



STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

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VIA ELECTRONIC MAIL

October 2, 2023

Bruce McDermott, Esq.
Murtha Cullina LLP
One Century Tower
265 Church Street, 9th Floor
New Haven, CT 06510-1220
bmcdermott@murthalaw.com

RE: **PETITION NO. 1588** – Endurant Energy petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 7.0-megawatt AC battery energy storage facility located at 22 Deerfield Road, Windsor, Connecticut, and associated electrical interconnection. **Council Interrogatories to Petitioner.**

Dear Attorney McDermott:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than October 23, 2023. Please submit an original and 15 copies to the Council's office and an electronic copy to siting.council@ct.gov. 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 requests 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.

Please be advised that the original and 15 copies are required to be submitted to the Council's office on or before the October 23, 2023 deadline.

Copies of your responses are required to be provided to all parties and intervenors listed in the service list, which can be found on the Council's website under the "Pending Matters" link.

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,

A handwritten signature in dark ink, appearing to read "Melanie Bachman".

Melanie Bachman
Executive Director

MB/RM

c: Service List dated August 17, 2023

Petition No. 1588
Endurant Energy
22 Deerfield Road, Windsor, Connecticut

Interrogatories
October 2, 2023

Project Development

1. Has Endurant Energy (Endurant) received any comments since the Petition was submitted to the Council? If yes, summarize the comments and how these were addressed.
2. If the project is approved, identify all permits necessary for construction and operation and which entity will hold the permit(s)?
3. Referencing Petition page 3, when was the project selected for the state Energy Storage Solutions Program (ESSP)? What ESSP incentives apply to the project?
4. What is the term of the ESSP agreement to provide energy storage, and with which entity? If the facility operates beyond the terms of such agreement, will Endurant decommission the facility or seek other revenue mechanisms?
5. If Endurant transfers the facility to another entity, would Endurant provide the Council with a written agreement as to the entity responsible for any outstanding conditions of the Declaratory Ruling and quarterly assessment charges under CGS §16-50v(b)(2) that may be associated with this facility, including contact information for the individual acting on behalf of the transferee?

Proposed Site

6. Submit a map clearly depicting the boundaries of the battery energy storage facility (BESF) site and the boundaries of the host parcel(s). Under Regulations of Connecticut State Agencies (RCSA) §16-50j-2a(29), “**Site**” means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located.
7. Is the Town of South Windsor within 2,500 feet of the Site? If yes, was notification provided pursuant to RCSA §16-50j-40?
8. Has the property owner expressed any concerns or requested any specific requirements related to decommissioning or site restoration at the end of the project’s useful life? If so, please describe.
9. Referencing Petition Figure 3, what is the length and width of the existing access drive to the point where it would reach the BESF? Figure 3, Note 3 states the access to the BESF “shall include road material and be at least 20 feet to meet NG personnel and equipment requirements”. Explain.

Energy Output

10. Is the 7.0 MW AC output based on the point of electrical interconnection?
11. What is the approximate percentage of Taylor & Fenn's annual electric load that would be served by the BESF?
12. Can the facility operate between 0 and 7.0 MW? Would each module be dispatched based on need?
13. How long will it take for the BESF to attain full output from when it is dispatched?
14. Referencing Petition, p. 21, it states the BESF would discharge for 2-3 hours during "blue sky" peak demand. Would the BESF be completely depleted after three hours?
15. What is the shortest time to export the stored 14.0 MWh AC to the grid? Does typical operation completely deplete the BESF or does output cease once a minimum remaining charge threshold is reached?
16. Referencing Petition pp. 4-5, it states the BESF will be connected behind the customer's electric utility meter, which will allow the facility to run on battery power during peak demand time. It further states the BESF will operate in parallel with the grid and can also export power into the utility distribution system, during peak demand times. During peak demand times does the grid or the Taylor & Fenn facility utilize the BESF output?
17. Does Taylor & Fenn operate their facility at full capacity on weekends? If no, would the BESF be dispatched to export excess power to the grid?
18. Referencing Petition pp. 21-22, assuming favorable energy prices, what is the minimum time it would take the BESF to fully recharge after a full 14.0 MWh AC discharge?
19. Is the facility required to reserve any battery storage capability for backup power? Where would the backup power be used and by whom?

Proposed Facility and Associated Equipment

20. Referencing Petition p. 7, when would Endurant select a battery supplier? Do all of the suppliers under consideration offer the Canadian Solar Inc. SolBank battery modules?

Interconnection

21. Which equipment would step-down the 13.8-kV AC grid voltage and then convert it to DC to recharge the batteries? Explain.
22. Referencing Petition p. 11, what is the status of the interconnection agreement with Eversource? Is it anticipated the battery manufacturer/model will change based on the interconnection agreement?

