



STATE OF CONNECTICUT  
CONNECTICUT SITING COUNCIL

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VIA ELECTRONIC MAIL

February 28, 2024

Mark J. Cook, Esq.  
Tobin, Carberry, O'Malley, Riley & Selinger, P.C.  
43 Broad Street, P. O. Box 58  
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RE: **PETITION NO. 1607** – Hanwha Q Cells America, Inc. petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 4.0-megawatt AC battery energy storage facility located at Parcel No. 95-F10-247-5 and 95-F10-247-5A, 163 State Pier Road, New London, Connecticut, and associated electrical interconnection. **Council Interrogatories to Petitioner.**

Dear Attorney Cook:

The Connecticut Siting Council (Council) requests your responses to the enclosed questions no later than March 20, 2024. Please submit an original and 15 copies to the Council's office and an electronic copy to [siting.council@ct.gov](mailto: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 March 20, 2024 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 blue ink, appearing to read "Melanie Bachman".

Melanie Bachman  
Executive Director

MAB/RDM

c: Service List dated January 8, 2024

**Petition No. 1607**  
**Hanwha Q Cells America, Inc.**  
**Parcel No. 95-F10-247-5 and 95-F10-247-5A, 163 State Pier Road, New London**

**Interrogatories**  
**February 28, 2024**

**Project Development**

1. Has Hanwha Qcells America, Inc. (Qcells) received any comments since the Petition was submitted to the Council? If yes, summarize the comments and how they were addressed.
2. Referencing Petition pp. 5-6, did any residents comment on the proposed facility at the Planning and Zoning meeting held on June 15, 2023? If yes, what were their concerns and how were the concerns addressed?
3. If the project is approved, identify all permits necessary for construction and operation and which entity will hold the permit(s)?
4. What is the estimated cost of the project? How are costs recovered?
5. Does Qcells intend to enter the Project into the Energy Storage Solutions Program?
6. If Qcells transfers the facility to another entity, would Qcells 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**

7. 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.
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 p. 11, does the 1,935 square foot area represent the size of the fenced compound?
10. Provide the distance, direction and address of the nearest residential property line to the proposed facility.
11. Provide the distance, direction and address of the nearest residential structure to the proposed facility.

### **Energy Output**

12. What distribution system benefits (ex. resiliency of critical infrastructure, reliability of the electric system, etc.) would be provided by the facility? How does the facility meet the objectives of the state Energy Storage Solutions program?
13. Would the facility recharge during off-peak hours? Explain.
14. Is the 4 MW AC output based on the point of electrical interconnection?
15. What is the cumulative efficiency of the discharge output (e.g.- the BESF can only discharge 90% of its stored capacity)?
16. If the BESF is contracted to discharge its full charge, would any of the battery export capacity be held in reserve to prolong battery life?
17. What storage capacity losses are anticipated for ambient temperatures below freezing?
18. Would the BESF utilize power for cooling and heating of the battery packs? If yes, would this power source be from stored energy or from the local distribution system?
19. Would Qcells participate in any other ISO-NE markets (ex. ancillary services)?

### **Proposed Facility and Associated Equipment**

20. Referencing Petition Attachment B, the specification sheet for the ST2752UX-US unit includes a 2-hour unit and a 4-hour unit. What type of unit will be installed? Does the timeframe reference the maximum hours of output? Why is the specification sheet marked "Preliminary"?

### **Interconnection**

21. Referencing Petition p. 11, is Eversource's local electrical distribution system three-phase, or would it have to be upgraded to three-phase to accommodate energy output from the BESF? If yes, for what circuit length and to what location?
22. Referencing Petition p. 11, what is the status of the system impact study with Eversource? Is it anticipated the battery manufacturer/model will change based on the interconnection agreement?
23. Would the facility be able to automatically disconnect from the grid in the event of a fault or other electrical disturbance? Explain.

### **Public Safety**

24. 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.?
25. Referencing Petition p. 20, if the site is monitored and can be dispatched 24/7 by an Energy Management System, what additional tasks does the Qcells Operations Center perform from 12:00 p.m. to 8:00 p.m.?

