6.0 VISUAL QUALITY AND SCENIC CHARACTER

6.1 INTRODUCTION

The New England Clean Energy Connect Project (NECEC) is a High Voltage Direct Current ("HVDC") transmission line and related facilities project with the capacity to deliver up to 1,200 MW of electric generation starting at the Canadian Border in Beattie Township (Twp) and connecting to the New England Control Area through the new Merrill Road Converter Station and existing Larrabee Road Substation in Lewiston, Maine.

The project is composed of five segments. Segment 1 includes 53.5 miles of new HVDC transmission line corridor within a 150' wide cleared corridor within a 300' right-of-way supported by single pole self-weathering steel structures with an average height of 100'. The new HVDC transmission line corridor will be located in Beattie TWP, Lowelltown Twp, Skinner Twp, Appleton Twp, T5 R7 BKP WKR, Bradstreet TWP, Parlin Pond Twp, Johnson Mountain Twp, West Forks Twp, Moxie Gore, and The Forks
Plantation (Plt).

Segment 2 includes the northern portion (22+/- miles) of HVDC transmission line to be co-located within an existing 115kV transmission line corridor between the southern end of Segment 1 near the north end of Moxie Pond in The Forks Plt, through the towns of Caratunk and Bald Mountain TWP T2 R3, to the Wyman Hydroelectric Facility located in Moscow. The co-located section will require the existing 150' wide corridor clearing to be widened by 75' on the western side with the exception of a small section near the former Moscow Radar Station which will be widened by 75' on the east side. The northern portion of the co-located HVDC transmission line along Moxie Pond and in the vicinity of the Appalachian Trail crossing, will be supported by single pole self-weathering steel structures ranging from 75' to 105 in height. The structures on the southern portion of Segment 2 will be single pole self-weathering steel structures with an average height of 100'.

Segment 3 will include 70+/- miles of the co-located HVDC transmission line from the Wyman Hydroelectric Facility in Moscow, through the towns of Concord Plt, Embden, Anson, Starks, Industry, New Sharon, Farmington, Wilton, Chesterville, Jay, Livermore Falls, Leeds, Greene, to

the new 345kV AC to +/-320kV HVDC 1200 MW Merrill Road Converter Station, just north of Larrabee Road Substation in Lewiston. The existing corridor clearing ranges between 150' and 225' in width for the majority of Segment 3, except for a 400' wide 1.1 mile long section ending at the Livermore Falls Substation. The co-located section will require the existing cleared corridor to be widened by 75' on the western side. The Converter Station and Larrabee Road Substation will be connected by a new 1.2-mile 345kV AC Transmission Line (Section 3007). In proximity to the Larrabee Road Substation there will be a partial rebuild of 0.8 miles of 34.5kV transmission line (Section 72) to accommodate the connecting segment of 345kV transmission line and the installation of a new 345kV transmission line terminal. The structures in Segment 3 will be single pole self-weathering steel structures with an average height of 100'.

Segment 4 will include a new 345kV STATCOM Substation off Fickett Road in Pownal and a 0.3 mile 345kV AC Transmission Line (Section 3005)connection from this facility to the Surowiec Substation. In addition, two 115kV transmission lines will be rebuilt: the 9.3 mile Section 62 between Crowley's Substation in Lewiston and Surowiec Substation in Pownal, and the 16.1 mile Section 64 between Larrabee Road Substation and Surowiec Substation. The typical 45' wooden H-frame structures will be replaced with 75' wooden single pole structures. Both rebuilt sections are located in the towns of Lewiston, Auburn, Durham and Pownal.

Segment 5 will include a new 26.5-mile 345kV AC Transmission Line (Section 3027) from the existing Coopers Mills Substation in Windsor to the existing Maine Yankee Substation in Wiscasset; partial rebuild of a 0.3 mile segment of the 345kV (Section 3025) transmission line between Larrabee Road Substation and Coopers Mills Substation; partial rebuild a 0.8 mile segment of 345kV (Section 392) transmission line between Maine Yankee Substation and Coopers Mills Substation; approximately 3 miles of re-conductor work on existing double circuit lattice steel towers outside of Maine Yankee; and a partial rebuild of a 0.8 mile segment 115kV transmission line (Section 60/88) outside of Coopers Mills Substation. Segment 5 is located in the towns of Windsor, Whitefield, Alna, Woolwich, and Wiscasset.

Several substations constructed or upgraded as part of the Maine Power Reliability Program (MPRP) will also require additional equipment installation as part of the NECEC Project including the Larrabee Road and Crowley's Substations in Lewiston, the Surowiec Substation in

Pownal, the Coopers Mills Substation in Windsor, the Maine Yankee Substation in Wiscasset and the Raven Farm Substation in Cumberland.

A Visual Impact Assessment (VIA) has been prepared by Terrence J. DeWan & Associates (TJD&A) for each segment and substation where visible changes will occur using standard visual impact assessment methodologies. Each VIA follows the methodology and standards described in the Maine Department of Environmental Protection's (MDEP) Natural Resources Protection Act (NRPA) Chapter 315 regulations as well as addressing the standards in the Site Location of Development Law Chapter 375.14 (Scenic Character). This is generally the same format that was used for Central Maine Power's MPRP.

The NRPA and Chapter 315 require an applicant to demonstrate that a proposed activity will not unreasonably interfere with existing scenic and aesthetic uses of a scenic resource and only apply to activities in, on, over, or adjacent to a protected natural resource.[1] More broadly, the Site Law and Chapter 375.14 require an applicant to demonstrate that the development will not have an unreasonable adverse effect on the scenic character of the surrounding area.[2] Potential impacts to identified scenic resources, and other points of local sensitivity, have been assessed within each segment. A summary of scenic resources within the APE are included as **Tables** in each Section.

Updates to the assessment methodology since the completion of MPRP include expanding the project Study Area viewshed or "Area of Potential Effect" (APE) from <u>one</u> mile on all sides beyond the new or upgraded transmission lines and substations to <u>three</u> miles on all sides beyond the new or upgraded transmission lines and substations and up to five miles beyond the Project for elevated viewpoints within the viewshed. A viewshed analysis was also completed for the entire five mile APE. This APE was reviewed by MDEP staff on July 19, 2017 prior to developing the VIA.

[1] A Scenic Resource is a public natural resource or public land visited by the general public, in part for the use, observation, enjoyment, and appreciation of natural or cultural visual qualities. The attributes, characteristics, and features of the landscape of a scenic resource provide varying responses from and varying degrees of benefits to, humans. *Chapter 315, Maine Department of Environmental Protection.*

[2] Applicants are required to provide evidence that 1) the design of the proposed development takes into account the scenic character of the surrounding area; 2) development which is not in keeping with the surrounding scenic character will be located, designed and landscaped to minimize its visual impact to the fullest extent possible, and 3) structures will be designed and landscaped to minimize their visual impact on the surrounding area. *Chapter 375.14.*

Throughout this assessment, all references to rebuilding transmission lines are limited to the NRPA application. Rebuilt lines are exempt from review under the Site Law, 38 M.R.S. § 488.

6.1.1 Data Collection

TJD&A conducted field evaluations, photographed existing conditions, prepared viewshed analyses and prepared the visual impact assessments for each of the transmission line segments and substations. TJD&A staff collected field data by driving, walking, hiking, boating, flying (float plane) and photographing the Study Area in order to assess visibility from public roads, trails, conservation lands, waterbodies and viewpoints. Specific field evaluation dates are noted in each segment report.

Photographic documentation was completed by TJD&A for all locations except the Kennebec River Gorge (referred to hereafter as the "Kennebec Gorge"), which was documented by POWER Engineers.

Other data sources include the United States Geological Survey (USGS) maps; substation grading plans, 3D PLS CADD models , and cross-sections and elevations provided by POWER Engineers; Maine Office of GIS website; maps and documentation from the comprehensive plans from individual towns; Land for Maine's Future website; Maine Department of Agriculture, Conservation and Forestry (MDACF) websites for State Parks, Wildlife Refuges, Maine Department of Inland Fisheries & Wildlife (MDIFW) Lake Survey Maps, Interconnected Trail Systems (ITS); Maine Land Use Planning Commission; National Park Services' National Natural Landmark website; The Nature Conservancy; The Trust for Public Land; The Forest Society of Maine; local/regional land trusts; sites listed on the National or State Register of Historic Places; Maine Lakes Study; Maine Wildlands Lake Assessment; Maine Rivers Study; DeLorme Atlas and Gazetteer; Google Earth, Maine Trail Finder; and other secondary data sources.

6.1.2 Project Study Area

Site Context

For each segment VIA, the physical context is described in terms of the land use, vegetation patterns, land form, and water bodies adjacent to the transmission line corridor or substation site.

The narrative evaluates existing vegetative buffers where present and their effectiveness in screening the facilities within the corridor from nearby land uses and scenic resources. Representative photographs are included for each segment to supplement the narrative and provide context within the viewshed. See Appendix B. In keeping with MEDEP policies, the VIAs have concentrated on views from publicly accessible viewpoints, primarily roads, trails, public lands, and water bodies.

Distance Zones

The concept of distance zones is based upon the United States Department of Agriculture (USDA) Forest Service's visual analysis criteria for forested landscapes and on the amount of detail that an observer can differentiate at varying distances. The distance zones used for the study of the NECEC Project are defined as:

Foreground (0 to 1/2 mile in distance): Within this distance zone, observers are able to detect surface textures, details, and a full spectrum of color. The majority of public views described in the VIA are in the foreground where transmission lines cross public roads, streams, rivers or where substations are adjacent to public roads, or other scenic resources.

Midground (1/2 mile to 3 miles in distance): In the midground, the details found in the foreground become subordinate to the patterns observed in the larger landscape as a whole. In panoramic views, the midground landscape is the most important element in the composition in determining visual impact. Transmission lines are part of the midground landscape in several situations, such as when approaching a road crossing adjacent to open fields, when seen from an elevated viewpoint, or when seen crossing hillsides above the viewer's location.

Background (greater than 3 miles): Changes to the landscape seen at this distance are highly visible only if they present a noticeable contrast in form or line. There are elevated viewpoints where the new and existing transmission line corridor clearings will be visible in the background. The effects of atmospheric haze can also significantly reduce visibility of clearings and structures.

6.1.3 Inventories of Scenic Resources within the Viewshed

A MDEP Visual Evaluation Field Survey Checklist for Scenic Resources has been completed for each transmission line segment and substation (**Figures 6-1 through 6-5**). Background information has been added to the checklist for any scenic resources or other visually sensitive areas within the viewshed of the transmission line corridors and substations.

6.1.4 Viewshed Analysis Methodology

A viewshed analysis was prepared to identify locations within the Project Study Area where potential visibility of any portion of one or more proposed transmission structures could occur. The analysis was used to guide fieldwork to areas of potential visibility of the Project from scenic resources and other visually sensitive areas within the viewshed. Two types of viewshed analysis were created. A topographic viewshed analysis was prepared using Digital Elevation Model (DEM) from the USGS National Elevation Data (NED) website. This data was used to develop a DTM (Digital Terrain Model) ground surface model for the entire five mile Study Area. Transmission structures were provided by POWER Engineers with an elevation and structure height and configuration. The visibility command found in Spatial Analysis Extension for ArcMAP was then used to determine areas where the structures could be visible from within the Study Area. The topographic viewshed analysis does not account for the screening effects of vegetation but it does provide a baseline understanding of where there is no possible Project visibility due to the screening effects of topography.

To gain a more realistic understanding of potential project visibility, an additional viewshed analysis was prepared to show the effect of tree cover on Project visibility. The DTM surface was converted to a DSM (Digital Surface Model) using Maine Land Cover Data Classifications from the Maine Office of GIS. A landcover height raster was developed using specific heights for land covers in the Study Area. (See note on Viewshed Maps for actual landcover heights.) This raster file was overlaid on the base map to indicate where it is not likely to have Project visibility due to the screening effects of 40’ tall vegetation.

All work was performed using ESRI ArcMap Software, Version 10.5, Basic Edition with 3D and Spatial Analyst extensions. See Appendix C: Viewshed Maps.

Fieldwork and additional 3D Modeling was used to confirm the potential for Project visibility. See Appendix B for Study Area photographs.

6.1.5 Study Area Photographs

Representative photographs of each Study Area are provided in Appendix B. The location of the photographs are indicated on the Study Area Maps found in Appendix A. The Study Area photos are organized by Maps 1 – 12. Photos for Segment 1 are found on Maps 1-3; Segment 2 photos on Maps 3 and 4; Segment 3 photos on Maps 5-9; Segment 4 photos on Maps 9 and 10; and Segment 5 photos on Maps 11 and 12. The photographs are provided to document the field study, supplement the narrative, and provide additional context images for the photosimulation locations.

6.1.6 Photosimulations

Photosimulations (computer-altered photographs) have been prepared to illustrate the anticipated changes to the new and co-located transmission line corridors and the surrounding landscape. The simulations concentrate on scenic resources that may be affected by the Project. A total of 32 key observation points (KOPs) from scenic resources and locally sensitive resources were selected for the development of photosimulations to illustrate the 'worst case' visibility and potential visual impact of the proposed Project. A summary of selected KOPS for Photosimulations are included in **Table 6-1.** The Photosimulations are found in Appendix D.

Photographs used in the photosimulations were taken during field work with either a Nikon D7100 or Nikon D5500 digital camera, set to shoot at a focal length equivalent to a 50 mm ('normal') lens. Photographs from the Kennebec Gorge were taken by POWER Engineers using a Canon EOS 5D Mark III. The locations of all photographs were recorded with a GPS unit which allowed the image to be registered in the computer model.

The photosimulations of the proposed Project were prepared by 1) creating a three dimensional DTM model base of the study area landscape using National Elevation Data from USGS; 2) inserting three dimensional models of the structures generated in PLS CADD provided by Power Engineers into the base model; 3) aligning the computer model of the Project with GPS located photographs in 3D Studio Max; 4) rendering a simulated perspective of the Project using 3D

Table 6-1. Summary of Photosimulations		
#	**PHOTOSIMULATION**	**VIEWPOINT LOCATION**
Segment 1		
1	Beattie Pond, Lowelltown Twp	From northern end of pond looking south
2	Wing Pond, Lowelltown Twp	From northern end of pond looking south
3	Rock Pond, T5 R6 BKP WKR	From southeast side of pond looking north,
4	No 5 Mountain,T5 R7 BKP WKR	Summit of mountain within Leuthold Preserve
5	Fish Pond, Hobbstown Twp	From southern end of the pond looking northwest
6	Attean View Rest Area, Jackman	Route 201, looking southwest
7	Parlin Pond, Parlin Pond Twp	Looking southwest from the north east end of pond
8	Coburn Mtn, Upper Enchanted Twp.	From summit looking southeast
9	Route 201, Johnson Mountain Twp	From intersection of Judd Road at Route 201
10	Kennebec Gorge, Moxie Gore	On Kennebec River looking southwest from picnic area
11	Kennebec Gorge, Moxie Gore	On Kennebec River looking north from picnic area
12	Moxie Stream, Moxie Gore	From the north side of the stream, looking west
Segment 2		
13	Moxie Pond north, East Moxie Twp	Looking southwest from northern end of Moxie Pond
14	Moxie Pond north, East Moxie Twp	Continued pan from northern end of Moxie Pond
15	Moxie Pond south, Bald Mtn Twp T2 R3	Looking west from southern end of Moxie Pond
16	Mosquito Mountain, The Forks Plt	Looking northeast from eastern overlook
17	Mosquito Mountain, The Forks Plt	Continued pan looking southeast from eastern overlook
18	Troutdale Road, The Forks Plt.	Looking southeast from road within existing corridor
A	Appalachian Trail – Pleasant Pond Mountain, The Forks, Plt	230’ southeast of surveyed from summit
B	Appalachian Trail - Troutdale Rd, Bald Mtn Twp	On trail within existing corridor looking towards Joe's Hole
C	Appalachian Trail - Bald Mountain, Bald Mountain Twp	From summit
Segment 3		
19	Route 201, Moscow	From existing transmission line crossing, near Wyman Hydro
20	Wyman Lake Recreation Area, in Pleasant Ridge Plt	Looking northeast from beach toward dam
21	Route 8, Anson	Looking north in existing transmission line crossing
22	Route 2, Farmington	Looking south in existing transmission line crossing
23	Androscoggin Riverlands State Park, Leeds	Looking south in existing transmission line crossing
24	Merrill Road, Lewiston	Looking north from existing transmission line crossing
Segment 4		
25	Riverside Drive, Auburn	Looking north across Androscoggin River
26	Fickett Road Substation, Pownal	Looking southwest from Fickett Road towards proposed substation
Segment 5		
27	Route 194, Whitefield	Looking south in existing transmission line crossing
28	Route 27, Wiscasset	Looking north in existing transmission line crossing
29	Route 1, Wiscasset	Looking south in existing transmission line crossing

Studio Max; and 5) exporting image into Photoshop and merging with 'normal' photographs to create a photorealistic representation of the Project. The alteration of vegetation to reflect new or widened corridor clearings was completed in Photoshop based on limit of clearing information provided by Power Engineers.

