

1.0 INTRODUCTION

This attachment considers the potential impacts of the Proposed Action with regards to Noise.

A detailed Noise Impact Assessment Study (“Noise Study”) was completed to evaluate the potential sound level impact of future operational noise levels of the Proposed Action. The Noise Study is included as **Appendix F**. The substation upgrades and interconnect line components of the Proposed Action do not include any operational-phase noise-generating equipment and therefore are excluded from the Noise Study. Potential impacts from construction related noise are addressed in Attachment G, “Construction”. The relocation of the training facility immediately adjacent to the proposed BESS Facility within the Proposed Action Site will not change the amount of noise generated by the training facility’s continued operation.

2.0 NOISE STUDY

The Noise Study dated June 25, 2024, which was prepared by Acentech, Inc., is included as **Appendix F**. The assessment is based on the guidance provided in “Assessing and Mitigating Noise Impacts, a New York State Department of Environmental Conservation (NYSDEC) guidance document (DEP-00-1).”

The Noise Study included: 1) acoustic model to calculate the expected sound levels of each of the noise producing equipment including battery storage containers, inverters, substation transformers, and air conditioning for a control house and 2) an evaluation of the results of the assessment to applicable noise standards, guidelines, and limits.

The acoustic model developed by Acentech projected noise levels based on operations of the Proposed Action Site equipment. It estimated the contribution of these various noise sources to the community sound levels and evaluated the anticipated noise impact at nearby sensitive receptor locations.

2.1 Existing Conditions

The NYSDEC noise guidelines are defined in their publication “Assessing and Mitigating Noise Impacts” (“NYSDEC Noise Guidance”).¹ This document states that sound pressure level (SPL) increases from zero to three decibels should have no appreciable effect on receptors; increases of three to six decibels may have the potential for adverse impact only in cases where the most sensitive of receptors are present; and increases of more than six decibels may require a closer analysis of impact potential depending on existing noise levels and character of surrounding land use. NYSDEC Noise Guidance also indicates that the addition of any permanent noise source should not raise ambient levels above 65 dBA in any non-industrial setting, or that noise sources should not exceed ambient levels when ambient levels already exceed 65 dBA.

NYSDEC Guidance advises that one can assume a background sound level based on the setting. For estimation purposes, the memo identifies estimated ambient sound as 87 dBA for highly industrial settings, 45dB(A) for a serene rural environment, and 79dB(A) for an urban industrial setting. This project site is located on an existing power utility facility. Given the existing environment surrounding the Project Site and the distance to the nearest sensitive receptors, it is appropriate to utilize assumed background sound level in accordance with NYSDEC guidance. Based on the surrounding properties and typical local noise levels, a nighttime ambient sound level to be 50 dBA at residential receivers was assumed.

The Proposed Action Site is a portion of the former Shoreham Nuclear Power Plant and is situated a considerable distance from most sensitive receptors. In addition, the existing utility use on the site generates similar noise levels associated with power utilities. The nearest sensitive receptors to the location

¹ NYSDEC. “Assessing and Mitigating Noise Impacts.” Available from: http://www.dec.ny.gov/docs/permits_ej_operations_pdf/noise2000.pdf. Accessed April 2024.

of the proposed BESS facility were determined to be the closest single-family residence (R-1) approximately 1,600 feet northeast from the Proposed BESS Facility, one (1) unoccupied historic residence owned by the Town of Brookhaven (R-2) approximately 900 feet southwest from the Proposed BESS Facility, and the public beach (R-3) approximately 1,400 feet north from the Proposed BESS Facility (see **Appendix F**).

In addition to the proposed BESS facility, the existing training facility will be relocated on the same property to the east of its existing location. Once constructed, activities at the training facility will occur indoors and machinery will run outside, however there will be no increase in usage of the facility in the new location and no associated noise generation is anticipated to result from the continued operation of the relocated training facility.

Substation upgrades are planned as part of the BESS project; however, these upgrades will not include the installation of any new noise-generating equipment.

Qualitative estimates were provided to assess the impact of the Proposed Action based on this assumed ambient noise condition per the NYSDEC Noise Guidance. For this requirement, the sound levels at the three (3) nearest sensitive receptors to KCE NY 31 were evaluated. **Figure 2 of Appendix F** shows the receptor locations.

2.2 Potential Impacts of the Proposed Project

The Proposed Action contains several types of noise producing equipment which were evaluated in the noise study including battery units, medium voltage (MV) transformer units, one (1) auxiliary load transformer, one (1) substation transformer, and one (1) HVAC unit.

The project only sound levels were calculated at each receptor which were combined with the assumed ambient sound level of 50 dBA to estimate future sound levels with the Proposed Action in place. As the calculated project-only sound levels are significantly lower than typical suburban nighttime ambient noise levels and both noise levels are well below the thresholds set by NYSDEC guidance, site specific ambient noise measurements would provide no significant information and are unwarranted.

The difference between the project sound level and typical local nighttime sound level were also determined. Typical nighttime levels were utilized, as this is the time when the lowest ambient noise levels occur. The noise generation at the Site will be constant, as there is no increase in daytime activity associated with the proposed BESS Facility.

Table F-1 provides a summary of the nighttime noise calculations during operation. The nighttime noise levels are projected to be 50 dBA or below at all sensitive receptors.

Table F-1 – Acoustic Model Results vs. Typical Local Noise Limits and NYSDEC Guidelines					
Receptor	Receiving Property	Typical Nighttime Sound Level Limit / Assumed Ambient (dBA)	Calculated Project Only Sound Level (dBA)	Difference: Typical Nighttime Limit - Calculated Sound Level (dBA)	Expected Increase over Ambient (dB)
R-1	Residential Property	50	33	-17	0
R-2	Historic Residence	50	40	-10	0
R-3	Public Beach	50	34	-16	0

Figure 3 of Appendix F shows the 50 to 65 dBA sound contours for operation. As shown in **Table F-1** above, the Proposed Action is not anticipated to exceed 50 dBA at any of the documented receptors. The greatest noise impacts will be observed at night. As no significant nighttime impacts to noise were identified, there will be no impact to daytime noise levels.

The project-only sound levels were combined with the assumed ambient sound level of 50 dBA at the three receivers to estimate future sound levels with the Proposed Action in place.² A 0 dBA increase is expected at each of the three receptor locations. This project is therefore well under the 10 dB(A) increase, at which level the NYSDEC guidance recommends mitigation (see **Table F-1** above).

Project noise levels will not exceed the typical local nighttime residential noise limits of 50 dBA at the historic residence, the nearest residential properties, or the public beach.

Considering the above, no significant adverse impact to noise is anticipated.

² The ambient sound level and project only sound pressure level are added logarithmically.