COMMONWEALTH OF MASSACHUSETTS
ENERGY FACILITIES SITING BOARD

Petition of Cranberry Point Energy Storage, LLC for a Jurisdictional Determination Pursuant to 980 C.M.R. § 2.09	)	EFSB 19-01

MEMORANDUM OF LAW IN SUPPORT OF THE PETITION OF CRANBERRY POINT ENERGY STORAGE, LLC FOR A JURISDICTIONAL DETERMINATION

On this date, Cranberry Point Energy Storage, LLC (the "Company") has petitioned the Energy Facilities Siting Board (the "Siting Board"), pursuant to 980 C.M.R. § 2.09, for a determination that the Siting Board does not have jurisdiction over the Company's proposal to construct an energy storage system ("ESS"), Cranberry Point Energy Storage ("Cranberry Point"), in Carver, Massachusetts (the "Project"). Cranberry Point will be built at 31R Main Street and will be a 150-megawatt ("MW") energy storage facility utilizing lithium-ion batteries for the storage of electricity.[1] The Project will benefit the reliability and efficiency of the electric grid by storing electricity generated during off-peak periods when there is a surplus of low-cost energy available and dispatching the electricity into the grid during peak periods, thereby providing an emissions-free source of electricity at times when that electricity will have the greatest value to the regional electric system.

For the reasons discussed more fully below, the Project is not a jurisdictional facility under G.L. c. 164, §§ 69G and 69J¼, and therefore, the Project is not subject to review by, and approval from, the Siting Board. This Memorandum provides the factual and legal basis in support of a

[1] The Company's affiliates are also pursuing the development of three other ESS facilities of various sizes at other locations in Massachusetts. Those proposals are not included in this Petition.

determination by the Siting Board that it does not have approval authority over the Project.

I. SUMMARY OF CRANBERRY POINT PROJECT

The Cranberry Point ESS will be located on a parcel of land located direct adjacent to the Carver #726 Substation owned and operated by NSTAR Electric Company d/b/a Eversource Energy ("Eversource"). The approximately five-acre parcel the Company seeks to lease for Cranberry Point is part of two larger parcels, one of which is 21.5 acres and the other is 12.5 acres, which are undeveloped and contain unimproved roads to access a cell tower and cranberry bogs to the south. There are no residential properties within 400 feet of the proposed Project site. The Cranberry Point battery equipment will be in a wooded portion of the property and is bounded to the north by transmission and distribution lines and the Eversource Carver Substation, to the west by transmission and distribution lines and to the south and east by wetlands. The Cranberry Point Project development will consist of approximately 217,800 square feet, of which approximately 6,000 square feet includes impervious surfaces such as concrete slabs and drilled piers. The remaining 211,800 square feet will be surfaced with crushed stone. In addition to the battery system and transformers, there will be a small internal substation and low voltage/medium voltage equipment, both of which will be supported by concrete pads. All equipment will be secured by the installation of a chain link fence and will be monitored by security cameras.

Lithium-ion batteries will be built into multi-cell modules in a parallel arrangement and the modules will be connected together to form strings. Each row will be approximately 11-feet wide and the spacing between the rows of containers will be approximately eight feet and the transformers will be spaced three feet from the first and last containers in each row. In total, there will be 128 containers and each container will have 21 inverters and 15 battery modules. There will be a total of 56 exterior transformers that are four feet by five feet and approximately four-

feet high. Containers will be spaced a minimum of 20 feet from other equipment. A 25-foot wide buffer will be maintained around all four sides of the perimeter of the containers. A minimum 35-foot separation will be provided between the containers and the Project's substation.

The adjacent Eversource Substation is accessible via a dedicated gravel road from Main Street/Route 58 in Carver and is enclosed by a security fence. It is expected that the Cranberry Point Project will interconnect to Eversource's existing Line #127 via a new 115-kV three-breaker ring-bus at the Substation. The Company anticipates this interconnection will be effectuated via an approximately 800-foot, aboveground 115-kV line directly from the Cranberry Point ESS to the Substation ring-bus. The interconnecting line will not cross any public ways and will be entirely located on the Project's and Eversource's properties. A preliminary site plan for Cranberry Point is provided as Attachment 1.

The Cranberry Point site was chosen because of its proximity to the Eversource Substation, which is a crucial intertie point for the area's 345-kV, 230-kV and 115-kV transmission system. The Substation is a link between the Pilgrim Nuclear Power Station and Canal Generation Station to the rest of the transmissions system and Southeastern Massachusetts ("SEMA") load. Cranberry Point will participate in the Independent System Operator – New England ("ISO-NE") Forward Capacity Market and will contribute to system reliability with its 150 MW of capacity in the SEMA load zone. Cranberry Point will also participate in the Day-Ahead and Real-Time[2] energy markets and will promote stability in those markets resulting from intermittent resources, fuel price swings, fluctuations in system demand, generator unavailability and other system contingencies.

[2] The Day-Ahead Energy Market allows market participants to commit to buy or sell wholesale electricity one day before the subsequent operating day. The Real-Time Energy Market enables market participants to buy and sell wholesale electricity during the course of the operating day. The Real-Time Energy Market balances the differences between day-ahead commitments and the actual real-time demand for and production of electricity.

The Company plans to have all the necessary permits for construction of the Project by March 1, 2020. Construction is estimated to begin in April 2020 and be completed in November 2021.

II. NEED AND ENVIRONMENTAL IMPACT

A. The Project Is Needed and Will Be a Valuable Addition to the Regional Electricity System.

The Cranberry Point Project will: (1) benefit the system during peak load times; (2) facilitate the storage of electricity, including from expanding sources of intermittent solar and wind generation; and (3) potentially defer future generation and transmission additions in the region. All of these features can be achieved in accordance with the state's energy goals, without creating emissions of pollutants, and in an environmentally benign manner.

1. The Project Will Provide Benefits to the Regional Electricity System During Peak Load.

Until recently, the ability to store electricity across the grid was limited. With recent advances in technology, however, battery storage has become a viable, flexible and economic option in the marketplace. As stated in the Massachusetts Department of Energy Resources' ("DOER") 2016 *State of Charge: Massachusetts Energy Storage Initiative*,[3] ESSs are the only technology that can take energy generated during lower cost off-peak periods to serve load during more expensive peak periods, thereby improving the overall utilization and economics of resources supplying electric service to the grid. The electric system in Massachusetts operates on a "just-in-time" basis, with decisions about power plant dispatch that are based on real-time demand and the availability of transmission to deliver it. Generation and load must always be perfectly in balance to ensure high power quality and reliability, which is becoming more challenging as intermittent

[3] https://www.mass.gov/files/documents/2016/09/oy/state-of-charge-report.pdf

renewable resources, principally wind and solar power, continue to grow in Massachusetts and New England.

