

2.0 PROJECT NARRATIVE

2.1 Introduction

This application for Site Plan Review is for the expansion of the existing West Medway Generating Station owned and operated by Exelon West Medway, LLC and Exelon West Medway II, LLC (collectively referred to hereinafter as “Exelon”). The expansion entails the construction of two 100-megawatt (MW) turbines (200 MW total) and associated appurtenances (the Project). The proposed facility will be located on approximately 13 acres of the 94-acre Property to the south of the existing three-turbine 135 MW power plant. Work is proposed on the Property (including Assessor’s Map 66 Lot 012, and Map 66 Lot 013), as well as on the abutting land owned by Eversource (Map 56 Lot 001, Map 56 Lot 002, Map 56 Lot 003, and Map 56 Lot 004). The majority of the Property is located within the Industrial II zoning district, with portions of Map 66 Lot 012, and Map 66 Lot 013 and the entirety of Map 56 Lot 001, Map 56 Lot 002, Map 56 Lot 003, and Map 56 Lot 004 located within the Agricultural Residential II zoning district. This addition will provide a facility for peak power generation, and is anticipated to operate only during times of peak energy demand.

2.2 Existing Conditions

The overall 94-acre Property is bordered on the north by land abutting Route 109 (Milford Street), on the east by Route 126 (Summer Street) and adjacent properties abutting this roadway, and on the south and west by West Street and adjacent properties, primarily residential in nature. Exelon West Medway, LLC currently operates a 135 MW power plant which includes: three 45-MW electric generators, each served by two Ultra-low Sulfur Distillate (ULSD)-fired combustion turbine sets, which operate during periods of peak demand or testing, which is typically less than 100 hours per year. The Property has been used for power generation since 1970.

The existing facility is completely fenced and mostly surfaced with concrete. The existing facility includes three turbine buildings (each building housing a 45 MW electric generator, two combustion turbine sets and two 65-foot tall square-to-round stacks), two 157,000-gallon above-ground fuel oil tanks, and a two-story building housing the control room. The remainder of the Property is largely vegetated and undeveloped. The 13-acre portion of the Property south of the existing power generation facility where the proposed facility is sited (the Site) is currently vegetated, primarily by mowed grass fields separated by hedgerows.

The existing facility is served by Town water for potable and fire protection purposes. Sanitary water and sewage is discharged via a private septic system and leach field.

Eversource holds an easement on approximately 54 acres of the Property, on which it owns and operates transmission and switchyard facilities to the southwest and west of the existing facility. Each transmission switchyard includes transformers, switchgear, transmission lines/towers, and other associated infrastructure dispersed through the Eversource easement.

The Property contains wetland resource areas including Riverfront Area, Inland Bank, Land under Water Bodies and Waterways, Bordering and Isolated Vegetated Wetlands, and Isolated Land Subject to Flooding. The Medway Conservation Commission issued an Order of Resource Area Delineation on September 10, 2015, confirming the extent of these state and locally-regulated wetland resource areas.

2.3 Proposed Conditions

The Project includes the construction and operation of two 100-MW combustion turbine generators (CTGs) each with its associated equipment (inlet air filter, intercooler, vent stack for intercooler, air-cooled heat exchangers for the intercooler and lube oil, Selective Catalytic Reduction system (SCR) modules complete with ammonia injection skid, oxidation catalyst, and exhaust stack, three-winding main generator step-up (GSU) transformer, auxiliary transformer, and electrical switchgear). The proposed facility will also include a Control/Administration and Facility Services building housing the control/administration, maintenance, and warehouse areas; a trailer-mounted demineralizer system (which, when necessary, will be removed from the facility and replaced by a fresh trailer); an enclosed gas compressor station with adjacent gas yard; a one million-gallon fuel oil (ULSD) tank; a 500,000-gallon fire/service water tank; a 450,000-gallon demineralized water storage tank; a 12,000-gallon fully-diked and covered aqueous ammonia storage tank; and a perimeter access road.

The CTGs and associated equipment will be placed on concrete foundations and pads. The general power block yard area is anticipated to be finished with crushed stone. A paved perimeter access road is anticipated to connect to the internal driveway, which currently serves as access to the existing facility. Access to the proposed facility will be controlled via a motorized security gate located off of the relocated main site access driveway.

