Petition before the Massachusetts Energy Facilities Siting Board for

Analysis in Support of Approval of Holyoke Gas & Electric's Liquefied Natural Gas Infrastructure & Resiliency Project

EFSB 22-07

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COMMONWEALTH OF MASSACHUSETTS

ENERGY FACILITIES SITING BOARD

HOLYOKE GAS & ELECTRIC DEPARTMENT

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6.1 Standard of Review

G.L. c. 164, § 69J requires the Siting Board to determine whether the petitioner has shown that the proposed facility minimizes costs and environmental impacts while ensuring a reliable energy supply. The Siting Board is required to determine: (1) whether environmental impacts have been minimized and; (2) whether an appropriate balance would be achieved among conflicting environmental impacts, cost and reliability. To make this determination, Section 69J requires the Siting Board to assess the proposed project's impact in the following areas: land use, water resources (including wetlands), air quality, solid waste, radiation and noise.

The Siting Board assesses any tradeoffs that need to be made among potentially conflicting environmental impacts, particularly where an option for mitigating one type of impact has the effect of increasing another type of impact. An assessment of all impacts of a project is necessary to determine whether an appropriate balance is achieved both among potentially conflicting environmental concerns and between environmental impacts and cost. A project proposal that achieves this balance meets the Siting Board's statutory requirement to minimize environmental impacts. This section provides information on existing environmental resources associated with the existing West Holyoke Facility site, potential impacts to these resources associated with the Project as well as the complementary improvement activities and avoidance and mitigation measures that have been incorporated into the Project design.

The Project and associated work involve minimal impacts given the previously disturbed and maintained nature of the site as well as the existing equipment and operations. The limited nature of impacts associated with the Project is confirmed in that the proposed work does not require any other permits or approvals; the review of the Siting Board is the only permit required. A number of design or mitigation measures will ensure that the West Holyoke Facility continues to operate in a manner that avoids or minimizes impacts.

6.2 Environmental Impacts and Mitigation

6.2.1 Wetland Resource Areas

6.2.1.1 Introduction

Wetlands and waterbodies are regulated as Waters of the United States (WOUS) under Section 401 and 404 of the Federal Clean Water Act (CWA). The U.S. Army Corps of Engineers (USACE) is the primary Federal agency responsible for regulating activities that may impact wetlands and waterbodies. The USACE has defined WOUS to include the following: traditional navigable waters (TNW) of the United States, wetlands, tributaries to navigable waters of the United States (including adjacent wetlands and

lakes and ponds) and interstate waters and their tributaries, including adjacent wetlands (Relatively Permanent Waters, RPWs). In addition, all other waters of the United States not identified above, such as isolated wetlands, intermittent streams and other waters that are not part of a tributary system to interstate waters or to TNWs of the United States are subject to the CWA where the use, degradation or destruction of these waters could affect interstate or foreign commerce. The Siting Board examines direct wetlands alteration, disturbance of wetland buffer zones or coastal wetland resource areas. Specifically, whether and if so, how much of the Project footprint or site access would be located in or result in direct temporary and/or permanent impact to wetlands.

The Massachusetts Wetlands Protection Act (WPA), G.L. c. 131 § 40, protects water-related lands such as wetlands, rivers and streams, floodplains, ponds, estuaries and others and establishes performance standards by which work is conducted in these resource areas. The implementation of the WPA wetlands regulations is delegated, in part, to local Conservation Commissions. Any proposed activity that will remove, fill, dredge, alter, or build upon a protected area or within 100 feet of a protected area (the Buffer Zone), requires the filing of a Notice of Intent. Many Massachusetts communities have local wetlands protection non-zoning bylaws or ordinances that give a municipality the authority to regulate activities in or near wetlands or waterbodies by imposing stronger protective measures than the state WPA. These local laws are administered and enforced by the local Conservation Commission. Each local bylaw or ordinance specifies wetland areas subject to protection and identifies proposed activities that require the filing of a Notice of Intent. Holyoke has a local wetlands protection ordinance with associated regulations.

6.2.1.2 Existing Conditions

For the Project, four parcels that total approximately 25.65 acres were evaluated for the presence of wetland resource areas subject to protection under the Wetlands Protection Act and the Holyoke Wetlands Protection Ordinance. All four parcels (Holyoke Assessor's Map References 182-00-04, 182-00-005, 182-00-007 and 188-00-005) are owned by HG&E and comprise the existing West Holyoke Facility site located within maintained upland areas that are bordered by upland temperate-deciduous forest. Dominant vegetation in the mowed areas and along the fence lines included lowbush blueberry (*Vaccinium angustifolium*), narrow-leaved plantain (*Plantago lanceolata*), red clover (*Trifolium pratense*), dandelion *(Taraxacum officinale)* and bluets *(Houstonia caerulea).* Dominant plant species within the surrounding forest include white pine (*Pinus strobus*), red oak (*Quercus rubra*), black oak (*Quercus nigra*), sugar maple (*Acer saccharinium*), quaking aspen (*Populus tremuloides*) and white birch (*Betula populoides*).

6.2.1.2.1 Desktop Wetland Analysis

Prior to initiating field surveys within the subject properties, HG&E conducted a desktop evaluation to determine the presence of federal, state and locally jurisdictional wetland resource areas. HG&E reviewed both the federal National Wetland Inventory mapping as well as the Massachusetts Department of Environmental Protection (MassDEP) geographic information system (GIS) wetland data

layers and did not identify any wetlands directly within or within 100 feet of the subject properties nor any perennial streams within 200 feet.

6.2.1.2.2 Field Delineation

On behalf of HG&E, wetland scientists conducted a field review of the subject properties on May 18, 2022 to identify and delineate any federal, state and/or locally jurisdictional wetland resource areas present within the West Holyoke Facility site. The field review was conducted in accordance with Section 404 of the federal Clean Water Act, the Massachusetts Wetlands Protection Act and the Holyoke Wetlands Protection Ordinance. The undisturbed areas of the properties did not contain a predominance (50% or more) of wetland indicator plant species nor were any hydric soils identified within the property through use of a hand auger. Based on these conditions, there are no federal, state or locally jurisdictional wetlands within the subject properties or within 100 feet of the site boundaries. In addition, no perennial streams were identified within 200 feet of the site boundaries.

6.2.1.3 Impacts and Mitigation

There are no wetland resource areas within the subject properties or designated workspace areas associated with the Project. Therefore, there will be no wetland impacts or mitigation requirements for the Project.

6.2.1.4 Compliance with Wetland Protection Regulations

There are no wetland resource areas within the subject properties or designated workspace areas associated with the Project. Therefore, none of the federal, state or local regulations pertaining to wetland protection are applicable to the Project.

6.2.2 Water Quality and Water Supply Protection

The Siting Board has historically based its determination regarding water supply upon a demonstration by the applicant of: (1) an agreement for, or documentation of, an adequate water supply for the operational needs of the project; (2) that the required water supply infrastructure exists or can be constructed with minimal environmental impacts; and (3) that historical and projected water withdrawals are within the permitted limits for the water supply source.

The Project will not have a substantial water demand and is not located proximate to any public water resources. Additionally, the existing West Holyoke Facility will continue to have extremely low process and sanitary water uses that will not be increased by the Project nor have material impacts on established water uses. The West Holyoke Facility will also continue to store minimal quantities of oils and other chemicals for process uses.

6.2.2.1 Water Supply Protection

Wellhead protection zones have been established for each public water supply well in the form of a MassDEP designated "Zone Is" and MassDEP designated interim "Zone IIs." The radius of these zones is determined by the pumping rate of the individual wells and is generally between 100 and 400 feet for Zone I and up to one-half mile for Zone II. The Project is not located in a MassDEP Approved Zone I or Interim Wellhead Protection Area (Zone II) and it is not located in any locally mapped Groundwater Protection Districts.