According to ISO-NE's *State of the Grid: 2018* presentation,[4] peak demand in Massachusetts is expanding at a rate of approximately 1% per year, resulting in additional costs to customers to maintain reliability. ESSs can be used to "peak shift" by using lower cost energy stored during off-peak periods to meet peak demand. This benefit is tangible and immediate because, as peak demand continues to grow in the Commonwealth and supply is increasingly provided by intermittent resources (such as solar and wind), the services of typically natural gas "peaker" plants would otherwise be necessary in order to reliably serve system needs during peak periods. These peakers present certain environmental and market challenges, including fuel availability, emissions, and high costs to operate. ESS installations, however, can be used to "peak shift" in lieu of fossil-fueled peaker plants. With sufficient ESS capability on the electrical system, the need to develop peakers could be reduced or largely avoided, and the cost and pollution of serving load at peak times would decrease, while at the same time assuring system reliability.

In addition to helping offset peak demand, and potentially offsetting the need for additional peaker plants, the Cranberry Point Project can assist ISO-NE in meeting local sourcing requirements[5] in Massachusetts. As ISO-NE has noted, ESS projects can provide peak shaving by reducing the amount of energy being drawn from the regional power system during time of high demand.[6] Utilizing ESS facilities within areas of high demand can help meet local demand without

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4 https://www.iso-ne.com/static-assets/documents/2018/02/02272018_pr_presentation_state-of-the-grid_2018.pdf

5 Local Sourcing Requirements are the portion of the total capacity requirement of the load in a Forward Capacity Market capacity zone that must be purchased from resources within that zone after accounting for the capacity that can reliably be imported into that zone.

6 See *Battery Storage is "charging" ahead in New England*, http://isonewswire.com/updates/2018/8/21/battery-storage-is-charging-ahead-in-new-england.html (Aug. 21, 2018).

additional energy imports or additional system investments. Located within the import constrained capacity zone of SEMA, Cranberry Point will play a valuable role in delivering capacity to serve this local load pocket of New England when it may otherwise be difficult or costly to transmit power from outside the local area. Alternatively, one or more natural gas peaking facilities could be needed to ensure system reliability during period of high demand. However, a large amount of energy storage capacity can be discretely sited in minimally invasive locations around the area to serve local power system needs by charging overnight, when there is an ample supply of power on the grid, and then delivering that power to the local electric grid during times of system need.

2. The Project Will Increase System Flexibility to Optimize the Use of Other System Resources.

As stated above, the Cranberry Point Project will create a unique opportunity to provide the flexibility needed to reliably manage and utilize renewable resources' intermittent output. Maintaining the balance between generation and load to ensure high power quality and reliability has become increasingly more challenging with the growth of intermittent renewable energy sources like wind and solar. ISO-NE has identified energy storage as a valuable technology to help accommodate more wind and solar resources in the supply mix and maximize their emission-free output by storing excess energy for use later and smoothing out variable generation; in addition, ISO-NE has pointed to energy storage as having the potential to reduce congestion and defer transmission and distribution system upgrades by being strategically located and operated in constrained areas, as well as providing peak shaving by reducing the amount of energy being drawn from the regional power system during time of high demand, and offering a source of backup power when storms or other factors cause local blackouts. See *Battery Storage is "charging" ahead in New England*, http://isonewswire.com/updates/2018/8/21/battery-storage-is-charging-ahead-in-new-england.html (Aug. 21, 2018); *Enhanced Storage Participation* (May 8, 2018

NEPOOL Markets Committee Presentation) (discussing the Resource Dispatchability changes enhancing the participation rules for dispatchable storage facilities); *The Expanding Role of Energy Storage in the Regional Power System* (April 18, 2018) (installed battery storage projects can supply nearly 20 MW for 30 minutes, and can provide or consume electricity on a near-instantaneous basis). Therefore, new storage technologies are a vitally important component for a reliable, economic and sustainable energy future in Massachusetts by allowing renewable sources to be more effectively integrated with the existing system.

According to the DOER *State of Charge Report*, the amount of distributed generation in Massachusetts has "skyrocketed" in recent years. See *State of Charge Report*, at ix. As of 2016, there were over 40,000 distributed solar photovoltaic ("PV") projects operating in Massachusetts, with nearly 400 newly installed projects per week. Id. This increase of solar PV resources presents challenges in managing two-way power flows[7] at substations, which may occur during times of light load and high solar generation. Id. An overabundance of intermittent energy resources, without adequate ESS to help balance flows into the grid, could ultimately lead to circumstances in which local distribution companies cannot approve interconnection of further PV projects to the grid or, alternatively, require significant system upgrades to accommodate new PV installations. The Cranberry Point Project will be able to help local electric companies that experience issues with two-way power flow and saturation of distributed generation resources at points of interconnection throughout the Commonwealth.

At the same time, there has been a sharp increase in state policy initiatives that will increase the intermittency issues associated with renewable generation resources. For example, area states have set some of the following renewable energy targets:

[7] Reverse power flow is an excess of power flowing from solar generation to the grid; it has the potential to cause damage to the grid's protective systems and adversely affect power quality by causing overvoltage.

Massachusetts:

- 1.6 gigawatts ("GW") of offshore wind by 2027
- 1.6 GW of distributed solar by 2022

Connecticut:

- 250 MW of offshore wind contracted
- Request for proposals ("RFPs") under evaluation for 12 terawatts per year ("TWh/year") of n- emission generation

Rhode Island:

- 400 MW renewable energy RFP planned
- 400 MW of offshore wind contracted

The integration of intermittent renewable energy of this scale may trigger significant reliability challenges for the southern New England power grid. Given the southern/coastal location of these renewable energy initiatives, large-scale energy storage in areas like Carver will serve a pivotal role in smoothing out the intermittent output from these expected facilities and matching that generation with system demand as needed. The quick response nature of energy storage will greatly assist the system's capability to manage sudden changes to system generation and demand.

