



STATE OF CONNECTICUT  
*CONNECTICUT SITING COUNCIL*

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

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**VIA ELECTRONIC MAIL & CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

January 19, 2024

Lee D. Hoffman, Esq.  
Pullman & Comley, LLC  
90 State House Square  
Hartford, CT 06103-3702  
[lhoffman@pullcom.com](mailto:lhoffman@pullcom.com)

RE: **PETITION NO. 1591** – KCE CT 5, 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 5.0-megawatt AC battery energy storage facility located at Village Hill Road, Stafford (Parcel No. 71-6) and Willington (Parcel No. 52-001-00), Connecticut, and associated electrical interconnection. **Final Decision.**

Dear Attorney Hoffman:

At a public meeting held on January 18, 2024, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need with the following conditions:

1. Approval of any Project changes be delegated to Council staff;
2. Submit a construction Fuel Storage and Spill Prevention Control Plan prior to the commencement of construction;
3. Provide a copy of the final Emergency Response Plan to local emergency responders prior to facility operation, and provide emergency response training;
4. Provide a signed certification by the Fire Chief that training has been completed and the ERP is approved prior to commencement of operation;
5. Submit a copy of the building permit prior to commencement of operation;
6. Submit a BESF operational noise study, with mitigation measures, if necessary, confirming compliance with DEEP Noise Control Regulations;
7. Submit a site construction plan consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control* that contains a blue spotted salamander and Vernal Pool and Wetland Protection Plan prior to commencement of construction;
8. Install temporary and permanent isolation barriers around the stormwater detention basin to reduce the potential for vernal pool obligate species from using the basin as a breeding area;

9. Submit a final access drive design sufficient to accommodate a tanker truck prior to commencement of construction;
10. Submit a final stream crossing culvert design that conforms to DEEP and U.S. Army Corps of Engineers stream crossing guidelines with a weight limit sufficient to accommodate a tanker truck prior to commencement of construction;
11. Provide a signed certification by the Fire Chief confirming the access drive and stream crossing culvert designs are sufficient to accommodate a tanker truck and emergency vehicles prior to commencement of operation;
12. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable;
13. The Council shall be notified in writing at least two weeks prior to the commencement of site construction activities;
14. Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, and the Towns of Stafford and Willington;
15. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed **along with a representative photograph of the facility**;
16. The facility owner/operator shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v;
17. This Declaratory Ruling may be transferred or partially transferred, provided both the facility owner/operator/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. The Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer. Both the facility owner/operator/transferor and the transferee shall provide the Council with a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility, including contact information for the individual acting on behalf of the transferee; and
18. This Declaratory Ruling may be surrendered by the facility owner/operator upon written notification to the Council.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition dated September 8, 2023 and additional correspondence dated November 15, 2023 and January 5, 2024.

Enclosed for your information is a copy of the staff report on this project.

Sincerely,

A handwritten signature in dark ink, appearing to read "Melanie A. Bachman". The signature is fluid and cursive, with the first name being the most prominent.

Melanie A. Bachman  
Executive Director

MAB/RDM/dll

Enclosure: Staff Report dated January 18, 2024

c: Service List dated January 18, 2024

The Honorable Salviero Titus, First Selectperson, Town of Stafford

([staffordtownhall@staffordct.org](mailto:staffordtownhall@staffordct.org))

The Honorable Peter Tanaka, First Selectperson, Town of Willington ([ptanaka@willingtonct.gov](mailto:ptanaka@willingtonct.gov))

STATE OF CONNECTICUT )

: ss. Southington, Connecticut January 19, 2024

COUNTY OF HARTFORD )

I hereby certify that the foregoing is a true and correct copy of the Decision and Staff Report in Petition No. 1591 issued by the Connecticut Siting Council, State of Connecticut.

ATTEST:



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Melanie A. Bachman  
Executive Director  
Connecticut Siting Council

STATE OF CONNECTICUT )

: ss. New Britain, Connecticut January 19, 2024

COUNTY OF HARTFORD )

I certify that a copy of the Connecticut Siting Council Decision and Staff Report in Petition No. 1591 has been forwarded by Certified First Class Return Receipt Requested mail, on January 19, 2024, to each party and intervenor, or its authorized representative, as listed on the attached service list, dated January 18, 2024.