Existing and proposed conditions photosimulations were created for each viewpoint to accurately represent the proposed changes based on "normal" focal length. For the cameras used, a "normal" view includes a horizontal field of view of 37.26 degrees. In evaluating the photosimulations, the reviewer should view the 'normal' images approximately 19.5" from a screen set at viewing 100% or 11"x17" hard copy, to approximate the actual view.

Panoramic views were also created for each viewpoint by using several 'normal' photographs 'stitched' together in Photoshop. The panoramic images provide a more contextual view of the landscape and are included for reference as the title page for each location. Each title page includes an aerial image location map, a context map, a typical cross section and photosimulation information including location, viewing direction, angle of view, date and time of photograph, camera focal length, camera type, photo source, proposed number of structures visible, and approximate distance to the nearest visible structure (or corridor clearing).

6.1.7 Affected Population/ User Expectations/Continued Use and Enjoyment

Several groups of people may be affected by the proposed Project. Most already see or come into contact with transmission lines and substations at different times during the year. The level of sensitivity to the visual changes that may result from the NECEC Project is site specific and will depend on the type and use of the resource, duration of exposure, distance from the Project, and potential mitigation.

Residents

The primary viewing population for most of the Project is the year-round residents who live along the roads that intersect or run along the existing transmission line corridors or those who live within the viewshed of the substations. The majority of the homeowners that may see the transmission line corridors live in rural areas outside of established residential areas. For

substations, particular attention is paid to abutting residential properties. The VIAs describe the number, proximity, orientation, and existing buffers for those homes that may be affected by the upgrades. There are very few residents within the viewshed of Segment 1.

Motorists

This category of users includes local residents, commuting traffic, delivery personnel, and others who use local roads that cross the transmission line corridors as part of their daily routines.

Recreating Population

Several types of recreation occurs within the Project area including snowmobiling, all-terrain vehicle (ATV) riding, camping, boating, fishing, swimming, bird watching, cross-country skiing, snowshoeing, hiking, mountain biking and dog-walking. Several of these types of recreation are enjoyed by people who use existing transmission line corridors or the resources within their viewshed and/or lands surrounding the substations.

Working Population

The working population includes people who are employed throughout northern Maine in commercial timber harvesting, and in central and southern Maine in agriculture, construction, land management activities, trucking, and other occupations that put them in transmission line corridors and/or substation viewsheds more frequently.

6.1.8 Visual Impact Assessments

A VIA has been performed for each transmission line segment and substation of the NECEC. The potential impacts on scenic resources and existing public scenic and aesthetic uses were evaluated within the identified project viewshed. The evaluation is based upon knowledge of the Project gained from fieldwork, viewshed analysis, resource mapping, and a review of the photosimulations and other data sources.

The narrative for each segment and substation follows the MDEP Chapter 315 Regulations, as noted below. MDEP's Basic Visual Impact Assessment Form[3] (VIA Form) is used as a starting

[3] *The Basic Visual Impact Assessment Form is found in MDEP Guidance for Assessing Impacts to Existing Scenic and Aesthetic Uses under the Natural Resources Protection Act. July 20, 2003.*

point to determine the potential visual effect of the Project on resources, based upon an evaluation of the Project's visual elements (*i.e.*, landscape compatibility, scale contrast, and spatial dominance as described in 6.1.8.1). The narrative also includes a description of the scenic significance of scenic resources based on state or local designations in published documents and visual quality observed during field visits (landform, vegetation, water bodies, color, views, human development and character.)

Observations and researched data are provided, when available, to determine the Project's effects on user expectation of scenic quality; extent, nature, duration of public use, and continued use and enjoyment. The following two questions were asked for each identified resource: Will the Project affect the way the scenic resource is currently being used and will it have an effect on the public's enjoyment of the resource?

The sections *in italics* below are quotes from the Chapter 315 Regulations.

Landscape Compatibility

Landscape compatibility, which is a function of the sub-elements of color, form, line, and texture. Compatibility is determined by whether the proposed activity differs significantly from its existing surroundings and the context from which they are viewed such that it becomes an unreasonable adverse impact on the visual quality of a protected natural resource as viewed from a scenic resource. Each sub-element is evaluated for how compatible the change resulting from the NECEC activity will be with its surroundings and whether there will be no, minimal, moderate, strong, or severe contrast.

> This section describes anticipated color contrasts between existing conditions and proposed materials to be used for the Project. In the case of transmission structures, new wooden poles may initially be darker than the existing poles but the contrast will diminish with time as normal aging occurs. Color contrast for new transmission structures in existing transmission line corridors is generally rated as minimal. Moderate contrasts in color may occur in situations that use self-weathering steel transmission structures, which are typically darker in color than wooden poles that have weathered to a light gray color. Where no other structures exist, the self-weathering steel can be more similar in color to surrounding wooded landscape.

Most of the electrical equipment used in substations will be galvanized or painted a silver color, which should match the existing equipment and that of adjacent substations. In the case of Fickett Road Substation the color should be similar to the adjacent Surowiec Substation.

Form: The form (three-dimensional shape) of the transmission structures that are being proposed for the HVDC structures are similar to single pole structures currently found in transmission line corridors upgraded during the MPRP project. The proposed single pole 115kV structures and H-frame 345kV structures are commonly seen in areas where they are proposed for the Project. In most instances, the new transmission structures are expected to result in a minimal contrast in form with the surrounding trees and existing transmission structures. Moderate contrasts in form may result in situations when there is disparity between the existing and proposed transmission structures (*e.g.*, a new HVDC single pole self-weathering steel structure located adjacent to an existing wood H-frame structure).

Line: The VIA describes the projected changes to the transmission line corridor, the conductors, and the transmission structures, all of which are linear elements in the landscape. It also determines if any of the transmission structures (vertical lines) or conductors (horizontal lines) will be seen against the sky from prominent viewpoints or scenic resources. The degree of contrast in line is a function of the distance from the observer, the relative length of the structure that is visible above the horizon, or the magnitude of other new lines introduced into the landscape.

Substations are typically composed of very linear elements – vertical, horizontal, and angular components – in addition to the lines of the conductors entering the facility. In the existing substations where new equipment will be added, there should be minimal to moderate contrast in line, depending upon whether the new components will be visible above the horizon. New substations could have a moderate to strong contrast between the lines found in nature and the lines introduced by the substation.

Texture: The HVDC structures will be single pole self-weathering steel, which has a smoother (and darker) texture than the standard wooden poles. There may be moderate contrasts in texture in situations where the HVDC structures are viewed adjacent to

wooden structures. The standard wooden structures, have a texture similar to the existing H-frame poles and monopoles used throughout the corridors. There is generally no contrast in texture for new transmission structures made of the same material.

The texture of the improved substations should be similar to the existing facilities, so there should be virtually no contrast in texture. In the case of new substations, the electrical equipment could have a moderate to strong contrast in texture with the surrounding vegetation and abutting land uses.

Scale Contrast

Scale contrast is determined by the size and scope of the proposed activity given its specific location within the viewshed of a scenic resource.

The VIAs describe the change in scale between the existing and proposed transmission lines, how the transmission structures fit into the maintained corridor, and how the transmission structures relate to the size of trees that line the corridor (where appropriate). The change in scale of the transmission line(s) and corridors resulting from the Project activity is evaluated for the degree of contrast within the surrounding landscape.

The VIA describes the relative size of the new or improved substations in comparison to their surroundings (transmission structures, existing trees, nearby homes or other adjacent land uses). This section also examines whether the components for both new and improved substations will be seen above the surrounding forest cover. In making a final determination of scale contrast for both new and improved substations, the VIA takes into consideration the presence of existing trees, topography, or other natural or man-made features that block the view of the facility. The VIA also recognizes the potential of visual buffer plantings and earthen berms in certain locations to minimize the visual impact of the substations by reducing its visible mass and introducing naturalistic forms in the immediate foreground.

Spatial Dominance

Spatial dominance is the degree to which an activity dominates the whole landscape composition or dominates landform, water, or sky backdrop as viewed from a scenic resource.

The VIAs describe whether the proposed transmission line(s) or new or improved substations dominate or are prominent in the whole landscape composition, or are prominently situated within the landscape, or dominates the surrounding landforms, nearby water bodies, or the sky. This section considers the presence or absence of screening vegetation between the viewpoint and the transmission structures or substations, the type and character of viewpoints (both roadside and from scenic resources), and the number of viewers and their respective sensitivity. The dominance of the transmission lines or substations is evaluated for their relative prominence in the landscape: insignificant; subordinate to the surrounding natural and cultural elements in the landscape; co-dominate the landscape; or dominate the landscape, the immediate setting, or the backdrop.

The severity of potential visual impact is determined by professional judgment on the part of TJD&A landscape architects who consider Landscape Compatibility (color, form, line, and texture), Scale Contrast, and Spatial Dominance to determine whether the visual impact will be negligible, moderate, strong, or severe. The evaluation is based upon first-hand knowledge of the specific site; a review of site photography and aerial photographs; Project design parameters for the individual transmission lines (cross-sections, areas of tree clearing) and substations; and photosimulations of the transmission lines. See Appendix B: Study Area Photographs and Appendix D: Photosimulations.

Transmission lines and substations are usually visible from multiple viewpoints and at different viewing distances. To account for this variability, a range of potential visual impacts is often provided (*e.g.*, moderate to strong) in recognition of both the viewer location and site conditions.

6.1.9 Mitigation Strategies

Mitigation is defined as any action taken or not taken to avoid, minimize, rectify, reduce, eliminate, or compensate for actual or potential adverse environmental impact.[4]

Transmission Lines

The primary mitigation measure being employed for Segment 1 is to use self-weathering single poles to minimize visual contrast, especially when viewed from elevated viewpoints and where

[4] *Maine Department of Environmental Protection. Chapter 315: Assessing and Mitigating Impacts to Existing Scenic and Aesthetic Uses. 5.F. Definitions.*

the structure is seen against a wooded backdrop. The new HVDC transmission line corridor is also primarily located in areas of commercial timber production which have been, and continue to be, periodically harvested.

In Segments 2 and 3, the primary mitigation measure being employed is to co-locate the HVDC transmission line adjacent to an existing corridor, rather than acquiring and developing an entirely separate transmission line corridor. This co-location strategy significantly reduces potential visual impacts.

Segment 4 and 5 have been designed to minimize additional clearing and the need for land acquisition by making the most effective use of existing corridors, existing structures, and rebuilding existing transmission lines. New structures will be set back as far from streams, rivers, and other areas of visual/habitat sensitivity as practicable.

There are many areas where favorable growing conditions and CMP's maintenance procedures have resulted in effective stands of non-capable species near the roadside which act as visual buffers. Wherever practicable, existing vegetation will be preserved within the transmission line corridor by careful layout of access roads and monitoring of construction practices during the installation process. No additional roadside buffers are proposed at this time.

Substations

Two main mitigation strategies have been employed in the development of the site plans for the new and improved substations to reduce their potential visual impact and achieve a harmonious balance between the facilities and the surrounding landscape. These include upgrading existing substations (several of which were constructed for MPRP) within the existing facility footprint which minimizes the need for additional clearing. Also, a Buffer Planting Plan will be developed for the areas north and east of the Fickett Road Substation in Pownal to minimize views of the substation. A detailed planting plan will be prepared by the Project landscape architect. The plan will consider specific site conditions to determine the optimum plant species mix. The Merrill Road Converter Station has been sited to avoid visibility from public roads. The preserved vegetation around the station will screen it from view from Merrill Road.

6.1.10 Conclusion

The VIA for each segment demonstrates that the proposed activity meets the standards for visual quality established under Chapter 315 and the Site Law's Chapter 375.14 (*i.e.*, that the proposed activity will not unreasonably interfere with existing scenic and aesthetic uses, that the developer has made adequate provision for fitting the development harmoniously into the existing natural environment, and that the development will not adversely affect scenic character in the surrounding area).

6.2 TRANSMISSION LINES

6.2.1 SEGMENT 1. New HVDC Transmission Line

The project is composed of five segments. Segments 1 includes 53.5 miles of new HVDC transmission line corridor within a 150' wide cleared corridor supported by single pole self-weathering steel structures with an average height of 100'. The new HVDC transmission line corridor will be located in Beattie TWP, Lowelltown Twp, Skinner Twp, Appleton Twp, T5 R7 BKP WKR, Bradstreet TWP, Parlin Pond Twp, Johnson Mountain Twp, West Forks Twp, Moxie Gore, and The Forks Plt.

6.2.1.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on June 8, 13, 14, 15, 21, and July 25, 26, 2017. Representative views from each road crossing within the Study Area are included in **Appendix B**.

Other data sources include the location, cross sections and structure details provided by Burns & McDonnell (B&McD)and POWER Engineers for the Project; project descriptions and maps from The Nature Conservancy, Maine Bureau of Parks and Lands website, Land for Maine's Future website; LUPC comprehensive plans and zoning ordinances; Northern Forest Canoe Trail website; Holeb Unit Management Plan (DOC 1989); Concept Plan for Attean Township and Dennistown Plantation (1993), National Park Service/National Natural Landmarks website; The Trust for Public Land (Cold Stream Forest); Maine Trail Finder; and Google Earth.

6.2.1.2 Study Area

The Study Area of Segment 1 is mostly located within the Western Mountains Biophysical Region.[5] . This region is characterized as a mountainous landscape with elevations ranging between 2,100' and 3,700'.

The Study Area includes 27 elevated viewpoints (hills and mountains) within 5 miles of Segment 1 as shown in Table 6-2 below.

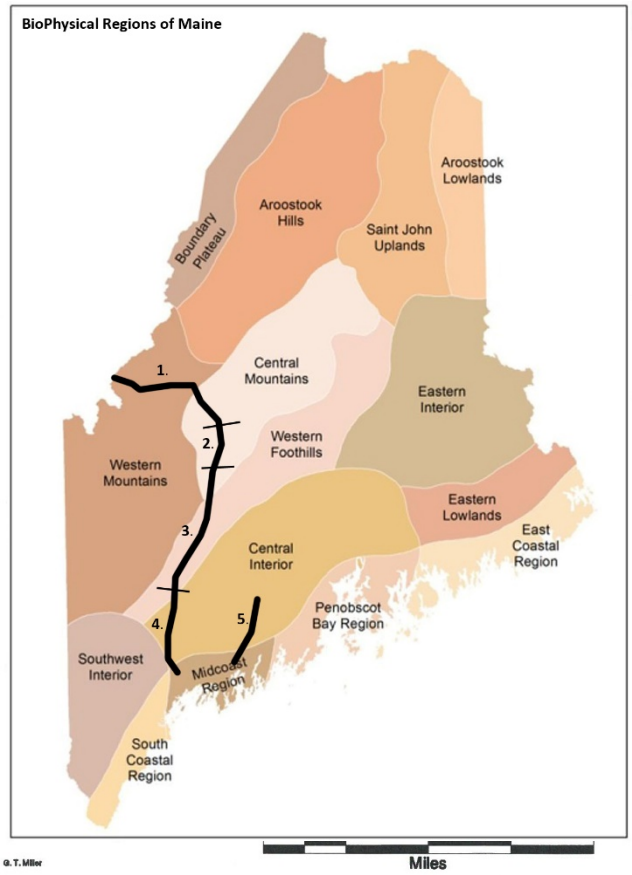


Illustration 6-1

Table 6-2 Elevated Viewpoint within 5 miles – Segment 1

MOUNTAIN	LOCATION	DIST	ELEV	DEVELOPMENT*	SIGNIFICANCE	VISIBILITY**
Lowell Hill	Beattie TWP	2.3 mi	2,923'	None	-	No - wooded
Dome Mtn	Beattie TWP	4.2 mi	2,353'	None	-	No - wooded
Van Dyke Mtn	Beattie Twp	0.5 mi	3,190'	None	-	No - wooded
Merrill Mtn	Merrill Strip Twp	1.8 mi	2,132	None	-	No - wooded
Caswell Mtn	Lowelltown Twp	1.4 mi	2,321'	None	-	No - wooded
Moose Mtn	Skinner Twp	0.7 mi	3,041'	None	-	No - wooded
Caribou Mtn	Skinner Twp	2.4 mi	3,650'	None	-	No - wooded
King Mtn	Skinner Twp	1.4 mi	2,530'	None	-	No - wooded
Peaked Mtn	Skinner Twp	0.5 mi	3,037'	None	-	No - wooded
Kibby Mtn	Skinner Twp	2.2mi	3,654'	Fire Tower – structure only, 4 structures at summit., Kibby wind project to the south	Accessible trail to fire tower	Possible
Tumbledown Mtn	T5 R6 BKP WKR	1.1 mi	3,588'	Fire Tower- Standing structure only, no cab, 3 structures at summit	access trail to fire tower – doesn't appear to be a documented hiking trail	Yes, 1 mile
MOUNTAIN	LOCATION	DIST	ELEV	DEVELOPMENT*	SIGNIFICANCE	VISIBILITY**

[5] *The Biophysical Regions of Maine: Patterns in the Landscape and Vegetation*. Janet McMahon. 1990.