3. The Cranberry Point Project Could Defer Future Generation and Transmission Projects.

Storage technology may also help defer additional generation and transmission infrastructure upgrades in the area. Indeed, DOER has noted that "[e]nergy storage can be a lower cost alternative to transmission infrastructure investment." *State of Charge Report* at 42. The Company's ESS Project and others like it may defer the need for significant replacements or additions of transmission and distribution capacity. Accordingly, the Project, with its ability to immediately serve the system during peak times, can help delay the need for certain distribution or transmission upgrades.

B. Environmental Impacts of ESS

Cranberry Point will obtain all necessary permits from state, regional and local agencies with jurisdiction over the Project, and will achieve an appropriate balance among environmental impacts, reliability and cost. The Company will endeavor to avoid or mitigate environmental impacts associated with the Project to the extent practicable and in accordance with the regulatory requirements imposed by the applicable permitting agencies. As discussed in more detail below, the Project will be subject to the following reviews.

1. Local Permitting Processes

The Project team has conducted a thorough assessment of environmental impacts associated with the Cranberry Point ESS in Carver and determined that review by the Carver Planning Board and the local conservation commission will be required. The lease parcel is located west of Main Street; north of and directly adjacent to the site is the existing Eversource Substation; south and west of the proposed site are wetlands; to the east of the proposed site is a disturbed area. Based upon site research the Cranberry Point ESS site does not contain Estimated or Priority Habitats for rare species or sensitive archeological resources. With regard to wetlands, the Cranberry Point site falls within the 100-foot buffer zone and all work associated with the facility will be a minimum of 65 feet from delineated wetlands. Thus, local Conservation Commission review, in the form of a Notice of Intent ("NOI"), is anticipated.

In planning its Cranberry Point Project, the Company has worked diligently in collaboration with the Carver Town Manager and the Carver Planning Board to create an Energy Storage Overlay District in the Town of Carver. In November 2017, the Company met with the Town Planner to discussion the Project and potential zoning issues. Thereafter, in February 2018, the Company met with the Town Planner and Town Administrator to discuss the Project, tax

revenues, local permitting requirements and the potential to propose a zoning overlay distribution that would allow the ESS. Thus, after several months of collaborative discussion, on April 24, 2018, the Planning Board brought forth a motion at the Town Meeting to amend the Town's zoning bylaw to create an overlay district that specifically allows energy storage facilities, such as the Cranberry Point Project. The Planning Board's motion was successfully passed with a four-fifths majority. With the passage of that zoning amendment, Cranberry Point will be able to be permitted through the Town's existing Special Permit process.

Under the Special Permit process, Cranberry Point will require Site Plan Approval by the Planning Board. Such a review involves a pre-filing meeting with the Technical Review Committee ("TRC"), written comments from the TRC based upon that meeting, the submission of a formal Site Plan Application, a second TRC meeting, then a fully noticed public meeting with presentation and comments from the TRC and the public. After Site Plan Approval has been received, the Project will apply for a Building Permit through the Carver Building Department. In preliminary conversations with regard to the Project, the Fire Department expressed a preference for the batteries to be located in containers, as opposed to housed within a building structure, because such a design provides easier access and promotes safety in the event of an emergency at the facility. The Company incorporated this input and designed its Cranberry Point Project accordingly.

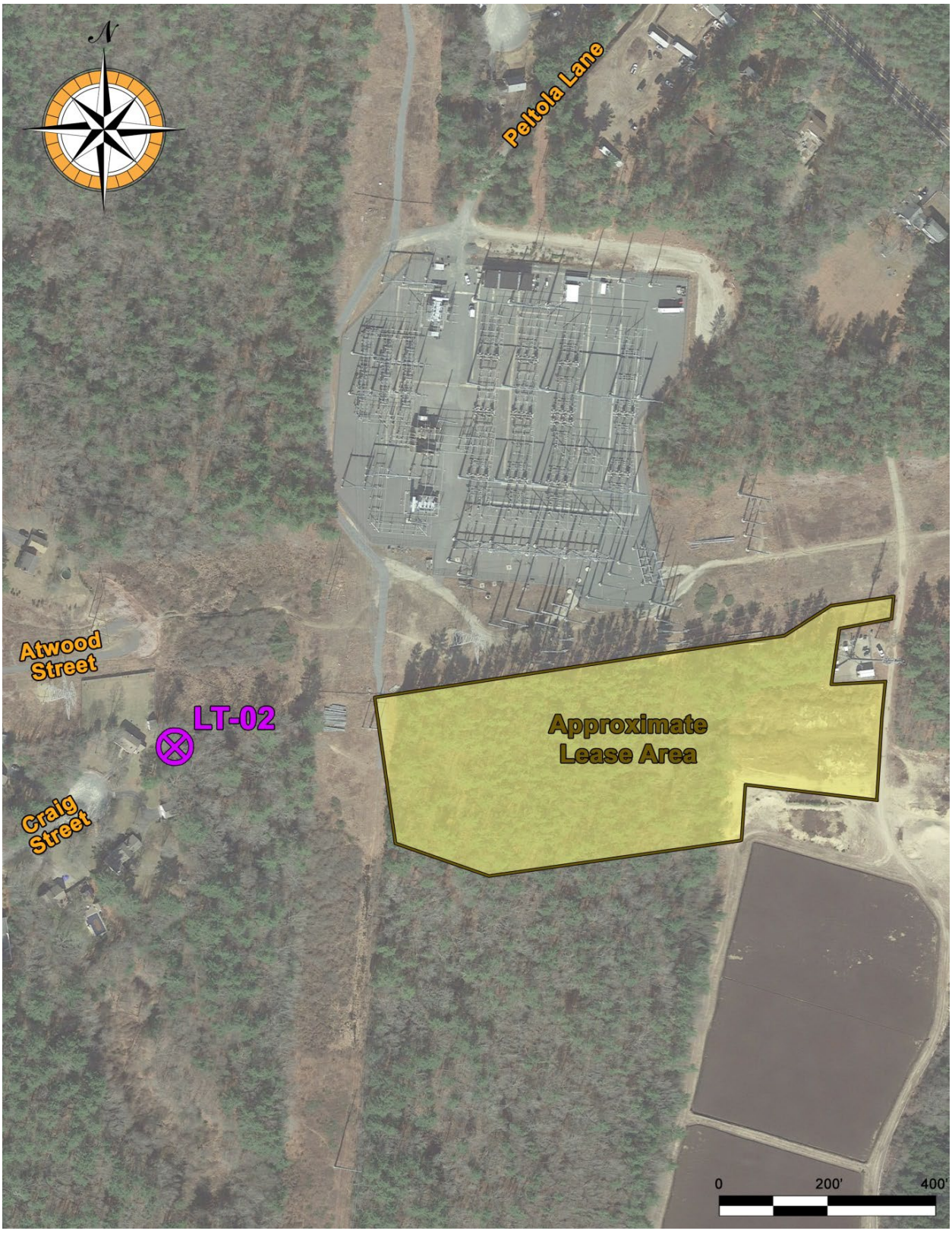
The Company met with Carver officials on October 24, 2018 to further discuss the Cranberry Point Project and local concerns, requirements and permitting. This meeting was attended by the Town Planner, Building Inspector and personnel from the Department of Public Works, Conservation Commission and Emergency Services personnel. At the meeting, the Town officials expressed a preference for: (1) a 24-foot access road, with an all-weather surface, around