6.2.2.2 Project Water Demand

6.2.2.2.1 Operational Demand

Incremental water demand for the Project will be negligible and consistent with existing conditions. The additional tank will not require any incremental water usage during operation. Water usage at the West Holyoke Facility will continue to be minimal and overall demand will remain consistent with current usage, namely limited to periodic use associated with the water-glycol heating system. This system, which will be updated with new equipment as a separate but complementary project, will continue to have an initial charge of water associated with a pre-mixed water-glycol solution to the system which will be periodically supplemented during operation of the heater. The total water-glycol system volume is expected to be less than or equal to approximately 2,600 gallons with only limited water requirements to maintain system levels as needed. Additional water demand for fire protection is not required, as the existing fire suppression system is sufficient to cover the Project. Water needs for the existing West Holyoke Facility currently is and will continue to be supplied from an existing private well located within the site to the south of the existing control building. No new water-related infrastructure is required within the site in connection with the addition of the LNG storage tank to meet the West Holyoke Facility's water demand with the Project.

6.2.2.2.2 Potable Water Demand

Potable water service for the existing West Holyoke Facility is currently provided by the private potable water well as previously described. The Project will not require any additional potable water demand during construction or in connection with the operation of the new LNG storage tank.

6.2.2.3 Project Wastewater Generation

The Project does not include the addition of any sanitary facilities and will not generate any new or incremental wastewater. Wastewater generated by the sanitary facilities within the existing West Holyoke Facility's control building is discharged directly to a private, on-site wastewater disposal (septic) system. Stormwater discharges associated with the Project will continue to be kept separate and will not be discharged to the sanitary sewer system.

6.2.2.4 Project Chemical Storage and Containment

The West Holyoke Facility currently contains four LNG tanks each with a 55,000-gallon capacity. The tanks are currently situated within a LNG spill containment system. The Project involves the addition of a fifth LNG storage tank with a 70,000-gallon capacity. The new LNG storage tank will be installed within a new, independent spill impoundment "dike" system to contain any spills from the tank or associated piping in accordance with Siting Board and federal LNG specific regulations. As currently performed, any such unlikely discharges will continue to be identified by the operations personnel through frequent inspections of the equipment. HG&E anticipates some limited storage of oil will continue consistent with established practices after the added tank is complete. Oil will continue to be stored in drums or totes that will be located within a building and placed on plastic containment pallets. HG&E will prepare a Spill Prevention Control and Countermeasure (SPCC) plan (or update its existing plan) in conformance with applicable regulations in connection with its final design for the new proposed tank. Based on the above, no releases of hazardous materials to the environment are anticipated in association with the proposed construction and operation of the Project.

During construction, if the total volume of oil (including motor lubricants, greases, gasoline, diesel and other petroleum products) stored at the site exceeds applicable thresholds, the contractor will adhere to the provisions of the SPCC plan. The following general procedures shall be followed during the use and storage of oils on-site for construction.

- Containers shall be in good shape without significant rusting, pitting, or other evidence of deterioration or damage.
- Berms and/or other barriers shall be used to protect stored fuel and oil containers from damage due to construction activities.
- Adequate secondary containment shall be provided for all containers.
- Containers of fuel and oil shall be located on level and stable ground and not in close proximity to storm sewer inlets.
- Site lighting shall be sufficient to discover discharges occurring during the hours of darkness and to prevent discharges from occurring through acts of vandalism.
- Fuel and oil bulk delivery and transfer procedures shall be in accordance with state and federal fuel transfer procedures and a written standard operating procedure.
- No temporary piping shall be used to transfer oil or fuel, only approved hose or dispenser shall be allowed.
- Tanks shall be equipped with overfill prevention equipment consisting of either a high liquid level alarm or high liquid level flow cutoff device set at 95% of the primary tank volume.
- Tank openings shall be securely capped and locked when not in use.
- A spill kit with sufficient sorbent, booms and other cleanup materials shall be located in close proximity to the Project Site during construction.
- Inspections shall be conducted to inspect containers of fuel and oil that are 55 gallons or greater in size for signs of damage, deterioration and oil discharges at least monthly.
- Fuel delivery operations shall adhere to local, federal and MassDOT regulations for the transfer of fuel.

- Any equipment fueling operations shall be conducted during daylight hours or lighting shall be provided.
- All spills shall be cleaned up immediately and reported within eight hours to HG&E. Spills greater than 25 gallons shall be reported immediately to the HG&E, MassDEP and the EPA.

6.2.2.5 Construction Considerations

Project construction will have no long-term impact on drainage or water quality. Dewatering may be necessary in areas where groundwater is encountered or at times when excavated areas are affected by storm water. Based on the geotechnical subsurface investigation performed at the West Holyoke Facility site and the anticipated bottom of foundation elevations, groundwater is not expected to be encountered during construction (See Appendix K).

Should it be necessary, dewatering procedures will include the following:

- Hose intakes will be elevated off the bottom of the excavation to prevent sediment intake;
- Secondary containment of pumps will be used to avoid fuel and contaminants from discharging to the ground; and
- Dewatering locations will be approved by the construction site manager.

An SPCC plan will be implemented by the contractor during construction activities for the Project. The SPCC plan is to ensure that hazardous materials are managed in accordance with federal, state and local regulations. The SPCC plan will provide procedures to prevent hazardous releases (e.g., oil and hydraulic fluid spills or leaks) from occurring and to perform a safe, efficient and timely response in the event of a spill during construction. HG&E has incorporated procedures for refueling construction equipment to ensure proper safety and spill prevention.

6.2.2.6 Conclusions

The Project is expected to and will be designed to have no adverse effect on water resources. The West Holyoke Facility will continue to require minimal water use during operation, does not require any new volumes of potable water and does not generate any wastewater. The existing well within the property has sufficient capacity to supply the West Holyoke Facility's water needs after completion of the Project. The new LNG storage tank associated with the Project has been sited within an LNG spill containment "dike" area with concrete berms which will be separate and independent from the containment system associated with the existing LNG storage tanks and will be sufficient to hold any liquids that may be released from the new LNG storage tank.

6.2.3 Floodplain

The FEMA National Flood Hazard Layer was examined for the presence of regulated floodplains and floodways in the West Holyoke Facility site. No such regulated areas are present within ¼-mile of the

existing facility site or proposed workspace areas. Therefore, the Project will have no adverse effect on designated floodplain areas.

6.2.4 Stormwater Management

The Siting Board examines whether an applicant has a comprehensive plan for minimizing impacts resulting from stormwater-related discharges, i.e., runoff resulting from rainfall events and snow melt. Stormwater runoff impacts at the West Holyoke Facility site will be minimized by the Project, consistent with incorporation of the applicable standards of the MassDEP Stormwater Policy. Steps to minimize impacts include ensuring that the post-development stormwater discharge rate is at or below the pre-development rate, ensuring the annual groundwater recharge will approximate the existing site conditions, controlling suspended solids and eliminating the exposure of chemical and oil-containing materials to stormwater.

6.2.4.1 MassDEP Stormwater Management Standards

MassDEP has issued the Massachusetts Stormwater Handbook, as well as Stormwater Management Standards pursuant to the Wetlands Protection Act, G.L. c. 131 § 40 and the Massachusetts Clean Waters Act, G.L. c. 21, §§ 26-53, to promote increased stormwater recharge, the treatment of more runoff from polluting land uses, low impact development techniques, pollution prevention, the removal of illicit discharges to stormwater management systems and improved operation and maintenance of stormwater Best Management Practices (BMPs).

The Project is estimated to disturb approximately 31,000 square feet (0.71-acres) which is under the one-acre threshold of new land disturbance and, therefore, does not require a USEPA Construction General Permit (CGP) for Stormwater Discharges from Construction Sites. Regardless, the Project will comply with the Massachusetts Stormwater Standards. The effect of redirected stormwater was analyzed and is presented in the Stormwater Management Report included as Appendix J. The goal of stormwater design is to limit the predicted, peak-post-development flow leaving the site to levels that are equal to or less than the predicted, peak-pre-development flow. The stormwater management solution for this Project was designed to meet or exceed requirements set forth in the Massachusetts Stormwater Handbook BMPs and the MassDEP's Stormwater Management Standards.