MOUNTAIN	LOCATION	DIST	ELEV	DEVELOPMENT*	SIGNIFICANCE	VISIBILITY**
Spencer Bale Mtn	Skinner Twp	3.3 mi	3,301’	None	-	No - wooded
Leroy Peak	Skinner Twp	1.0 mi	3,030’	None	-	No - wooded
No. 6 Mtn	T5 R7 BKP WKR	1.9 mi	3,315’	None	within Leuthold Preserve – no trail	No - wooded
No 5 Mtn	T5 R7 BKP WKR	2.3 mi	3,186’	Fire tower – 47’ steel structure – no cab.	within Leuthold Preserve with trail access	Yes
Hardwood Mtn	Hobbstown Twp	2.2 mi	2,410’	None	-	No - wooded
Hardscrabble Mtn	Hobbstown Twp	2.7mi	2,354’	None	-	No - wooded
Spencer Mtn	Hobbstown Twp	3.9 mi	2,210’	None	-	No - wooded
Catheart Mtn	Bradstreet Twp	2.3 mi	2,395’	None	-	No - old logging roads
Bean Brook Mtn	Parlin Pond Twp	1.7 mi	2,690’	None	-	No - harvested
Parlin Mtn	Parlin Pond Twp	3.2 mi	2,450’	None	-	No - harvested
Coburn Mtn	Upper Enchanted Twp	0.8 mi	3,730	Abandoned ski area, snowmobile & ATV trails, fire tower –- observation, 3 structures on summit	All viewpoints in the Upper Enchanted Township are Designated Scenic Viewpoints of State or National Significance	Yes
Shutdown Mtn	Upper Enchanted Twp	4.8 mi	2,539’	None	-	No - harvested
Granny Cap	Lower Enchanted Twp	4.3 mi	2,705’	None	-	No - wooded
Cold Stream Mtn	Johnson Mountain Twp	2.5 mi	2,254’	None	-	No - harvested
Wilson Hill	West Forks Plt	1.5 mi	1,570’	None	-	No - harvested
Attean Scenic View	Route 201 Jackman	7.0 mi	2,070’	Rest Area with parking, interpretive panels, rest room	on Old Canada Road National Scenic Byway	Yes, distant views of corridor

* Description of development at summits is documented from fieldwork and/or research on fire towers from Maine Fire Lookouts-State Listing Page.
** Project visibility is documented through field work, viewshed analysis, and review of google earth aerials.

The watershed of this mountainous area drains through small streams towards the East and West Branches of the Moose River, into the South Branch of the Moose River, the Moose River, and the Kennebec River. The northern portion of the Segment 1 Study Area including Moose River and No. 5 Bog drains northward towards Attean Pond towards Moosehead Lake to the Kennebec

River. The area within 3 miles of Segment 1 includes numerous small to medium sized waterbodies, typically surrounded by spruce fir vegetation in heights ranging from 40' to 60'. See Table 6-3 for list of waterbodies within three miles of Segment 1.

Table 6-3 Waterbodies within 3 miles of Segment 1

WATERBODY	LOCATION	DIST +/-	SIZE (ac)	ACCESS	DEV	RES. CLASS/ MAN. CLASS	SCENIC RATING	PROJECT VISIBILITY
Beattie Pond	Beattie TWP	1,300'	27	AC[1]	DEV[1] (1 camp)	2/6	-	Yes – 1 structure
Mud Pond	Beattie TWP	1.2 mi	12	INAC	UNDEV	3/7	-	No
Sipun Pond	Lowelltown TWP	2.2 mi	5.6	INAC	UNDEV	-/7	-	No
Wing Pond	Lowelltown Twp, Skinner Twp	1.4 mi	10	INAC	UNDEV	3/6	-	Yes – 1 structures
Rock Pond	T5 R6 BKP WKR	1,010'	124	AC	DEV	1B/7	S	Yes – 2 structures
Iron Pond	T5 R6 BKP WKR Hobbstown Twp	2,700'	32	AC	UNDEV [2]	2/7	-	Yes, top of 1 structure
Tobey Pond #2	T5 R7 BKP WKR	2.8 mi	32	INAC	UNDEV	2/6	S	No
Tobey Pond #3	T5 R7 BKP WKR	2.5 mi	14	INAC	UNDEV	2/6	S	No
Boulder Pond	T5 R7 BKP WKR	2.3 mi	30	INAC	UNDEV	3/6	-	No
Hall Pond	T5 R7 BKP WKR	1.1 mi	42	INAC	UNDEV	3/6	-	No
Whipple Pond	T5 R7 BKP WKR	1,760'	112	AC	UNDEV	2/7	S	No
Toby Pond	Hobbstown Twp	850'	28	INAC	UNDEV	2/7	-	No
Chub Pond	Hobbstown Twp	1.0 mi	24	AC	DEV	2/7	-	No
Fish Pond	Hobbstown Twp	1.9 mi	219	AC	DEV	2/7	S	Yes – tips of up to 2 structures
Moore Pond	Bradstreet Twp	1,400'	47	AC[3]	UNDEV	1B/7	-	No
Egg Pond	Bradstreet Twp	332'	4	INAC	UNDEV	-/7	-	Yes, 1 structure
Moose River (Bow River Trip)	Bradstreet Twp	0.9 mi	7.2 mi within study area	AC	UNDEV	-	-	No
Grace Pond	Upper Enchanted Twp	1.5 mi	150	AC	DEV[4]	1B/7	-	No
Parlin Pond	Parlin Pond Twp	1.7 mi	543	AC	DEV	1B/7	S	Yes- 4 structures, corridor
Mountain Ponds	Johnson Mountain Twp	0.7 mi	2/1.5	INAC	UNDEV	-/7	-	No

WATERBODY	LOCATION	DIST +/-	SIZE (ac)	ACCESS	DEV	RES. CLASS/ MAN. CLASS	SCENIC RATING	PROJECT VISIBILITY
Markham Pond	Johnson Mountain Twp	1.5 mi	4	INAC	UNDEV	-/7	-	No
Tobey Pond	Johnson Mountain Twp	1,400’	20	AC	UNDEV	1B/7	-	No
Little Wilson Hill Pond	Johnson Mountain Twp	1,300’	20	INAC	UNDEV	3/7	-	Yes
Round Pond	Chase Stream Twp	2.8 mi	30	AC	UNDEV	1B/7	-	No
Long Pond	Chase Stream Twp	2.0 mi	17	AC	UNDEV	2/7	-	No
Flatiron Pond	Chase Stream Twp	1.4 mi	5	INAC	UNDEV	-/7	-	No
Ellis Pond	Chase Stream Twp	2.0 mi	85	AC	DEV	1B/7	-	No
Dead Stream Pond	West Forks Plt	2.9 mi	67	AC	DEV	3/7	-	No
Wilson Hill Pond	West Forks Plt	0.8 mi	21	INAC	UNDEV	3/7	-	No
Upper Kennebec River	West Forks Plt Moxie Gore (crossing)	0	9.0 mi Within study area	INAC at crossing	UNDEV at crossing	LUPC Recreation Protection Sub-district	S	Yes at Crossing
Black Brook Pond	Moxie Gore	2.2 mi	333	AC[5]	DEV	2/7	-	No
Baker Pond	Moxie Gore	1.9 mi	93	AC	UNDEV	3/7	-	No
Prescott Pond	Moxie Gore	0.7 mi	22	INAC?	UNDEV	2/7	-	No
Fish Pond	Moxie Gore	0.5 mi	15	AC[6]	UNDEV	2/7	-	No
Mud Pond	Moxie Gore	1.1 mi	18	INAC	UNDEV	3/7	-	No
Moxie Stream	Moxie Gore	0	5.1 in study area	AC	UNDEV		S	Yes at Crossing

	REMOTE POND
	SCENIC RESOURCE OF STATE OR NATIONAL SIGNIFICANCE
DIST:	Distance to the Project. AC: Accessible. INAC: Inaccessible. DEV: Developed. UNDEV: Undeveloped.
RES. CLASS:	Resource Class from Maine Wildlands Lake Assessment (MWLA) 1A: Lakes of Statewide significance with multiple outstanding natural values. 1B: Lakes of Statewide significance with a single outstanding natural value. 2: Lakes of regional significance (no outstanding values but at least one significant resource value). 3: Lakes of local or unknown significance. Note that lakes and ponds smaller than 10 acres do not have a resource assessment. (-)
MAN. CLASS	LUPC Management Class Designation: 6: Remote Pond, 7: Lakes not otherwise designated
SCENIC RATING	S: Significant O: Outstanding ratings from the Maine Wildlands Lake Assessment (-) No scenic resource rating
VISIBILTY:	Project visibility based on viewshed mapping, fieldwork and 3D modeling/ cross sectional analysis.
NOTES	[1]. Beattie Pond is listed as INAC in MWLA but there is now a gravel access road within 400’ of the Pond. The Pond is listed as DEV (Developed) in MWLA. There is one camp with associated out buildings. [2]. Iron Pond is listed as AC/DEV in MWLA but there is no development, logging roads are within 250’ of Pond. [3]. Moore Pond is listed as “INAC?”, there is now a boat launch to the Pond so it is now accessible [4] .Grace Pond is listed as UNDEV in MWLA but there are at least 10 camps now , considered developed [5]. Black Brook Pond is listed as INAC? And UNDEV. There are now 20+/- camps on the Pond. [6.] Fish Pond is listed as INAC in MWLA but there is now a 2WD access road to a boat put in

Segment 1 is primarily located within a commercial forest with several significant areas of conservation land within the Study Area. The vegetation on the land immediately surrounding the Project is mixed deciduous and coniferous second growth with areas of active harvesting. Vegetation ranges in height from 0' (existing laydown areas) to 60'. Land use in the immediate vicinity of the transmission line is predominantly commercial forest with sparse seasonal camps on adjacent ponds. The largest population centers within Segment 1 are the villages of West Forks and The Forks Plt, both located approximately 5 miles from the Project. Jackman is over 8 miles to the north of the Project Study Area.

Table 6-4. Conservation Lands within 3 miles of Segment 1

CONSERVATION LAND	HOLDER	LOCATION	DIST +/-	SIZE (ac)	ACCESS	PROJECT VISIBILITY
Holeb Public Reserved Land/Moose River, No 5 Bog	BPL FSM	Holeb Twp	1.0 mi	26,095, 3,200 +/- within 3 miles	Public	Possible, not likely
Leuthold Preserve	TNC	Appleton Twp, T5 R7 BKP WKR, Bradstreet Twp	Abuts on south	16,934 13,200 +/- within 3 miles	Public	Yes, from No.5 Mountain
Grace Pond Upper Enchanted	BPL	Upper Enchanted Twp	1.2 mi	2,201, 1,550+/- within 3 miles	Public	No
Bradstreet Twp S Parcel	BPL	Bradstreet Twp	780 ft	177	Public	No
Upper Enchanted Twp Parcel	BPL	Upper Enchanted Twp	0.3 mi	300	Public	Yes, from Coburn Mountain
Cold Stream Forest	BPL	Johnson Mountain Twp	190 ft	8,139, 5,370 +/- within 3 miles	Public	Possible, not likely
West Forks Parcels	BPL	West Forks Plt	crosses	3 parcels, 695	Public	Yes
Johnson Mountain Parcel	BPL	Johnson Mountain Twp	crosses	513	Public	Yes
Plum Creek / Moosehead Region	BPL	Chase Stream Twp	0.5 mi	71,630, 5,370+/- within 3 miles	Public	No
Moxie Falls	BPL	Moxie Gore	0.3 mi	237	Public	No
Moxie Gore Parcel	BPL	Moxie Gore	0.9 mi	448	Public	No
Draper, NEFF	NEFF	Moxie Gore	crosses	3,477	Private, possible access	Yes
The Forks Plt N Parcel	BPL	The Forks Plt	0.9 mi	717	Public	No

Scenic Resources[6] with potential views of the Project that were evaluated include: Beattie Pond in Beattie TWP; Wing Pond in Lowelltown Twp, Skinner Twp; Rock Pond inT5 R6 BKP WKR; Fish Pond in Hobbstown Twp; Parlin Pond in Parlin Pond Twp; Upper Kennebec River in West

[6] *Throughout this section, the term "Scenic Resources" is used as defined by Chapter 315.10, Maine Department of Environmental Protection.*

Forks Plt/Moxie Gore (crossing); and Moxie Stream in Moxie Gore. Elevated viewpoints assessed include No. 5 Mountain in T5 R7 BKP WKR within the Leuthold Preserve, Coburn Mountain in Upper Enchanted Twp, and the Attean View Rest Area on Route 201 in Jackman.

6.2.1.3 Distance Zones

Foreground (0 to 1/2 mile in distance): Foreground views of the HVDC transmission line corridor are found at road crossings (primarily within the commercial timber harvesting areas), river and stream crossings, and from adjacent waterbodies listed below:

- Beattie Twp: Lowelltown Road, Beattie Pond, Mill Brook, unnamed haul roads
- Lowelltown Twp: Beattie Pond (eastern portion), Wing Pond (northern portion), unnamed haul roads
- Skinner Twp: Wing Pond, Lowelltown Road, West Branch Road, South Branch Moose River, Goldbrook Road, Pine Tree Road, unnamed haul roads
- Appleton Twp: Spencer Bale Road
- T5 R6 BKP WKR: Rock Pond, Iron Pond
- Hobbstown Twp: Spencer Bale Road
- T5 R7 BKP WKR: Spencer Rips Road
- Bradstreet TWP: Mining Road, several unnamed logging roads
- Parlin Pond Twp: Hardscrabble Road
- Johnson Mountain Twp: Coburn Mountain access road/Enchanted Mountain Road, Judd Road, Route 201, Capital Road, Wilson Hill Road,
- West Forks Twp: Wilson Hill Road, Upper Kennebec River
- Moxie Gore: Fish Pond Road, Moxie Stream
- The Forks Plt: Lake Moxie Road

Midground (1/2 mile to 3 miles in distance):

- T5 R7 BKP WKR: Iron Pond
- Hobbstown TWP: Fish Pond
- Johnson Mountain Twp: Coburn Mountain – (1.2 miles to closest visible portion of corridor.
- Parlin Pond Twp: Parlin Pond- 1.6 miles from Pond to Project, view from northern end of Pond is 2.9 from Project.

Background (greater than 3 miles):

- T5 R7 BKP WKR: No 5 Mountain – 5 and 7 miles to visible portion of Project from summit
- Jackman: Route 201 – Attean View Rest Area – 7.1 miles to visible portion of Project
- Appalachian Trail –6.25 miles from Pleasant Mountain, 7.9 from Bald Mountain to the new HVDC Corridor

6.2.1.4 Inventory of Scenic Resources within the Viewshed of Segment 1

Figure 6-1 - SEGMENT 1
MDEP Visual Evaluation Field Survey Checklist
(Natural Resources Protection Act, 38 M.R.S. §§ 480 A - Z)

Name of applicant: Central Maine Power
Application Type: Site Law/NRPA
Activity Type: Segment 1, installation of a HVDC transmission line
Activity Location: Beattie TWP, Lowelltown Twp, Skinner Twp, Appleton Twp, T5 R7 BKP WKR, Bradstreet TWP, Parlin Pond Twp, Johnson Mountain Twp, West Forks Twp, Moxie Gore, and The Forks Plt.
County: Franklin and Somerset
GIS Coordinates, if known: See project location maps and photosimulations
Date of Survey: June 8, 13, 14, 15, 21, and July 25, 26, 2017.
Observer: Amy Segal, Steve Thompson
Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? The No. 5 Bog and Jack Pine Stand is a large peatland containing boreal vegetation and glacial features surrounded by a stand of Jack and Red Pine. It is the "only large, intermontane peatland in the northeastern US."[7]. The Bureau of Parks and Lands designated the No.5 Bog as an ecological reserve to protect five exemplary natural communities, within the bog and the largest inland stand of Jack Pine in the state. The edge of the Bog is located approximately 2 to 2.5 miles north of the Project in Attean Twp, TR R7 BKP WKR, Bradstreet Twp. The open water of No.5 Bog is approximately 3.2 miles north of the Project. Public access to the No. 5 Bog is limited to private roads off Spencer Road to the south which connect to the Moose River. Viewshed analysis indicates the Project may be visible from the Bog. Fieldwork on the southernmost portions of the Moose River indicate Project visibility should be extremely limited from within the Bog due to the shoreline vegetation, water levels, and viewing distance. There are two waterfalls within three miles of the Project: Cold Stream Falls in Johnson Mountain Twp and Moxie Falls in Moxie Gore. The primary viewing platforms within the Moxie Falls Scenic Area are 0.5 miles to the south of the closest point of the Project and 1.6 miles downstream of the proposed crossing of Moxie Stream. Cold Stream Falls, within the Cold Stream Forest lands, is approximately 1.7 miles north of the Project The Project will not be visible from either waterfall due to intervening topography and vegetation.	□	□	■
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge? The **Leuthold Preserve**, is a 16,934 acre forested preserve located north of the Project in Appleton Twp, T5 R7 BKP WKR and Bradstreet Twp. The preserve is managed collaboratively by The Nature Conservancy, Forest Society of Maine and the Maine Bureau of Parks and Lands as an ecological reserve. The southern boundary of the Preserve appears to follow Spencer Road and abuts the Project boundary in Appleton Twp and T5 R7 BKP WKR. The Project will not be visible from any of the waterbodies located within the 3 mile Study Area (Whipple Pond, Hall Pond, Boulder Pond, Tobey Ponds #2, and #3 and an Unnamed Pond) within the Preserve due to intervening shoreline vegetation.	□	□	■

[7] *https://www.nps.gov/subjects/nnlandmarks/site.htm?Site=NOFI-ME*

The Project will be visible from **No. 5 Mountain** (T5 R7 BKP WKR) at a distance of 3.9 miles; at this distance the structures will be difficult to see but the corridor may be noticeable as it crosses the commercial forest land. No. 5 Mountain is the only accessible elevated viewpoint within the Preserve located within 5 miles of the Project. The summit is fairly open with several large areas of exposed ledge with 360 degree views of the surrounding area. There is a 47' old fire tower on the summit of No. 5 Mountain that allows hikers to gain a view above the treeline, but there is no observation deck on the tower so the views are from the tower stairs. The view of the Project from the summit of No. 5 Mountain is partially screened by No. 6 Mountain which is located approximately 1 mile to the southwest. See Appendix B: Study Area Photographs, Map 1 and Photosimulation in Appendix D.