ATTEST:



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Dakota LaFountain  
Clerk Typist  
Connecticut Siting Council

**LIST OF PARTIES AND INTERVENORS  
REVISED SERVICE LIST**

<b>Status Granted</b>	<b>Document Service</b>	<b>Status Holder (name, address &amp; phone number)</b>	<b>Representative (name, address &amp; phone number)</b>
<b>Petitioner</b>	<input checked="" type="checkbox"/> E-mail	KCE CT 5, LLC	<p>Lee D. Hoffman, Esq. Pullman &amp; Comley, LLC 90 State House Square Hartford, CT 06103-3702 (860) 424-4315 <a href="mailto:lhoffman@pullcom.com">lhoffman@pullcom.com</a></p> <p>Paul Williamson Senior Development Manager Key Capture Energy 25 Monroe Street, Suite 300 Albany, NY 12210 <a href="mailto:paul.williamson@keycaptureenergy.com">paul.williamson@keycaptureenergy.com</a></p>



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**Petition No. 1591**  
**KCE CT 5, LLC**  
**Village Hill Road, Stafford (Parcel No. 71-6) and Willington (Parcel No. 52-001-00)**  
**Staff Report**  
**January 18, 2024**

## **Introduction**

On September 7, 2023, the Connecticut Siting Council (Council) received a petition from KCE CT 5, LLC (KCE) for a declaratory ruling pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k for the construction, operation and maintenance of 5.0 megawatt (MW) alternating current (AC) battery energy storage facility (BESF)<sup>1</sup> located at Village Hill Road, Stafford (Parcel No. 71-6) and Willington (Parcel 52-001-00), Connecticut, and associated electrical interconnection (Petition or Project).

Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-40 on or about May 23, 2023, KCE notified the abutting property owners Town of Stafford and Town of Willington officials (municipalities), state officials and agencies of the proposed Project. On July 11, 2023, KCE notified the Town of Ellington.<sup>2</sup> No comments were received.

On September 12, 2023, the Council sent correspondence to the municipalities and the Town of Ellington stating that the Council has received the Petition and invited the municipalities to contact the Council with any questions or comments by October 11, 2023. No comments were received.

Also, on September 12, 2023, pursuant to RCSA §16-50j-40, the Council notified all state agencies listed therein, requesting comments regarding the proposed Project be submitted to the Council by October 11, 2023. In response to the Council's solicitation, the Council on Environmental Quality submitted comments on September 28, 2023 regarding wildlife, noise and wetlands<sup>3</sup>.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act, an administrative agency is required to take an action on a petition for a declaratory ruling within 60 days of receipt. During a regular meeting held on October 12, 2023, pursuant to CGS §4-176(e), the Council voted to set the date by which to render a decision on the Petition as no later than March 9, 2024, which is the 180-day statutory deadline for a final decision under CGS §4-176(i).

The Council issued interrogatories to KCE on October 25 and December 15, 2023. KCE submitted responses to the Council's interrogatories on November 15, 2023 and January 5, 2024, respectively.

On November 15, 2023, KCE filed a Motion for Protective Order (MPO) related to the disclosure of project costs, cost recovery mechanisms and energy pricing contained within the response to Council interrogatory No. 3 for the proposed facility, pursuant to CGS §1-210(b) and RCSA §16-50j-62(d), on the basis that it contains confidential, proprietary information. On December 7, 2023, the Council granted the MPO.

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<sup>1</sup> CGS §16-50i(a)(3) - the Council has jurisdiction over energy storage facilities using any fuel throughout the state.

<sup>2</sup> The Town of Ellington is located within 2,500 feet of the proposed facility.

<sup>3</sup> [https://portal.ct.gov/-/media/CSC/3\\_Petitions-mediaLibrary/Petitions\\_MediaLibrary/MediaPetitionNos1501-1600/PE1591/ProceduralCorrespondence/PE1591\\_STATEMEMO-CommentsRecd\\_a.pdf](https://portal.ct.gov/-/media/CSC/3_Petitions-mediaLibrary/Petitions_MediaLibrary/MediaPetitionNos1501-1600/PE1591/ProceduralCorrespondence/PE1591_STATEMEMO-CommentsRecd_a.pdf)

## Public Act 21-53

Public Act 21-53, “An Act Concerning Energy Storage,” established a statewide goal to deploy 1,000 MW of energy storage in Connecticut by the end of 2030. It requires the Public Utilities Regulatory Authority (PURA) to develop programs for customer-side and grid-side energy storage systems connected to the electric distribution system and enables DEEP to issue requests for proposals for energy storage systems paired with renewable energy sources and stand-alone energy storage systems connected to the electric transmission or distribution system.<sup>4</sup>

Energy storage system is defined under CGS §16-1(48) as “any commercially available technology that is capable of absorbing energy, storing it for a period time and thereafter dispatching the energy.”

On July 28, 2021, PURA developed a nine-year electric storage program, the Energy Storage Solutions (ESS) program<sup>5</sup>, that is administered by the Connecticut Green Bank, Eversource Energy (Eversource) and the United Illuminating Company (UI). It offers performance incentive payments to residential, commercial, and industrial customers host on-site battery energy storage systems as follows:

1. Behind the Meter (BTM): customer-side distributed resource that serves on-site load (paired or stand-alone) behind a customer meter; and
2. Front of the Meter (FTM): grid-side distributed resource that does not serve on-site load (paired or stand-alone) behind a customer meter.<sup>6</sup>

A paired BTM or FTM storage system has a separate input and output source. For example, a paired system could have a solar facility-generated input and a 23-kV electric distribution line output. A stand-alone BTM or FTM storage system has the same input and output source, such as a 23-kV electric distribution line. Among the technical requirements for storage systems in the ESS program is the capability of the system to provide backup power or island from the grid during outage events.