An infiltration basin with inflows from the new LNG storage tank's spill impoundment "dike" system basin sump pump was designed to incorporate two BMPs. The first BMP is an oil grit separator to prevent fines ingress to the basin. Second, a sediment forebay is also implemented as a final pre-treatment for stormwater before it enters the infiltration basin. Models of this system were executed using HydroCAD and indicated that the predicted, peak post-development flows are less than the predicted pre-development flows for the 2-year, 10-year and 100-year, 24-hour storm events at the discharge locations. In sum, the Project has been designed in compliance with the performance standards of the MassDEP Stormwater Management Policy and will not result in any increases in

stormwater rate or runoff within the site. No stormwater-related approvals or reviews are required in connection with the Project.

6.2.4.2 Construction Considerations

HG&E's objective is to minimize the potential for erosion and sedimentation impact during construction and to effectively restore any disturbed areas. HG&E will meet these objectives by implementing standard and appropriate erosion and sediment control measures. In general, the measures are designed to minimize erosion and sedimentation by:

- Minimizing the quantity and duration of soil exposure;
- Protecting areas of critical concern during construction by redirecting and reducing the velocity of runoff;
- Installing and maintaining erosion and sediment control measures during construction;
- Stabilizing exposed areas where required as soon as possible following construction; and
- Inspecting the construction route and maintaining erosion and sediment controls as necessary until final stabilization is achieved.

It will be the responsibility of the contractor to implement and maintain erosion and sediment control measures during construction as required by local and state regulations.

6.2.5 Solid and Hazardous Waste

6.2.5.1 Phase I Environmental Site Assessment

HG&E completed an ASTM Phase I Environmental Site Assessment (ESA) of the West Holyoke Facility site in general conformance with the scope and limitations of ASTM Standards E1527-13. The purpose of the Phase I ESA was to:

- Identify: 1) recognized environmental conditions (RECs), defined by ASTM as the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; 2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or 3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.
- Identify historical RECs (HRECs), defined by ASTM as a previous release of hazardous substances or petroleum products affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities and meeting unrestricted use criteria established by the applicable regulatory authority or authorities without subjecting the subject property to any controls (for example, activity and use limitations or other property use limitations).
- Identify controlled RECs (CRECs), defined by ASTM as a recognized environmental condition affecting the subject property that has been addressed to the satisfaction of the applicable regulatory authority or authorities with hazardous substances or

petroleum products allowed to remain in place subject to implementation of required controls (for example, activity and use limitations or other property use limitations).

- Identify de minimis conditions, defined by ASTM as a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a de minimis condition is not an REC nor a CREC.

The following findings were made regarding features, activities, uses and conditions that may indicate the presence or likely presence of hazardous substances or petroleum products at or within close proximity to the Project Site.

Recognized Environmental Conditions (RECs)

Based on the evaluation of current Project Site conditions and review of available property records, no RECs, defined as evidence of past, current, or future potential releases of oil and hazardous material (OHM) were identified in the Project Site. While the West Holyoke Facility site was previously used as propane-air facility and currently has four LNG storage tanks and associated equipment (including a vaporizer and boilers), propane and LNG are not a defined hazardous substance pursuant to CERCLA 42 U.S.C. Section 9601(14). Therefore, the prior use of the West Holyoke Facility site as a propane-air facility and the current use as an LNG facility are not considered a REC per ASTM Standards E1527-13 and E1527-21.

Historic Recognized Environmental Conditions

No HRECs, defined as evidence of a past release of OHM that has achieved regulatory closure without the use of required controls or conditions (e.g., Activity and Use Limitations [AULs], engineering controls etc.) were identified in the Project area or the existing West Holyoke Facility site.

Controlled Recognized Environmental Conditions

No CRECs, defined as a past release of OHM that has achieved regulatory closure with the use of required controls or conditions (e.g., AULs, engineering controls, etc.) were identified in the Project area or the existing West Holyoke Facility site.

De Minimis Conditions

A de minimis condition is defined by ASTM as a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. A condition determined to be a de minimis condition is not an REC nor a CREC. GEI did not identify any de minimis conditions in the Project area or at the West Holyoke Facility site.

Based on these findings, it was determined that a Phase II ESA is not warranted for the Project.

6.2.5.2 Construction and Operation

Any wastes generated during demolition, site preparation, construction and operation of the Project or the complementary enhancement work will be transported offsite in accordance with local, state and federal guidelines and regulations. There will be limited waste generated with the Project. During Project construction, equipment and other materials such as brick or concrete will be removed. HG&E will implement measures to minimize the generation of solid and other waste and will encourage recycling of debris to the extent possible. As necessary, separate containers will be provided for recyclable materials that will be picked up by a recycling contractor or the solid waste disposal contractor for proper processing and recycling. Any non-recyclable solid wastes will be transported to a licensed solid waste landfill. During operation of the new LNG storage tank, solid or hazardous waste streams are not expected to be generated on a regular basis, as is currently the case at the West Holyoke Facility.

6.2.6 Rare and Endangered Species

6.2.6.1 Federal

According to the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation website, two threatened species may be present within the Project area: the northern long-eared bat (NLEB) (*Myotis septentrionalis*) and monarch butterfly (*Danaus plexippus*). The Project is located within a White-Nose Syndrome Zone per Final 4(d) Rule;[1] however, the existing West Holyoke Facility site is disturbed and does not contain any known NLEB hibernaculum or suitable monarch butterfly habitat. The Project will not require tree clearing, therefore additional consultation with USFWS regarding federally listed rare species or migratory birds is not required.

6.2.6.2 State

In Massachusetts, the Natural Heritage and Endangered Species Program (NHESP) inventories estimated habitats of rare wildlife (EH) and priority habitats of rare species (PH). The EH are protected under the Massachusetts Wetlands Protection Act (G.L. c. 131, § 40), which identifies habitat areas of rare wetland wildlife species. The PH are based on the known geographical extent of habitat for State listed rare species of plants and animals and are protected under the Massachusetts Endangered Species Act. Review of the EH and PH data layers identified an area of Priority / Estimated Habitat (PH 1178) that extends across the eastern portion of lot 182-00-007. This lot is not currently within the boundaries of the workspace associated with the Project, therefore, no impacts to state-listed rare species are anticipated.

In June 2022, HG&E initiated consultation with NHESP through submittal of a Rare Species Information Form to determine the specific species present within the mapped habitat. On July 18, 2022, NHESP

[1] U.S. Counties within 150 miles of positive counties/districts (data as of 6/30/2017).

provided a formal response indicating that the species present is a 'Data Sensitive Species' and 'highly susceptible to collection' and therefore cannot be released without a release being agreed to in writing by NHESP (see Figure 6-1). However, since no work associated with the Project is proposed directly within the mapped habitat, no additional consultation with NHESP is required.

6.2.6.3 Vernal Pools

The NHESP has a certification program for vernal pools which affords them protection under the WPA should they occur within a Bordering Vegetated Wetland. Vernal pools are depressional aquatic resource basins that typically go dry in most years and may contain inlets or outlets, typically of intermittent flow. Vernal pools range in both size and depth depending upon landscape position and parent materials. Pools usually support one or more indicator species, including wood frog (*Rana sylvatica*), spotted salamander (*Ambystoma maculatum*), blue-spotted salamander (*Ambystoma laterale*), marbled salamander (*Ambystoma opacum*), Jefferson's salamander (*Ambystoma jeffersonianum*) and fairy shrimp (*Eubranchipus spp.*); however, they should preclude sustainable populations of predatory fish. The certification process requires documentation of breeding activity by one or more of the species (by egg masses or tadpoles/larvae) during the early growing season.

No certified vernal pools or potential vernal pools as mapped by NHESP are located within or immediately adjacent to the Project area or West Holyoke Facility site.

