Connecticut State Agencies.

Sincerely,

Melanie A. Bachman
Executive Director

MB/MP

c: Council Members

Petition No. 1348
West Farms Mall, LLC /Safari Energy, LLC
Interrogatories
Set One
August 30, 2018

Project Development

1. Pursuant to Connecticut General Statutes §16-50k(a), has Safari Energy, LLC (Petitioner) obtained a letter from the Connecticut Department of Energy and Environmental Protection (DEEP) that the proposed facility will not materially affect the status of core forest or a letter from the Connecticut Department of Agriculture (DOAg) that the proposed facility will not materially affect the status of prime farmland? Please submit any correspondence submitted to and/or received from DEEP and/or DOAg relative to the proposed facility.

Proposed Site

2. Where is the nearest recreational area from the proposed site? Describe the visibility of the proposed project from this recreational area.

3. Where is the nearest national, state-designated, and/or local historic area from the proposed site? Describe the visibility of the proposed project from the nearby historic area(s).

4. Page 11 of the Petition notes that, "The nearest residence to the boundary of the Site is 40 feet (to the north). The nearest residence to the proposed location of the parking canopies is 570 feet to the west…" What are the addresses of both of these closest residences?

Energy Production

5. Referencing Electrical Plan Drawing E200, the total direct current megawatts (MW DC) of System 1, System 2 and System 3 is approximately 2.7168 MW DC. The cover page of the Petition shows about 2.7618 MW DC. Explain.

6. Would the proposed facility provide its total of approximately 2.02 MW AC at the points of interconnection or would this number be less due to losses?

7. Can the project be designed to accommodate a future potential battery energy storage system?

8. Would the impact of soft shading, such as air pollution or hard shading, such as bird droppings or weather events, such as snow or ice accumulation, hail, dust, pollen, etc. reduce the energy production of the proposed project? If so, was this included in the proposed project capacity factor assumptions? Would any of these expose the solar panels to damage? If applicable, what type of methods would be employed to clear the panels of the bird droppings, prey shells, snow and ice accumulation, hail, dust or pollen and at what intervals?

Site Components and Solar Equipment

9. What is the design wind speed of the solar panel mounts (both rooftop and canopy)? How are the panels adhered to the mounts? What prevents the solar panels from separating from either the racking or the foundation during high winds?

10. The proposed solar panels are described as double-sided LGNeON cells. How much power is anticipated to be generated from the rear of the cells? Are the double-sided cells also proposed for the roof installation?

11. Reference drawing titled, "Elevation Sketch of Roof Mounted Solar Modules." What is the approximate distance from the top of the roof to the top edge of the proposed solar panels? What is the approximate distance from the top of the roof to the bottom edge of the proposed solar panels?

12. Reference Sheet S3.1 from United Structural Design LLC. Provide the distance from ground level to the highest point of a solar panel on a three-panel canopy and also on a six-panel solar canopy.

Interconnection

13. Roughly what is the estimated peak load of the mall facility (in MW) relative to the proposed approximately 2.02 MW AC peak output of the proposed solar facility? Is there an already existing solar facility located on top of the mall? Roughly how many MW does the existing facility contribute to the mall's peak load?

14. Referencing Drawing E200, three PV systems are depicted: two for the canopies and one for the roof. Will these systems operate independently such that if an interconnection failure exists at one (or one system needs to be shut down for maintenance), the others will continue to operate?

15. Is it correct to say that because the solar arrays would connect to on-site electrical rooms, no new electrical feeders would have to be run out to the street? If this is not correct, please indicate if any new overhead or underground connections to Eversource's distribution system would be required.

16. Should the Eversource system experience an outage, will the PV systems still be operational to provide power to the mall?

Public Safety

17. Would the solar facility have a protection system to shut the facility down in the event of a fault within the facility or isolate the facility during abnormal grid disturbances or during other power outage events?

18. Would the project comply with the National Electrical Code, the National Electrical Safety Code and any applicable National Fire Protection Association codes and standards?

19. Would the proposed structural design and loading associated with the proposed rooftop and canopy solar installations comply with the Connecticut State Building Code (or other codes) as applicable? If this project is approved, could a final set of drawings of the proposed solar facility stamped by a Professional Engineer be provided to the Council post-approval?