The proposed BESF is a stand-alone FTM system that was designed in response to the goals of the ESS program and KCE expects to participate in future procurements for battery energy storage systems.

## Public Benefit

A “customer-side distributed resources” facility is defined under CGS §16-1(a)(34) as “generation of electricity from a unit with a rating not more than 65 MW at customer premises within the transmission and distribution system or a reduction in the demand for electricity at customer premises through conservation and load management. A “grid-side distributed resources” facility, is defined under CGS §16-1(a)(37) as “generation of electricity from a unit with a rating not more than 65 MW that is connected to the transmission or distribution system.”

The state Comprehensive Energy Strategy (CES) examines future energy needs and identifies opportunities to reduce ratepayer costs, ensure reliable energy availability, and mitigate public health and environmental impacts. CES Strategy No. 8(B) is “Integrate efficiency, storage, and renewables to meet peak demand.” The state Integrated Resource Plan (IRP) assesses the state’s future electric needs and a plan to meet those future needs. IRP Strategy No. 13 is “Support the development of energy storage resources that can support the reliable integration of variable renewables and avoid fossil peaking generation.”

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<sup>4</sup> The interim goals of the program are 300 MW by year-end 2024 and 650 MW by year-end 2027.

<sup>5</sup> <https://energystoragect.com/>

<sup>6</sup> Energy Storage Solutions Program Manual, CT Green Bank, Eversource and UI, dated January 20, 2023, *available at* [https://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/a3ee00544b1b1fc285258940006564b7/\\$FILE/ESS%20Program%20Manual\\_Updated%201.20.2023\\_CLEAN.pdf](https://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/a3ee00544b1b1fc285258940006564b7/$FILE/ESS%20Program%20Manual_Updated%201.20.2023_CLEAN.pdf)

The proposed BESF is a grid-side distributed resource facility. It would benefit the state electric system by drawing energy from generation resources at times of low demand and subsequently injecting that energy back into the system at times of high demand. The proposed facility is designed to achieve the goals of the state Conservation and Load Management Plan, including, but not limited to, shifting energy demand and servicing system load.

KCE participated in ISO-NE England, Inc. (ISO-NE) Forward Capacity Auction (FCA) 17, securing a capacity supply obligation for the 2026 to 2027 Capacity Commitment Period. KCE intends to participate in FCA 18 for the 2026 to 2027 Capacity Commitment Period and subsequent years. KCE will participate in other available ISO-NE markets, such as the wholesale energy market and frequency regulation markets subject to needs and market opportunities.

The Project would be remotely operated by KCE and would be dispatched according to market signals and opportunities, ISO-NE capacity supply obligation instructions, or other future contract obligations, as applicable.

### **Proposed Site**

Pursuant to CGS §16-50x, the Council has exclusive jurisdiction over the BESF “site.” Under 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. The Council does not have jurisdiction or authority over any portion of the host parcel(s) beyond the boundaries of the facility “site.” This includes portions of the host parcel retained by the property owner and portions of the host parcel(s) the property owner(s) may lease to third parties. Once a facility is decommissioned, the Council no longer has jurisdiction or authority over the “site.”

KCE proposes to construct the BESF on an approximately 4-acre site under a lease agreement with the property owners of Parcel No. 71-6 Stafford (Stafford parcel) and Parcel 52-001-00 in Willington (Willington parcel). The Stafford parcel is a 6.7 acre, residentially zoned parcel (AA) with an address of 83 Village Hill Road. It is developed with a residence that fronts Village Hill Road to the east. The Willington parcel is a vacant 33.0-acre residentially zoned parcel (R-80) fronting Blair Road to the west and Village Hill Road to the east.

The surrounding area consists of residentially developed and vacant parcels. An Eversource electric transmission line and substation are located approximately 0.1-mile northwest of the Willington parcel. The BESF would be located in the western portion of the Willington parcel. A majority of the proposed access drive would extend across the southern and western portion of the Stafford parcel. The nearest residential property line from the BESF, and the proposed perimeter fence enclosing the BESF, is approximately 285 feet and 260 feet to the north, respectively, at 81 Village Hill Road, Stafford. The nearest residential property line from the access drive is approximately 15 feet to the north at 81 Village Hill Road.