The **No. 5 Bog/Moose River Reserve**, approximately 4,700 acres, is a designated ecoreserve encompassing the southern portion of the No. 5 Bog, surrounding uplands areas and adjacent parts of the Moose River. The Reserve is located adjacent to the east and north of the Leuthold Preserve. See description above.

C. A state or federal trail? ■ ■ ■

The **Old Canada Road National Scenic Byway (Route 201)** is designated as both a Maine State Scenic Byway and a National Scenic Byway.[8] This 78.2 mile-long Byway follows the Kennebec River within Segments 1 and 2 of the Project Study Area. This section of road is also part of the Kennebec-Chaudiere Heritage Corridor, which links Fort Popham from the south with the City of Quebec to the north.

Segment 1 of the Project crosses the **Byway/ Route 201 in Johnson Mountain Twp** approximately 1,200' south of Judd Road and 2,000' north of Capital Road. This segment of Route 201 passes through a commercial forest area with mixed vegetation buffer strips along the sides of the road ranging in height from 20' to 40'. The most visible portion of the Project will be the conductors crossing over the road. A motorist traveling south on Route 201 will see the conductors as they approach the crossing for approximately 1,900'. A motorist traveling north may see the conductors and one of the structures for approximately one mile approaching the crossing. Posted speed for Route 201 in this area is 45 mph which translates into a motorist being exposed to the Project for 29 seconds traveling south and about one minute traveling north. The closest rest stops or designated scenic overlooks on Route 201 is located 5.3 miles north of the crossing on the west side of Parlin Pond. (The Project will not be visible from the Parlin Pond rest area.) There will be minimal visual impact to the Byway due to the minimal duration of view and limited Project visibility.

The Project will also be visible in the background from the **Attean View Rest Area** on the Byway/Route 201 in Jackman. This scenic overlook encompasses an approximately 100 degree view towards Merrill Mountain, Attean Mountain, and Sally Mountain and Attean Pond, No. 5 Bog and the Moose River. Wind turbines located 14 miles to the north in Canada are also visible from the overlook. The corridor clearing for Segment 1 will be slightly visible at distances of 7 to 12 miles to the southwest and seen in context of the meandering Moose River and commercially harvested areas beyond the conservation land. At this distance individual structures will not be readily visible to the average observer and the corridor clearing will blend with the surrounding vegetation patterns on either side of the corridor. There will be minimal to no visual impact from the Attean View Rest Area.

Snowmobile trails are common throughout Segment 1. The new HVDC transmission line corridor will cross ITS 89 in Bradstreet Twp and Johnson Mountain Twp and ITS 87 in Johnson Mountain Twp. These ITS trails are part of The Forks Trail Network, a 150 mile network connecting Jackman, Eustis, Moosehead Lake, and Bingham. The majority of ITS routes are generally located in the valleys and logging roads and should have

[8] The National Scenic Byways Program is part of the U.S. Department of Transportation, Federal Highway Administration. The U.S. Secretary of Transportation recognizes certain roads as All-American Roads or National Scenic Byways based on one or more archeological, cultural, historic, natural, recreational and scenic qualities. http://www.byways.org/

minimal visual contact with the Project. While snowmobile / ATV trails are not considered scenic resources of state or national significance, some of the local trails may cross Rock Pond, Fish Pond, and Parlin Pond, all of which are scenic resources of state or national significance. Local snowmobile trails are also located on Coburn Mountain in Upper Enchanted Twp and all viewpoints within Upper Enchanted Township are considered designated scenic viewpoints, and therefore are considered scenic resources. See description of Coburn Mountain below.

The Project will cross the **Northern Forest Canoe Trail** in a portage section between Spencer Rips on the Moose River, along Spencer Rips Road, past Whipple Pond to Spencer Road and Fish Pond. The Northern Forest Canoe Trail website describes the trail as, *"Completed in 2006, the 740-mile Northern Forest Canoe Trail (NFCT) connects waterways from the New York State's Adirondack Park to the Canadian border in northern Maine. Following traditional travel routes used by Native American, settlers and guides, the NFCT connects 22 rivers and streams, 58 lakes and ponds and 45 communities. It is the largest inland water trail in the nation."*[9] Because the trail crosses Fish Pond, paddlers may notice the tips of up to four structures visible to the northwest. Visual impact will be very minimal.

D. A public site or structure listed on the National Register of Historic Places? □ □ □

None.

E. A National or State Park? None □ □ □

The Appalachian National Scenic Trail (AT), a unit of the National Park System, extends 2,175 miles from Mount Katahdin in Maine to Springer Mountain in Georgia. Approximately 14.5 miles of the Trail are located within 5 miles of Segment 2. The closest point on the AT with visibility of Segment 1 is Pleasant Mountain at a distance of 6.25 miles. The Appalachian Trail is a scenic resource of state or national significance and is described in greater detail in Segment 2.

F. 1) A municipal park or public open space? □ □ □

There is no municipal land. Other publically accessible parcels with in the Project Study Area include the land managed by the Bureau of Parks and Lands around Moore Pond in Bradstreet Twp. A boat launch on Moore Pond is accessible off Spencer Road. The Project is approximately 1,300' from the northern edge of the Pond but will not be visible due to intervening vegetation.

Other conservation land in the area includes the Grace Pond Upper Enchanted parcel with limited public access. The Project will not be visible from the pond due to intervening topography and vegetation.

2) A publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities? □ □ ■

All viewpoints in the Upper Enchanted Twp Unit (also known as the Coburn Mountain parcel) were designated as Scenic Viewpoints of State or National Significance by the Maine Department of Conservation (now part of the Maine Department of Agriculture, Conservation and Forestry) in March 2010. Coburn Mountain, elevation 3,730', is the highest viewpoint within the unit. The trails on the mountain appear to be used mainly for snowmobile and ATVs. Some of the trails on the mountain follow portions of the abandoned ski area known as Enchanted Mountain which closed in the 1970's. There are no official trail signs other than signs prohibiting

[9] *https://www.northernforestcanoetrail.org/discover/trail-overview/*

ATVs on certain trails. There is a small communication tower powered by solar panels and a small wind turbine located on lower portions of the trail. The vegetation along the trail is generally 15-25' in height which generally blocks any foreground views except for eastern views toward Indian Pond and Moosehead Lake. There is a large clearing on the summit with a small building and communication infrastructure, a fairly large solar panel array, and an observation tower. (See Photographs in Appendix B, Map 2.) From the ground summit, there is an east to south vista with a filtered view of the northern portion of Moxie Pond. Recent clearing has increased the panoramic views from the summit. The old fire tower on the summit allows viewers to stand approximately 20' above the ground for a 360 degree view of the area.

The Project will first be visible near the trailhead in an area of active timber harvesting. From the summit, portions of the new 150' wide corridor clearing will be visible in the midground looking toward the west side of Johnson Mountain at distances of 1.2 to 3.0 miles and in the background (4+ miles) to the southeast. Up to 10 HVDC structures will be visible within 3 miles of the summit. Recreational users of trails on Coburn Mountain are aware of manmade structures along the trail and at the summit. While the view from Coburn Mountain is distinctive in the region because of its elevation, it also includes views of active commercial timber harvesting and hauling roads. The view is not of undisturbed wilderness but rather active working forest. The closest portions of the Project will be screened by foreground vegetation at the summit. The 150' wide cleared corridor is sited within recently harvested areas to reduce additional tree removal. The visual impact from Coburn will be minimal to moderate.

3) A public resource, such as the Atlantic Ocean a great pond or a navigable river? ■ ■ ■

Beattie Pond, partially located in Beattie Twp and Lowelltown Twp, is classified by LUPC as a Management Class VI Lake, or remote pond. The first criteria to be designated Management Class 6 includes having no existing road access by two-wheel drive motor vehicles during summer months within 1/2 mile of the normal high-water mark of the water body. There is an existing gravel access road for two-wheel drive motor vehicles within 400 feet of the Pond. This road appears to provide access to a camp with outbuildings located on the southeast end of the Pond. The second criteria for the designation is having existing buildings within 1/2 mile of the normal high-water mark of the water body limited to no more than one non-commercial remote camp and its accessory structures. Signage at the gated entrance to the access road indicates use by a 'club' for hunting. It isn't completely clear, but based on the signage the camp could be a commercial camp. The access road within 400' and the potentially commercial camp are contrary to the criteria for classification as a remote pond. The Maine Wildlands Lake Assessment designated Beattie Pond as Resource Class 2: a lake of regional significance (with no outstanding values but at least one significant resource value). Fisheries were rated as 'Significant'. Scenic resources were not considered unique or significant (*i.e.*, they did not meet a minimum standard of significance).

Views of the Project from Beattie Pond are limited to one transmission line angle structure located approximately 1,300 feet south of the Pond. The majority of the structure will be buffered by existing vegetation such that only the top portion of the structure and conductors will be visible. The structure will be made of self-weathering steel which will blend into the wooded landscape, reducing the contrast in color when viewed from the Pond. Visual impact on the Pond should be minimal to moderate.

Wing Pond, partially located within Lowelltown Twp and Skinner Twp, is classified by LUPC as a Management Class VI Lake, or remote pond. There are no access roads within the P-RR buffer around the Pond or camps on the shoreline of the Pond. The Maine Wildlands Lake Assessment designated Wing Pond as Resource Class 3: a Lake of local or unknown significance. Scenic resources were not considered unique or significant (*i.e.*, they did not meet a minimum standard of significance).

Views of the Project from Wing Pond will include two structures and conductors visible from within 1.75 miles. The visible portion of the Project is located within a recently harvested area visible at the base of Smart Mountain. No additional corridor clearing will be required in the area visible from the pond. Because the structures will be made of self-weathering steel, the contrast in color with the surrounding vegetation will be minimal. At certain times of the day and season, the conductors may be the most visible component when they reflect sunlight. Visual impact on Wing Pond should be minimal to moderate depending on viewers' location on the Pond.

Rock Pond is a 124 acre pond in T5 R6 BKP WKR. The *Maine Wildlands Lake Assessment* designated Rock Pond as Resource Class 1B with 'Outstanding' Fisheries resource and 'Significant' Scenic and Shore Character resources. The Pond is considered a Scenic Resource of State or National Significance as a great pond with scenic resources rated as 'Significant'. *The Scenic Lakes Character Evaluation in Maine's Unorganized Towns* characterizes Rock Pond as having "low complexity" of Relief and Physical Features and no unique Shoreline Configuration or Vegetation Diversity. There is a boat launch, approximately 6 campsites (RV and tent sites) on the northwestern end of the Pond and one camp. The Pond appeared to be heavily used for boating and fisheries as evidenced by the number of boats stored at the boat launch.

At the closest point, The Project will be approximately 1,000' north of Rock Pond. The camp sites on the northern end of the Project will not have views of the Project due to intervening vegetation. Visitors to the Pond will cross under the Project as they drive along Spencer Road to access the boat launch. Up to six structures and the cleared corridor will be visible from the Pond to the northwest as the Project passes through the valley between the Three Slide and Greenlaw Mountains at a distance of 3,500'. Additionally, the top portions of up to six structures, conductors, and portions of the cleared corridor will be visible at distances of 0.6 to 0.8 mile looking to the north. The visual impact to Rock Pond will be moderate to strong depending on the location and orientation of the viewer due to the visibility of the cleared corridor and structures within the midground viewing distance. However, shoreline vegetation will partially screen the closest visible structures and the use of self-weathering steel structures and non-specular conductors will minimize the contrast with the wooded backdrop.

Fish Pond is a 219 acre pond in Hobbstown Twp. The *Maine Wildlands Lake Assessment* designated Fish Pond as Resource Class 2 with 'Significant' resource ratings for Scenic and Cultural resources. The Pond is considered to be a Scenic Resource of State or National Significance as a great pond with scenic resources rated as 'Significant'. *The Scenic Lakes Character Evaluation in Maine's Unorganized Towns* characterizes Fish Pond as having a 'low' rating for Relief and Shoreline Configuration, and a 'medium' rating for Physical Feature and Vegetation Diversity, no special features, and low/no levels of Inharmonious Development. There is a boat launch on the northwestern end of the Pond adjacent to a small campground. The shoreline appears undeveloped and the focal points on the Pond are No. 6 Mountain and No. 5 Mountain.

At the closest point, The Project will be approximately 2 miles northwest of Fish Pond. Visibility of the Project from Fish Pond will be very limited with the tips of up to 4 structures slightly visible above the treeline at distances of 3 to 4 miles. The corridor clearing will not be visible. The visual impact to Fish Pond will be minimal.

Parlin Pond is a 543 acre pond in Parlin Pond Twp. The Old Canada Road National Scenic Byway (Route 201) is located along the western boundary of the Pond and there is a rest area with interpretive panels on the southwest end of the Pond. A boat landing is located on the southwest corner of the Pond off the rest area on Route 201. There are approximately 50 camps on or near the shoreline of Parlin Pond. It is considered an accessible and developed pond and appears to be heavily used for boating and fishing as evidenced by the number of boats and docks along the shoreline and stored at the boat launch. The *Maine Wildlands Lake Assessment* designated Parlin Pond as Resource Class 1B with 'Significant' ratings for Fisheries, Scenic and Shore Character, and Botanical resources. The Pond is considered to be a Scenic Resource of State or National

Significance as a great pond with scenic resources rated as 'Significant'. *The Scenic Lakes Character Evaluation in Maine's Unorganized Towns* characterizes Parlin Pond as having a 'medium' rating for Relief, 'low' ratings for Physical Features, Shoreline Configuration, Vegetation Diversity, and no Special Features. The Pond also has a rating of 'medium' for inharmonious development.

Project visibility will be from the northern and eastern portions of the Pond looking southwest toward the shoulder of Coburn Mountain. Up to five structures, conductors and portions of the corridor clearing will be visible at distances of approximately 1.8 to 2.8 miles depending on your location on the Pond. At this distance and viewing angle, the self- weathering steel structures will be visible against the wooded backdrop of Coburn Mountain, with the exception of one structure that will be silhouetted on the ridgeline. The proposed corridor clearing will not be visible but a change in vegetation will be slightly noticeable. The visual impact to Parlin Pond will be minimal to moderate.

Segment 1 of the HVDC transmission line corridor crosses the **Upper Kennebec River** in West Forks Plt and Moxie Gore 3.7 miles upriver of the confluence with the Dead River and approximately 8.2 miles downriver of Harris Dam. The Maine Rivers Study identifies the Upper Kennebec River as an "A" river, with unique/significant resource values for undeveloped, scenic, and inland fisheries. This section of the River is also rated as having outstanding statewide geologic and whitewater boating resource values with high recreational importance. The River itself is zoned as a Protected Recreation Resource Subdistrict by LUPC.

