

1.0 INTRODUCTION

This attachment considers potential human health impacts from the Proposed Action, including potential electromagnetic fields, the construction of the Proposed BESS Facility, interconnect line, substation upgrades, and relocation of the training facility. Specifically, it addresses previous spills on the site, chemical storage, recognized environmental conditions (RECs) identified in a Phase I Environmental Site Assessment (ESA), and establishing methods for safe construction activities and handling of hazardous waste.

2.0 ELECTROMAGNETIC FIELD STUDY

Electromagnetic fields (EMF) are invisible forces which surround all electrical equipment, including transmission lines, wiring, and electronic devices. EMF is composed of electric fields and magnetic fields. Electric fields are generated by voltage and are associated with any electric device. Magnetic fields are only generated by the flow of current. Electric fields are readily shielded by common objects and have not been associated with human health impacts in scientific studies, therefore magnetic fields are typically the concern when examining EMF impacts.

In a battery, electrical energy is stored in chemical bonds. The chemical processes in battery storage are not associated with the generation of magnetic fields; however, the transmission of the electric flow to and from the BESS facility will produce EMF. The EMF associated with the BESS facility is comparable to EMF associated with electrical substations and transmission lines.

The potential EMF impact of the Proposed Action has been evaluated based on a comparison of the EMF levels calculated for the West Bartlett Substation Project and the Proposed Action (**Appendix G**). According to the New York State Public Service Commission's (NYSPSC's) Statement of Interim Policy on Magnetic Fields of Major Electric Transmission Facilities (issued and effective September 11, 1990), the prudence avoidance health standard for a magnetic field is 200 milligauss (mG) at the edges of major transmission facility rights-of-way (100 feet for circuits with voltage less than 230kV with the transmission line centered). Major transmission facilities are defined as transmission line facilities that are subject to Article VII of the Public Service Law. Although the Proposed Action is not subject to Article VII, the NYSPSC standard will be used for EMF evaluation.

For comparison purposes, the LIPA West Bartlett Substation is a 69kV substation with two connecting OH 69kV transmission circuits. The Proposed Action will include an approximately 500-foot 138kV transmission line. As a conservative approximation, projected EMF for the Proposed Action was doubled as compared to the West Bartlett Substation. This is a conservative estimate as the National Institute of Environmental Health Sciences identifies typical average EMF fields for transmission lines between 115kV and 230kV as ranging from 29.5mG to 57.5 mG at the source (see **Appendix H**). The strongest EMF is anticipated adjacent to the substation equipment and the transmission lines. EMF rapidly decreases with distance, and EMF levels outside of the Proposed Action Site should not be distinguishable from the typical background conditions.¹

The EMF study that was undertaken for the West Bartlett Substation Project included calculating average and peak-load magnetic fields for post-project conditions. Peak-load conditions represent the highest anticipated load conditions during summer months when power demand is highest. The EMF Study calculated post-project magnetic fields at several profile locations extending outward from the West Bartlett Substation fence and across the interconnecting 69kV transmission circuits. The maximum magnetic field measurement collected from all profile locations (including around the substation and across the 69kV transmission circuits) was 26.1 mG (under peak-load conditions). A projection of twice the EMF at the higher voltage associated with the BESS transmission results in a calculation of 52.2 mG associated with the

¹ National Institute of Environmental Health Sciences, National Institute of Health. "Electric Magnetic Fields Associated with the Use of Electric Power," June 2022. Page 37.

Proposed Action, which is well below the NYSPSC's prudence avoidance health standard of 200 mG. Based on a comparative analysis of the West Bartlett Substation, the predicted EMF levels from of the Proposed Action will be below the 200 mG prudence avoidance health standard established by the NYSPSC and will not result in significant adverse impacts.

3.0 PHASE I ENVIRONMENTAL SITE ASSESSMENT

3.1 Existing Conditions

A Phase I Environmental Site Assessment (ESA) report, dated March 15, 2023, was prepared by H2M architect + engineers to identify potential environmental concerns for the Proposed Action Site (**Appendix I**). During the Phase I ESA research and investigations, multiple spills that occurred on-site and on adjoining properties were identified. H2M has reviewed the spill reports for each of the spill incidents and determined that there are no open spill case investigations. Further, the Proposed Action Site was identified on multiple regulatory databases including the RCRA-Very Small Quantity Generator (RCRA-VSQG), Major Oil Facility (MOSF), Manifest, State Pollutant Discharge Elimination System (SPDES), Underground Storage Tank (UST), Aboveground Storage Tank (AST), Chemical Bulk Storage (CBS) and Air Emission Data (AIRS) databases under the site names "PPL Shoreham Energy LLC," "PPL Shoreham Power Plant" and "Shoreham Energy LLC". These listings are associated with a power generation site that is located within the Proposed Action Site parcel, but outside of the proposed lease area where the BESS facility will be located. See Sections 5.5.1 and 5.5.2 of **Appendix I** for further details.

The Phase I ESA also identified recognized environmental conditions (RECs) present on the Proposed Action Site. The REC is described below:

Pesticide and Polychlorinated Biphenyls (PCB) Impacted Soils and Groundwater – The aerial photograph review showed that the subject property had been utilized for agricultural purposes from 1938 through 1966. The use of pesticides to maintain pest control is a common practice in the agricultural industry. Following LILCO's acquisition, the subject property has been utilized for the storage of various electrical and hydraulic equipment. There is a potential for PCB-containing equipment to have been present and releases associated with the same to have occurred. The majority of the subject property and the proposed lease area is unpaved. Although no petroleum-impacted soils were observed during the site reconnaissance, distressed vegetation and exposed soils were observed. During the site reconnaissance, soil mounds were observed within the proposed lease area. While the soil mounds were likely to have been created during heavy machinery training operations, it is unknown whether soil may have been deposited onsite from other unknown sources. In addition, outdoor drum storage was observed in a canopied area to the south of the proposed lease area, which is located hydraulically upgradient. Although groundwater is not anticipated to be accessed for onsite potable usage, the potential presence of these chemicals in onsite soil is considered to be a REC.