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

The proposed grid-side BESF would consist of twelve 2.752 MWh Sungrow battery storage units with a maximum export capacity of approximately 5.0 MW AC. Each battery storage unit has a maximum storage capacity of approximately 2.75 MWh for a total maximum storage capacity of approximately 33.02 MWh.<sup>7</sup> The BESF would be capable of providing a maximum of 19.6 MWh of electrical energy to the distribution system over a 4-hour duration at full output. Its recharge cycle would require a minimum of 4.67 hours based

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<sup>7</sup> While the facility would be theoretically capable of storing 33.02 MWh of energy, the maximum discharge is proposed to be limited to 19.6 MWh due to electrical losses, to prevent a full depletion of the batteries and to address degradation losses of the life of the BESS.



on 5.0 MW AC at the point of interconnection. Each battery storage unit consists of 48 modules with 64 battery cells per module.

Other equipment includes two Sungrow SC3150-MV-US inverters each paired with a 5,000 kilovolt-ampere transformer; an auxiliary power skid with a 23-kV/480 V transformer; switchgear; and a control house.

The facility, including the access drive and electrical interconnection, would disturb an approximate 4.0-acre area. The BESF would be located within an approximately 165-foot by 158-foot compound surrounded by a 7-foot tall chain link fence. The control house is 10 feet long by 8 feet wide by 8.5 feet high. The battery storage units are approximately 30.6 feet long by 5.7 feet wide by 8.5 feet high and each includes, but is not limited to, batteries, cooling system, fans, and electrical equipment. The cooling system for each battery storage unit would include a fan; water pump; and a circulating water and ethylene glycol mix coolant.

The facility would be accessed from a new 12-foot wide, 2,000-foot-long gravel access drive extending the length of the Stafford parcel from a new curb cut on Village Hill Road. The proposed access drive would partially follow an existing woods road before turning southward onto the Willington parcel and to the BESF compound.

Approximately 500 cubic yards of cut and 350 cubic yards of fill would be required to construct the Project. Excess material would be used in off-site locations on the Willington parcel by the landlord.

No blasting is expected to be required for the Project. The geotechnical report indicates that sandy soils are in the excavation areas with no areas of shallow bedrock.

The facility would interconnect to existing 23-kV electric distribution lines on Blair Road. The proposed overhead interconnection route on the Willington parcel would extend west from the BESF for approximately 930 feet, connecting to the existing distribution circuit. Four new utility-poles, approximately 39 feet above grade, would be installed to extend the overhead line to the point of interconnection (POI). Four additional utility poles to support meter and recloser equipment would be required at the POI at Blair Road.

Eversource's distribution impact study has been completed, and an interconnection agreement is anticipated to be completed by the second quarter 2024. An interconnection review by ISO-NE is currently underway.

Construction of the BESF is expected to begin by summer 2025 and would take approximately 12 months. Construction hours would be from 7:00 a.m. to 6:00 p.m. Monday through Friday.

Once operational, the facility would require planned maintenance visits twice per year and routine visits for vegetative maintenance and snow plowing. As part of BESF maintenance, the batteries would be replenished once they degrade to approximately 65 percent of initial capacity. The transformers, switchgear and inverters would be replaced at approximate 10-year intervals.

At the end of the approximately 20-year service life, all BESF components would be removed and the Site restored in accordance with the Project Decommissioning Plan.

## **Environmental Effects and Mitigation Measures**

### *Air and Water Quality*

The facility would not require a DEEP Air Permit. No hazardous air emissions would be produced during the operation of the facility.

Operation of the facility would not consume water. The BESF is located in an area served by private well water; however, it is designed to meet all Connecticut water quality standards during and after construction.

The site is not located within a Federal Emergency Management Agency-designated flood zone nor within a DEEP-designated Aquifer Protection Area.

KCE performed a wetland and watercourse survey on November 18 and February 6, 2022, and April 4, 2023, identifying two forested wetlands and an intermittent watercourse on the host parcels; as follows:

Wetland 1 – a small, isolated wetland consisting of a sidehill drainage swale that spans the boundary of the western portion of the two host parcels;

Wetland 2 – a large riparian drainage wetland connected to a forested depression that occurs in the central portion of the Willington parcel and western portion of the Stafford parcel; and

Watercourse 1 – a 4-foot wide intermittent watercourse that drains the northwestern portion of Wetland 2, towards downslope areas and an abutting property.

The construction limit of disturbance (LOD) for the BESF is approximately 60 feet southwest of Wetland 2 at its closest point. Post-construction, the BESF perimeter fence would be approximately 100 feet from Wetland 2. The nearest point of the access drive to Wetland 2 is approximately 15 feet. Approximately 1,000 linear feet of the proposed access drive is within 100 feet of Wetland 2 as it follows the route of the existing woods road across the Stafford parcel.

Two vernal pools (VP) supporting vernal pool-obligate species were identified within Wetland 2. The BESF and access drive would be approximately 490 feet and 369 feet from VP 1 and 684 feet and 235 feet from VP 2, respectively. The construction LOD would be outside of the vernal pool envelopes (from the vernal pool edge to a distance of 100 feet) of both VPs.