The most visible portion of the Project will be the conductors crossing the river. The curves in the river, sloped topography, and riverside trees estimated to be 75' in height, will limit views of the Project to an area extending approximately 1,600' upstream and 2,200' downstream. From a picnic area located 1,200' +/- north of the crossing, vegetation will screen the closest structures on either side of the river (located 845' to the southwest and 1,080' to the west). Conductors over the river will be visible to recreational boaters for approximately 1,600' approaching the crossing. From within the crossing, two structures will be visible looking to the east at distances of 425' and 800' and two structures will be visible looking to the west at distances of 450' and 970'.
The preserved riparian vegetation (trees will not be cleared within approximately 200 feet from the east and west side of the river), minimizing views into the corridor from the river. From areas south of the river, the top of one structure and conductors will be visible for a distance of approximately 2,200'. The design includes structures on either side of the river of 95' and 105' tall. The duration of exposure to the corridor is minimized by the near perpendicular angle of the corridor as it crosses the river. Where topographic conditions allow, capable vegetation will be permitted to grow within and adjacent to protected natural resources or critical habitats where maximum growing height can be expected to remain below the conductor safety zone CMP will also use non-specular conductors in highly sensitive locations such as the Kennebec River crossing and Rock Pond. Non-specular conductors appear duller and less reflective which minimizes their visibility. Marker balls/bird diverters will be placed on the shield wires as required. These orange balls will be noticeable from within the foreground, or most of the area of visibility.

Moxie Stream is a tributary of the Upper Kennebec River from its headwaters at Moxie Pond. The Upper Kennebec River and its tributaries; Cold Stream and Moxie Stream, are rated as an "A" river in the Maine Rivers Study. Moxie Stream is rated for its Geologic/Hydrologic, Critical/Ecologic, Undeveloped, and Scenic Resource Values. The proposed HVDC transmission line corridor will cross Moxie Stream in Moxie Gore for approximately 2.3 miles +/- north of the confluence with the Kennebec River, 1.6 miles +/- north of Moxie Falls, and 2.7 miles south of Moxie Pond. Moxie Stream is crossed by the existing 115kV transmission line within a 150' wide cleared corridor as it connects to the north end of Moxie Pond. The proposed corridor will cross Moxie Stream 650' +/- south of the location where Fish Pond Road once crossed the stream. Large stone piles remain where the bridge abutments were once located.

The proposed 150' wide corridor clearing and conductors will be visible for approximately 760' on the upstream side approaching the crossing and approximately 1,000' on the downstream side of the Moxie Stream crossing. See Photosimulation in Appendix D. The line has been sited to avoid the adjacent open wetland area which will reduce visibility from upstream areas. Avian marker balls will be installed on shield wires and conductors if required. The HVDC transmission line structures will be setback 410' from the stream on the north side, and 560' from the stream on the south side. Riparian vegetation along the stream bank will be preserved and will minimize views into the corridor from the stream. The visual impact to Moxie Stream will be minimal based on the limited duration of exposure and the screening effects of preserved riparian vegetation.

The **Moose River** is not rated as a scenic river segment in the Maine River Study however, the 'Bow River Trip' on the Moose River between Attean and Holeb Ponds in Jackman is a popular 34 mile river trip. Approximately 7.2 miles of the Moose River are located within 3 miles of the Project and at the closest point, the river is 0.9 mile from the Project. As noted above, the viewshed analysis indicates views are possible from the Moose River within 3 miles of the Project, however field work and computer analysis has determined that Project visibility would be very limited to none, due to intervening vegetation along the river banks. See Appendix B Study Area Photographs, Map 1.

South Branch Moose River, Skinner Twp is not rated as a scenic river segment in the Maine River Study. The Project will cross in a location where the river is 70' wide within a wooded strip between logging roads. Logging roads are located approximately 330' to the east and 640' to the west. The closest HVDC structures will be 775' +/- to the east and 575' +/- to the west, in close proximity to the logging roads. Preserved riparian vegetation within the corridor will minimize views into the corridor. The visual impact to South Branch Moose River will be minimal to moderate.

2. What is the closest estimated distance to a similar activity? □ □ ■

The proposed HVDC transmission line will be a new corridor joining with the existing 115kV transmission line on the north end of Moxie Pond in The Forks Plt.

3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? ■Yes □No

The adjacent ponds and streams are used throughout the year for a variety of recreational pursuits, including snowmobiling, fishing/ice fishing, and boating. Coburn Mountain is used for hiking year-round, and snowmobiling in winter. Use of the Upper Kennebec River at the crossing location occurs in spring, summer, and fall.

6.2.1.5 Affected Population/User Expectations/Continued Use and Enjoyment

There are four general groups of people who may be affected by the construction of the project.

Motorists

The primary viewing population is the year-round residents who live or work near Route 201 and those who are driving on the Old Canada Road National Scenic Byway for pleasure. Motorists

presently see distribution lines along Route 201 and clustered pockets of development in areas near Parlin Pond, West Forks Plt, and The Forks Plt. The road corridor generally appears wooded on both sides with preserved 'Beauty Strips" remaining to screen commercial timber harvesting areas on either side. At the location of the Route 201 crossing, the existing wooded vegetation on either side of the road is approximately 30' to 50' in height and will screen the cleared corridor for approaching motorists. The tops of one structure on the east side of the road will be partially visible for approximately one mile heading north and 1,800' heading south. In general, the crossing should be minimally noticeable due to the structures being setback from the road, the horizontal curve in the road approaching the crossing heading south, and the limited duration of exposure (30 seconds to a one minute) due to travel speed.

A smaller number of motorists will see the Project while traveling to camps off Spencer Road, Capital Road, and Lake Moxie Road. When traveling on Spencer Road or Capital Road, the motorist will see the Project in context with the working forest. When traveling on Lake Moxie Road the motorist will see the project in context of the existing transmission corridor that crosses the road 700' to the east of the proposed crossing. Motorists will continue to use the roads for work, pleasure driving, and to access their camps. The Project should have no to minimal effect on their continued use and enjoyment of those roads. There should be minimal visual impact to motorists.

Residents

There are a minimal number of residents within the Segment 1 viewshed because it is mostly within commercial forest lands. The primary residents who will view the Project include one camp owner on Beattie Pond, one camp owner and transient campers on Rock Pond, 50+/- camp owners on Parlin Pond, one camp on the south side of Moxie Stream (off Mina's Way), and four camps on the north side of Moxie Stream off Fish Pond Road. As noted above the Project will also cross Lake Moxie Road approximately 700' west of the existing transmission line crossing. There is one home on the southwest side of the corridor on Lake Moxie Road that will have views of the new cleared corridor and conductors but the proposed HVDC transmission line structures will not be visible. The closest structure will be 500' +/- to the southeast but will be screened by intervening vegetation.

The single visible structure from Beattie Pond will most likely not be visible from the camp itself due to intervening vegetation. The camp on Rock Pond is oriented towards the west and will have a view of the Project between Greenlaw and Three Slide Mountains at a distance of 1.6 miles. The majority of camps on Parlin Pond are located on the west side of the Pond and oriented towards the east and away from the Project. The 5 +/- camps on the northeast end of Parlin Pond will have views of the Project as it crosses the shoulder of Coburn Mountain 2.9 +/- miles to the southwest. (See Photosimulation in Appendix D.) The camp owners on either side of Moxie Stream will drive under the transmission line en route to their camps but all but one (on the north side) will not actually see the Project from their camps due to intervening vegetation. The residents on Lake Moxie Road will have limited views of the Project from their homes. Few residents will have views of the Project. For those minimal number of camps with views, there will be minimal to moderate visual impacts depending on viewing distance.

Recreating Population

There are several types of recreational users that will be affected by the Project including hikers on No. 5 Mountain and Coburn Mountain; ATV users and snowmobilers using ITS trails 87 and 89 and Coburn Mountain; those who travel on local roads while hunting; boaters and those who fish on Beattie Pond, Wing Pond, Rock Pond, Moxie Stream and Parlin Pond; and rafters on the Kennebec River.

As described above in the Scenic Resource Checklist, the view from No 5 Mountain is in the background and will be minimally visible. The Project should not negatively affect the hiker's experience or the public's continued use and enjoyment of No 5 Mountain. While Project views from Coburn Mountain are both in the midground and background, and more of the cleared corridor will be visible, the users expects to see active timber harvesting, and logging roads which are similar in line, color and form to the Project. Moreover, the primary users of Coburn Mountain are ATV and snowmobile riders who commonly use transmission corridors as part of their network of trails. The Project should not negatively affect the public's continued use and enjoyment of Coburn Mountain. Hunters commonly use logging roads and local gravel roads for access while hunting. Those hunting in this area expect to see logging roads and harvested areas which are generally similar to the Project. The Project may even create more opportunities for

hunting access. The Project should not negatively affect hunter's continued use and enjoyment of the Project area.

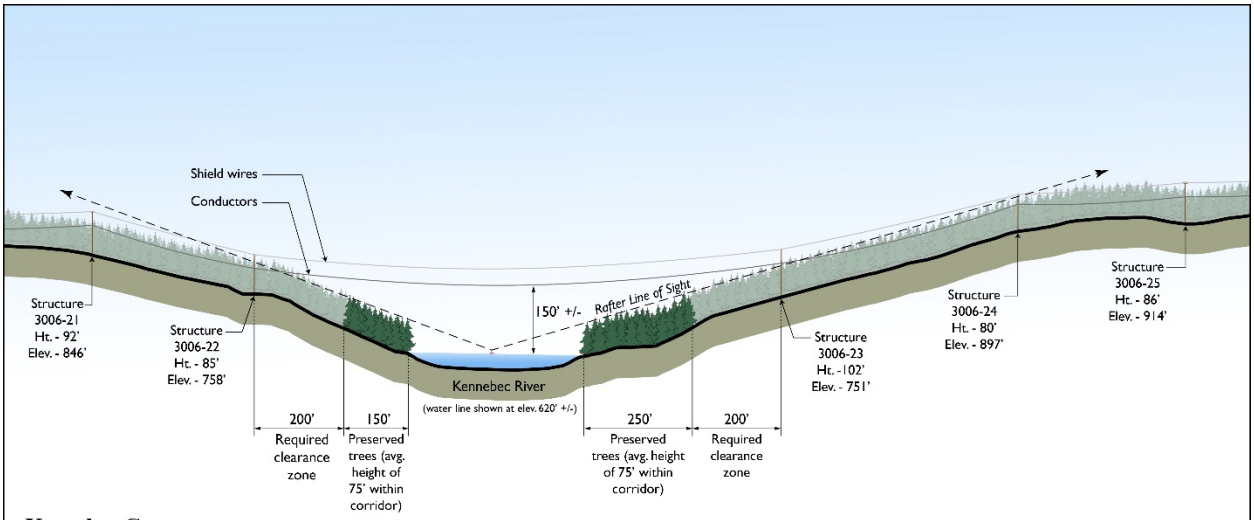
Those who fish on Beattie Pond, Wing Pond, Rock Pond, Moxie Stream and Parlin Pond are primarily interested in the salmon, brook trout and lake trout fisheries resource on each of these waterbodies. Remote ponds such as Beattie Pond are fly fishing only. While boating and/or fishing, these users would have the opportunity to position themselves on the resource to minimize their exposure to the Project. Users of these water resources generally have high expectations for visual quality. The Project may moderately affect the boating/fishing experience but should not decrease the public's continued use and enjoyment of the waterbodies if the fishery resources are maintained.

Rafters using the Kennebec Gorge access the river location via a set of stairs adjacent to the Harris Dam. The rafting resource is dependent on scheduled water releases from the Harris Dam. Rafters are aware of the existing transmission lines adjacent to the parking and preparation areas prior to rafting. Rafters enter the river mid-morning and run a range of Class III – V rapids within the first 5 miles of the rafting experience. The Project crosses the Kennebec about 3 miles downstream of the last major Class III and IV rapids (Black Brook Rapids). The three miles between Back Brook Rapids and the Project crossing location are free flowing with occasional Class I or II rapids. At the Project crossing location the river is generally flatwater and the rafters are allowed to swim. Most rafting companies offer lunch for the rafters at different locations in the vicinity of the Project crossing. Two photosimulations have been prepared to illustrate what the views of the Project would be from the picnic areas north and south of the Project crossing. From the picnic area north of the crossing, the conductors will be visible but the structures will be screened from view by vegetation and topography. From the southern picnic area looking north, one HVDC transmission line structure and conductors will be visible. Lunch typically takes one hour. After lunch, rafters continue down the river for approximately 3.5 miles to the location where the rafts are taken out of the river near The Forks Rest Area. Most trips begin

around 10:30 am and take out is generally around 3pm. Rafters of the Kennebec River have a high expectation for visual quality. The most active portion of the trip will not have Project views so the public's enjoyment of the majority of the resource will not be negatively affected. Rafting companies have options for choosing picnic locations without Project views. If they

choose one of the locations closest to the Project crossing, the rafters may be potentially exposed to the Project for up to an hour. The presence of the Project should not deter rafters from swimming but may slightly diminish their enjoyment of scenery from certain picnic areas. Visibility of the crossing itself will be for a relatively short duration as rafters float past the 150' wide corridor. Woody vegetation, including mature capable trees will be preserved within 150'+/- on the east side and 250'+/- on the west side of the edge of the river to minimize views into the corridor from the river. The calculation to allow capable species to remain within the corridor is based on conductor height and sag, required clearance from conductor to vegetation, topography between the river and each pole, and assumed maximum mature tree height of approximately 75 feet. (Trees taller than 75' height and within the transmission line corridor may need to be removed in order to prevent their encroachment into the conductor safety zone). The tips of one structure will be visible looking in each direction, but the majority of the structures will be screened by the preserved trees. See Illustration 6-1. Kennebec Gorge Cross Section below.

Illustration 6-2.



Brookfield Renewable Power, owner of the Harris Station Dam Hydro Electric Facility, maintains records of all rafting companies and has indicated 20 +/- rafting companies register to use the river throughout the season. There are approximately 10 rafting outfitters consistently running trips on the Upper Kennebec each year. The rafting community has provided use numbers indicating that the average number of rafters (with a rafting company) over the past 3

years was about 42,000 per year. Each rafting company is allowed to have 120 rafters per day during the rafting season from April 15th to October 15th. The industry typically licenses approximately 100 whitewater guides a year, many either rent a raft or own their own raft, and take friends and family down multiple times a year. These individual users account for approximately 10,000 additional users per season.

Overall the Project will have minimal to moderate visual impact on recreational users depending on location, activity, and duration of exposure.

Working Population

The primary working population affected by the Project include the people who are employed throughout Segment 1 in commercial timber harvesting. Segment 1 is primarily located within working forests accessed off Spencer Road in Parlin Pond Twp, Bradstreet Twp, T5 R7 BKP WKR, Hobbstown Twp, Appleton Twp, Skinner Twp, Goldbrook Road in Skinner Twp and Capitol Road in Johnson Mountain Twp. There should be minimal visual impacts to the commercial timber working population in the area.

Another working population affected by the Project includes the seasonal rafting companies and boating guides using the Kennebec River, and recreational and sporting guides who use area waterbodies for boating, fishing and hunting. As noted in the review of the scenic resources above, there will be minimal to moderate impacts to commercial users of the Kennebec River depending on duration of exposure (where picnic sites are chosen). Guides using other recreational resources will experience minimal to moderate visual impacts depending on location, activity and duration of exposure (i.e. if they chose to use a resource with Project views). Guides have many choices as to where to bring clients; there are numerous waterbodies in the area that will have no or minimal visual impacts from the Project.

6.2.1.6 Visual Impact Assessment

Landscape Compatibility

Color: The proposed single-pole HVDC transmission structures will be constructed of weathering steel (self-oxidizing) that will have a dark brown, rusty appearance. For most of the viewpoints from scenic resources, the difference in color should result in a relatively minor visual impact in the context of the surrounding commercial forest. Where the structures are seen silhouetted against water (from elevated viewpoints) or against sky (from low elevation viewpoints), the dark color will create a stronger color contrast. In some locations where just the tips of the structures are visible at longer distances, the rusty brown color will make the structures appear tree-like in form and color and therefore less distinguishable from the surrounding forest.

Form: Segment 1 will use one type of transmission structure: a single pole structure averaging 100± feet tall. Similar single pole structures are currently used in transmission lines in central Maine. The structure form is generally similar in vertical form to adjacent trees resulting in minimal contrast in form. The new cleared corridors are generally similar to areas commonly seen throughout the working forest also resulting in minimal contrast in form.

Line: Segment 1 will contain one HVDC transmission line throughout its length. The conductors and cleared corridor will create new lines visible within the viewshed. The line created by a cleared corridor will be less distinct when located within existing harvested areas, such as when viewed from Coburn Mountain and Wing Pond. From elevated viewpoints where the Project is seen in the background such as from Attean View and No. 5 Mountain, the line is somewhat indistinct and minimal in contrast. Where harvesting is not readily visible and the cleared corridor is partially visible, the Project will create a moderate contrast in line. Where the cleared corridor is visible within the foreground and creates a silhouetted 'notch' against the sky along a ridge line, such as from Rock Pond, there will be a strong contrast in line. Similarly, in areas that generally appear undeveloped and natural such as the Kennebec River and Moxie Stream, the structures, cleared corridor and conductors will result in a strong contrast in line.

Texture: The HVDC structures will be single pole self-weathering steel, which have a smoother texture than the standard wooden poles. This texture should cause a minimal contrast in texture.

Scale Contrast

Scale contrast is determined by the size and scope of the proposed activity given its specific location within the viewshed of a scenic resource.