the Project and in the middle aisle; (2) an 8-foot separation between strings of batteries; (3) water as the preferred means of fire suppression; (4) security fencing and three gates around the facility; (5) avoidance of the 100-foot wetlands buffer as much as possible; (6) crushed stone between the battery modules to allow infiltration of water; (7) the installation of a "lip" on the battery foundations to ensure potential spills are contained; (8) inclusion of visual mitigation to reduce industrial appearance; (9) the Project to comply with the intent of the recent Carver solar bylaw with regard to visual screening; (10) a tree replanting program to mitigate existing trees cleared from the site; and (11) the existing tree screen on three sides of site will remain. Also, the Town requested to be informed once a specific battery technology was chosen so that further discussions could take place to develop a targeted emergency response plan. The Company will be incorporating these requests in the design of the Project and will continue to work closely with local officials as the design plans are finalized.

2. Noise

As part of its due diligence, the Company performed background noise measurements in Carver for a continuous 24-hour period from August 28 to 29, 2018. As described above, the area is rural, with a substation and isolated residential properties in the vicinity, and the closest residential properties are to the west. Figure 1, below, shows the location of the site and the closest residences, along with the background noise monitoring location at 20 Craig Street.

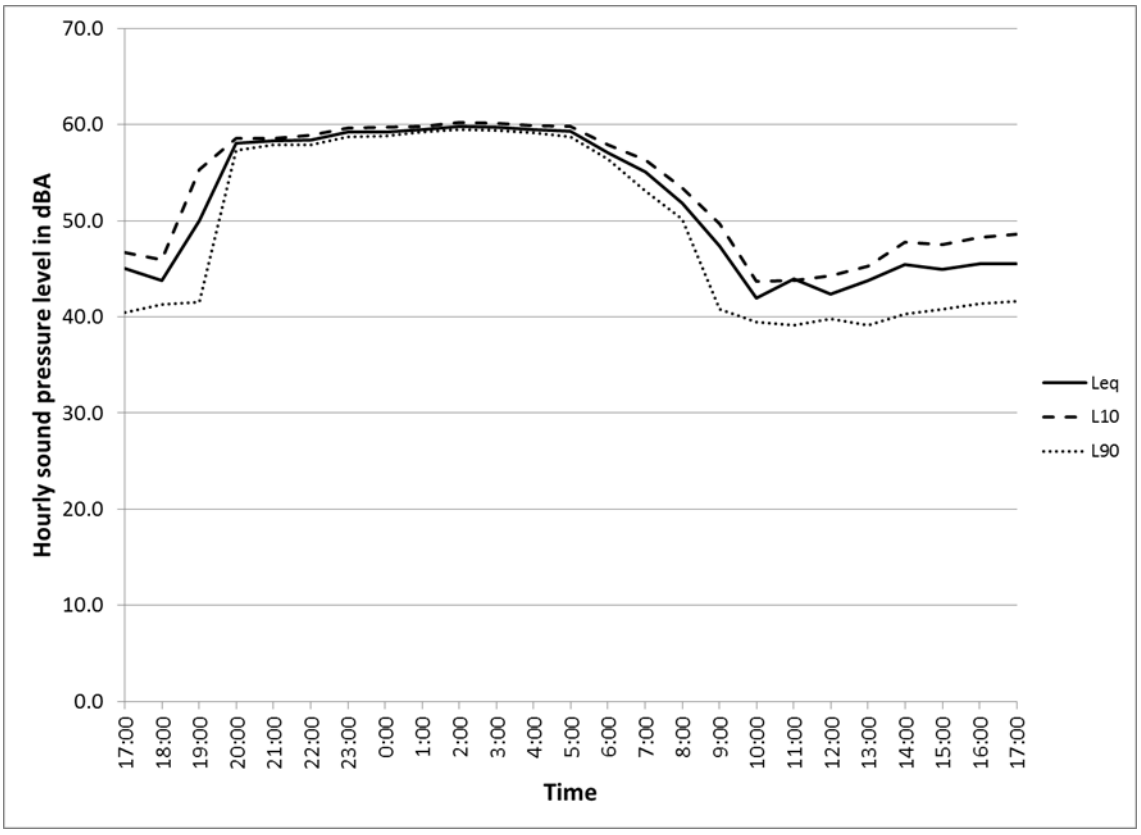
Figure 1: Noise Monitoring Location



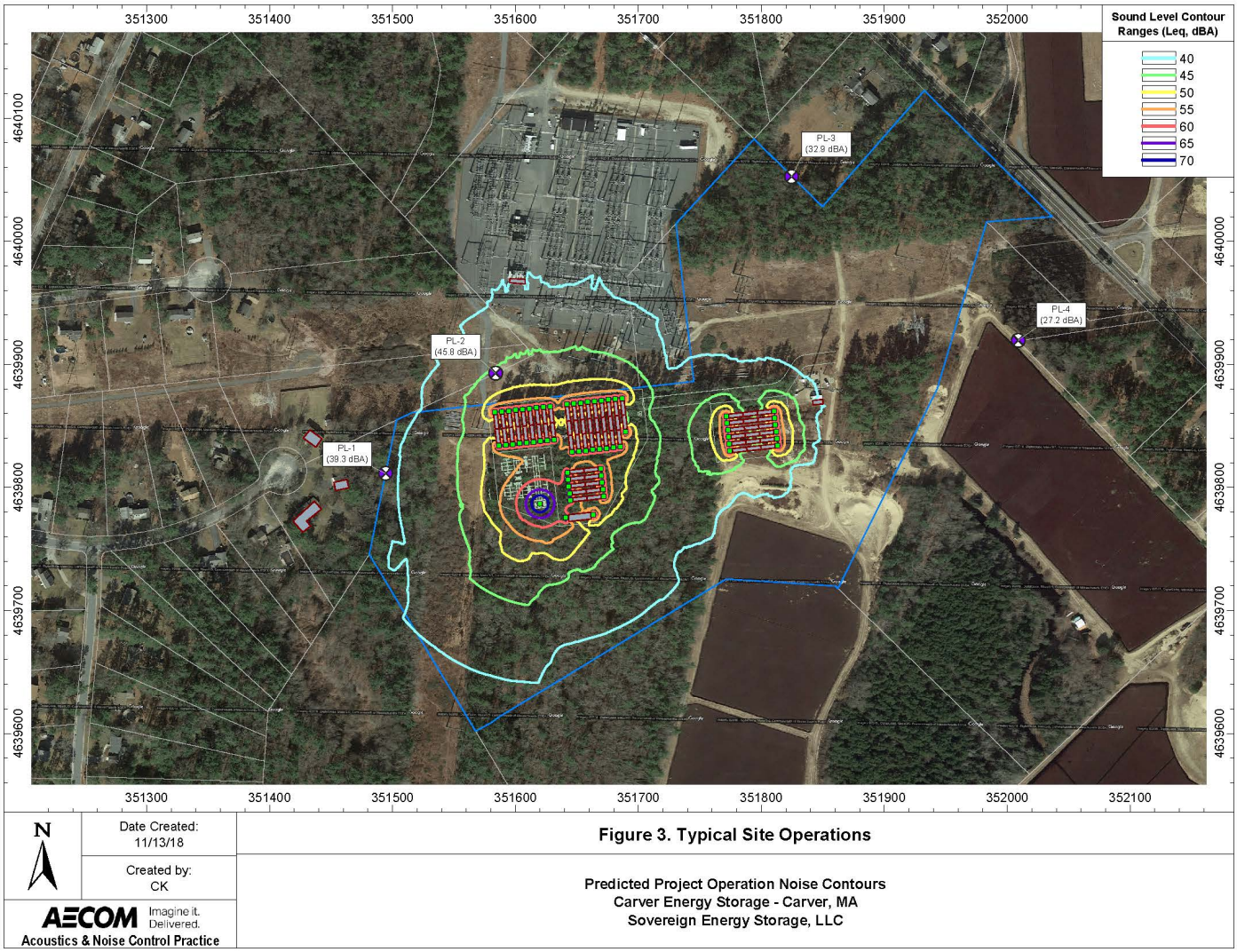
Sound pressure level measurements were collected at the representative location (LT-02) at 20 Craig Street. Sound level data, in dBA, were collected in terms of hourly equivalent levels (L_{eq}, which are energy-averaged levels over specified time periods) during the course of the study. They were also recorded in terms of hourly L_{10} and L_{90} values to show the general range of sound levels over the course of the 24-hour period. L_{10} is the level exceeded 10% of the time and L_{90} is the level exceeded 90% of the time. L_{10} typically represents the prevailing loudest activities in the area while L_{90} typically represents the residual background level in the area.

Weather conditions were ideal for sound monitoring with winds below 10 miles per hour at all times, temperatures in the 80s and 90s on the Fahrenheit scale, and no precipitation. Noise sources in the area were natural sounds (from birds, insects, and rustling leaves) and the nearby substation was not audible. Results from the 24-hour readings are presented in Figure 2. L_{10} and L_{90} values are included in Figure 2 to show the range of the readings. There was generally a 15 to 20 dB difference in monitored levels between the daytime and nighttime readings, mainly caused by insects. Minimum background levels were roughly 40 dBA.

Figure 2: 24-hour Sound Monitoring Results