Development of the Project would maintain upland forested areas and vernal pool species migratory corridors that may exist to the east, west and south, in accordance with the 2015 U.S. Army Corps of Engineers (USACE) Vernal Pool Best Management Practices.

The access drive would cross the intermittent stream west of Wetland 2 at the location of an existing woods road crossing. KCE discussed the proposed culvert stream crossing with the DEEP Land and Water Resources Division on June 21, 2023 and incorporated recommendations into the design, conforming to DEEP Stream Crossing Guidelines. The culvert crossing would be wider and properly sloped compared to the existing crossing, improving habitat connectivity. Approximately 250 and 450 square feet of permanent and temporary disturbance, respectively, would be required to install the culvert. A stream crossing permit will be required from the USACE.

The proposed Project would be constructed consistent with the *2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control* (2002 E&S Guidelines).

The proposed transformers associated with the battery storage units would be filled with 100% biodegradable FR3 oil and would not have secondary containment. The transformers would include low oil level alarms. The auxiliary power transformer would also utilize FR3 oil and have a containment system on the auxiliary power skid.

A preliminary Spill Prevention Control and Countermeasures Plan (SPCC) has been developed that takes into account the Project transformers. A final SPCC will be developed once final approvals are obtained and Project components are procured.

Pursuant to CGS Section 22a-430b, DEEP retains final jurisdiction over stormwater management and administers permit programs to regulate stormwater discharges. DEEP regulations and guidelines set forth standards for erosion and sedimentation control, stormwater pollution control and best engineering practices.

The DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (General Permit) requires implementation of a Stormwater Pollution Control Plan (SWPCP) to prevent the movement of sediments off construction sites into nearby water bodies and to address the impacts of stormwater discharges from a proposed project after construction is complete. In its discretion, DEEP could require an Individual Permit for discharges and hold a public hearing prior to approving or denying any General or Individual Permit (Stormwater Permit) application.

There would be approximately 4.0-acres of ground disturbance. A DEEP-issued Stormwater Permit is required prior to commencement of construction activities. The Stormwater Permit requires erosion control measures that comply with the 2002 E&S Guidelines and the 2004 Connecticut Stormwater Quality Manual.

KCE discussed the Project with the DEEP staff on March 23, 2023. DEEP recommended keeping disturbance along the interconnection route to a minimum to reduce the potential for erosion on the steep slope.

A construction sequence on the site plans includes the establishment of erosion control measures, site clearing, installation of site infrastructure, and site stabilization.

#### *Forests and Parks*

Approximately 4.0 acres of forest would be removed to construct the proposed Project. The Project is located within core forest.

The nearest state forest is Nye-Holman State Forest located approximately 1.0 mile west of the site.

#### *Scenic, Historic and Recreational Values*

Seven properties listed on the National Register of Historic Places are within a mile of the site. On July 26, 2023, the State Historic Preservation Office submitted correspondence stating the Project would have no effect on historic resources and concurred with the findings of an archeological study of the site that determined that no additional archaeological investigations are warranted.

The nearest publicly-accessible recreational area is the Chenes Roches Preserve located approximately 0.3 miles southwest of the site. The site would not be visible from the preserve due to intervening topography and forest.

There are no scenic roads within one mile of the site.

The BESF would be screened from abutting properties by topography and existing vegetation.

#### *Fish, Aquaculture and Wildlife*

The site is not located within a DEEP Natural Diversity Database (NDDB) buffered area.

During the wetland and watercourse survey on April 4, 2023, blue spotted salamander egg masses were identified in VP-1. Blue spotted salamanders are a listed State-species of Special Concern and are a vernal pool obligate species. The salamander favors red maple wetlands and have a dispersal range of up to 328 feet from a breeding VP.

The BESF and access drive would be approximately 490 feet and 369 feet from VP 1. KCE would install erosion control fencing to deter small wildlife, such as salamanders, from entering the construction area.

The northern long-eared bat (NLEB), a federally-listed and state-listed Endangered Species, and the small whorled pogonia, a federally-listed threatened and state-listed Endangered Species occur in Connecticut. There

are no known state-listed occurrences of NLEB in Stafford and Willington.<sup>8</sup> The USFWS indicated that the site does not contain critical habitat for NLEB or the small whorled pogonia.

As part of the USACE permit for the stream crossing, KCE would further consult with the USFWS.

### *Agriculture*

Soil at the site is classified as stony sandy loams. Prime farmland soils occur on the eastern portions of both the Willington and Stafford parcels. The proposed access drive on the Stafford parcel would occupy approximately 0.23-acre of prime farmland soil.

The host parcels are not enrolled in the Public Act 490 Program for agricultural or open space tax abatement.

### **Public Safety**

#### *Noise*

The primary sources of equipment noise for the proposed Project are the 12 battery storage units and the 2 inverters.