The proposed facility will have full acoustical enclosures for the gas turbines and the generators. A 55-foot high noise wall will surround the entire power island, including air cooled heat exchangers. In addition, the proposed facility will be equipped with a full complement of acoustical controls. These controls will include combustion air inlet silencers, insulation for the SCR/oxidation catalyst enclosure, acoustical enclosures or barriers around many components, stack exhaust silencers, an acoustically-treated enclosure to house the fuel gas compressors, and a 25-foot high fuel gas yard perimeter noise wall.

Natural gas for the Project will be delivered via an interconnection to the existing Algonquin Gas Transmission Company (AGT) pipeline. The existing AGT main runs in a generally southwesterly to northeasterly direction, passing within a short distance from the northwest corner of Exelon's Medway Property. A service lateral is anticipated to be installed approximately three to five feet below the existing surface elevation. Two buildings are proposed to support the gas service lateral. The first will be approximately 14 feet wide by 50 feet in length, and will contain flow control and metering equipment. The second, smaller building will be approximately 12 feet wide by 16 feet in length and will contain gas monitoring and analysis equipment. The length of the proposed interconnection is approximately 3,080 feet, and is anticipated to be constructed on Map 56 Lot 001, Map 56 Lot 002, Map 56 Lot 003, and Map 56 Lot 004, owned by Eversource. The final location of the gas service lateral will be based upon the outcome of negotiations between Exelon and Eversource for determination of an easement.

Eversource will distribute electric power generated by the Project through its bulk transmission system. The Project will interconnect with Eversource via an approximately 1,200-foot overhead circuit from a GSU transformer to Eversource's SEMA/RI switchyard to the southwest of the Project.

2.3.1 Uses

The proposed use is consistent with the existing use on the Property. The entirety of the proposed facility will be located within the Industrial II Zoning District. Under the Bylaw, "*Electric power generation including but not limited to renewable or alternative energy...*" is a use allowed by right in the Industrial II District. The proposed gas service lateral located within the Agricultural Residential II zoning district will be constructed entirely within existing natural gas and transmission rights of way.

2.3.2 Proposed Construction

The first actions that will take place upon initial mobilization is anticipated to include construction staking; installation of construction-phase soil erosion, sediment, and stormwater control measures; limited site clearing; and establishing locations for temporary facilities for trailers/laydown, which will include basic grading. Initial work activity will also include re-routing the current entry road into the existing and proposed facilities and installation of permanent security fencing that will sustain the construction phase. The stormwater detention/infiltration basin will be constructed in two phases. The first phase will be performed early in the construction process to help manage storm flows during construction, and the second phase will be performed later in the construction phase to establish the final footprint of the detention/infiltration basin.

Underground utilities, including electrical ductbank/conduit, process (e.g., gas, fire suppression) piping and gravity piping, along with stormwater collection/transport systems will be installed earlier in the construction period to allow for accessibility for aboveground construction and on-site traffic.

Aboveground utilities, including ULSD fuel oil piping and select electrical systems will be constructed in unison with the placement of foundations. The bulk of the proposed facility will be installed on shallow mats or spread footings. After foundation concrete curing, several field-erected tanks will be installed. The Control/Administration and Facility Services Building will use a pre-engineered building style, with metal wall and roof panels, windows, and doors. Other pre-manufactured or engineered enclosures include the fuel gas compressor enclosure, fire protection pumps, and PDC housing the electrical switchgear.

Much of the early construction will focus on the areas around the primary power block and foundations, to enable immediate installation and interconnection of major equipment with the constructed balance of plant support systems. Major equipment will include the CTGs and their auxiliaries; SCR/CO modules; and generator step-up and auxiliary transformers.

Final construction efforts will involve tank fills, natural gas pressurization, tie-in of utilities with existing systems (e.g., water, wastewater, gas, transmission), and construction-phase testing.

2.3.3 Project Intended to Serve

The proposed Project is anticipated to provide additional needed capacity to the Southeast Massachusetts/Rhode Island (SEMA/RI) load zone in the ISO-New England electric grid, to help meet energy demand during peak times.

2.3.4 Number of Employees

During construction, the proposed facility is anticipated to require approximately 200 during peak periods. At the testing stage of the construction period, the proposed facility is anticipated to require approximately 50 workers during peak periods. It is anticipated that up to six new full-time employees will be required to operate and maintain the facility after construction.

2.3.5 Hours of Operation

The proposed facility is anticipated to operate during periods of peak energy demand, which may occur at any point, 24 hours a day, seven days a week.