26. Referencing Petition p. 19, the battery units would have fused sprinkler heads for fire safety.
  - a. Where will the connection for the water supply be located?
  - b. Under what conditions might the sprinkler heads be activated, and how long would they continue to jettison water?
  - c. In the event that such sprinkler heads are activated, would the ground surrounding the proposed facility be graded to direct sprinkler water to a certain location or area? If yes, identify such location.
27. Is the use of water applied directly to a battery fire currently a best management practice for fire control and extinguishment? If no, why are fused sprinkler heads proposed?
28. What BESF design features are included to prevent “Thermal Runaway?”
29. What is the typical duration of a battery fire before it self-extinguishes?
30. If one battery unit caught fire, can it easily spread to adjacent batteries? What mechanism are in place to reduce the possibility of a fire from spreading to an adjacent battery unit?
31. Referencing Petition p. 10, where is the existing fire hydrant located on the host parcel?
32. Will the facility be designed in accordance with the 2022 Connecticut State Fire Code Chapter 52- Energy Storage Systems?
33. Referencing Petition p. 19, when and what type of testing would be conducted on the BESF fire extinguishing agent and venting actuators, and smoke, thermal and gas detectors prior to installation at the site?
34. Referencing Petition Exhibit F pp. 16-17,
  - a. Would smoke from the fire be considered hazardous and require notification to state and local authorities?
  - b. Would smoke require area residences to stay in place or evacuate? If yes, who would determine if these actions are necessary and who ensures notifications have been made?
  - c. What type of emergency would require the evacuation of all persons 330 feet downwind of the BESF?
  - d. To what distance from the BESF would evacuation take place in the event of a fire?
  - e. Why is there no mention of a downwind distance for the 1/3-mile Isolation Zone?
  - f. Would the final Emergency Response Guide contain a map with addresses of all properties requiring evacuation and/or isolation for certain types of emergencies?
  - g. What methodology was used to determine the size of the evacuation and isolation zones?
35. Would firewater or other runoff from a battery fire be considered hazardous and require cleanup by a hazardous materials response contractor?
36. What type of media and/or specialized equipment would be necessary to extinguish a battery storage/electrical component fire?
37. Referencing Petition Exhibit F p. 18, the diagram shows response actions to protect the transformer from becoming involved in a fire. What materials within the transformer are combustible? Is the ester oil flammable?

38. Would Qcells dispatch personnel to the BESF in the event of a fire? Where would Qcells personnel be located that can respond to on-site emergencies? Do first responders have to wait for Qcells personnel to arrive before beginning emergency response measures?
39. Referencing Site Plan E.100, a “Non-Exclusive Access Way” is shown extending across the parking lot at 163 State Pier Road. Who would ensure access to the facility is not blocked by vehicles that could impede access to the BESF during an emergency?
40. Can a dedicated access drive extending from Crystal Avenue be included in the Project design?
41. 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 for BESF operations personnel? If yes, provide detail. If no, explain why such measures are not necessary.
42. Referencing Petition Exhibit F p. 15, what role does the battery supplier have in fire emergency response? What procedures would be followed if the battery supplier is not available?
43. Referencing Petition Exhibit F p. 5, can the refrigerant storage container within the cooling units potentially explode in the event of a fire?
44. Referencing Petition Exhibit F p. 1, it states the Emergency Response Guide should be placed in the “FACP”. Define FACP.
45. What are the industry Best Management Practices for Electric and Magnetic Fields at battery storage facilities?
46. 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](https://portal.ct.gov/-/media/CSC/1_Dockets-medialibrary/Docket_346/whiteprFINAL20091009114810pdf.pdf)
47. Would the proposed facility have on-site night lighting? If yes, identify the type, location and potential visual impacts.
48. Is there a standard or recommended minimum distance of a BESF to a publicly accessible area?
49. Is there an existing fence along the east property line, separating the Crystal Avenue sidewalk from the host parcels? If yes, what is the type and height of the fence. Would this fence remain in place?
50. Referencing Petition p. 10, the transformers would contain a “degradable ester oil.” Does the transformer have a containment system in the event of an insulating mineral oil leak? Are there alarms (such as low-level oil alarms) to alert monitors of a leak?
51. Referencing Petition Exhibit E – Acoustic Analysis,
  - a. 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?
  - b. Was the modeling performed for the worst-case scenario with all equipment operating simultaneously, and does such scenario also take into account any fans for the cooling system? Explain.

## **Environmental Effects and Mitigation Measures**

52. Referencing Petition p. 16, what is the status of the Phase 1A cultural resources survey?
53. Referencing Petition Figure 5, access to the facility would be through an area marked as “Area of Undetermined Flood Hazard”. Is this area under review by the Federal Emergency Management Agency?
54. Have drainage characteristics of the proposed site been evaluated to ensure water will not pool around the BESF? Where would stormwater be directed to?
55. Referencing Petition p. 8, what City of New London park is located 210 feet away from the BESF?
56. Referencing Petition Attachment A- Site Plans- Watershed Plan, what is the distance of the BESF to Winthrop Cove Park at its closest point?
57. Referencing Petition p. 16, provide a photo and/or specification sheet of the opaque material proposed for the west end of the compound fence. What is the estimated lifespan of this material? What off-site areas/receptors would be able to view the west end of the BESF?
58. Would the existing berm screen the entire facility from viewpoints to the south? What is the height of the berm?
59. Are there existing shrubs between the BESF and Crystal Avenue? If yes, would these shrubs remain in place?
60. Would Qcells be willing to install landscape shrubs along the east side of the BESF to screen the facility from Crystal Avenue and Winthrop Cove Park?
61. 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 shown (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**

62. Referring to Petition Attachment D – Geotechnical Report, p. 7 recommends a geotechnical engineer be on-site during excavation and site preparation. Does Qcells intend to retain a geotechnical engineer to oversee these activities?

### **Facility Maintenance/Decommissioning**

63. Referring to Petition p. 5,
- a. What is the anticipated life of a battery before replacement/replenishment is required?
  - b. What is anticipated annual degradation of battery storage capacity?
  - c. At what remaining battery capacity is replacement/replenishment recommended?
  - d. What is the estimated cost of replacement/replenishment?
64. At what time intervals would the transformers, inverters and switchgear need replacement?
65. At what intervals would vegetation management occur?
66. Referencing Petition p. 20, what minimum snow depth would require removal within the BESF compound?