A noise analysis determined noise from operation of the facility would be no greater than 46 dBA at the nearest residential property boundaries along the southeast and west sides of the host parcels. The analysis determined noise at the residential property line abutting the Stafford parcel to the north (81 Village Hill Road), would be 53 dBA. The DEEP Noise Control Regulations threshold for a residential receptor is 51 dBA. KCE obtained a noise waiver from the owner of the 81 Village Hill Road parcel and the Town of Stafford. KCE is willing to record the noise waiver in the Town land records.

KCE is also willing to conduct a BESF operational noise study and design noise mitigation for the 81 Village Hill Road parcel.

Construction noise is exempt per DEEP Noise Control Regulations.

#### *Electric and Magnetic Fields*

The existing distribution lines along Blair Hill Road are the dominant sources of electric and magnetic fields (EMF). The proposed electrical interconnection is not expected to create additional EMF at the property boundaries beyond existing conditions.

#### *Security*

The facility would be monitored on a 24/7 basis by a remote operations control center to detect abnormalities in operation. It includes extensive safety control systems, including both automatic and manual shutdown mechanisms that comply with pertinent engineering standards. If operational abnormalities occur, the BESF can be remotely shut down and emergency responders can be notified if necessary.

The proposed site would comply with the Council's White Paper on the Security of Siting Energy Facilities. Security measures include, but are not limited to, a perimeter security fence with a locked gate, and recording security cameras.

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<sup>8</sup> <https://portal.ct.gov/-/media/DEEP/NDDDB/NoLongEaredBat-Map.pdf>

The BESF would be enclosed within a 7-foot tall chain link fence that complies with the requirements of the National Electrical Code (NEC).<sup>9</sup>

The nearest residential property line from the proposed fence is approximately 260 feet to the north at 81 Village Hill Road.

Emergency lighting would be installed at the BESF. Visual impacts associated with emergency lighting would be mitigated by existing vegetative buffers and site topography.

### *Fire Protection*

KCE developed a preliminary Emergency Operations Plan (EOP) for the BESF. KCE's EOP provides guidance on procedures to address a fire or other abnormal emergency conditions at the facility.

The BESF would be designed in accordance with the National Fire Protection Association 855 – Standard for the Installation of Stationary Energy Storage Systems (NFPA 855). Each battery storage unit would be equipped with an exhaust ventilation system per NFPA 69 that would remove flammable gases released during a potential battery failure before explosive limits could be reached. This would consist of two exhaust fans per battery cabinet.

Each battery storage unit would also contain two heat detectors; two smoke detectors; and two combustible gas detectors for fire protection and to protect against thermal runaway. In the event of fire detection via these sensors, the fire alarm panel would send a signal to the central station which would then be relayed to the local fire department.

In the event of fire detection via smoke, heat or gas detectors, all battery racks would electrically disconnect from the system, and the fire alarm control panel would send a signal to the central station which would then be relayed to the location fire department.

Each battery unit would be equipped with a dry sprinkler system per the manufacturer. After the power is shut down, the fire department could connect a tank truck to the system outside the battery container and pump water into the sprinkler system for fire suppression. However, current guidance from the International Association of Fire Chiefs (IAFC) suggests that fire events should be allowed to burn out in a controlled, contained manner while nearby resources are monitored and protected using water as a proactive cooling agent exterior to the battery containers. Thus, KCE believes that containment of any fire until it is exhausted and use of water on surrounding structures to ensure containment of the fire is a best practice rather than operating the pre-installed sprinkler system. If a battery storage unit is on fire, it should be allowed to self-extinguish. A battery fire could last for two days.

There are no fire hydrants proximate to the Site. The fire department has tanker trucks which can bring water to the site in the event of a fire.

In the event of a fire that includes a battery burst/rupture, a study for the New York State Energy Research and Development Authority notes that decomposition products or gases could potentially emit toxic fumes similar to that of fires of plastic materials such as sofas, mattresses or office furniture. It is not anticipated that evacuation of surrounding areas would be necessary in the event of such an event, but such decision would be subject to the discretion of the local fire marshal. Per the IAFC guidance, persons should maintain a safe distance from the fire, typically at least 300 feet. The nearest residential property line from the BESF is

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<sup>9</sup> Section 110.31 of the National Electrical Code (NEC), 2020 Edition notes that for over 1,000 Volts, "...a wall, screen, or fence shall be used...A fence shall not be less than 7 feet in height or a combination of 6 feet or more of fence fabric and a 1 foot or more...utilizing barbed wire or equivalent."

approximately 285 feet to the north at 81 Village Hill Road, Stafford. The nearest residence from the BESF is approximately 750 feet to the west at 106 Blair Road, Willington.

The width and turn radius of the proposed access drive is sufficient to accommodate fire trucks. A fire department staging area would most likely be established in the cleared areas around the BESF.

KCE will continue to coordinate with local emergency responders, including the Town, to refine the emergency response plan and provide training to local responders prior to construction.