2.3.6 Anticipated Project Timetable

Construction of the proposed Project is scheduled to begin in the fall of 2016. The Project is required to commence commercial operation no later than June 2018. The construction and testing phase will consist of the following sequential events:

- Receipt of required approvals and permits (September 2016);
- Initial site mobilization (“Construction Start”) (October 2016 – February 2017);
- Early site construction, including installation of construction-phase soil erosion, sediment control, and stormwater management systems; underground utilities; and temporary construction facilities (e.g. trailers, laydown spaces, work areas) (October 2016 to May 2017);
- Foundation and building construction (October 2016 to October 2017);
- Receipt and installation of power-generating and balance of plant equipment and systems; tanks; transformers; utilities including natural gas service lateral, transmission interconnection and water/wastewater interfaces and construction-phase testing and readiness actions to verify construction completion (April 2017 to February 2018);
- Startup and commissioning (“Testing”), including first-fire of the CTGs, synchronization of the facility to the Eversource grid, generator verification tests for ISO-NE and NPCC compliance, performance tests, and final commissioning (September 2017 to June 2018).

At completion, the proposed facility will be available for commercial operation and dispatch.

2.3.7 Cost Estimate

The capital costs of the Project are anticipated to total \$240 million.

2.3.8 Mitigation

The proposed facility is not anticipated to contribute to any significant health risks, and the cumulative health impacts from the project have been minimized. The terms and conditions to be incorporated into permits required for this Project will constitute all feasible measures to avoid damage to the environment, and will minimize and mitigate such damage to the maximum extent practicable.

Exelon understands that the Town of Medway has retained consultants to review and provide comments regarding air quality, noise, and water supply in relation to the proposed Project.

Noise

Significant attention has been paid to reduce sound levels from the proposed facility through a combination of noise controls and enhancements to the equipment layout.

Construction

Though increased community sound levels are an inherent consequence of construction activities, every reasonable effort will be made to minimize noise impacts during construction of the proposed facility. These noise mitigation measures are anticipated 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 operations and techniques, where feasible;
- Selecting the quietest equipment alternatives, where feasible;
- Scheduling the noisiest construction activities during daylight hours;
- Turning off idling equipment; and
- Locating noisy equipment at locations that protect sensitive locations through shielding or distance.

Operation

The Applicant intends to purchase every noise control enhancement available for the generating equipment. Additionally, the Applicant proposes the following additional noise mitigation:

- ‘Ultra Low Noise’ Air Cooled Heat Exchanger Fans
- Gas compressor enclosure
- Gas compressor yard noise barrier wall (25 feet tall)
- Power block noise barrier wall (55 feet tall)

The noise barrier wall systems proposed for the fuel gas compressor yard and power block yard will be constructed of wall panels with a solid steel exterior, acoustic insulation, and a perforated sound-absorbing interior liner plate to provide significant site far field noise reduction. The proposed barrier locations are situated as close as possible to the equipment while maintaining adequate ventilation and accessibility. Air flow openings and other egress areas in the noise wall will be designed to maintain overall noise attenuation performance of the wall. As a general design guideline, the interior faces of the barrier wall will be covered with a perforated sound absorbing liner plate to reduce reflection from the barrier surface which would otherwise increase sound levels at other locations. The sound absorptive material will include a protective face that is weather, fire, corrosion, and abuse resistant and exhibits sufficient hanging and tear strength. The contractor selected will be responsible for the design, detailing, and adequacy of the framework, supports, and attachment methods required for the proper construction of the noise barrier wall.

Air Quality

Construction

During construction, the Applicant will require that all contractors associated with the proposed facility comply with MassDEP's Clean Air Construction Initiative. The main aspects of the program include:

- All contractors shall use ULSD oil in diesel-powered non-road vehicles;
- All non-road engines used on the construction site shall meet the applicable non-road engine standard limitations per 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;
- 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 are anticipated to 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.

In addition, fugitive dust will be minimized by dust suppression during earth moving which will include the use of water trucks to wet ground surfaces, stabilization of soils, and use of stabilized construction and exit points.

Operation

The Project will use state-of-the-art emission control techniques to minimize and mitigate air emissions. The Project will comply with all air quality regulatory requirements. Exelon has submitted an application for a Major Comprehensive Air Plan Approval (MCPA) to MassDEP documenting in greater detail how the Project will comply with air regulations and minimize impacts.