6.2.7 Topography, Geology and Soils

The West Holyoke Facility site has been previously disturbed through the development and continuing operation of the existing LNG facility. Past site preparation associated with development has created a level surface across the site, so there is little to no topographic variation within the Project area. The ground surface within the existing West Holyoke Facility is relatively level with existing ground surface elevations ranging from approximately elevation (El.) 277 to 279 feet based on an Existing Conditions Survey prepared by WSP USA, Inc., dated May 25, 2022. Minimal surface disturbance or grading is required for the Project and these will not result in significant topographic changes.

According to published geologic mapping titled "Surficial Materials Map of the Mount Tom Quadrangle, Massachusetts (1:24,000 scale)" by Janet R. Stone and Mary L. DiGiacomo-Cohen, 2018 and "Bedrock Geologic Map of Massachusetts (1:250,000 scale)" (Goldsmith, et al., 1983), the subsurface materials at the West Holyoke Facility site are mapped as coarse deposits over sedimentary bedrock. The coarse deposits are generally described as poorly to well-graded sand and gravel of varying proportions and is underlain by sedimentary bedrock described as reddish-brown to pale red arkosic sandstone and siltstone, gray sandstone, gray mudstone and black shale.

The soil survey for Hampden County was reviewed to identify the soil types present within the Project area and none of the soil units were deemed hydric (i.e., wetland soils). The main soil type underlying the West Holyoke Facility site is 253A: Hinckley loamy sand, 0 to 3 percent slopes, which is a deep, excessively

drained soil formed in glaciofluvial material, with an average depth of 60 inches to the water table. The soil type was confirmed through subsurface investigations completed within the West Holyoke Facility site (see Appendix K). Based on the soil conditions within the site, HG&E does not anticipate any concerns associated with soil limitations (shallow depth to bedrock, shallow groundwater, etc.) that could adversely affect the construction or operation of the Project.

6.3 Human / Community Impacts and Mitigation

6.3.1 Air Quality and Health

6.3.1.1 Applicable Regulatory Requirements

A new 70,000-gallon aboveground LNG storage tank will be added to a set of four existing 55,000-gallon aboveground LNG storage tanks. Safety Data Sheets for LNG indicate that methane and ethane are its primary components, with any other components being present at approximately 1% by volume. 310 CMR 7.01 excludes methane and ethane from the definition of Volatile Organic Compound (VOC). LNG storage tank contents are stored at very low temperature and correspondingly low vapor pressure. As a consequence, it would not be feasible for the tank to emit one ton of VOC per year. The planned, additional LNG storage tank is therefore exempt from air permitting under the "de-minimis" condition of 310 CMR 7.02(2), as with the existing four LNG storage tanks.

Similarly, the planned, additional LNG storage tank is exempt from 40 CFR Subpart Kb, "Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984". This regulation applies to storage tanks with a capacity over 151 m^3 (39,890 gallons) that store Volatile Organic Liquids (VOLs) with a maximum true vapor pressure over 3.5 kPa. LNG is not subject to Subpart Kb since methane and ethane are also excluded from the definition of "Volatile Organic Liquid."

The Project will only generate temporary construction-related emissions. There will be no new emissions associated with the regular operation of the new LNG storage tank. Therefore, modeling and testing for pollutants is not required.

6.3.1.2 Air Emissions/Quality Mitigation Measures During Construction

Construction – Fugitive Dust and Odor

To minimize the potential for airborne dust from earth disturbing activities, HG&E will require its contractors to place water trucks with misters in or near the work areas during construction activities and utilize them as appropriate when conditions require. In addition, if it is necessary to stockpile excavated soil on the site, it will be covered with plastic sheeting or a similar barrier to minimize the potential for the release of dust or for soil migration from the work area. There also will be installation of anti-tracking pads at construction entrances and regular sweeping of the pavement of adjacent

roadway surfaces during the construction period to minimize the potential for construction traffic to generate dust and particulate matter.

Construction – Engine Emissions

Consistent with MassDEP air quality regulations (310 CMR 7) and best industry practices including the Clean Air Construction Initiative, fuel-powered construction equipment will be managed as follows:

- All contractors shall use ultra-low-sulfur diesel (ULSD) fuel in diesel-powered non-road vehicles. ULSD has a maximum sulfur content of 15 parts per million compared to 500 parts per million for low-sulfur diesel fuel (a 97 percent reduction).
- All non-road engines used on the construction site shall meet the applicable non-road engine standard limitations per 40 CFR 1039, Appendix I (formerly 40 CFR 89.112).
- All contractors shall utilize the best available technology for reducing the emission of PM and NO_x for diesel-powered non-road vehicles. To minimize air emissions from equipment operation, HG&E will direct its contractors to retrofit any diesel-powered, non-road construction equipment rated 50 horsepower or above, whose engine is not certified to United States Environmental Protection Agency (USEPA) Tier 4 standards and that will be used for 30 days or more over the course of the Project, with USEPA-verified (or equivalent) emission control devices (e.g., oxidation catalysts or other comparable technologies.
- All diesel-powered, non-road construction equipment with engine horsepower ratings of 50 and above to be used for 30 or more days over the course of project construction shall have EPA-verified (or equivalent) emission control devices, such as oxidation catalysts or other comparable technologies (to the extent that they are commercially available) installed on the exhaust system side of the diesel combustion engine.
- All contractors shall turn off diesel combustion engines on construction equipment not in active use and on dump trucks that are idling while waiting to load or unload material for five minutes or more.
- All contractors shall establish a staging zone for trucks that are waiting to load or unload material at the work zone in a location where diesel emissions from the trucks will not be noticeable to the public.
- All contractors shall locate construction equipment away from sensitive receptors such as residents and passersby, fresh air intakes to buildings, air conditioners and windows.

To minimize the potential for airborne dust from earth disturbing activities, HG&E will require its contractors to place water trucks with misters in or near the work areas during construction activities and utilize them as appropriate. In addition, excavated soils will be stockpiled and covered with plastic sheeting or similar barrier to minimize the potential for the release of dust and for soil migration from the work area. There also will be installation of antitracking pads and regular sweeping of the pavement of the West Holyoke Facility driveway and Mueller Road during the construction period to minimize the potential for construction traffic to generate dust and particulate matter.

6.3.2 Noise Impacts and Sound Mitigation Measures

Operational sound from Project equipment will continue to comply with MassDEP standards at all residential receptors. The additional LNG storage tank will not emit any noise during regular operation. Therefore, the only potential Project-related noise impacts will be temporary and associated with construction. HG&E has incorporated measures into the Project design and implementation to ensure that construction-related noise is minimized such that it will not affect adjacent property owners.

6.3.2.1 Regulatory Requirements

Federal Noise Guidelines

The EPA identifies safe levels of environmental noise exposure in a document intended to "provide State and Local governments as well as the Federal Government and the private sector with an informational point of departure for the purpose of decision making."[2] While the EPA has no regulation governing environmental noise, the agency has conducted several extensive studies to identify the effects of sound level on public health and welfare. This publication remains the authoritative study based on a large sampling of community reaction to noise. The EPA sound level guidelines do not provide an absolute measure of noise impact, but rather a consensus on potential activity interference, human health and welfare effects and annoyance. Since these protective levels were derived without concern for technical or economic feasibility and contain a margin of safety to ensure their protective value, they should not be viewed as standards, criteria, regulations, or goals. Rather, EPA has stated that they should be viewed as levels below which there is no reason to suspect that the general population will be at risk from any of the identified effects of noise.[3]

The EPA recommends that sound levels outdoors in *residential* areas and in other places in which quiet is a basis for use, not exceed a day-night sound level (L_{dn}) of 55 dBA to "protect the public health and welfare with an adequate margin of safety," the standard set out in the Noise Control Act of 1972.[4] The EPA also suggests an L_{eq} of 70 dBA (24-hour) limit to avoid adverse effects on public health and safety at publicly accessible property lines or extents of work areas where extended public exposure is possible.[5] These levels are identified as desirable to protect against speech interference and sleep disturbance for residential, educational and healthcare areas.