Predicted noise levels generated by the planned facility were calculated using the Cadna/A computer model, which is a commercially-available noise mapping program based on the acoustical algorithms in ISO Standard 9613-2 (*Acoustics – Attenuation of sound during propagation outdoors, Part 2: General method of calculation*). The principal noise generators in the facility will be the battery packs and associated transformers. The noise levels used in the model were supplied by the manufacturer (75 dBA at 1 meter from each unit) and audible noise estimations from the power ratings of the transformers. Using these source levels, topographical mapping of the area, and the currently planned site layout drawings provided by the Project team, noise contours (lines of constant noise level) were calculated for the Project area. Figure 3, below, shows the noise contours at a height of 5 feet above ground level resulting from the modeling calculations.



As is shown in Figure 3, the maximum predicted residential property line sound levels are between 39 dBA to the west and 46 dBA to the north. Therefore, all predicted noise levels from the facility are within 10 dBA of the minimum measured background and will not exceed the Massachusetts Department of Environmental Protection ("DEP") noise regulation standard at the property line. Also, there will be no perceptible noise impacts from the Project at the closest residential receptors.

3. Safety

The design and operation of the Cranberry Point Project will comply with all industry and

regulatory standards applicable to large-scale battery storage facilities. Additionally, the Company has had numerous meetings with local fire officials in Carver to discuss local issues for each facility, including fundamental design components, emergency vehicle access, water supply, and safety and emergency plan development. As described in greater detail below, the Company has taken proactive and practical steps to ensure that the safety of the public, emergency responders, employees and others is adequately protected.

a. Design and Planning

The Project team will carry out proper risk analysis valuating all types of risks applicable to the Project in general for safety and environment, risks related specific to technologies applied and those applicable to the exact location. Every step of the process will be properly assessed covering the process of construction, operation and decommissioning. Any mitigation methods identified in this process will then be incorporated into the system design process and included into Health, Safety & Environment ("HSE") Manual of the Project and available for inspections by the local regulating authorities. The Company will apply the experience of over 3 GW of construction and operation in the United States to the HSE plan for the Project.

The Company is a member of Electric Power Research Institute ("EPRI") Program 94 on Energy Storage & Distributed Generation since 2012. The Company has also actively taken part, since the establishment, to various working groups of the Energy Storage Integration Council ("ESIC"). The goal is to advance the deployment and integration of energy storage systems through open and technical collaboration. In particular, the Company is a part of the "Testing and Characterization Working Group" working to improve industry standards for energy storage by developing common metrics and establishing performance standards and test protocols. The Company is also in the "Grid Integration Working Group" that provides practical guidance for

implementing energy storage in the field. Thus, the Company brings a wealth of industry experience and involvement to its development of the Project.