Air emissions will be minimized using Lowest Achievable Emission Rate (LAER) for nitrogen oxides (NOx). NOx emissions from the Project will be controlled to a stack concentration of 2.5 parts per million (ppm, by volume dry basis corrected to 15% oxygen) with natural gas firing and 5.0 ppm with ULSD firing. For all pollutants, Best Available Control Technology (BACT) will be used to minimize air emissions as detailed in the table below.

Table 1

Pollutant	Planned Control Measure
NOx	Water Injection / Selective Catalytic Reduction
VOC	Oxidation Catalyst
CO	Oxidation Catalyst
SO ₂	Low Sulfur Fuels
PM	Primary Use of Natural Gas
NH ₃	Air Permit Emissions Limits
Pb	Primary Use of Natural Gas
H ₂ SO ₄	Low Sulfur Fuels
CO ₂	Primary Use of Natural Gas and Use of Highly Efficient Turbines
HAPs	Primary Use of Natural Gas and Oxidation Catalyst

2.4 Site Plan Review Standards

2.4.1 General Design Principles

The proposed facility will be consistent with the current character of the Property and the Town of Medway. The Project is a continuance of the current use located on the Property and does not conflict with the zoning designation on the Site. The Project is consistent with the Medway Master Plan, adopted by the Planning and Economic Development Board in 2009, which identifies that the expansion of the commercial/industrial tax base “...is needed to offset the costs of servicing existing and new residential development.” Additionally, the Master Plan encourages “...development of commercial and industrial properties along the Bellingham line.” The existing and proposed facilities are located along the Bellingham line and would expand Medway’s tax base. Lastly, the Project is consistent with Economic Development Goal 6, which includes as an action item for the Town, “Identify key personnel at Exelon and work with them to encourage revival of the expansion of the peak electricity generating plant.” The proposed facility is therefore consistent with the 2009 Medway Master Plan.

Impacts to the natural environment of the Property have been avoided and minimized where feasible. Please refer to Section 2.4.10 and 2.5.2 for additional discussion of the natural environment.

There are no historical resources on or adjacent to the Property. The proposed facility is anticipated to have no negative impact any historical resources.

2.4.2 Design Standards

The proposed Project follows the Town of Medway Design Review Guidelines for Industrial Zones, dated August 2015, to the maximum extent feasible. Pitched roofs have been incorporated into the design of several proposed structures, such as the fuel gas compressor enclosure and the Control/Administration and Facility Services building. Improvements to the access drive are proposed to reflect a unique and rural New England character.

A landscaped berm is proposed along the southern portion of the Property to screen the proposed facility to the maximum extent practicable. The plantings on top of the berm are designed to maintain a naturalistic appearance. The dense forested buffer along Summer Street and the northeastern boundary of the Property is proposed to be maintained. Please refer to Section 2.4.9 for additional discussion of trees and landscaping, and Section 7.0 for photograph renderings showing anticipated visual conditions.

2.4.3 Traffic

The proposed facility will be accessed via the existing facility site driveway. The sight lines from the existing driveway locations exceed industry standards to allow safe vehicle exits. No new curb cuts on public ways are proposed.

Internal site driveways consist of a 24-foot wide perimeter access road bounded by a bituminous concrete berm extending from the existing facility site driveway, and a 12-foot wide gravel access road connecting to the existing emergency access drive from West Street. The internal circulation has been designed to ensure adequate on-site truck circulation using AutoTURN[®] analyses with both a WB-50 design vehicle (55 feet long) and fuel delivery design vehicle (62 feet long). This is anticipated to be adequate for emergency vehicle access.

Traffic analysis studies were completed by MDM Transportation Consultants, Inc., as part of the Transportation section of the Draft Environmental Impact Report (DEIR) and supplemental construction period transportation evaluation dated October 16, 2015 (Updated February 3, 2016) to evaluate the impacts of the proposed facility. In summary, the studies found that there will be adequate capacity along Summer Street and at the study intersections to accommodate the Facility. Incremental traffic increases at the study intersections due to the Facility do not result in any change in operating levels relative to No-Build conditions, which are shown to be below capacity. Therefore, no additional off-site roadway improvements are warranted to accommodate the Facility. Recommended access improvements, on-site circulation/traffic management improvements, and a construction traffic management plan will support the proposed operational needs of the Facility while minimizing on-site and adjacent roadway impacts. American Association of State Highway and Transportation Officials' ("AASHTO") criteria for stopping sight distance and intersection sight distance for the ambient travel speeds are satisfied at the site driveway intersections with Summer Street and West Street.