In Segment 1, there will be a wider range of scale contrasts due to its location within a working commercial forest. Where forest areas are regenerating the proposed HVDC structures would be the tallest vertical objects in the foreground. The crossings of Moxie Stream and Route 201 will present the greatest scale contrast in Segment 1 because they are foreground views, however in both locations vegetation along the corridor will help to reduce the moderate scale contrast. For most locations within Segment 1, the transmission line is seen at wider landscape midground and background viewing distances which minimizes the scale contrast. The topographic change in elevation and 75' + tree height on either side of the Kennebec Gorge at the crossing will minimize the scale contrast of the 95' and 105' tall structures as seen from the river.

Spatial Dominance

Spatial dominance is the degree to which an activity dominates the whole landscape composition or dominates landform, water, or sky backdrop as viewed from a scenic resource.

When the Project is viewed from Beattie Pond, Wing Pond, Rock Pond, Fish Pond, Parlin Pond, No. 5 Mountain, Coburn Mountain, and the Attean View, the mountain ridges will continue to dominate the landscape. The Project has been sited to avoid the most prominent ridgelines, crossing on lower shoulder elevations when necessary. Where the Project crosses Route 201, Moxie Stream, and the Kennebec Gorge, the Project has been sited to avoid the most visually sensitive areas of each scenic resource, in less prominent locations. From the scenic resources in Segment 1, the Project will be subordinate to the surrounding natural and cultural elements in the landscape and in three locations (Fish Pond, No. 5 Mountain, and Attean View) the Project will be visually insignificant. Segment 1 of the Project will not dominate the landscape composition or the surrounding land forms, water bodies, or sky.

6.2.1.7 Mitigation Strategies

Several mitigation strategies have been incorporated into the design of Segment 1. Locating the majority of the proposed HVDC transmission line within commercial forest lands and utilizing existing haul roads for access minimizes the need for new clearing and construction of access roads. Where impacts to scenic resources are unavoidable, the Project has been sited to avoid the most sensitive areas of these resource. The HVDC structures will be made of self-weathering steel which will result in minimal color contrast with the surrounding wooded landscape. Non-specular conductors will be used at Rock Pond and the Kennebec Gorge crossing to reduce reflective qualities of the conductors when viewed from the most visually sensitive locations. At the Upper Kennebec River crossing, approximately 200' of existing mature tree growth will remain on both sides of the riverbanks which will significantly minimize views of the proposed crossing from the river.

6.2.1.8 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts, Segment 1 will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in the surrounding area.

6.2.2 SEGMENT 2. Moxie Pond to Wyman Hydro

Segment 2 includes the northern 22+/- miles of HVDC transmission line to be co-located within an existing 115kV transmission line corridor between the new HVDC transmission line near the north end of Moxie Pond in The Forks Plt, through the towns of Caratunk and Bald Mountain TWP T2 R3, to the Wyman Hydroelectric Facility located in Moscow. The co-located section will require the existing 150' wide corridor clearing to be widened by 75' on the western side (except for a small section near the former Moscow Radar Station which will be widened on the east side.) The co-located HVDC transmission line will be located on the west side of Moxie Pond and cross the Appalachian Trail south of Joe's Hole within the existing 115kV transmission corridor. The HVDC transmission line will be supported by single pole self-weathering steel structures with heights ranging from 75' to 110'.

6.2.2.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on June 2, 6, 7, 8, and 13, 2017. Representative views from each road crossing within the Study Area are included in Appendix B.

Other data sources include the location, cross sections and structure details provided by POWER Engineers for the Project; project descriptions and maps from Maine Bureau of Parks and Lands website, LUPC comprehensive plans and zoning ordinances; Maine Appalachian Trail Club's Official Map and Guide to the Appalachian Trail 15th Edition (Map 4, Monson to the Kennebec River); National Park Service website; Maine Wildlands Lakes Assessment; Maine Trail Finder; various area recreation websites; and Google Earth.

6.2.2.2 Study Area

Site Context

The Study Area of Segment 2 is located within the Central Mountains Biophysical Region[10]. The Segment 2 Study Area is characterized by medium to large waterbodies surrounded by mountains with elevations ranging between 1,630' and 2,630'. The closest elevated viewpoints on the Appalachian Trail are Bald Mountain and Pleasant Pond Mountain. The Study Area includes seven elevated viewpoints (mountains) within 5 miles of Segment 2 as shown in Table 6-5 below.

Table 6-5 Elevated Viewpoints within 5 miles of Segment 2

MOUNTAIN	LOCATION	DIST	ELEV	DEVELOPMENT	SIGNIFICANCE	VISIBILITY
Black Nubble	Squaretown Twp	3.3 mi	1,632'	None, no trail	None, Privately owned	No - wooded
Mosquito Mountain	The Forks Plt	0.7 mi	2,215'	Trail, American flag	Privately owned, regional resource	Yes, See Photosimulation
Bald Mountain	Bald Mtn Twp T2 R3	3.1+ miles	2,629'	Trail only	Appalachian Trail	Yes, minimal views
Pleasant Pond Mountain	The Forks Plt	3.0+ miles	2,477'	Trail only	Appalachian Trail	Yes, minimal views
Middle Mountain	The Forks Plt	2.7 miles	2,241'	Trail only	Appalachian Trail	Yes, filtered views

[10] *The Biophysical Regions of Maine: Patterns in the Landscape and Vegetation*. Janet McMahon. 1990.

MOUNTAIN	LOCATION	DIST	ELEV	DEVELOPMENT	SIGNIFICANCE	VISIBILITY
Moxie Mountain	Caratunk	4.5 to 5+ miles	2,515'	Radio Installation, Helicopter landing site Trail – not well marked or maintained	Local/regional resource Privately owned	Visibility from rock slide area on southern face
Black Nubble	Caratunk	4.3	2,066'	None, no trail	None, Privately owned	No - wooded

	SCENIC RESOURCE OF STATE OR NATIONAL SIGNIFICANCE

The two largest waterbodies are Moxie Pond (2,370 acres) on the north end of Segment 2 and Wyman Lake (3,200-acre impoundment) at the southern end. The area within 3 miles of Segment 2 includes several small to medium waterbodies typically surrounded by spruce/ fir vegetation averaging 60' to 75' in height and commercially harvested areas. See Table 6-6 for list of waterbodies within three miles of Segment 2.

Table 6-6. Waterbodies within 3 miles of Segment 2

Key	
	SCENIC RESOURCE OF STATE OR NATIONAL SIGNIFICANCE
DIST:	Distance to the Project. AC: Accessible. INAC: Inaccessible. DEV: Developed. UNDEV: Undeveloped.
RES. CLASS:	Resource Class from Maine Wildlands Lakes Assessment (MWLA) and Maine Lakes Study (MLS) 1A: Lakes of Statewide significance with multiple outstanding natural values. 1B: Lakes of Statewide significance with a single outstanding natural value. 2: Lakes of regional significance (no outstanding values but at least one significant resource value). 3: Lakes of local or unknown significance. Note that lakes and ponds smaller than 10 acres do not have a resource assessment. (-)
MAN. CLASS	LUPC Management Class Designation: 7: Lakes not otherwise designated
SCENIC RATING	S: Significant O: Outstanding ratings from the Maine Wildlands Lakes Assessment
VISIBILTY:	Project visibility based on viewshed mapping, fieldwork and 3D modeling/ cross sectional analysis.
NOTES	[1]. MWLA state that Mosquito Pond is 'INAC', but there is an accessible trail to boat launch on pond. Bald Mountain Pond in Bald Mountain Twp and Pleasant Pond in Caratunk are not located within the 3 mile study area. There will be no Project views from either pond.

WATERBODY	LOCATION	DIST +/-	SIZE (ac)	ACCESS	DEV	RES. CLASS/ MAN. CLASS	SCENIC RATING	PROJECT VISIBILITY
Moxie Pond Joe's Hole	East Moxie Twp, The Forks Plt., Bald Mountain Twp T2 R3	Crosses	2370	AC	DEV	1B	O	Yes, see Photo-simulation
Mosquito Pond	The Forks Plt	0. 5 mi	71	AC[1]	UNDEV	1B	O	No
Little Mosquito Pond	The Forks Plt	1.5 mi	24	INAC	UNDEV	-/7	-	No
Baker Stream	Bald Mountain Twp T2 R3	Crosses - 0.6 mi	1.3 entire stream within 3 miles	AC	UNDEV	-	-	Yes, at existing crossing
Little Austin Pond	Bald Mountain Twp T2 R3	1.7 mi	110	AC	UNDEV	2/7	-	No

WATERBODY	LOCATION	DIST +/-	SIZE (ac)	ACCESS	DEV	RES. CLASS/ MAN. CLASS	SCENIC RATING	PROJECT VISIBILITY
Austin Pond	Bald Mountain Twp T2 R3	2.5 mi	684	AC	UNDEV	2/7	-	No
Baker Pond	Caratunk	0.5 mi	186	AC	UNDEV	1B	-	No
Little Dimmock Pond	Caratunk	2.5 mi	41	AC	UNDEV	2	-	No
Big Dimmock Pond	Caratunk	2.0 mi	90	AC	UNDEV	2	-	No
Mountain Dimmock Pond	Caratunk	3.0 mi	50	AC	UNDEV	2	-	
Little Heald Pond	Caratunk	2.1 mi	26	INAC	UNDEV	2	-	No
Chase Pond	Moscow	2.1 mi	96	INAC	UNDEV	2	-	No
Little Chase Pond	Moscow	2.4 mi	1.1	INAC	UNDEV	-	-	No
Mink Ponds	Moscow	1.8 mi	4.5	INAC	UNDEV	-	-	
Austin Stream Austin Gorge	Moscow, Mayfield Twp	0.5 mi	13 +/- miles within 3 miles	AC	UNDEV	-	-	No
Wyman Lake	Moscow	500 ft	3,146	AC	DEV	-	S	Yes, minimal near dam

Land uses in the immediate vicinity of the co-located transmission line includes commercial forest lands, numerous seasonal camps on adjacent ponds, and the former Moscow radar sites. The most significant conservation land parcel is the National Park Service Appalachian Scenic Trail Unit located in Bald Mountain TWP and Caratunk. The largest population center is the village of Moscow at the southern end of Segment 2.

Table 6-7. Conservation Lands within 3 miles of Segment 2

CONSERVATION LAND	HOLDER	LOCATION	DIST +/-	SIZE (ac)	ACCESS	PROJECT VISIBILITY
Appalachian Trail Corridor (Tract 108-01 & 108-03)	NPS	Bald Mountain Twp, Caratunk	crosses	1,822, 1,302 +/- ac within 3 miles	Public	Yes
Caratunk E	BPL	Caratunk, Bald Mountain T2 R3	0.2 mi	549	Public	No

Table 6-8. Structures on the National Register of Historic Places within 3 miles of Segment 2

STRUCTURES on the NATIONAL REGISTER OF HISTORIC PLACES	TOWN	PUBLICALLY ACCESSIBLE	PROJECT VISIBILITY
Arnold Trail Historic District	Portion within 3 miles located on Wyman Lake in Moscow and Pleasant Ridge Plt	Yes	Yes

Scenic Resources[11] with potential views of the Project that were evaluated include:

Moxie Pond in East Moxie Twp, The Forks Plt, and Bald Mountain Twp T2 R3, the Appalachian Trail including the summit of Pleasant Pond Mountain, Bald Mountain, and the existing transmission line crossing at Troutdale Road, Joe's Hole/Baker Stream, the Wyman Lake Recreation Area in Pleasant Ridge Plt., the Arnold Trail and Wyman Lake in Moscow/Pleasant Ridge Plt.

Two additional locations evaluated include Mosquito Mountain in The Forks Plt and Moxie Mountain in Caratunk. Both of these elevated viewpoints are located on privately owned land where public access is allowed.

6.2.2.3 Distance Zones

Foreground (0 to 1/2 mile in distance): Foreground views of the HVDC transmission line corridor are found at road crossings (primarily within the commercial timber harvesting areas), river and stream crossings, and the Appalachian Trail, as listed below:

- The Forks Plt: Troutdale Road/ logging roads, access road to Mosquito Pond, Moxie Pond
- East Moxie Twp: Moxie Pond
- Caratunk: logging roads,
- Bald Mountain Twp: Troutdale Road/Trestle Road, Moxie Pond, Joe's Hole ,Baker Stream, Little Austin Pond access road,
- Moscow: Heald Pond Road, Chase Pond Road, Stream Pond, Wolf Mountain Pass Road, Bassett Lane, Henry Beaudoin Road, Burns Road, Donigan Road, Route 201

Midground (1/2 mile to 3 miles in distance):

- The Forks Plt: Mosquito Mountain
- Bald Mountain Twp: Bald Mountain, Appalachian Trail

Background (greater than 3 miles):

- The Forks Plt: Pleasant Pond Mountain, Appalachian Trail
- Caratunk: Moxie Mountain

[11] *Throughout this section, the term "Scenic Resources" is used as defined by Chapter 315.10, Maine Department of Environmental Protection.*

6.2.2.4 Inventory of Scenic Resources within the Viewshed of Segment 2

FIGURE 6-2-SEGMENT 2
Co-located HVDC Transmission between Moxie Pond and Wyman Hydro
MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST
(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Central Maine Power Company
Application Type: Site Law/NRPA
Activity Type: Co-located HVDC transmission line from north of Moxie Pond and Wyman Hydro
Activity Location: The Forks Plt, Caratunk, Bald Mountain TWP T2 R3, Moscow.
County: Somerset
GIS Coordinates, if known: See project location maps from POWER Engineers
Date of Survey: June 2, 6, 7, 8, and 13, 2017.
Observer: Amy Segal, Steve Thompson
Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? None	□	□	□
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge? None	□	□	□
C. A state or federal trail*?*	■	■	■

The Appalachian National Scenic Trail (AT), a unit of the National Park System, extends 2,175 miles from Mount Katahdin in Maine to Springer Mountain in Georgia. Approximately 14.5 miles of the Trail are located within 5 miles of Segment 2. There will be three general areas of Project visibility from the AT: from the summit area of Pleasant Pond Mountain at distances of 2.9 to 6.5 +/- miles, from within the 115kV transmission line corridor crossings near Troutdale Road, and from the summit area of Bald Mountain, including the North Peak side trail, at distances of 2.8 to 6.5+/- miles. The AT crosses the existing 115 kV transmission line three times in proximity to Troutdale Road near Moxie Pond within the CMP right-of-way. Appendix E describes and illustrates the experience of hiking on the Appalachian Trail (AT) northbound from the summit of Pleasant Pond Mountain to (Moxie) Bald Mountain. The appendix includes maps, aerials, trail character photographs and photosimulations from the summits of Pleasant Pond Mountain and Bald Mountain and Troutdale Road. The field analysis identified eight elevated viewpoints within 5 miles of the Project; the viewpoints are labeled as VP 1-4 near Pleasant Pond Mountain and VP 8-11 near the Bald Mountain summit. There will be filtered/distant Project views from six of the eight elevated viewpoints.

Pleasant Pond Mountain (VP1) in The Forks Plt. The summit of Pleasant Pond Mountain (elev. 2,477) is 3.3 miles from the Project and offers 180+ degree views north to east of Moxie Pond. Mount Kineo and Mount Katahdin are visible along with many other peaks. Moxie Pond and Mosquito Mountain are visible in the midground and Bald Mountain in the background. The character of the summit includes low growing spruce/fir vegetation with intermittent areas of exposed ledge outcropping. Open or minimally filtered views through the vegetation are possible from approximately 900 feet along the AT as it passes over the summit looking northwest to the southeast. The Bingham Wind Project is partially visible 13 miles to the southeast. The existing 115kV transmission line, located along the western shore of Moxie Pond, is

not highly visible from the summit due to intervening vegetation along the edge of the cleared corridor. Approximately 250 feet south of the actual summit on the Trail, there is another viewpoint (VP2), with less obstructing views and a 270-degree view from north to south. This viewpoint (VP2) was selected to photosimulate and analyze because of the wider potential view of the Project.

From Viewpoint 2 in The Forks Plt (elev. 2,463')., the proposed 150' wide co-located HVDC transmission line corridor will be visible at distances of 5.1 miles to the northeast, 2.9 miles to the east toward Moxie Pond, to 6+ miles to the southeast. The new HVDC transmission line will be 5.4 + miles to the northeast and minimally visible. Portions of the co-located HVDC line will be screened by Mosquito Mountain to the northeast and Middle Mountain to the southeast. The closest visible structures will be minimally visible with just tips visible at distances of 2.9 to 3.5 miles. The majority of proposed HVDC structures will be screened by vegetation. There would be potential for up to 12 structures to be visible looking to the southeast at a distance of 4.5 to 6.5 miles but the structures will be difficult to distinguish from the background. The conductors may be more visible in the afternoon when the sunlight reflects off the lines. These 12 structures and conductors would be seen in context of the Bingham Wind Project visible on the horizon. There will be minimal visual impact from the summit of Pleasant Pond Mountain due to the viewing distance and the resulting minimal Project visibility.