20. Where is the nearest airport and/or airfield? Would glare from the solar arrays have any impact on air navigation? Has a glare analysis been conducted? If not, under what circumstances would a Federal Aviation Administration (FAA) glare analysis be required? Would any notice to FAA be required because of the height(s) of the solar facility (e.g. as a physical obstruction)?

21. Would the proposed solar facility present a fire safety or other hazard (ex. Lightning strike)?

22. With regard to emergency response:

    a. Is outreach and/or training necessary for local emergency responders in the event of a fire or other emergency at the site?
    b. How would site access be ensured for emergency responders?
    c. In the event of a brush or electrical fire, how would the Petitioner mitigate potential electric hazards that could be encountered by emergency response personnel?

23. Page 7 of the Petition notes that, "Appropriate means of disconnect to shut down the Facility in the event of an emergency will be located on the ground, but inaccessible to the general public. Once operational, Safari Energy will work with local fire and law enforcement officials to ensure they have the appropriate knowledge and access to provide their services to the Facility, if necessary." Would there be an emergency key box or a disconnect switch (for example) for first responders to perform an emergency shutdown of the facility?

24. Would the proposed lighting plan (with its proposed foot-candle intensity) for under the proposed canopies comply with applicable codes? Could the lights be dimmed if the glare is found to be a problem?

Environmental

25. Would any additional tree clearing have to be performed to reduce shading effects on solar panels, or is all tree clearing only required to physically accommodate the proposed project (e.g. the canopies)?

26. For the purpose of demonstrating greenhouse gas emissions reductions for the proposed project (and as a supplement to page 8 of the Petition), please utilize the EPA Greenhouse Gas Equivalencies Calculator at https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator and submit the full results.

Facility Construction

27. Would construction of the proposed facility involve disturbance of one or more total acres of land area? If yes, has the Petitioner submitted an application for a General Permit to DEEP?

28. Page 4 of the Petition notes that the solar parking canopy columns would be installed using helical coring. Is this essentially a drilling process? Approximately how deep into the ground would the Petitioner need to core to install the columns?

29. Where would the construction "staging area" or materials storage area be located?

30. What would be the construction timeline of the project from groundbreaking to full operation?

31. Would any weekend construction hours be anticipated, or would all work be expected to be completed during the week (from 7:00 a.m. to 5:00 p.m.)?

Maintenance Questions

32. How, or why, is a tilt of 5 degrees being proposed for the panel arrays? Will this relatively low tilt cause problems with snow removal? Is there a plan to remove snow accumulation?

33. Would snow accumulation on the solar panels affect the output of the facility? Under what circumstances would snow be removed? Describe snow removal methods and site access.

34. What accumulation of snow could the solar panel array structures (both rooftop and canopy) handle? Would the Petitioner clear snow from the panels when it approached the limit?

35. Would any chemicals be used or only water for solar panel cleaning? Would this maintenance activity have any impacts to water quality?

36. Within the renderings in Exhibit K, the asphalt parking area where the canopies will be installed appears to be cracked in many areas, although the cracks may have been filled. Will the canopies interfere with any future maintenance and/or replacement of the asphalt in these areas?

37. The Petition states that the canopies would extend approximately 9 feet above grade. Box trucks tend to be on the order of 9' 6" high. Will access by box trucks or similar high profile vehicles be prohibited from accessing the area of the canopies? If so, how will this be accomplished?

38. Would the proposed rooftop System 1 impact stormwater drainage on the roof? Would any roof storm drains be impacted? Which code(s) govern stormwater drainage on roofs, e.g. Connecticut State Building Code, International Building Code, etc.? Would the rooftop drainage system remain in compliance with such code(s) post-construction?

39. The Petition proposes to include a 3/4" gap between panels to allow for rainfall drainage. What type of impact is anticipated from such drainage contacting either the pavement and/or parked vehicles below?

40. With stormwater drainage from the canopies through the ¾" gaps, would this materially affect the existing parking lot drainage system, or would it require upgrades to such drainage system?

41. Does the Petitioner have any information concerning the underside of the canopy arrays and the potential for these areas to act as shelters or nesting areas for birds and/or insects?

42. What measures will be taken to prevent vandalism to the underside of the canopies; e.g., protection for wiring, graffiti, etc.?