As set forth below, the existing West Holyoke Facility meets and will continue to meet all requirements of the EPA noise guidelines subsequent to completion of the Project.

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[2] U.S. EPA, Information on Levels of Environmental Noise Requisite to Protect the Public Health and Welfare with an Adequate Margin of Safety, Document EPA-550/9-74-004, March, 1974. ("Document EPA-550/9-74-004")

[3] Document EPA-550/9-74-004, at 4.`

[4] Id., Noise Control Act of 1972, 42 USC 4904(a)(2).

[5] That is, to protect against hearing damage, one's 24-hour noise exposure should not exceed 70 dBA.

Massachusetts State Regulations

The MassDEP regulates noise under its Air Pollution Control regulations. In these regulations, an "air contaminant" is defined to include sound and a condition of "air pollution" includes the presence of an air contaminant in such concentration and duration as to "cause a nuisance" or "unreasonably interfere with the comfortable enjoyment of life and property." (310 CMR 7.00)

MassDEP's regulations at 310 CMR 7.10 prohibit "unnecessary emissions" of noise. MassDEP Division of Air Quality Control (DAQC) Policy Statement 90-001 (February 1, 1990) (MassDEP Noise Policy) interprets a violation of this noise regulation to have occurred if the source causes either:

1) An increase in the broadband sound pressure level of more than 10 dBA above the ambient; or
2) A "pure tone" condition.

"Ambient" is defined as the background A-weighted sound level that is exceeded 90% of the time, measured during equipment operating hours (L_{90}). A "pure tone" condition occurs when any octave band sound pressure level exceeds both of the two adjacent octave band sound pressure levels by 3 dB or more.

These noise limits are MassDEP policy and are applicable both at the property line and at the nearest residences. As a policy and not regulation, the MassDEP has waived these limits in certain cases at property line locations where the adjacent land uses are not considered noise sensitive, such as an adjacent industrial parcel.

The new LNG storage tank will not emit sound during regular operations and is fully compliant with applicable state regulations regarding noise.

Holyoke Noise Requirements

The Holyoke Code of Ordinances (Supplement 38 – July 12, 2022), Chapter 38, Article III regulates noise at the local level. Section 38-73 is a general prohibition on nuisance noise within the city. Section 38-72(a) prohibits "unreasonable" or "excessive" and states "Subject to the provisions of this article, the creation of any unreasonably loud, disturbing and unnecessary noise is prohibited. Noise of such character, intensity and duration as to be detrimental to the life or health of any individual or contrary to the public welfare is prohibited."

Section 38-73(a)(4) applies to construction, demolition or excavation and states the following:

> The erection, including excavating, demolition, alteration or repair, of any building further than between 7:00 a.m. and 6:00 p.m. on weekdays, except in case of an urgent necessity in the interest of public safety and then only with a permit from the board of public works, which permit may be renewed for a period of three days or less while the emergency continues.

HG&E has committed to complying with Section 38-73(a)(4) during construction of the Project.

6.3.2.2 Construction Considerations

Though increased community sound levels are an inherent consequence of construction activities, every reasonable effort will be made to minimize noise impacts during Project construction. Table 6.3-1 provides typical construction equipment noise levels.

Table 6.3-1
Typical Construction Equipment Sound Levels (CA/T Equipment Noise Emissions and Acoustical Usage Factors Database a,b)

Equipment Description	Lmax at 50 ft, dBA, slow	Impact Device?[c]	Acoustic Use Factor[d]
All other equipment > 5 HP	85	No	50%
Backhoe	80	No	40%
Compactor (ground)	80	No	20%
Compressor (air)	80	No	40%
Drum Mixer	80	No	50%
Dump Truck	84	No	40%
Excavator	85	No	40%
Flat Bed Truck	84	No	40%
Front End Loader	80	No	40 %
Generator	82	No	50 %
Generator (<25 KVA, VMS signs)	70	No	50 %
Grader	85	No	40 %
Man Lift	85	No	20 %

Construction noise mitigation measures are expected to include:

- Using appropriate mufflers on all equipment and ongoing maintenance of intake and exhaust mufflers;
- Muffling enclosures on continuously running equipment, such as air compressors and welding generators;
- Replacing specific construction operations and techniques with less noisy ones, where feasible;
- Selecting the quietest equipment alternatives, where feasible;
- Scheduling construction activities during daylight hours;
- Turning off idling equipment; and
- Locating noisy equipment at locations that protect sensitive locations through shielding or distance.

6.3.2.3 Sound Mitigation Measures

There are no new sound generating sources associated with the Project. Therefore, the Project complies with all applicable noise regulations and performance standards and no sound mitigation measures are required.

6.3.3 Traffic Management

6.3.3.1 Traffic Impact During Construction

Construction is estimated to last 31 weeks during the spring, summer and fall months. Table 6.3-2 summarizes the approximate frequency and vehicle types expected to support the Project.

Table 6.3-2
Traffic and Frequency Expected During Construction

Approximate Frequency	Description
Daily	Civilian and work vehicles to transport workers, tooling and small supplies.
Bi-Weekly	Transport trailers to deliver and pick up specialized equipment including but not limited to excavation equipment.
Weekly	Transport trailers and delivery trucks to deliver materials including but not limited to: piping; rebar; and structural steel.
High frequency during foundation construction	Special bulk materials transport and delivery trucks including but not limited to cement trucks.
Single Delivery	Special delivery truck for 110'-6" long LNG storage tank.
Single Delivery	Cranes for pick/place of materials and large equipment.
Single Delivery	Nitrogen truck(s) (commissioning phase only).
High frequency towards end of construction	Dump trucks to support excavation and extract net cuts (1,300 yards estimated). While there may be opportunities to locate cuts at the West Holyoke Facility site, it is assumed the net cut is transported off site.
High frequency towards end of construction	Traffic due to commissioning is likely to consist mostly of civilian and work vehicles with exception of tank cooldown efforts which may require a bulk nitrogen truck.

Route planning for delivery of the LNG storage tank will be completed after the Project approval and purchase of the tank; however, it is anticipated that the tank will be delivered to the West Holyoke Facility site using the interstate highway system (namely Routes I-90 and I-91 in Massachusetts), State Route 202 and then a short distance on the Holyoke streets of Apremont Highway and Mueller Road.

Construction personnel parking is anticipated to be established either in a designated area at the West Holyoke Facility site with access/egress via Mueller Road or at a remote location where workers can be shuttled to the site. Any remote parking areas and/or contractor staging/laydown areas will be located within previously developed and disturbed areas in proximity to the West Holyoke Facility site.

6.3.3.2 Traffic Impact During Operation

Approximately 100 LNG trucks transit into and out of the West Holyoke Facility per year (0.27 trips per day) to offload LNG to support the existing West Holyoke Facility operation and customer demand. After the construction of the Project, a modest increase of tanker truck deliveries is expected in the summer months (approximately seven additional truck deliveries) for filling of the LNG storage tanks prior to the winter season. A slight decrease in truck deliveries (approximately five less truck deliveries) is expected during the winter dependent on weather, customer demand and pipeline supply availability. Over the next ten years, a gradual increase in the total annual LNG deliveries is estimated to increase by 0.08 trips per day. Following this peak, LNG deliveries are expected to gradually decrease back to current levels and even lower as HG&E implements its Clean Energy Commitment (see Appendix G). Thus, during the continuing operation of the West Holyoke Facility with the additional LNG storage tank, there will be a negligible change in the peak daily and hourly LNG truck traffic to and from the West Holyoke Facility.

6.3.3.3 Conclusions

Traffic impacts due to construction and operation of the Project will be minimal and consistent with existing operations. No delays to local traffic should be experienced except possibly for the one-time delivery of the new LNG storage tank or where the LNG trucks may need to travel on local roadways, or when there is an occasional oversized vehicle. In these scenarios, HG&E will work with the City to manage any occasional, unexpected local traffic impacts as necessary and appropriate.