Public Safety

23. Would the project comply with the current National Electrical Code (NEC) and the National Electrical Safety Code (NESC)? What codes and standards apply to battery storage facilities?
24. Identify the code/standard and section that addresses the minimum fence height for the BESF.
25. Is a gap proposed between the bottom of the fence and grade. What animal deterrents are in place for small animals, such as nesting birds, chewing rodents, etc.?
26. Referencing Petition p. 15, a battery fire would be self-extinguishing. What is the typical duration of a battery fire before it self-extinguishes? If one battery caught fire, can it easily spread to adjacent batteries? Explain.
27. Referencing Petition p. 15, would firewater or other runoff from a battery fire be considered hazardous and require cleanup by a hazardous materials response contractor?
28. Referencing Petition Exhibit E, a lithium-ion phosphate safety data sheet is provided. The sheet states the battery may burst and release hazardous decomposition products when exposed to a fire situation. If a battery burst,
 - a. would smoke from the fire be considered hazardous and require notification to local authorities?
 - b. would smoke require area residences to stay in place or evacuate? If yes, who would determine if these actions are necessary?
29. Provide a detailed standard operating procedure for emergency response and notifications in the event of a battery fire.
30. Would Endurant dispatch personnel to the BESF in the event of a fire? Where would Endurant personnel be located that can respond to site emergencies?
31. Would placards be installed at the facility to alert emergency responders as to how to extinguish a fire, the fire media to be used, and contact numbers to operators of the BESF? If yes, provide detail. If no, explain why such measures are not necessary.
32. Referring Petition p. 12, provide a diagram showing the proposed emergency access driveway to the site.
33. Petition pp. 25-26 states explosion risk would be minimized by exhaust fans/sensors. Are these features susceptible to fire and subject to failure? Are they within a fire enclosure?
34. What explosion mitigation system is more effective, vent panels or an exhaust system? Explain.
35. Referencing Petition Exhibit A, the battery module has an optional aerosol-based fire suppression system. What media is used in the system? Does Endurant intend on selecting this option for the site?
36. Referencing Petition Exhibit E, the air-cooling refrigerant safety data sheet states refrigerant and the storage cylinders could be explosive under certain conditions. Would a battery fire or other fire at the site potentially cause the refrigerant or storage cylinders to explode?

37. Referencing Petition Exhibit E –a transformer oil safety data sheet is provided.
 - a. How much oil is contained within the transformer?
 - b. Are there alarms (such as low-level oil alarms) that can alert personnel of a leak? If not, how would a leak be detected?
 - c. Do the transformers have a leak containment system? If yes, describe.
38. Referencing Petition Exhibit G – Sound Assessment, will the system generate noise during charging of the facility, discharge of the facility, neutral conditions (i.e. neither charging nor discharging), or all three? Was the modeling performed for the worst-case scenario, and does such scenario also take into account any fans for the cooling system? Explain.
39. What are the industry Best Management Practices for Electric and Magnetic Fields at battery storage facilities?
40. Describe how the proposed facility would comply with the Council’s White Paper on the Security of Siting Energy Facilities, *available at: https://portal.ct.gov/-/media/CSC/1_Dockets-medialibrary/Docket_346/whiteprFINAL20091009114810pdf.pdf*
41. Would the proposed facility have on-site lighting? If yes, identify the type, location and potential visual impacts.

Environmental Effects and Mitigation Measures

42. Referencing Petition p. 17, what is the status of the DEEP Natural Diversity Database review?
43. Describe the amount of tree clearing, if any, to develop the site.
44. What is the distance of the site from Windsor Meadows State Park? Would the BESF be visible from the state park?
45. Submit photographic site documentation with notations linked to the site plans or a detailed aerial image that identify locations of site-specific and representative site features. The submission should include photographs of the site from public road(s) or publicly accessible area(s) as well as Site-specific locations depicting site features including, but not necessarily limited to, the following locations as applicable:

For each photo, please indicate the photo viewpoint direction and stake or flag the locations of site-specific and representative site features. Site-specific and representative site features include, but are not limited to, **as applicable**:

1. wetlands, watercourses and vernal pools;
2. forest/forest edge areas;
3. agricultural soil areas;
4. sloping terrain;
5. proposed stormwater control features;
6. nearest residences;
7. Site access and interior access road(s);
8. utility pads/electrical interconnection(s);
9. clearing limits/property lines;
10. mitigation areas; and
11. any other noteworthy features relative to the Project.

A photolog graphic must accompany the submission, using a site plan or a detailed aerial image, depicting each numbered photograph for reference. For each photo, indicate the photo location number and viewpoint direction, and clearly identify the locations of site-specific and representative site features show (e.g., physical staking/flagging or other means of marking the subject area).

The submission shall be delivered electronically in a legible portable document format (PDF) with a maximum file size of <20MB. If necessary, multiple files may be submitted and clearly marked in terms of sequence.

Facility Construction

46. Quantify the amounts of cut and fill that would be required to develop the proposed facility. If there is excess cut, will this material be removed from the site or deposited on the site? Were soils in the construction area assessed for the potential of hazardous materials?
47. Provide the estimated typical construction hours and days of the week (e.g. Monday through Friday 8 AM to 5 PM)?
48. Provide detailed site plans with notes/plans for site construction and environmental mitigation.

Facility Maintenance/Decommissioning

49. Referring Petition p. 11, it states the battery cells may be replenished after 10 years.
 - a. What is anticipated annual degradation of battery storage capacity?
 - b. At what remaining battery capacity is replenishment recommended?
 - c. What is the estimated cost of replenishment?
50. At what time intervals would the transformers, inverters and switchgear need replacement?
51. Provide a decommissioning and site restoration plan.