Middle Mountain (VP3) in Caratunk. The view from Middle Mountain (elev. 2,300') is similar to VP2 but more filtered due to the lower elevation and height of the spruce/fir vegetation. The viewpoint is approximately 0.6 mile south of the summit of Pleasant Pond Mountain looking north to northeast. The filtered 180-degree view includes Moxie Pond and Mosquito Mountain and is open for approximately 40' of trail. The existing transmission line is difficult to distinguish from this point. The Project would be mostly screened by foreground vegetation. Up to 3 structures would be visible, with the closest 2.7 miles to the east. Due to the partial screening of the Project and viewing distance, there will be a minimal visual impact from this viewpoint on Middle Mountain.

Viewpoint 4 in Caratunk is a filtered viewpoint from a point 1.2 miles southeast of VP3 looking southwest towards the Bigelow Mountain Range. The Project will not be visible from this elevated viewpoint.

Existing Transmission Line Crossings (VP 5 and 6) in Bald Mountain Twp.
The trail from the summit of Pleasant Pond Mountain to Troutdale Road is approximately 4.7 miles. The AT first crosses the existing 115kV transmission as it approaches Troutdale Road, approximately 500' west of Troutdale Road (VP5) where 12+ existing transmission line structures within the 150' wide cleared corridor are visible (looking northwest and southeast towards Joe's Hole) for approximately 400' of Trail. Once the AT reaches Troutdale Road, it parallels the road for approximately 900' before crossing Baker Stream and heading to Bald Mountain. The existing transmission corridor is visible for approximately 400' on the AT on Troutdale Road. The existing 115kV transmission line crosses Troutdale Road within this 900' section. From Troutdale Road (VP6) there are five existing transmission line structures visible to the southeast and two visible to the northwest. The trailhead off Troutdale Road has parking for 3 cars and a small campsite.

The existing 150' wide 115kV transmission line clearing will be widened by 75' on the western side to accommodate the new HVDC transmission line corridor. The widened corridor will result in slightly increased duration of exposure to the transmission lines in each of the two crossing locations. From both VP5 and VP6, two self-weathering steel HVDC structures will be visible looking to the northwest and six to the southeast towards Joe's Hole (Moxie Pond). (See Photosimulation B). The visible proposed HVDC structures will range in height from 75' to 80' on either side of Joe's Hole up to 100' - 105' for the angle structures furthest from view in either direction. The closest structures to Troutdale Road on the north side will be setback 500' from the road, and the structure across Joe's Hole will be 420'+/- from the road. The

structures will be spaced approximately 800' to 900' apart in comparison to 375' to 570' spacing for existing structures. The visual impact as viewed from the AT (VP 5 & VP6) will be minimal to moderate due to the presence of the existing 115kV transmission line corridor and foreground viewing distances.

Existing Transmission Line Crossing (Viewpoint 7) in in Bald Mountain Twp. After walking along or parking at the trailhead on Troutdale Road, hikers head east to reach Bald Mountain requiring the immediate crossing of Baker Stream at the south end of Joe's Hole. (The trail to the summit of Bald Mountain is 4.8 Miles from Baker Stream.) The trail continues for 1,400' after the stream to the third crossing (VP7) of the existing 115kV transmission line. The trail parallels the existing transmission line corridor for approximately 75 feet approaching the cleared corridor until it crosses at a nearly perpendicular angle. There are up to 15 existing transmission line structures visible from VP 7 crossing; up to 7 structures toward the northwest and 8 to the southeast.

The existing 150' wide transmission line clearing will be widened by 75' on the western side to accommodate the co-located HVDC transmission line corridor. There is 290'+/- of trail within the existing cleared corridor at this location. With the 75' of additional cleared corridor width, an additional 425' of the AT will be within the cleared corridor. From this crossing, a hiker would see one HVDC transmission line structure looking to the northwest and six looking to the southeast. The visual impact as viewed from the AT (VP 7) will be minimal to moderate due to the presence of the existing 115kV transmission line corridor, foreground viewing distances, and additional portion of trail within the corridor.

Bald Mountain Brook Lean-To is halfway between Troutdale Road and the summit of Bald Mountain. The area includes a lean-to structure as well as camp/tent sites. It is a heavily wooded area with 40+ foot vegetation and no possible views of the Project.

Near Bald Mountain Summit (VP8) looking south to southwest from a point on the Appalachian Trail, 375 feet west of the summit of Bald Mountain. This area is the first point on the trail to Bald Mountain with open views of Moxie Pond, Moxie Mountain, and the surrounding area. Large open areas of exposed ledge outcropping and small intermittent patches of spruce/fir forest are characteristic of the landscape between this viewpoint and the summit of Bald Mountain. The closest proposed structures will be visible in the co-located HVDC transmission line at a distance of 2.8 miles. The visual impact from this viewpoint will be similar to the summit. See below.

Bald Mountain Summit (VP9). The summit of (Moxie) Bald Mountain (elev. 2,629') is located 3.0 miles from the Project, approximately 5 trail miles east of the crossing at Troutdale Road. The summit landscape consists of open exposed ledge areas with patches of 5-10 foot spruce/fir vegetation. This open landscape character provides a variety of different vantage points for approximately 750' along the trail. The surveyed summit (with USGS marker) has a 360-degree view of the surrounding landscape including the Bigelow Range, Coburn Mountain, Pleasant Mountain, Mosquito Mountain, and the northern half of Moxie Pond. The MATC trail guides described Moxie Bald Mountain as follows: "*The long ridge of Moxie Bald offers many points of interest, including blueberries and raspberries in season. On a clear day, sweeping views are possible, from the coastal lowlands to the south, to the Barren-Chairback Range, White Cap Mountain, Katahdin, Big Moose Mountain, and the Boundary Range to the north, and to the Bigelow Range and Sugarloaf Mountain to the west. The Trail descends to Moxie Pond before traversing Pleasant Pond Mountain (2,477 ft., views similar to Moxie Bald)... Both peaks are popular as day hikes.*"[12] The closest portions of the existing 115kV transmission line are screened by vegetation and not readily visible from the summit. The most visible portion of the existing transmission line is the cleared corridor near the northern end of Moxie Pond at a distance of 5.1 miles. The Bingham Wind Project is visible from most points on

[12] *The Official Appalachian Trail Guide to Maine, Maine Appalachian Trail Club, Fifteenth Edition, 2009.*

the summit at a distance of 12 miles. Just beyond the summit, heading northbound, are views towards Bald Mountain Pond to the east.

From Bald Mountain, only the co-located section of the HVDC transmission line would be visible; the new HVDC transmission line will not be visible more than 8 miles to the northwest. At the closest point, the co-located corridor will be partially visible at a distance of 2.8 miles. The majority of the Project looking southwest will be screened by low spruce/fir trees along the perimeter of the open summit area. The focal point looking southwest is Baker Pond and Moxie Mountain and background mountains. The Project will not interfere with the view towards those landscape elements. Looking to the west and northwest, the Project will be located along the west side of Moxie Pond which is partially screened by foreground vegetation. The focal points looking towards the northwest are Pleasant Pond Mountain, Mosquito Mountain, and highly configured shoreline of Moxie Pond. The only place a hiker will see the proposed widened corridor clearing is where the existing corridor is visible at a distance of 5.1 miles. The proposed HVDC structures will be made of self-weathering steel structures which will blend with the wooded backdrop. The conductors will be the most visible components of the Project, especially in the morning hours when the sunlight is reflecting off the lines. Due to the partial screening of the Project and viewing distance, there will be a minimal visual impact from the summit of Bald Mountain.

Viewpoint 10 in Bald Mountain Twp is a view looking southeast towards Bald Mountain Pond from 600' east of the summit where the Trail starts the descent northbound off the summit of Bald Mountain. The Project will not be visible from this location.

North Peak Trail(VP11) is a side trail off of the AT that is encountered shortly after descending northbound off of the summit of Bald Mountain. Approximately 1,350' of the 0.7 mile side trail to the North Peak is over open ledges with 270 degree views. The summit of Bald Mountain is the only foreground view obstruction. The MATC Guide describe the North Peak Trail on Moxie Bald Mountain *"as a pleasant ledge walk with good views, and good blueberries in season."* The existing 115kV transmission line to the west of Moxie Pond is also visible from the North Peak. The proposed co-located HVDC transmission line will be visible from this location at 3.5 miles. More of the Project will be visible but at greater distance than from the summit of Bald Mountain. There will be a minimal visual impact from the North Peak due to the viewing distance and minimal visibility of the proposed structures and cleared corridor.

Snowmobile trails. The co-located HVDC transmission line corridor will run parallel to and cross ITS 86 in The Forks Plt for approximately one mile. While snowmobile / ATV trails are not considered scenic resources of state or national significance, some of the local trails may cross Moxie Pond, which is a scenic resource of state or national significance. The existing 115kV transmission line corridor will be expanded by 75' on the western side. The visual impact to the ITS trail should be minimal due to the trail's current location within the corridor.

D. A public site or structure listed on the National Register of Historic Places? □ □ ■

There are no structures on the NRHP within Segment 2 but the **Arnold Trail Historic District** is located along the center line of Wyman Lake from the dam north, approximately 3 miles within the Segment 2 Study Area. The Arnold Trail is the route that Benedict Arnold took in 1775 in an ill-fated attempt to attack Quebec during the Revolutionary War. According to the National Register nomination form,[13] the trail is 194 miles long,

[13] *National Register of Historic Places, Inventory – Nomination Form, Arnold Trail to Quebec. Maine State Park and Recreation Commission. July 14, 1969.*

stretching from Fort Popham at the mouth of the Kennebec River to Coburn Gore on the Canadian Border. The nomination form states "*The rivers have been altered more than anything since 1775…above Augusta, the Kennebec has an entirely different aspect than it did in 1775. Dams have been constructed at 10-15 miles intervals up the river, giving the stream a rather placid appearance, far different from the quick flowing shallow and treacherous Kennebec that the bateaux men saw*." People interested in traveling along the Arnold Trail do not expect to encounter the same conditions as 1775. The more culturally significant locations (Great Carrying Place Portage Trail) for the Arnold Trail are not within the Segment 2 Project area.

Three HVDC transmission structures and conductors will be visible at distances of 0.5 - 1.3 miles from the middle of Wyman Lake where the Arnold Trail is located, and seen in context of the Wyman Hydroelectric Dam and the Bingham Wind project. There will be a minimal visual impact from the Arnold Trail. See description of Wyman Lake below, and the photosimulation from the Wyman Lake Recreation Area in Appendix D.

E. A National or State Park? ■ ■ ■

The Appalachian National Scenic Trail is a Unit of the National Park System. See above.

F. 1) A municipal park or public open space? □ □ ■

The Wyman Lake Recreation Area/Pleasant Ridge Swim Area on Wyman Lake off Pleasant Ridge Road, in Pleasant Ridge Plt is managed by Brookfield Renewables and the Bingham-Moscow Chamber of Commerce. The area includes a boat launch, swimming beach, picnic areas, and rest rooms. The Project will be visible from the swimming beach adjacent to the existing 115kV transmission line corridor and in context with the Wyman Hydroelectric Dam and portions of six Bingham Wind turbines. Three HVDC transmission structures and conductors will be visible at distances of 0.9 - 1.3 miles from this viewpoint. There will be a minimal visual impact from the Wyman Lake Recreation Area.

2) A publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities? □ ■ ■

Mosquito Mountain, west of Moxie Pond in The Forks Plt is privately owned but is presumed to allow public access. The trailhead on Troutdale Road is not well marked and parking is minimal. This 1.2-mile hike seems to be more of a local/ regional resource but is documented on websites as being a popular hike for families and college student groups. Hikers on the trail cross underneath the existing 115kV transmission line corridor approximately 400'from the trailhead. There are two scenic overlook locations: one on the east side of the mountain where there is an American flag anchored to the ledge, and one on the summit, 1,400' further west. Views from the eastern overlook include a 180-degree view including all of Moxie Pond, Mosquito Pond, (Moxie) Bald Mountain, and Pleasant Pond Mountain. The existing 115kV transmission line along the western side of Moxie Pond is visible with the closest point 0.7 mile to the east. The Indian Pond Road along the existing 115kV transmission line to Harris Dam is visible to the north of Moxie Pond at a distance of 3.0 to 5.1 miles and the Bingham Wind Project is visible 14.5 to 16.6 miles to the southeast. Expectations of visual quality among hikers of Mosquito Mountain are moderated by the visibility of the existing transmission line at Troutdale Road and Indian Pond Road

The existing 150' wide 115kV transmission line corridor clearing will be widened by 75' on the western side to accommodate the proposed HVDC transmission line. From the eastern overlook, twenty-four structures and conductors will be visible adjacent to the existing H-frame structures at distances of 0.7 to 1.3 miles. Where the existing cleared corridor is visible, the proposed expanded corridor will be visible. The proposed HVDC

structures will be made of self-weathering steel structures which will blend with the wooded backdrop and be less visible than the existing wood H-frame structures. The proposed conductors will be slightly higher than the existing conductors. Due to the presence of the existing transmission line and roads there will be minimal change in visual impact from the summit of Mosquito Mountain.

Moxie Mountain in Caratunk Twp is on private land, access is off an unmarked trailhead off logging roads/Heald Pond Road. The trail is not well marked or maintained. The south face of the mountain has rock outcrops, rock slides, and unique rock formations which allow for southern views. There are communication installations on the summit. The Project may be minimally visible from the outcrops at a distance at 4.5 to 5 miles to the southeast over the cleared former Moscow radar sites. There will be no visual impact to Moxie Mountain.

3) A public resource, such as the Atlantic Ocean, a great pond or a navigable river? ■ ■ ■

Moxie Pond is a 2,370 acre pond in East Moxie Twp, The Forks Plt., Bald Mountain Twp T2 R3. The *Maine Wildlands Lakes Assessment* designated Moxie Pond as Resource Class 1B with 'Outstanding' Scenic resources and 'Significant' Fisheries, Shore Character, and Cultural resources. The Pond is considered a Scenic Resource of State or National Significance as a great pond with scenic resources rated as 'Outstanding. *The Scenic Lakes Character Evaluation in Maine's Unorganized Towns* characterizes Moxie Pond as having "low complexity" of Relief, "medium complexity" for Shoreline Configuration, Vegetation Diversity, and Special Features and "High complexity" for Physical Features. Moxie Pond was also rated as "High" for Inharmonious Development. There is a boat launch on the northwest end of Lake Moxie Road near the dam, and approximately 145 camps on the west side of the lake and 30+/- camps on the east side. The majority of camps located on the western shoreline are oriented to the east and away from the Project. The main access road for the camps is Lake Moxie Road/Troutdale Road which is located parallel to the existing 115kV transmission line along the western side of Moxie Pond. The existing 115kV wood H-frame transmission structures are typically 45' in height and spaced 350' to 500' apart. The existing transmission line is generally 350' to 900' from the edge of the pond except for a few areas where land extends into the Pond, such as near Caribou Narrows, and in two areas where the transmission line is directly adjacent to the Pond, near Black Narrows and at the southern end near Joe's Hole. The existing transmission line is generally not visible from the pond.

The Project will be located within the existing 115kV transmission line corridor which runs along the entire length of the western side of Moxie Pond. The existing 150' wide corridor clearing will be widened by 75' on the western side (away from the Pond) to accommodate the new transmission line. Of the 36 proposed HVDC structures adjacent to the Pond, the tops of approximately 12 structures will be visible from various areas of the Pond. The majority of the structures and conductors will be screened by shoreline vegetation which averages 60 to 75' in height. The structures will range in height from 75' to 105', the tallest structures being the most visible above the shoreline vegetation. Portions of the cleared corridor will be visible in two areas of the pond where the existing corridor is already visible: at the southern end north of Joe's Hole and near Black Narrows. From the northern end of the Pond, near the boat launch, the tips of six HVDC structures and portions of conductors will be visible at distances of 2,400' to 4,200'. (See Photosimulation 14). From the southern end, the tops of up to three HVDC transmission line structures and conductors will be visible above the tree line (see Photosimulation 15), but seen in context with the two existing H-frame structures and conductors that are visible. The visual impact to Moxie Pond will be minimal due to the presence of the existing transmission line and screening effects of shoreline vegetation. The use of self-weathering steel structures will minimize the contrast with the wooded backdrop as seen from the Pond.

Wyman Lake, the only portion of the Kennebec River where Segment 2 would be visible, is not considered to have scenic resources by the Maine Wildlands Lakes Assessment. The Wyman Dam on the Kennebec River was constructed in 1931 for hydroelectric generation. Wyman Lake, the resultant impoundment, extends for 11 miles to the north. Several recreation facilities have been constructed along the shoreline for boat access, swimming, and picnicking. Boaters and swimmers using the southern 3 miles of the Lake above the dam currently see the dam infrastructure, existing transmission line corridors, camps, Pleasant Ridge Road, and 6 turbines of the Bingham Wind Project. As noted in the description of the Wyman Lake Recreation Area and the Arnold Trail, approximately three HVDC transmission structures and conductors will be visible at distances of 0.5 - 1.3 miles from the southern portion of the Lake. There will be minimal visual impact from the Wyman Lake.