#### *Aviation Safety*

The nearest airport is Ellington Airport located 8.2 miles west of the facility site. KCE utilized the Federal Aviation Administration's (FAA) Obstruction Evaluation Tool and determined a temporary crane up to a height of 100 feet during construction of the Project would not be an aviation hazard and would not require notification to the FAA.

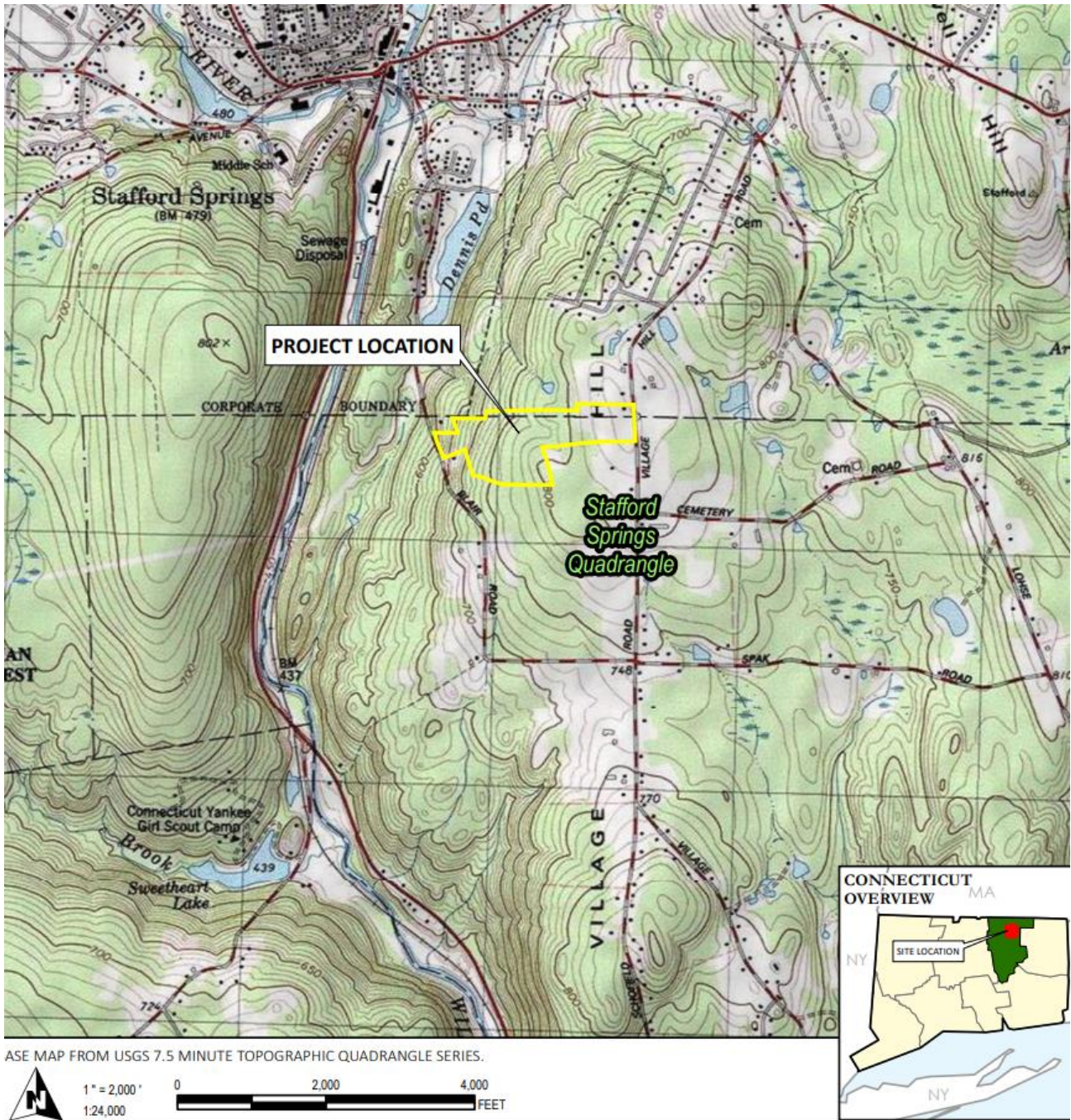
#### **Conclusion**

The BESF is a grid-side distributed energy resource with an output capacity of not more than sixty-five megawatts, meets air and water quality standards of the DEEP, and would not have a substantial adverse environmental effect. The proposed Project would further the State's energy policy by integrating storage to meet peak demand and support the reliable integration of variable renewable resources.

If approved, staff recommends the following conditions:

1. Approval of any Project changes be delegated to Council staff;
2. Submit a construction Fuel Storage and Spill Prevention Control Plan prior to the commencement of construction;
3. Provide a copy of the final Emergency Response Plan to local emergency responders prior to facility operation, and provide emergency response training;
4. Provide a signed certification by the Fire Chief that training has been completed and the ERP is approved prior to commencement of operation; and
5. Submit a copy of the building permit prior to commencement of operation.