Modern energy storage technology is safe and there are no known reports of fires from battery storage systems of the size being proposed by the Company for the Project. Nonetheless, great care is being taken in the design to reduce the risk of potential hazardous conditions, including mechanical, thermal, or electrical contingencies. To address safety concerns, the Company is developing its procedures to the highest industry standards and designing the Project to ensure safety of the community through various methods. To that end, the Project team is locating this facility directly adjacent to the Eversource Substation, in an area that is already used for electric transmission and distribution infrastructure. The closest land uses are for cranberry bogs, the substation, transmission/distribution lines and a cell tower. The Project is located approximately 400 feet from the closest residential abutter, behind these other adjacent uses and wooded areas. Moreover, as described below, the Project is being developed in accordance with industry standards and in close consultation with the Carver Fire Department. This local input has resulted in enhancements to the Project to promote, to the greatest extent possible, safety associated with the ESS, including: (1) no building enclosure of the battery packs; (2) appropriate access roads; (3) additional spacing between batteries; (4) coordinated emergency planning; and (5) provision of a mobile water source.

b. Safety Plans and Monitoring

The Company has developed rigorous health and safety requirements associated with its ESS projects that will include a comprehensive emergency response plan. Such a plan requires the Project to be consistent with local building codes, electrical codes and the International Building Code ("IBC"). The Company, in conjunction with all equipment suppliers and local

authorities, will develop Emergency Response Plan ("ERP"), which will include the set of actions required by specific personnel, and provide decision support to personnel faced with emergency situations. For personnel working on the Project, the scope of the plan is as follows:

- To ensure that the alarm is raised and that appropriate parties are alerted;
- To summon assistance from appropriate sources;
- To provide relevant information to those providing assistance; and
- To ensure that the correct initial actions are taken at the site of the emergency.

The ERP itself will include:

- Definition of emergency scenarios/categories
- Contact details for all actors to be involved (including public authorities, suppliers, representatives of the owner)
- Definition of the communication protocol for the incident notification
- Incident response sheet with the detailed set of actions to be made for each category of the emergency
- Site layout with the defined meeting point(s) in case of emergency
- Incident response checklist

In addition, the Project will also have detailed and responsive monitoring and auto shut-down capabilities. Remotely monitored at the Company's Andover, Massachusetts headquarters 24-hours a day, such oversight is performed on a battery-by-battery basis. If an individual battery is operating outside of pre-determined parameters (such as temperature, voltage or impedance), an automatic shut-down sequence will occur for that particular battery. If such an abnormality spreads or appears with a nearby battery, then the entire rack will be shut down. If more than one rack is affected, the entire container is remotely disabled and if an adjacent container shows any problem, then all neighboring containers are disabled. Through this extensive monitoring and response protocol, the Company seeks to ensure the prevention of any emergency response that would be required from the local fire department.

c. Fire Suppression, Detection and Response

There is also extensive industry information with regard to fire suppression systems and

emergency management for battery storage facilities, should the above-described monitoring and automatic shut-down not prevent a fire. In general, with regard to fire suppression systems, city and county regulations do not require sprinklers or explicit fire suppression measures for outdoor lithium-ion battery installations. For outdoor commercial or utility projects requiring flame detection, an independent, external fire detection system will be installed for the Project. Such a system monitors temperature, voltage and impedance, as discussed above. These systems will be connected to the Company's local headquarters for continuous monitoring. Fire detection systems that can be used include infrared flame detectors and thermal security cameras. Each battery section at Cranberry Point will have its own fire detection and fire extinguishing system, while the inverter containers will be equipped with fire detection system. The potential explosion risk of the batteries is extremely low since the lithium-ion technology batteries are sealed and no hydrogen presence is envisioned.

d. Consultation with Carver Fire Department

The Company has engaged in comprehensive and productive communications with the Carver Fire Department to ensure that input from local first-responders is integrated into the Project's design. Accordingly, from the outset, the Project has incorporated the requests of the Carver Fire Department to locate the battery units on unenclosed concrete pads to make firefighting via crane and truck more effective.

At its most recent meeting on October 24, 2018, the local Fire Department specifically expressed a preference for: (1) a 24-foot access road, with an all-weather surface, around the Project and in the middle aisle; (2) an 8-foot separation between strings of batteries; (3) water as the preferred means of fire suppression; and (4) security fencing and three gates around the facility. The Company has agreed to all of these requests and in in the process of incorporating these into

its Cranberry Point Project final design. There is no nearby public water supply so water would need to be trucked to the site in the event of an emergency. Therefore, at the Town's request, the Company plans to provide a mobile source of water (i.e., a tanker truck) to the Fire Department. The determination with regard to the details of the mobile source to be provided is being developed in discussions with the Carver Fire Department.

e. Conclusion on Safety

Based upon the above, the Project team has worked closely with the local communities to ensure the safety of the public, emergency response teams and the storage facilities themselves. The Company has designed its Project to meet rigorous industry standards applicable to battery storage units and with extensive input from local officials to ensure the safest and most effective response in the event of an emergency. The Company will continue to work in a coordinated manner with local official to ensure that all appropriate safety measures are incorporated into the design, maintenance and operation of the Project.

III. LEGAL ANALYSIS

A. Statutory Framework

The Legislature has established the Siting Board as the lead state agency to review and approve needed, least-cost and least-environmental-impact facilities for significant energy infrastructure. See, e.g., Brockton Power Company LLC v. Energy Facilities Siting Board et al., 469 Mass. 215, 219-20 (2014); Alliance to Protect Nantucket Sound, Inc. v, Energy Facilities Siting Board, 457 Mass. 663, 673-74 (2010); Box Pond Ass'n v. Energy Facilities Siting Bd., 435 Mass. 408, 409-10 (2001); Town of Andover v. Energy Facilities Siting Bd., 435 Mass. 377, 378-79 (2001). G.L. c. 164, § 69H authorizes the Siting Board to "review the need for, cost of, and environmental impacts of transmission lines, natural gas pipelines, facilities for the manufacture and storage of gas, and

oil facilities." The Siting Board also has jurisdiction to review and approve "generating facilities" pursuant to G.L. c. 164, § 69J¼. Chapter 164 provides that "[n]o applicant shall commence construction of a facility at a site unless a petition for approval of construction of that facility has been approved by the [Siting Board]." See G.L. c. 164, §§ 69J, 69J¼.