A copy of Traffic Information is provided in Section 5.0 of this Application.

2.4.4 Drainage and Stormwater Management

A stormwater management system consisting of infiltration basins, bioretention basins/rain gardens, catch basins and water quality filters, has been designed to control peak runoff rates, provide water quality, promote groundwater recharge and sediment removal. The system maximizes on-site stormwater infiltration, which is an effective way to mitigate phosphorus in stormwater runoff. The Project will not engineer any “direct connections” to the Town’s municipal separate storm sewer systems (MS4).

The system has been designed to comply with:

- The 2008 Massachusetts Department of Environmental Protection (DEP) Stormwater Management Handbook,
- The Massachusetts Wetland Protection Act (310 CMR 10.00),
- The Town of Medway General By-Laws of the Town Article XXVI Stormwater Management,
- The Town of Medway Planning Board Rules and Regulations Chapter 200 – Submission and Review of Site Plans, and
- Rules and Regulations of the Town of Medway Conservation Commission.

The site does not contain, nor is it tributary to, any Critical Areas as defined in the Massachusetts Stormwater Handbook.

Refer to Section 3.0 Post-Development Conditions of the Stormwater Management Report included in Section 4.0 of this Application for information on existing and proposed hydrology, including pre-development and post-development drainage calculations prepared by a Registered Professional Engineer in the Commonwealth of Massachusetts, and compliance with applicable regulations.

2.4.5 Utilities

Utilities will be located underground where feasible.

A new water line connecting to the Town's water supply system along West Street will supply potable water to the proposed facility and the demineralization system. On an annual average, the proposed facility is anticipated to use approximately 95,000 gallons per day (gpd) of water, and a maximum of approximately 190,000 gpd when operating under high-demand winter load conditions (both turbines operating at 100% load for 24 hours per day). Exelon understands that the Town of Medway does not have the capacity to meet this demand under its existing Water Management Act permit; accordingly, the preferred source of water for the Project is a combination of an on-site well and the Town of Millis municipal water supply. Exelon proposes to transport Millis water to the proposed facility via the Town of Medway municipal water system by activating the existing interconnection between the two water supplies at Village Street. At this time, Exelon anticipates that required water supply agreements include an Inter-Municipal Agreement between Millis and Medway, a contract between Exelon and Millis, and a contract between Exelon and Medway.

Most of the water used by the proposed facility is anticipated to be evaporated in the exhaust of the combustion turbines and be discharged as water vapor from the stacks. The existing septic system and leach field will be abandoned, and a new 6-inch sanitary and process sewer connection will connect to the existing 18-inch Town sewer main along West Street. Sanitary waste and process skid drains and demineralizer rinse water will be discharged to the sewer. Turbine wash-water will be collected in a wash water drain tank and transported off-site for disposal by an approved waste hauler as needed.

2.4.6 Parking

Parking for the proposed facility will consist of the existing parking lot and 16 new proposed spaces adjacent to the maintenance and warehouse area. The new parking area is located adjacent to a side lot line, and will be screened from view by the landscape berm along the southern portion of the Property. The perimeters of the new parking areas are bounded by bituminous concrete berm. The stalls comply with the dimensional requirements of the Regulations.

During construction, the parking area for workers will be in an existing material lay-down lot in the southern portion of the Property along West Street. The temporary lot will be re-enforced with crushed stone to facilitate construction employee parking. Upon completion of the construction, the material lay-down-lot will be restored with loam and seed.

2.4.7 Snow Removal

Snow storage areas are depicted on the Layout and Materials Plan, and are not anticipated to affect visibility of entering vehicles, nor generate runoff to public ways. Requirements for snow removal and use of deicing chemicals at the proposed development are detailed in the Site Owner's Manual, contained within the Stormwater Management Report in Section 4.0.

2.4.8 Outdoor Lighting

Proposed site lighting includes standard pole mounted 4000K LED luminaries and 4000K LED wall packs mounted on sound walls and buildings. Proposed light poles are a maximum 20 feet tall, and wall packs are mounted at heights varying from a minimum of 10' to a maximum of 22'.

Adequate lighting has been provided for safe movement of persons and vehicles, as well as security. Proposed foot candle readings at all property lines do not exceed 0.01 foot candles.

Abutting land uses consist of an existing generating station, switching station, and transmission line right-of-way, forested land, residential uses, and limited commercial uses. As the uses vary, the surrounding area lighting is variable in nature as well. The proposed lighting in the context of this area and the Industrial II zoning district is considered appropriate in both scale and light levels.