### Site Location



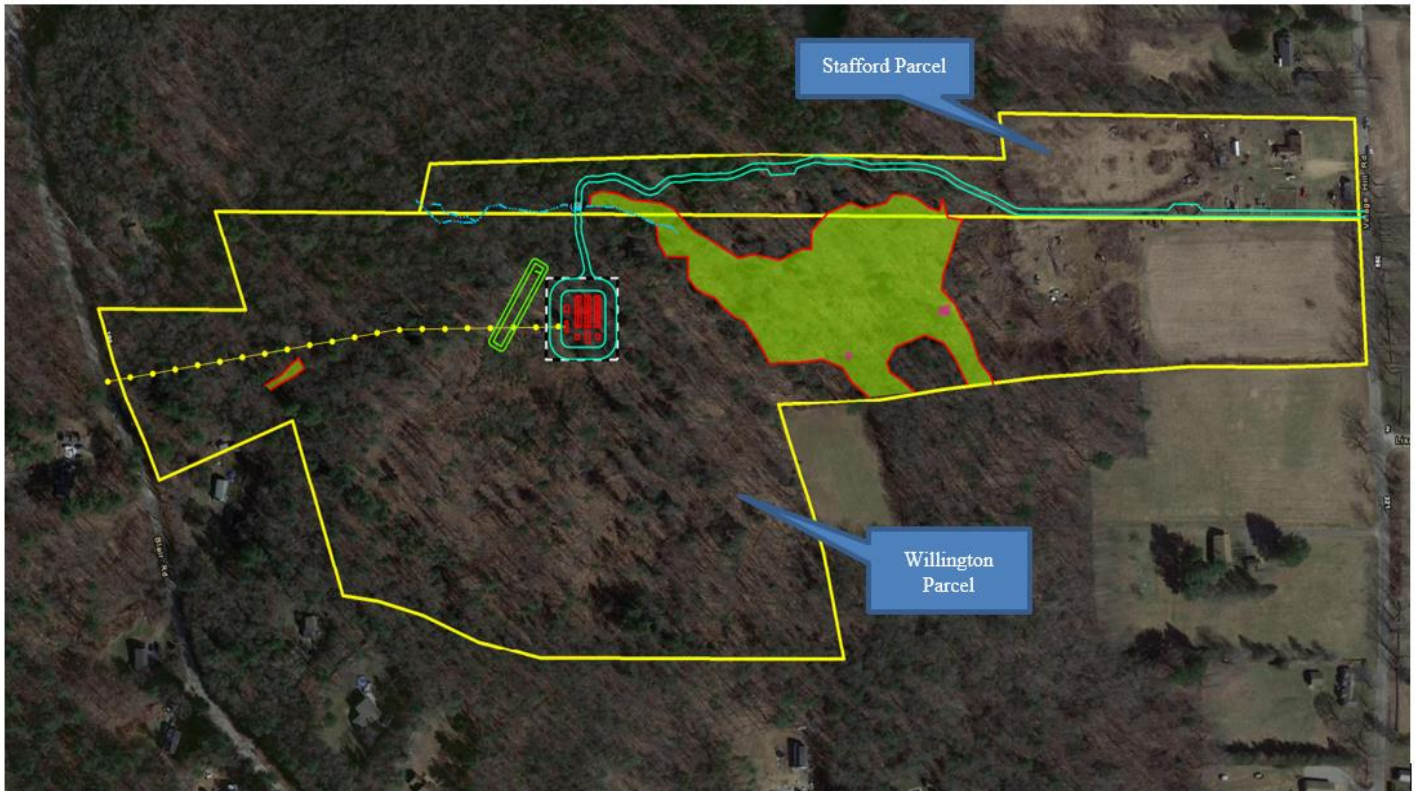
BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.






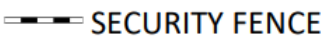

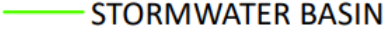

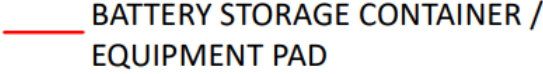

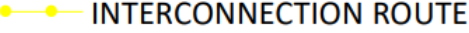

**HOST PARCEL**

Combined Willington and Stafford parcels shown

### Proposed Site Layout



#### **LEGEND**

- |  |  |
|--|--|
|  HOST PARCELS                   |  ACCESS ROAD                                |
|  CULVERT                        |  SECURITY FENCE                            |
|  DELINEATED INTERMITTENT STREAM |  STORMWATER BASIN                          |
|  DELINEATED WETLAND BOUNDARY    |  BATTERY STORAGE CONTAINER / EQUIPMENT PAD |
|  VERNAL POOL BASIN              |  INTERCONNECTION ROUTE                     |
|  DELINEATED WETLAND             |  |