For purposes of determining whether a project is a "facility" that is subject to the Siting Board's jurisdiction, G.L. c. 164, § 69G and the Siting Board's implementing regulations define a jurisdictional generating facility to include "any generating unit designed for or capable of operating at a gross capacity of 100 megawatts or more, including associated buildings, ancillary structures, transmission and pipeline interconnections that are not otherwise facilities, and fuel storage facilities." However, the Siting Board's statutes and regulations do not explicitly define what constitutes a "generating unit," "generation" or a "generating facility." Although the term "generation" is not defined by Section 69G, it is defined elsewhere in Chapter 164 as: "the act or process of transforming other forms of energy into electric energy or the amount of electric energy so produced." Relatedly, a "generation facility" is defined as "a plant or equipment used to produce, manufacture or otherwise generate electricity and which is not a transmission facility or an energy storage system procured by a distribution company for support in delivering energy services to end users." G.L. c. 164, § 1. In concert therewith, an ESS is defined as, "a commercially available technology that is capable of absorbing energy, storing it for a period of time and thereafter dispatching the energy." Id.

Within this statutory framework, the Siting Board may conduct a review of a proposed project to determine whether it involves the construction of a jurisdictional facility. See Providence and Worcester R.R. Co. v. Energy Facilities Siting Bd., 453 Mass. 135, 142 (2009); see, e.g., Harbor Electric Energy Company, EFSB 17-03 (Sept. 20, 2017); University of

Massachusetts, EFSB 15-2 (Sept. 21, 2015); Boston Gas Company d/b/a National Grid, EFSB 14-1 (Aug. 20, 2014). In particular, the Siting Board's regulations, at 980 C.M.R. § 2.09, authorize the Siting Board to undertake a review to determine the existence or scope of its jurisdiction over proposed energy infrastructure projects. In the case of an ESS project, the Siting Board would have jurisdiction to review and approve a battery project only to the extent the facility generates electricity.[8] Providence and Worcester R.R. Co., 453 Mass. at 142 (interpreting the Siting Board's authority based on the statutory text as "the principle source of insight into Legislative purpose" to attempt to give effect and purpose to all of its words, and examining whether a proposed pipeline qualified as an "oil facility" based on the express terms of G.L. c. 164, § 69G). At issue, therefore, is the proper interpretation of the Siting Board's statutory authority in relation to the Project.

In general, the Supreme Judicial Court (the "SJC") accords an administrative agency such as the Siting Board "substantial deference" in its interpretation of the statutes that it is charged with enforcing. Providence and Worcester, 453 Mass. at 141. Where the statute's meaning is clear and unambiguous, the Court will "give effect to the Legislature's expressed intent." Id. For that reason, "[a]n incorrect interpretation of a statute by an administrative agency is not entitled to deference." Id. In analyzing a matter of statutory construction, the Court will "consider the statutory text itself, the principal source of insight into Legislative purpose." Id. at 142 (internal quotations omitted), citing New Bedford v. Energy Facilities Siting Council, 413 Mass. 482, 485 (1992). Where the statutory meaning is plain and unambiguous, the SJC is constrained to apply

[8] Given that the Company's interconnecting transmission line will be of very short length, much less than the thresholds set forth in Section 69G, the transmission line associated with the Project would not be jurisdictional to the Siting Board. See G.L. c. 164, § 69G (defining transmission thresholds as "a new electric transmission line having a design rating of 69 kilovolts or more and which is one mile or more in length on a new transmission corridor" and "a new electric transmission line having a design rating of 115 kilovolts or more which is 10 miles or more in length on an existing transmission corridor"). In the same vein, while the Siting Board has jurisdiction over certain storage facilities, by definition such authority applies only to the storage of oil, natural gas and liquefied natural gas ("LNG"), but notably not the storage of electricity. Id.

it, unless "following the Legislature's literal command would lead to an absurd result, or one contrary to the Legislature's manifest intention." Providence and Worcester, 453 Mass. at 142. As is the case for all administrative agencies, the Siting Board does not have the power to "imply language in a statute if the Legislature has not provided it." Id. at 145, quoting New England Power Co. v. Selectmen of Amesbury, 389 Mass. 69, 74-75 (1983).

B. The Proposed Project Is Not a Jurisdictional Generating Facility Subject to Siting Board Review.

The Siting Board does not have jurisdiction over the Cranberry Point Project because an ESS installation, even one over the 100 MW threshold for generation, is not a jurisdictional "generating facility" pursuant to G.L. c. 164, § 69G and under G.L. c. 164, § 1. The Siting Board has, in the past, looked to the definitions in Section 1 of Chapter 164 when a particular term is not defined in G.L. c. 164, § 69G. In a recent petition for a jurisdictional determination, the Siting Board used the definition of "transmission" in Section 1 to determine whether a proposed facility was subject to the Siting Board's jurisdiction as a transmission line under G.L. c. 164, § 69J.[9] See Harbor Electric Energy Company, EFSB 17-03, at 10; see also Comm. v. Burnham, 451 Mass. 517, 521 (2008) (stating "words used in one part of a statute to connote a particular meaning should be given the same meaning in another part of the same statute."). Consistent with the broad deference accorded to administrative agencies to interpret statutes entrusted to their oversight, it is appropriate for the Siting Board to consider the relevant definitions in Section 1 of Chapter 164 in analyzing whether an ESS is subject to Siting Board review pursuant to G.L. c. 164, § 69J. See, e.g., ENGIE Gas & LNG, LLC v. Dep't of Public Utilities et al., 475 Mass. 191, 204 (2016); Goldberg et al. v. Board of Health of Granby et al., 444 Mass. 627, 633 (2005); Box Pond Ass'n, 435 Mass. at 416. Because the term "generation" is not defined in Section 69G and the definition

[9] The Siting Board's statutory definitions in Section 69G do not specify what constitutes "transmission."

provided for this term in Section 1 may inform the Siting Board's decision here, the Siting Board should be guided by the definitions in Section 1 to determine whether an ESS is a generating facility subject to Siting Board review pursuant to G.L. c. 164, § 69J¼. See Harbor Electric Energy Company, EFSB 17-03, at 10; see also Burnham, 451 Mass. at 521.