2.4.9 Trees and Landscaping

Approximately 20% of the Property currently is wooded. There is a dense buffer of forested area along Summer Street and along the northeastern boundary of the Property, screening the residential areas to the north. These trees are not proposed to be removed.

The project will remove approximately 2 acres of trees, 0.5 acres of which consist of the inner hedgerows of the existing fields where the proposed facility will be built. Approximately 1 acre of proposed replacement plantings (including Red Maple, Sugar Maple, Pin Oak, Eastern Red Cedar, White Spruce, and Eastern White Pine, and a variety of flowering shrubs) are proposed in a landscape berm along the southern portion of the Property. The proposed berm is anticipated to be approximately 5 to 9 feet in height. The top of the proposed berm varies in width, but is approximately 30 feet wide on average. The proposed berm is approximately 1,000 feet in length.

Please refer to Section 7.0 for a photorealistic rendering showing anticipated visual conditions in the vicinity of the proposed berm.

2.4.10 Environmental Considerations

The Medway Open Space and Recreation Plan (2010) did not identify the Property in its five-year action plan; it can therefore be concluded that the proposed facility is not anticipated to have an adverse impact on any existing or potential open space areas identified in the Plan.

During the design phase of the site layout, consideration was given to conserving environmentally sensitive features and minimizing impact on the existing hydrology. To achieve this, extensive grading was avoided and the site was designed to match the existing terrain where feasible. Minimizing earthwork helps to maintain the existing drainage patterns to the maximum extent practicable under post-development conditions. Through careful site planning the proposed impervious surfaces have been minimized, reducing the impact the project may have on the existing watershed. Large portions of the power block, fuel gas yard and switchyard are proposed to be surfaced with crushed stone, a pervious surface. Additionally the impervious areas associated with the roadways and parking area were minimized to the maximum extent while still complying with local bylaw requirements and provided vehicular safety.

On-site wetland resource areas were excluded to the maximum extent from the development envelope. A Notice of Intent for work within wetland resource areas and associated buffer zone is anticipated to be filed with the Medway Conservation Commission in the second quarter of 2016.

2.4.11 Construction Standards

The Project will adhere to the construction standards outlined in Section 100-7 of the Rules and Regulations for the Review and Approval of Land Subdivisions, and will follow general engineering practices:

- The site was designed to match the existing terrain where feasible and extensive cut and fill will be avoided.
- Tree removal was minimized where possible, and a landscape berm is proposed along the southern portion of the Property to minimize the visual impact of the facility.
- The stormwater management system has been designed to provide treatment for stormwater runoff associated with the proposed impervious surfaces on site, and a draft Stormwater Pollution Prevention Plan (SWPPP) has been developed to control construction-related impacts from erosion, sedimentation and other pollutant sources.
- Construction-period noise impacts have been reduced to the extent feasible as outline in Section 2.3.8.

2.5 Development Impact Statement

2.5.1 Traffic Impact

The proposed Project contains frontage on a public way. Accordingly, a Traffic Impact Assessment is required under Section 204-3(A)(7)(a) of the Regulations. A copy of the Transportation section of the Draft Environmental Impact Report (DEIR) and supplemental construction period transportation evaluation dated October 16, 2015 (Updated February 3, 2016) are provided under Section 5.0 to fulfill this requirement.

Existing Traffic Conditions

Summer Street in the immediate study area carries approximately 7,885 vehicles per day (vpd) with 710 vehicles during the peak hour, which represents 9% of the daily traffic volumes. West Street in the immediate study area is a low volume roadway that carries approximately 880 vpd with up to 98 vehicles during the peak hour, which represents approximately 11% of the daily traffic volumes.

Volume and Effect of Projected Traffic

Under a worst case operational scenario with both the existing and proposed facilities experiencing peak operating conditions, the Site would generate 8 truck trips per hour (4 entering and 4 exiting trips) and approximately 176 truck trips per day (approximately 88 entering and 88 exiting). This anticipates that four trucks per hour would be delivering fuel to both the existing station and the Proposed Project. The traffic study has found that incremental traffic associated with the Project is not expected to materially impact operating conditions at the study intersections. Accordingly, no additional roadway improvements are warranted.

Truck trips associated with replenishment of fuel supplies (oil) at the site will originate from Providence, RI. As a result, trucks destined to/from the Project will use Route I-495 to/from the south and Route 126 to/from the west. These roadways are well established commercial truck routes, and provide the most direct and efficient means of travel to the site.