6.3.4 Historic and Archaeological Resources

Review of potential Project related impacts on historic properties and cultural resources pursuant to Section 106 of the National Historic Preservation Act is coordinated at the state level by the Massachusetts Historical Commission (MHC). HG&E completed a cultural resource sensitivity assessment and due diligence to identify historic architectural properties and archaeological sites on and in the vicinity of the West Holyoke Facility site. Properties were identified through a search of the MHC Inventory of the Historic and Archaeological Assets of the Commonwealth. The entire West Holyoke Facility site has been previously disturbed through the construction and operation of the existing facility; therefore, the potential presence of subsurface cultural resources is low and does not warrant

additional investigation. In summary, this assessment concluded that there are no historic or archaeological resources on the West Holyoke Facility site and the site has "limited" archaeological sensitivity. To confirm this determination, HG&E initiated formal consultation with MHC through the submission of a Project Notification Form (PNF). The MHC response is pending.

6.3.5 Socioeconomics

The socioeconomics of the area are conducive to this Project. The area includes a variety of land uses, including residential, utility and agricultural. The Project will not place a strain on City services or local police and fire departments since the installation of the new LNG storage tank will not substantially change the existing operations of the West Holyoke Facility. The West Holyoke Facility will remain consistent with state and regional planning documents. The Project will facilitate the provision of socioeconomic and environmental benefits to Holyoke and surrounding municipalities including contributing to energy requirements and improving the supply of natural gas.

6.3.5.1 Regional Land Use

Holyoke contains a mixture of urban, suburban and rural areas. The urban portions of the City, located along the Interstate 91 corridor contain commercial and industrial land uses as well as high-density residential development. Further west of the interstate, the land use quickly transitions to single-family residential development interspersed with undeveloped land and agricultural land. These land uses are predominant within the area of the West Holyoke Facility site.

6.3.5.2 Current Site Conditions and Zoning

The West Holyoke Facility site is located within Holyoke, Hampden County, Massachusetts. The site is located at 91 Mueller Road as shown on Figure 1-1. According to Holyoke Assessor's office, the West Holyoke Facility site address consists of two parcels (182-00-004 and 182-00-005) with a combined area of approximately 18.82 acres. The proposed Project will be located within the existing fenced West Holyoke Facility spanning both parcels with an overall area of approximately 4.5 acres. The West Holyoke Facility is bordered by solar fields to the north and west, an undeveloped wooded area and a few residential parcels to the east and several residential parcels to the south.

The West Holyoke Facility site is zoned as Agriculture and Single-Family Residence (RA). HG&E is a municipal entity and municipal facilities are allowed uses within a RA zone. General performance standards for this type of facility require screening with plants or other suitable materials to minimize potential visual impacts from adjoining properties or adjacent streets. The existing West Holyoke Facility screening, especially from Mueller Road, is anticipated to fulfill these requirements. The West Holyoke Facility was obtained by the City and designated for use by HG&E as an LNG facility. No additional zoning approval is required for the Project.

6.3.5.3 Consistency with State and Regional Planning Documents

Massachusetts Executive Order 385

The Project is consistent with Executive Order 385, "Planning for Growth" (E.O. 385), which expressly seeks to promote sustainable economic development in the Commonwealth. The proposed Project will clearly meet the dual objectives of EO 385 of promoting economic activity that is supported by adequate infrastructure and which does not result in avoidable loss of environmental quality and resources. The proposed Project already has adequate infrastructure to support it. The proposed Project is located within the existing fenced, disturbed West Holyoke Facility site. The Project will not affect any rare species habitat or wetlands and has been designed in accordance with industry standards to ensure minimization of potential air and noise impacts. The Project will also promote strategic economic development by providing additional peak volumes of natural gas necessary to support residential, commercial and industrial development within the City and region when cost-effective viable energy alternatives are not available. See Section 7.0 for additional information regarding potential economic growth opportunities associated with the Project.

Pioneer Valley Planning Commission

The Project is consistent with the Pioneer Valley Planning Commission's (PVPC) Plan for Progress as well as its Climate Action and Clean Energy Plan. Part of the PVPC's regional economic strategies is to increase use of clean energy to reduce business costs and improve the environment. An action step identified by PVPC for this strategy is 'While steadily increasing the generation of affordable clean energy, at the same time take steps to increase the supply of natural gas that can keep energy costs affordable to businesses and institutions throughout the Pioneer Valley.' This action step dovetails well with HG&E's Clean Energy Commitment. See Appendix G.

HG&E has achieved incredible GHG emission reductions over the last 30 years and is committed to continue down a path towards a sustainable future. To achieve net zero emissions by 2050, per the state target outlined in 2020, the community, state and country will need to make significant strides in energy, transportation, building design and all other aspects of this transition. At the very heart of this conversation, HG&E will work closely with the community and focus on the mission to provide customers with competitive rates, innovative and sustainable energy solutions, reliable service and excellent customer care. The Project helps to meet the current demand for natural gas in the region to keep energy costs affordable while simultaneously and upgrading its existing electric system in anticipation of further electrification of the building and transportation sector over the next 15 to 20 years.

6.3.5.4 Existing Socioeconomics

Originally settled in 1655 and incorporated as a City in 1873 with an area of 22.8 square miles, Holyoke is located in Hampden County, approximately five miles north of Springfield. It is bordered by the Towns

of Southampton, Westfield, Easthampton, Hadley, Chicopee and West Springfield. According to the US Census Bureau, Holyoke's 2021 population was 37,929, a decrease of approximately 5 percent since 2010. According to the 2010 Census, there are 15,464 housing units in the City and the median value between 2016 and 2020 was $197,700. Median household family income between 2016 and 2020 was $42,537, with the majority of residents employed in manufacturing, technology, professional and related occupations (the state-wide median income at the time was $64,994). Town land uses are generally a mix of residential, commercial, agriculture and open space.

6.3.5.5 City Government

Holyoke's local government is led by a Mayor and a City Council. The majority of the City's budget revenue is obtained through property taxes, with approximately 75 percent of those property taxes are from residential properties. The Project represents an opportunity to improve its energy infrastructure and promote additional residential and commercial development within the City which would, in turn, improve the municipal tax base.

6.3.5.6 Environmental Justice Policy

There are no mapped Environmental Justice populations within one mile of the West Holyoke Facility site. There are several mapped areas of Environmental Justice populations to the east and south of the property in Holyoke, Chicopee, West Springfield and Westfield, Massachusetts that are within five miles of the site, however, the Project does not impact air quality or have other environmental impacts that would disproportionately affect these populations. The Project does not qualify for MEPA's enhanced public involvement protocols or enhanced analysis of potential project impacts on environmental justice populations. The closest mapped Environmental Justice population is on the west side of Old Stage Road in Westfield and is approximately 1.1 miles from the West Holyoke Facility site. This Environmental Justice population is based on income where at least 25% of households have a median household income 65% or less than the state median household income. The project falls well outside of any Environmental Justice populations in Holyoke, but HG&E's standard is to engage and communicate with the entire community in order to be inclusive and transparent as it relates to ongoing energy projects. Twenty-nine of Holyoke's thirty-seven block groups are considered Environmental Justice populations by the Commonwealth. These block groups have been designated as Environmental Justice populations based on all three factors the state considers: income, English language isolation (no one older than 14 speaks English well in the home) and minority. Over the last few months, the Project has been well communicated in Spanish and English throughout the community. See Appendix A; see also Section 7.0.

6.3.5.7 Community and Economic Benefits

The Project will result in important benefits for the Commonwealth, Western Massachusetts and Holyoke. There are four categories of socioeconomic benefits derived from the Project:

- Maintenance of safe and reliable, cost-effective service to existing natural gas customers;
- Facilitation of an orderly transition from fossil fuels while securing emissions reductions and cost savings during such transition;
- Local financial and economic benefits due to availability of targeted, strategic incremental service;
- Limited short term construction cost benefits; and
- Environmental benefits in reduced emissions.