As referenced above, a jurisdictional "facility" defined by Section 69G includes "any generating unit designed for or capable of operating at a gross capacity of 100 megawatts or more" where the term "generation" as defined in Section 1 means "the act or process of transforming other forms of energy into electric energy or the amount of electric energy so produced." G.L. c. 164, § 69G; G.L. c. 164, § 1 (emphasis added). Critically, by its very nature, an ESS does not "transform" one form of energy into electric energy; rather, it directly takes electric energy already produced by other generating facilities, stores it and then dispatches it into the transmission grid when needed or economical to do so. Simply stated, an ESS does not constitute a "generating unit" and does not "generate" electricity for purposes of the Siting Board's jurisdiction under G.L. c. 164, §§ 69G and 69J¼.

Such a determination is consistent with the analysis the Siting Board conducted in a recent case in which Boston Gas Company d/b/a National Grid ("National Grid") sought a jurisdictional determination regarding an LNG storage tank and asserted that the storage tank was not a "facility" because it did not "manufacture" or "store" gas as required by G.L. c. 164, § 69G. Boston Gas Company d/b/a National Grid, EFSB 14-1 (2014); see also Harbor Electric Energy Company, EFSB 17-03, at 10. Pursuant to G.L. c. 164, § 69G, in the natural gas context, a jurisdictional "facility" is "a unit, including associated buildings and structures, designed for or capable of the manufacture or storage of gas" (emphasis added). National Grid established that the liquefaction process merely changes the physical state of natural gas, from a gas to a liquid, and therefore does

not qualify as "storage" or "manufacture." Boston Gas Company, EFSB 14-1. at 6. The Siting Board determined that the liquefaction process did not by itself store or manufacture gas because the chemical composition of natural gas does not change when it is liquefied. Id. at 10. Therefore, the Board found that liquefaction equipment, as presented in National Grid's petition, was not a "facility" as that term is defined in G.L. c. 164, § 69G. Id. The Siting Board should reach a similar conclusion here: under Chapter 164, energy storage does not transform one form of energy into electricity; it does not independently "generate" electricity; it is not "generation"; and it is not a "generating facility"; therefore, the Company's ESS Project is not a "facility" for the purposes of Siting Board jurisdictional review. See id. at 8.

In that regard, the "energy so produced" clause stated in Section 1 of Chapter 164 also does not make the stored energy somehow generation for purposes of Section 69G. The phrase "so produced" refers back to the term to "transforming." Because, as stated above, an ESS facility does not transform one form of energy (whether by oil, natural gas, nuclear or even wind or solar) directly into electricity, it does not itself "produce" electric energy; thus, the statutory language regarding the amount of electric energy "so produced" does not change this conclusion. Instead, an ESS facility takes electricity already produced, stores it and dispatches it into the grid at a time when the product is most useful to the grid. There is no separate or related transforming or production of electric energy as part of this process.

Further supporting this conclusion is that the Legislature has established that, pursuant to Chapter 164, "energy storage systems" are explicitly exempt from the definition of "generation facility." Under G.L. c. 164, § 1, a "generation facility" is "a plant or equipment used to produce, manufacture or otherwise generate electricity and which is not a transmission facility or an energy storage system procured by a distribution company for support in delivering energy services to

end users." G.L. c. 164, § 1 (emphasis added). Relatedly, an "energy storage system" is a specifically defined term in Section 1: "a commercially available technology that is capable of absorbing energy, storing it for a period of time and thereafter dispatching the energy and which may be owned by an electric distribution company." G.L. c. 164, § 1 (emphasis added). Taken together, the language in the two definitions was intended to clarify that electricity storage facilities, even when owned or procured by distribution companies, do not violate the 1997 deregulation prohibition on distribution companies otherwise owning generation or participating in the generation business.[10] In short, distribution companies may own electricity storage facilities because they do not represent generation. Thus, Chapter 164 is clear that an ESS, regardless of who owns it, does not represent a generating facility.

Based upon the above, the Siting Board should not consider an ESS facility to be a "generating facility" because it would be inconsistent with the language of G.L. c. 164, §§ 1, 69G and would require the Siting Board to imply language that the Legislature did not choose to provide. See Providence and Worcester, 453 Mass. at 145; New England Power Co., 389 Mass. at 74-75. Accordingly, the ESS Project proposed by the Company is not a "generating facility" subject to the Siting Board's jurisdiction.

C. Public Policy Considerations

Important public policy considerations further support a determination by the Siting Board that an energy storage system is not jurisdictional. As the Siting Board is well aware, its jurisdictional reviews for facilities are comprehensive, time consuming and expensive. As state

[10] The statutory language must be reasonably interpreted to clarify that distribution companies may procure or own energy storage without running afoul of the Electric Restructuring Act and the SJC's case law prohibiting distribution companies from engaging in the generation business. See G.L. c. 164, § 1A; Engie Gas & LNG, LLC v. Dep't of Pub. Utils. et al., 475 Mass. 191, 207 (2016) ("in restructuring the electric industry by removing electric distribution companies from the business of electric generation, the Legislature 'shifted the risks for generation development from consumers to generators'").

above, energy storage systems are vitally needed in the regional energy market and the Project is one of the first of its kind proposed in the East Coast of the United States. Allowing this industry to advance locally would not only greatly assist the reliability, economics and sustainability of the area's energy supply, it would also make Massachusetts a leader the development and deployment of this new industry.

Moreover, a decision by the Siting Board that the proposed ESS is non-jurisdictional would not change the fact that the Project would still receive a rigorous and thorough vetting from the relevant permitting agencies and input from the general public. Indeed, even though the Project is not a generation facility subject to Siting Board review, local agencies in Carver must review the Project and conduct a detailed assessment allowing for public input and evaluation of the same issues (noise, visual impacts, wetlands, safety, construction impacts, etc.) that would otherwise be a part of the Siting Board's review. Similarly, issues associated with the Project's interconnection will be vetted through the usual ISO-NE process in concert with Eversource, thereby ensuring the proper functioning and reliability of the regional electric system. In sum, the issues normally considered by the Siting Board for a jurisdictional project will be addressed in other forums and there is no benefit associated with a parallel review conducted by the Siting Board.

D. Conclusion

Based on the foregoing analysis, the Cranberry Point Project is not a jurisdictional facility that is subject to approval by the Siting Board pursuant to G.L. c. 164, §§ 1, 69G and 69J¼, as well as the Siting Board's regulations.

IV. CONCLUSION

For the foregoing reasons, the Company requests that the Siting Board determine that the

proposed Project, as described herein, is not subject to the jurisdiction of the Siting Board.

Respectfully Submitted,

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