Mitigation

While no off-site transportation improvements are necessary, the following on-site improvements are proposed to support the operational needs of the Project while minimizing impact to adjacent roadways:

Site Access Improvements

- A STOP sign (R1-1) and STOP line pavement marking will be installed on the driveway approach to Summer Street. The sign and pavement marking shall be compliant with the Manual on Uniform Traffic Control Devices (“MUTCD”).
- Plantings (shrubs, bushes) and structures (walls, fences, etc.) will be maintained at a height of two feet or less above the adjacent roadway grade within the sight lines in vicinity of the site driveway in order to continue to provide unobstructed sight lines.

Onsite Circulation/Traffic Management Improvements

- AutoTURN[®] analysis was completed for the preliminary site plan using both a WB- 50 design vehicle (55 feet long) and fuel delivery design vehicle (62 feet long). Based on recommendations a number of areas for on-site roadways have been widened to ensure adequate on-site truck circulation.
- A truck by-pass will be constructed in the fuel-unloading zone to increase the efficiency of fuel delivery operations.
- On-site truck staging areas have been identified to accommodate fuel-truck storage while waiting for an unloading zone to clear. The primary fuel truck staging area has been identified adjacent to the existing on-site roadway. The potential truck staging areas can accommodate 6 fuel oil delivery trucks in the primary staging area and up to an additional 13 trucks in the overflow staging area. To the extent trucks are staged on-site they will be actively managed by on-site staff. Based on previous experience, it was estimated by Exelon that the process of entering the site, unloading and exiting the site would take approximately 45 minutes or less to perform. Under the worst case scenario the Site (existing and proposed Project combined) will generate approximately 4 inbound and 4 outbound truck trips per hour resulting in the need to stage approximately 2 vehicles. The designated staging areas for fuel unloading will be distinct from those for truck deliveries of other materials.

Construction Traffic Management Plan

A traffic-construction management plan will be implemented in cooperation with the Town and the Project’s EPC Contractor prior to the start of construction. The construction traffic management plan will include but will not be limited to the following:

- Designated parking areas will be provided for construction employees in an existing material laydown lot in the southern portion of the site along West Street, which will be reinforced during the construction phase of the site and returned to grass upon completion of the project.
- Construction periods (i.e., worker arrival/departure times) and material deliveries will be designated to coincide with off-peak travel periods of the area roadway.
- The current arrival/departure periods are 5:00 – 6:00 am and 6:00 – 7:00 pm, which have been shown to be off peak travel periods.
- Exelon will establish waiting and staging areas on-site for all material deliveries and the management of truck traffic.
- Dust suppression methods will be implemented at unpaved construction areas as needed (e.g., use of water trucks to wet the ground surface, stabilization of soils, creation of wind breaks, and/or use of stabilized construction and exit points).

2.5.2 Environmental Impact

The proposed Project is anticipated to disturb greater than thirty thousand (30,000) square feet of land or greater. Accordingly, an Environmental Impact Assessment is required under Section 204-3(A)(7)(b) of the Regulations. A copy of the Final Environmental Impact Report (FEIR) filed under the Massachusetts Environmental Policy Act (MEPA) is provided as a compact disk under Section 6.0 to fulfill this requirement.

2.5.3 Community Impact

Visual and Historic Character

The adjacent properties, primarily those to the south of the Property, are well-buffered with trees, both deciduous and coniferous. There is a dense buffer of forested land along Summer Street and along the northeastern boundary of the Property, which provides screening for the residential areas to the north. In addition, a landscape berm is proposed along the southern portion of the Property. Please refer to Section 7.0 for photographic renderings showing anticipated visual conditions.

There are no historical resources on or adjacent to the Property. The proposed facility is anticipated to have no negative impact any historical resources.

Goals of Existing Community Plans

The proposed facility is consistent with the Medway Master Plan (2009) and the Medway Open Space and Recreation Plan (2010).

Medway Master Plan (2009)

In 2009, the Town conducted a survey which indicated that residents found that maintaining the small-town feel, high taxes, and availability/quality of drinking water were the three largest concerns for residents. The proposed facility is anticipated to help in achieving *Goal 2 of Land Use: Encourage commercial/industrial development*, of the 2009 Medway Master Plan. This goal references need for increased commercial/industrial zoning to encourage more of this type of development to raise tax revenue and ease the tax burden on residential properties. The proposed facility is not anticipated to result in an increased amount of land zoned as industrial; however, the proposed facility is anticipated to generate increased revenue for the Town through a Payment in Lieu of Taxes (PILOT) Agreement between the Town and Exelon. The Proposed Project has the added benefit of locating on existing, but underutilized, industrial-zoned land.