The need for reliable natural gas service to the community cannot be understated. Customers currently and will continue to rely on natural gas to meet critical energy needs, particularly during regional winter heating seasons. Disruptions of service during extreme cold weather would place the health and safety of numerous Holyoke residents at risk and likely would result in substantial economic consequences in terms of both property damage (e.g., frozen pipes) or business interruptions. The Project seeks to address reliability concerns to enable HG&E to continue to provide reliable service to its existing customers.

Local Financial and Economic Benefits

The Project will enable the provision of targeted incremental natural gas service to existing and future customers and will allow HG&E to lift its existing moratorium on new gas load to strategically promote economic development. This incremental service could result in new residential and commercial development, as well as expansion of existing operations, in Holyoke and surrounding municipalities thereby providing additional tax revenues.

Energy Cost Benefits

Sections 3.0 and 4.0 of this analysis shows that the Project may provide energy cost benefits to HG&E's existing customers and opportunities for savings through the incremental increase in natural gas service. The Project will provide a less expensive fuel source than alternative fossil fuels such as oil and propane, would reduce potential price volatility, would better enable HG&E to optimize its existing gas supply resources already supported by customers and would provide additional system and peak demand reliability.

Short-Term Construction Cost Benefits

During the construction period, there will be approximately 25 to 50 professional and craft labor personnel engaged in various activities associated with the Project. Local contract labor will provide some operation and maintenance services. These personnel will provide a short-term economic benefit to the community through employment opportunities and spending at local businesses and restaurants.

Environmental Benefits

The Project has been sited at the existing West Holyoke Facility site and will avoid impacts to natural resources such as forested land, wetlands and rare species habitat. The operation of the Project will not have an adverse effect on existing air quality or noise and will have a negligible effect on traffic. The Project also has the additional benefit of "building a bridge" to a net zero carbon future by promoting strategic and cost-effective natural gas customer additions to facilitate the transition toward electrification (by reducing consumption of higher emitting fuel sources such as oil) that are currently not available due to the established moratorium.

6.3.6 Visual Impacts and Mitigation

6.3.6.1 Overview

The overall visual impact of the Project will be minimal and, based on the visual analysis described below, will remain consistent with the existing West Holyoke Facility and surrounding land use or slightly reduced. The West Holyoke Facility is currently surrounded by an 8-foot perimeter fence fitted with 6-foot slats which currently serves as a vapor barrier and visual buffer. The Project will increase the fence slat height to eight feet alongside the west fence line at the rear of the LNG storage tanks and the northeast fence line alongside the tanks which will increase the height of the visual buffer. The existing tree cover surrounding much of the site to the south and east also minimizes visual impacts from nearby residences. See Figures 6-2, 6-3, 6-4 and 6-5 for photographs of the existing West Holyoke Facility and surrounding area from the perspective shown on each Figure's accompanying aerial photograph. Please note that Figure 6-2 also shows a rendering of the likely view of the proposed fifth tank.

6.3.6.2 Project Context

The West Holyoke Facility site is located adjacent to an existing solar farm to the north and west, undeveloped forested land and a natural gas pipeline easement to the east/northeast and residential development to the south. The site and adjacent lands to the north, south and west are generally flat, although the topography rises fairly sharply (approximately 25 to 50 feet in elevation) to the east.

6.3.6.3 Project Components

The main component of the Project, the horizontal LNG storage tank, has been designed to be installed at a similar height as the existing four horizontal tanks at the West Holyoke Facility site and will be located to the north of the existing tanks, which is the furthest point away from Mueller Road. As such, the installation of the new tank will have minimal visual impacts to the neighboring community. Average site elevation in the area of the West Holyoke Facility is 279' above sea level. The top of the proposed LNG storage tank will be at or below the elevation of the existing LNG tanks. As such, the installation of the new tank will have minimal visual impacts to the neighboring community.

6.3.6.4 Conclusions

The overall visual impact will be consistent with the existing facility. As is currently the case, portions of certain tanks may be visible from nearby residences during the fall and winter. The existing tree canopy will continue to provide additional screening of the West Holyoke Facility from nearby residences to the south. The extension of the perimeter fence slats alongside a portion of the facility will provide an increased visual buffer over existing conditions and further minimize potential visual impacts. The Project will have only minimal visual impacts from existing conditions.

6.4 Complementary Facility Improvements

Although not subject to Siting Board review as part of the Project, HG&E will be performing limited improvements at the West Holyoke Facility concurrent with construction of the Project. These improvements include restoration of an existing containment berm and replacement of an older vaporizer system with a new, redundant system (and related heating equipment) as well as further enhancements consisting of the installation of a new fire alarm control panel and improvements to the facility's process and safety control systems. In addition, an enhanced instrument air compression system will be installed that will replace the existing natural (power) gas system used to operate process control valves and further reduce GHG emissions at the West Holyoke Facility. These improvements will further enhance the service reliability of the operations of the West Holyoke Facility and overall safety. As with the Project, this work associated with the vaporizer system improvements and other enhancements will occur within the existing fence line of the West Holyoke Facility. Since the complementary improvements are a concurrent activity, HG&E analyzed the potential associated environmental impacts and determined:

- No impacts to water resources, wetlands or waterbodies – the proposed work will occur wholly within the existing West Holyoke Facility site and is not located within 100 feet of a wetland, 200 feet of a perennial stream or any designated surface or drinking water protection areas;
- No impacts to rare species or cultural resources – the proposed work is not located within an NHESP-identified habitat of rare species. The location of the new equipment is located within an area that is previously disturbed and does not have the potential presence of subsurface cultural resources;
- No exceedance of air emission thresholds – the construction and operation of the vaporization system improvements, similar to the new LNG storage tank, are exempt from air permitting under the "de-minimis" condition of 310 CMR 7.02(2).
- No exceedance of noise thresholds – the vaporization system improvements will not result in a new noise source that will exceed the existing sound condition of the facility. Operational noise will be similar to existing conditions and will not result in a significant increase in sound levels at the nearest noise sensitive areas.
- The vaporization system improvements will not have adverse visual effects on the surrounding community. The highest point of the discharge piping will be flanges located approximately 21 feet above the surrounding grade which is consistent with

existing structures within the West Holyoke Facility and will have a similar visual profile as existing conditions (see Figure 6-2).

- No new stormwater discharges will result from the vaporization system improvements – the existing stormwater management facilities within the site along with the proposed stormwater management improvements associated with the Project have been designed to include the portion of the West Holyoke Facility site where the vaporization system improvements will occur.
- Enhancements to the fire detection system through the installation of a new fire alarm control panel will not result in increased emissions or noise but the facility will benefit from the consolidation of existing and new fire detection equipment within a central system.
- The replacement of the existing natural gas-powered control systems with an instrument air system. Existing control gas systems utilize natural for motive pressures to activate valves. Replacement with an instrument air system reduces the potential for natural gas leaks and resultant fugitive emissions while also enhancing safety.
- Because the enhancements to the vaporization system and valve actuation systems will result in an increase in the electrical load for plant operation, a new emergency back-up generator and transfer switch will be installed. This change will not exceed any noise or emissions permit requirements.

Based on HG&E's analysis, the complementary system improvements that will occur concurrent with the Project will not result in any adverse environmental impacts and will not require any regulatory permits or approvals aside from HG&E's standard reporting procedures.

MASSWILDLIFE

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FISHERIES & WILDLIFE

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July 18, 2022

Joshua Surette
Epsilon Associates, Inc.
3 Mill & Main, Suite 250
Maynard MA 01754

RE: Project Location: Mueller Road
Town: HOLYOKE
NHESP Tracking No.: 22-41161

To Whom It May Concern:

Thank you for contacting the Natural Heritage and Endangered Species Program of the MA Division of Fisheries & Wildlife (the "Division") for information regarding state-listed rare species in the vicinity of the above referenced site. Based on the information provided, this project site, or a portion thereof, is located **within** *Priority Habitat 1178* (PH 1178) and *Estimated Habitat 856* (EH 856) as indicated in the *Massachusetts Natural Heritage Atlas* (15th Edition) for the following state-listed rare species:

Scientific name	Common Name	Taxonomic Group	State Status
*Data Sensitive Species**		Reptile	Endangered

The species listed above is protected under the Massachusetts Endangered Species Act (MESA) (M.G.L. c. 131A) and its implementing regulations (321 CMR 10.00). State-listed wildlife are also protected under the state's Wetlands Protection Act (WPA) (M.G.L. c. 131, s. 40) and its implementing regulations (310 CMR 10.00). Fact sheets for most state-listed rare species can be found on our website (www.mass.gov/nhesp).