Additionally, one (1) Historic REC (HREC) and one (1) Business Environmental Risk (BER) were identified for the subject property. Regarding the one (1) HREC (Multiple Onsite and Adjacent Reported Releases), H2M has reviewed the spill reports for each of the spill incidents and determined that there are no open spill case investigations with the NYSDEC for the subject property. Concerning the BER (Underground Injection Control Program Structures), an out-of-service onsite sanitary system and an in-service storm drain were identified within the proposed lease area. There is a potential for additional stormwater drywells and sanitary systems located throughout the remainder of the subject property. There is a potential for inadvertent discharges into these UIC structures and is a BER for the subject property.

3.2 Potential Impacts of the Proposed Project

Based on the results of the Phase I ESA, construction activities associated with the Proposed Action are to be conducted using work methods described in a site-specific health and safety plan (HASp), as well as in

compliance with all applicable state and federal regulations regarding the handling and disposal of potentially contaminated materials. Additionally, all other Proposed Action related construction will be conducted utilizing appropriate health and safety precautions including monitoring of excavated areas for discolorations or other signs of potential contamination. Regarding the out-of-service onsite sanitary system and in-service storm drain that were identified within the proposed project area, they will be removed during construction.

Prior to construction a project specific HASP will be drafted which will identify key personnel and reporting procedures for that phase of the project. The HASP will define specific work activities subject to this HASP, identify the responsible party for each task, establish a protocol for protecting personnel from incidents that may arise while performing field activities within the Site. The HASP will include details on hazard identification and risk management, communication procedures, PSEGLI technical safety requirements, safety compliance, and environmental compliance.

Although no significant contamination is anticipated, historical site use as an electrical power generating facility may have resulted in low level impacts to soil. Chemicals of concern (COG) that may be present in soil at low concentrations may include: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, polychlorinated biphenyls, and pesticides or herbicides. All field employees will be experienced and have OSHA HAZWOPER training and utilize the specified personal protective equipment (PPE) to minimize the potential for exposure.

On-site activities will be conducted in accordance with all applicable local, state and federal environmental regulations as well as any permit conditions, stipulations and restrictions. All work may be monitored for compliance by PSEG LI to ensure deficiencies and emergencies are managed appropriately. Dust control measures will be implemented during demolition and construction. At this time, there are no identified contaminants which would require a Community Air Monitor Plan (CAMP). Should contaminants be identified a CAMP will be implemented. Any observed environmental conditions that could adversely impact the public shall also be reported.

The Proposed Action will include the presence of chemicals, including dielectric/cooling fluid for the transformers, and lithium-ion electrolyte and cooling fluid encased within the BESS units. However, the design of the Proposed Action incorporates several features to mitigate potential discharges of these chemicals into the environment. Specifically, the dielectric/cooling fluid will arrive pre-sealed in the transformers, and the lithium-ion and cooling fluids will be pre-sealed within each individual battery unit within the containers.

It is anticipated that a total of approximately +/- 14,755 kg of Anode (including Carbon/Graphite), +/- 12,765 kg of Cathode (including lithium transition metal oxides or lithium iron phosphate), and +/- 18,440 kg of Electrolyte (including Lithium salts and Carbonate Esters) encased within each BESS containers; +/- 240 kg coolant/refrigerant per BESS container unit; +/- 35,000 liters of dielectric fluids within the medium voltage transformers; +/- 35,000 liters of dielectric fluid within the main power transformer (MPT); and +/- 700 gallons of dielectric fluid within auxiliary load transformer will be located onsite.

The dielectric/cooling fluid will arrive pre-sealed in the transformers and the lithium-ion electrolyte will be pre-sealed within each individual battery unit within the containers. The battery enclosures, transformers, and the project substation equipment will be installed on foundations that are designed to minimize the potential for infiltration into impervious surfaces or transport via stormwater runoff. In addition, secondary containment for the main power transformer and, if required by Environmental Protection Agency or NYSDEC regulatory standards, medium voltage transformers' fluids will be designed and implemented.

The Proposed Action includes plans for safe waste handling and disposal and will prevent the discharge of hazardous waste from the BESS Facility. The facility will have an Operations and Maintenance (O&M) Plan in place which will be compiled based on the O&M manuals from the battery and other equipment vendors. These will be compliant with the applicable federal, state, and local laws and manufacturers'

recommendations on safe maintenance and handling of equipment. A Spill Prevention, Control, and Countermeasure (SPCC) plan will also be developed for the Proposed Action to ensure appropriate controls and emergency protocols. Finally, a Health, Safety, Environment, and Quality (HSEQ) Management Plan will be in place which applies to the safety of employees of KCE, contractors, and visitors working at the Site. With the implementation of the policies and procedures outlined in the O&M, SPCC, and HSEQ, safe working practices and pollution prevention and control measures will be in place.

Abatement of asbestos containing materials (ACM) commenced in November 2024, and is expected to be completed by the end of 2024. All ACM will be abated and disposed of in accordance with all applicable State and Federal regulations. The relocation of the training facility does not include the usage of any hazardous materials and is not associated with any hazardous waste; therefore, it is not anticipated to have any significant adverse impacts on human health.

Considering the above, there are no significant adverse impacts expected to affect human health as a result of the Proposed Action.