The proposed facility is also anticipated to help the Town achieve Goal 6 of Economic Development: Attract new (and retain existing) businesses and increase the industrial/manufacturing base. The proposed facility is anticipated to increase the industrial base by expanding an existing industrial facility on existing underutilized industrial land. More specifically, Economic Development Goal 6 includes as an action item for the Town, “*Identify key personnel at Exelon and work with them to encourage revival of the expansion of the peak electricity generating plant.*”

Medway Open Space and Recreation Plan (2010)

The Property is not an area of focus for any of the goals or action items in the Medway Open Space and Recreation Plan. The proposed facility is not anticipated to have a detrimental or adverse impact to the implementation of the Plan or in achieving any of the goals or action items outlined in the Plan. The proposed facility is therefore consistent with the Medway Open Space and Recreation Plan.

Quality of Life

The proposed facility will provide peak-demand power generation for the eastern part of Massachusetts, which includes Medway. The proposed facility will be located on a site which currently serves as a power generation facility. The proposed facility is anticipated to generate negligible traffic and is anticipated to provide six new full-time jobs, as well as approximately 200 construction jobs. Significant mitigation is proposed for impacts from noise. The proposed facility is anticipated to provide additional industrial tax revenue for the Town on an existing, underutilized industrial-zoned property, which is anticipated to help to provide services for residents and reduce the tax burden for residential properties. Therefore, it can be reasonably concluded that this development is anticipated to have a net positive impact on the quality of life for residents of Medway.

2.5.4 Parking Impact

The Project does not propose 30 or more new parking spaces; accordingly, a Parking Impact Assessment is not required under Section 204-3(A)(7)(d) of the Regulations.

2.6 Waivers

The Applicant requests waivers from the following requirements of the Planning Board Rules and Regulations:

1. Site Plan Scale – Section 204-4(B) – *The site plan shall be drawn at a scale of one (1) inch equals forty (40) feet or such other scale that has been approved in advance by the Planning Board and that clearly and adequately represents the proposed improvements.*
2. Tree Replacement – Section 205-9(F) – *The total diameter of all trees over ten (10) inches in diameter that are removed from the site shall be replaced with trees that equal the total breast height diameter of the removed trees. The replacement trees may be placed on or off site as recommended by the Planning Board.*

Requests for Waivers from the Rules and Regulations are included in Section 1.0 of this Application.

In addition to the above waivers, the Project is seeking an Exemption from Certain Dimensional Provisions of Zoning Bylaw from the Department of Public Utilities (DPU) to allow for the construction of the proposed facility’s 160-foot stacks, a 55-foot sound wall and certain essential components associated with the Facility (listed on Table 2, many of the listed components are integral elements of the two GE LMS100 CTG main power blocks, and are located within the 55-foot high sound wall). Section 6.1 of the Revised Zoning Bylaw provides for a maximum building height of 40 feet.

Table 2

Component	Proposed Height
Unit 1 Combustion Turbine	52'
Unit 1 SCR/CO Module	45'
Unit 1 SCR/CO Module Exhaust Stack	160'
Unit 1 Air Cooled Heat Exchanger and Lube Oil Air Cooled Heat Exchanger	45' ±
Unit 2 Combustion Turbine	52'
Unit 2 SCR/CO Module	45'
Unit 2 SCR/CO Module Exhaust Stack	160'
Unit 2 Air Cooled Heat Exchanger and Lube Oil Air Cooled Heat Exchanger	45' ±
Power Block Noise Wall	55'
115 kV Transformer High Side A-Frame	57'
115 kV Transmission Support Poles #1 to #5 (total of 5)	73.5'
115 kV Dead End Structures (total of 3)	40'

In addition, a variance is required to construct the 20-foot sound wall to meet certain setback requirements of the Zoning Bylaw. The Project is also seeking an Exemption from Certain Dimensional Provisions of Zoning Bylaw from the DPU for this portion of the work. Specifically, Section 6.1 of the Zoning Bylaw imposes minimum front- and rear-yard setbacks of 30 feet and a minimum side-yard setback of 20 feet for structures. The sound wall, which will be located at the Property line, will not meet the 30-foot setback.