*This species is considered a "Sensitive Species". This species is highly susceptible to collection and is therefore of high concern to Natural Heritage. Information about this species (including presence/absence) cannot be released to anyone (especially including release to third parties or published) unless such release is agreed to in writing by the Natural Heritage Program (See Massachusetts Public Records law: M.G.L. chapter 66 section 17D).

Please note that projects and activities located within Priority and/or Estimated Habitat **must** be reviewed by the Division for compliance with the state-listed rare species protection provisions of MESA (321 CMR 10.00) and/or the WPA (310 CMR 10.00).

Wetlands Protection Act (WPA)
If the project site is within Estimated Habitat and a Notice of Intent (NOI) is required, then a copy of the NOI must be submitted to the Division so that it is received at the same time as the local conservation commission. If the Division determines that the proposed project will adversely affect the actual Resource Area habitat of state-protected wildlife, then the proposed project may not be permitted (310

CMR 10.37, 10.58(4)(b) & 10.59). In such a case, the project proponent may request a consultation with the Division to discuss potential project design modifications that would avoid adverse effects to rare wildlife habitat.

A streamlined joint MESA/WPA review process is available. When filing a Notice of Intent (NOI), the applicant may file concurrently under the MESA on the same NOI form and qualify for a 30-day streamlined joint review. For a copy of the NOI form, please visit the MA Department of Environmental Protection's website: https://www.mass.gov/how-to/wpa-form-3-wetlands-notice-of-intent.

MA Endangered Species Act (MESA)

If the proposed project is located within Priority Habitat and is not exempt from review (see 321 CMR 10.14), then project plans, a fee, and other required materials must be sent to Natural Heritage Regulatory Review to determine whether a probable Take under the MA Endangered Species Act would occur (321 CMR 10.18). Please note that all proposed and anticipated development must be disclosed, as MESA does not allow project segmentation (321 CMR 10.16). For a MESA filing checklist and additional information please see our website: https://www.mass.gov/regulatory-review.

We recommend that rare species habitat concerns be addressed during the project design phase prior to submission of a formal MESA filing, as avoidance and minimization of impacts to rare species and their habitats is likely to expedite endangered species regulatory review.

This evaluation is based on the most recent information available in the Natural Heritage database, which is constantly being expanded and updated through ongoing research and inventory. If the purpose of your inquiry is to generate a species list to fulfill the federal Endangered Species Act (16 U.S.C. 1531 et seq.) information requirements for a permit, proposal, or authorization of any kind from a federal agency, we recommend that you contact the National Marine Fisheries Service at (978)281-9328 and use the U.S. Fish and Wildlife Service's Information for Planning and Conservation website (https://ecos.fws.gov/ipac). If you have any questions regarding this letter please contact Melany Cheeseman, Endangered Species Review Assistant, at (508) 389-6357.

Sincerely,

Everose Schlüter

Everose Schlüter, Ph.D.
Assistant Director

New LNG Tank Rendering from inside West Holyoke Facility, facing west, showing minimal visual impact.
Photo captured with a Canon 6d Mark II and a Canon 17-40mm lens.

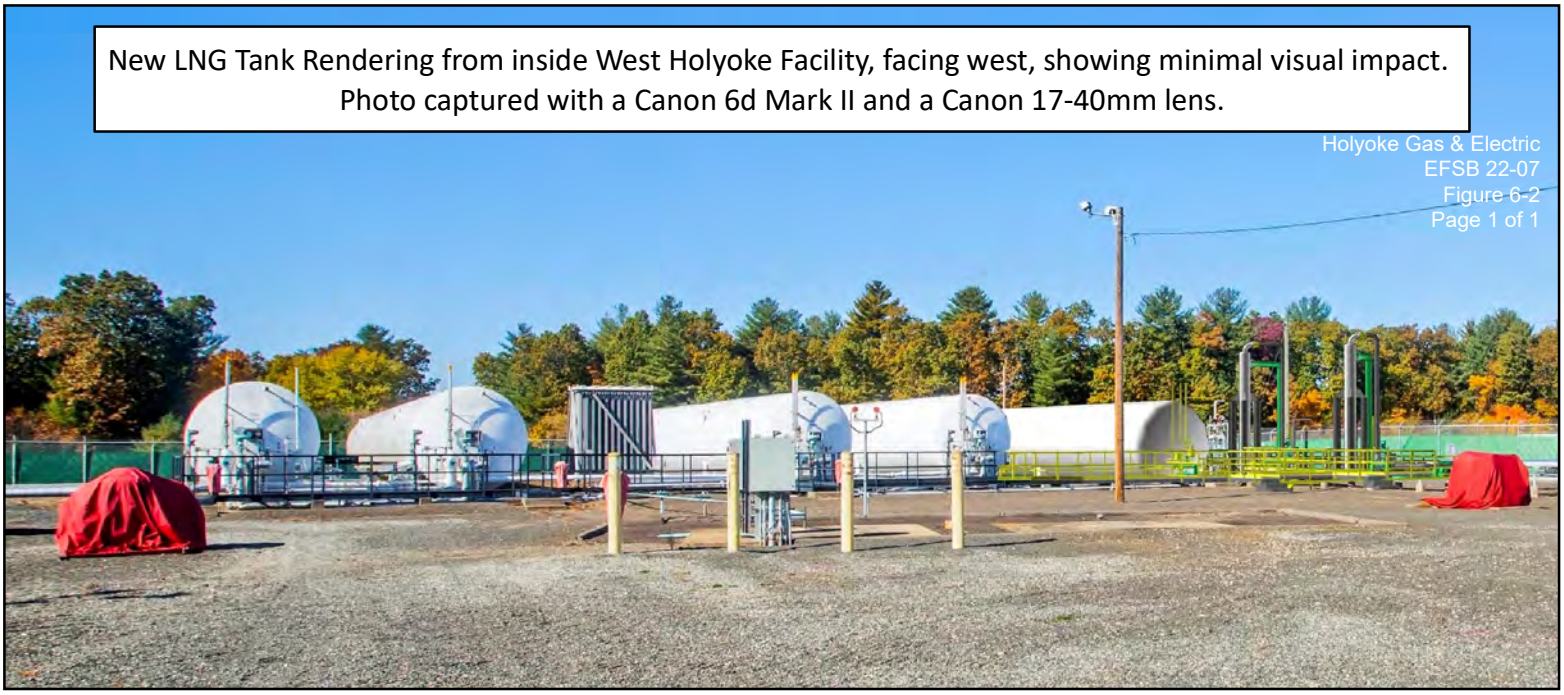

FIGURE 6-2 (Photo from E direction)

Image viewing west from West Holyoke Facility access road.
Facility contents not visible from the street view demonstrating minimal visual impact of Project.
Photo captured with a Canon 6d Mark II and a Canon 17-40mm lens.

FIGURE 6-3 (Photo from E direction)

Image viewing south from County Road toward existing West Holyoke Facility. Facility not visible from the street view demonstrating minimal visual impact. Photo captured with a Canon 6d Mark II and a Canon 17-40mm lens.

FIGURE 6-4 (Photo from N direction)

Image viewing east from County Road toward existing West Holyoke Facility. Facility not visible from the street view demonstrating minimal visual impact. Photo captured with a Canon 6d Mark II and a Canon 17-40mm lens.

FIGURE 6-5 (Photo from W direction)