Baker Stream, in Bald Mountain Twp T2 R3, flows from Baker Pond to Moxie Pond. The entire 1.3 miles is within 3 miles of the Project. The existing 115kV transmission line crosses Baker Stream just south of Joe's Hole. The Appalachian Trail crosses Baker Stream approximately 500' south of the transmission line crossing. Troutdale/Trestle Road is located on the west side of Baker Stream and crosses just north of Baker Pond. There are five camps on the west side of the stream. The existing 150' wide corridor clearing will be widened by 75' on the southern side at the stream crossing to accommodate the new HVDC transmission line. The preserved vegetation along the stream will continue to screen the Project from view for the majority of the stream. The visual impact from Baker Stream will be minimal due to the presence of the existing transmission line and screening effects of shoreline vegetation.

2. What is the closest estimated distance to a similar activity? ■ □ □

The Project will be located within the existing 115kV transmission line corridor.

3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? ■Yes □No

The scenic resources are used throughout the year for a variety of recreational pursuits, including boating, fishing/ice fishing, and hiking.

6.2.2.5 Affected Population/User Expectations/Continued Use and Enjoyment

There are four general groups of people who may be affected by the Project.

Motorists

The main motorists who will see the Project include the camp owners who drive on Lake Moxie Road and Troutdale Road to access camps on Moxie Pond, and homeowners in Moscow who live off Heald Pond Road, Chase Pond Road, Stream Pond Road, Wolf Mountain Pass Road, Bassett Lane, Henry Beaudoin Road, Burns Road, and Donigan Road. Motorists presently see the existing 115 kV transmission line in several locations where they cross existing roads or

where there is no vegetation between the road and the existing corridor. The longest duration of exposure will be on Troutdale Road for approximately 1,000' where the road is located within the eastern side of the existing cleared corridor. (See Photosimulation 18). The proposed widened corridor and HVDC structures will be located on the west side of the corridor away from the road. Motorists will continue to use the roads to access their camps and homes. Due to the Project being co-located with the existing transmission line corridor, there should be minimal effect on motorists' continued use and enjoyment of those roads. There should be minimal visual impact to motorists.

Residents

Most camp residents on the west side of Moxie Pond and Baker Stream have preserved vegetation between their camps and the existing 115kV transmission line corridor. Because the Project will be located on the west side of the corridor, there will be no change in the vegetative buffer and therefore no visual impacts. The camp owners on the east side of Moxie Pond (mostly clustered around Mosquito Narrows) may have limited views of the tops of 3 to 5 HVDC transmission structures at a distance of 0.2 to 1 mile. The majority of the structures and conductors will be either screened by shoreline vegetation or seen against the wooded backdrop. The visual impact to camp owners on the east side of Moxie Pond will be minimal. The Project should not negatively affect the camp owners' experience or their continued use and enjoyment of their camps.

On Troutdale Road near Joe's Hole/Baker Stream and the crossing of the AT, there are camps on either side of the existing transmission line: one 400'+/- to the northeast, and one 180'+/- to the southwest. With the 75' of proposed clearing on the west side of the corridor, the existing vegetated buffer for the camp on the west side of the transmission line will be reduced and may result in a narrow opening to the corridor. The proposed HVDC structures will not be visible from the camp but the widened corridor may allow one existing 115kV transmission structure to be visible. The visual impact to camp owners on Troutdale Road will be none to minimal depending on the screening effect of remaining vegetation.

Most residents in Moscow whose driveways currently cross the existing 115kV transmission line corridor have significant vegetative buffers between their homes and the existing cleared corridor and should not be affected by the Project. Homeowners off of Donigan Road may see portions of

the HVDC structures above the tree line depending on the vegetative buffer on their property. The visual impact to homeowners in Moscow on Heald Pond Road, Chase Pond Road, Stream Pond Road, Wolf Mountain Pass Road, Bassett Lane, Henry Beaudoin Road, Burns Road, and Donigan Road will be none to moderate depending on existing vegetative buffers remaining between their homes and the Project.

Recreating Population

There are several types of recreational users that will be affected by the Project including hikers on the Appalachian Trail and Mosquito Mountain; boaters and those who fish on Moxie Pond, Baker Stream, and Wyman Lake; and ATV users and snowmobilers using ITS trails 86.

As described in the narrative for the elevated viewpoints on the Appalachian Trail, there will be minimal visibility of the Project from the summit areas of Pleasant Pond Mountain and Bald Mountain. AT hikers currently experience crossing the existing 115kV transmission line corridor three times in proximity to Troutdale Road. Hikers expect to see the transmission line as it is noted in Trail Guides and if they park in the trailhead adjacent to the existing corridor. The Project should not negatively affect the hikers' experience or their continued use and enjoyment the Appalachian Trail.

Project views from Mosquito Mountain are seen in context with the existing 115kV transmission line corridor both in the foreground (at the trail crossing), and the midground and background from summit overlooks. The proposed self-weathering steel HVDC structures will be seen against a wooded backdrop which will minimize their visibility. The widened corridor clearing will be visible in areas where the existing corridor is already visible. The Project should not negatively affect the public's continued use and enjoyment of Mosquito Mountain.

Expectations for visual quality among boaters on Moxie Pond, Wyman Lake, and Baker Stream are moderated by the visibility of existing development. Those who fish on these water resources are most interested in the fisheries. While boating and/or fishing, these users would have the opportunity to position themselves on the waterbodies to minimize their exposure to the Project. On Moxie Pond the main areas of Project visibility will be in the southern area near Joe's Hole and near Black Narrows where the existing transmission line is already visible. On Wyman Lake, boaters and those who fish will see the Project in context with the dam, the existing transmission

line, and Bingham Wind turbines. The Project will minimally affect the boating/fishing experience and should not decrease the public's continued use and enjoyment of the waterbodies.

6.2.2.6 Visual Impact Assessment

Landscape Compatibility

Color: The proposed single-pole HVDC transmission structures will be constructed of weathering steel (self-oxidizing) that will have a dark brown, rusty appearance. From most of the Segment 2 viewpoints, the difference in color between structures and surrounding vegetation should result in a relatively minor visual impact. Where the HVDC structures are seen adjacent to the existing wooden H-frame structures, there will be a stronger color contrast.

Form: Most of Segment 2 will use one type of transmission structure: a single pole structure averaging 100± feet tall which will result in a minimal to moderate contrast in form. The angle structures will be 2-pole structures more similar in form to the existing H-frame structures.

Line: Segment 2 is co-located with an existing transmission line therefore the proposed conductors and cleared corridor will create minimal additional line contrast. Where the proposed conductors but not the existing conductors are visible, there will be a moderate line contrast. However, increased viewing distances will diminish the line contrast visibility from elevated viewpoints.

Texture: The HVDC structures will be single pole self-weathering steel, which have a smoother texture than the standard wooden poles. This texture should cause a minimal contrast in texture.

Scale Contrast

Scale contrast is determined by the size and scope of the proposed activity given its specific location within the viewshed of a scenic resource.

In general, there will be a moderate scale contrast created by co-locating the proposed HVDC structures, which average 100' in height, with the existing H-frame structures that average 45' in height. In locations along Moxie Pond where the average height is 90', the scale contrast will be

slightly less. With the corridor widened by 75', the total cleared corridor width will be 225' which is a 50% increase resulting in a moderate scale increase of the corridor itself. The scale contrast will be most visible from the foreground corridor crossings at roads and at Joe's Hole/Baker Stream crossing and from the southern end of Moxie Pond where the existing transmission structures are visible.

Spatial Dominance

Spatial dominance is the degree to which an activity dominates the whole landscape composition or dominates landform, water, or sky backdrop as viewed from a scenic resource.

When viewed from the summits of the AT or Mosquito Mountain, the Project will not dominate the landscape because of its co-location with the existing transmission line which is at a low elevation along Moxie Pond. Views towards Moxie Pond and the surrounding mountain ridges will continue to dominate the landscape from elevated viewpoints. In foreground viewing locations such as road crossings and the crossing of Joe's Hole/Baker Stream, the Project will be co-dominant with existing transmission line structures. Segment 2 of the Project will not dominate the landscape composition or the surrounding land forms, water bodies, or sky.

6.2.2.7 Mitigation Strategies

The primary mitigation strategy utilized for Segment 2 was co-locating the line with an existing 115kV transmission line. The HVDC structures will be made of self-weathering steel which will result in minimal color contrast with the surrounding wooded landscape when viewed from elevated viewpoints and waterbodies. The height of the HVDC structures on the western side of Moxie Pond has been minimized to the extent possible to reduce the contrast in scale and reduce potential visibility from Moxie Pond. Where the widening of the cleared corridor results in a longer duration of exposure to AT hikers (east of Baker Stream), trail relocation may be possible.

6.2.2.8 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts, Segment 2 will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in the surrounding area including in the municipalities in which it is located or in neighboring municipalities, where applicable.

6.2.3 SEGMENT 3. Co-located HVDC from Moscow to Lewiston.

Segment 3 will include 70+/- miles of the co-located HVDC transmission line from the Wyman Hydroelectric Facility in Moscow, through the towns of Concord Twp, Embden, Anson, Starks, Industry, New Sharon, Farmington, Wilton, Chesterville, Jay, Livermore Falls, Leeds, Greene, and Lewiston. It will terminate at the new 345kV AC to +/-320kV HVDC 1200 MW Merrill Road Converter Station, just north of Larrabee Road Substation in Lewiston. (See Merrill Road Converter Substation in Section 6.3.4.) The existing corridor clearing ranges between 150' and 225' in width for the majority of Segment 3, except for a 400' wide 1.1-mile long section ending at the Livermore Falls Substation. The new co-located transmission line section will require the existing cleared corridor to be widened by 75' on the western side. The Converter Station and Larrabee Road Substation will be connected by a new 1.2-mile 345kV AC Transmission Line (Section 3007). In proximity to the Larrabee Road Substation, there will be a partial rebuild of 0.8 miles of 34.5kV transmission line (Section 72) to accommodate the connecting segment of 345kV transmission line and the installation of a new 345kV transmission line terminal. The terminal at Larrabee Road Substation will be located within the existing fenced-in facility and be similar in height to the existing adjacent substation components. The structures in Segment 3 will be single pole self-weathering steel structures with an average height of 100'.

6.2.3.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on June 22 & 26 and July 3 & 5, 2017. Representative views from road crossings within the Study Area are included in Appendix B: Study Area Photographs, Maps 5 – 9.

Other data sources include the aerial photographs and cross sections provided by POWER Engineers for the Project; project descriptions and maps from comprehensive plans and zoning ordinances where available; Maine Trail Finder website; Kennebec Land Trust website; Androscoggin Land Trust website; Somerset Woods Trustee website; Chamber of Commerce websites; Maine DACF website (State Parks); the *Vision and Master Plan for the Androscoggin Riverlands State Park, by BPL, 5/2010*, and Google Earth.

6.2.3.2 Study Area

Segment 3 is divided into two different landscape characters. The northern portion of the Study Area is located within the Central Mountains and Western Foothills Biophysical Regions[14] and is characterized by the Kennebec River and Sandy River watersheds with numerous small to medium waterbodies ranging in size from 6 to 196 acres. There are also a few larger waterbodies: Embden Pond (1,568 ac) in Embden and Clearwater Pond (751 ac) in Industry. The northern portion of the Project area is surrounded by medium hills and mountains with elevations ranging between 1,200' and 1,850'. This portion of the Study Area includes Bingham, Concord Plt, Embden, Solon, Anson, Madison, Starks, Industry, Farmington, New Sharon, Wilton, and Chesterville. The Kennebec River flows for 27 miles through the north portion of Segment 3 with several of the population centers located along its banks including the villages of Bingham, Solon, North Anson, Anson, and Madison. The Project will be located within the existing 115kV transmission line corridor which is 0.25 to 1.5 miles to the west of the Kennebec River. The Sandy River flows through Farmington and the central portion of the Study Area towards the Kennebec River.

Table 6-9 Elevated Viewpoints within 5 miles – Segment 3

MOUNTAIN	LOCATION	DIST	ELEV	DEVELOPMENT	SIGNIFICANCE	VISIBILITY
Fletcher Mountain	Concord Twp	2.8 mi	1,709'	Harvesting	None	No - wooded
Barton Hill	Anson	4.2 mi	1,295'	Private residence	None, private	No - wooded
Boardman Mountain	Industry	3.5 mi	1,490'	None	None	No - wooded
Bannock Mountain	Industry	0.7 mi	1,230'	Private residence	None, private	Not likely - wooded
Norton Mountain	New Vineyard	4.0 mi	1,850'	Harvesting	None	No - wooded
Spruce Mountain	Jay	2.0 mi	1,114'	None	None	No - wooded
Moose Hill	Livermore Falls	2.0 mi	1,116'	Private residence	None, private	Not likely - wooded
Academy Hill	Canton	3.9 mi	1,112'	Conservation Land (Androscoggin Land Trust)	Recreation, wildlife habitat, ATV, multi-use trails	No - wooded
Jug Hill	Androscoggin	0.8 mi	790'	None	None	Not likely - wooded
Monument Hill	Leeds	1.5 mi	665'	None	Hiking trail	Possible

[15] *The Biophysical Regions of Maine: Patterns in the Landscape and Vegetation*. Janet McMahon. 1990.

The southern portion of the Segment 3 Study Area is within the Western Foothills Biophysical Region. It is characterized by the Androscoggin River watershed, small to medium waterbodies generally ranging in size from 3 to 208 acres, and medium hills with elevations ranging between 665' and 1,116'. The largest waterbodies are Androscoggin Lake (3,980 acres) and Lake Auburn (2,260 acres) within the Study Area. The southern portion of Segment 3 includes the Towns of Jay, Livermore Falls, Leeds, Greene, and Lewiston. The largest population center is Lewiston.

The Androscoggin River flows for 41 miles through the southern portion of the Study Area and is crossed by the Project in Auburn. The Project will be located within the existing 115kV transmission line corridor which is 0.7 to 1.8 miles east of the Androscoggin River.

The majority of the vegetation on the land immediately surrounding Segment 3 is mixed forestland with occasional agricultural fields. The existing transmission line is predominantly edged with 50 to 70-foot tall mixed deciduous and evergreen trees. Land uses in the immediate vicinity of the transmission line are predominantly woodland, farmland, and low density rural residential with clusters of village development.

Table 6-10. Waterbodies within 3 miles of Segment 3

WATERBODY	LOCATION	DIST +/-	SIZE (ac)	ACCESS	DEV	RES. CLASS/ MAN. CLASS	SCENIC RATING	PROJECT VISIBILITY
Lower Kennebec River	Moscow to Norridgewock	Crosses In Moscow	27.5 miles within 3 miles	ACC	DEV	-	-	Yes, at Wyman Hydro, and other areas
Jackson Pond	Concord Twp	0.9 mi	32	AC	UNDEV	1B/7	O	No
Lily Pond	Concord Twp	0.7 mi	25	AC	DEV, 1 camp	-	-	No
Tibbetts Pond	Concord Twp	0.9 mi	6	AC	UNDEV	3	-	No
Embden Pond	Embden	2.1 mi	1,568	AC	DEV	1B	-	Not within 3 miles
Sandy Pond	Embden	1.3 mi	107	AC	DEV	1B	-	No
Fahi Pond	Embden	0.4 mi	196	AC	DEV	1B	-	Possible Not likely
Carrabassett River	Anson	crosses	3.9 mi within 3 miles	AC	DEV	-	-	Yes, at crossing
Nevens Pond	Anson	2.0 mi	10.6	INAC	UNDEV	-	-	No
Cold Pond* (Redneck Rd Starks)	Starks	0.4 mi	4.2	INAC	UNDEV	-	-	Possible Not likely
Clearwater Pond	Industry	1.2 mi	751	AC	DEV	2	-	Possible but Minimal

WATERBODY	LOCATION	DIST +/-	SIZE (ac)	ACCESS	DEV	RES. CLASS/ MAN. CLASS	SCENIC RATING	PROJECT VISIBILITY
Sandy River	Farmington	crosses	9.3 mi within 3 miles	AC	DEV	-	-	Yes, at crossing
Pease Pond	Wilton	1.4 mi	109	AC	DEV	2	-	Possible Not likely
Locke Pond	Chesterville	1.4 mi	120	AC	DEV	-	-	Possible Not likely
Sand Pond	Chesterville	1.6 mi	81	AC	DEV	2	-	No
Robinson Pond	Chesterville	1.5 mi	8	AC	UNDEV	-	-	No
North Pond	Chesterville	1.9 mi	170	AC	UNDEV	2	-	Possible Not likely
Parker Pond	Jay	1.3 mi	17	AC	DEV, 2 camps	2	-	Possible Not likely
Androscoggin River	Jay	crosses	41.5 mi within 3 miles	AC	DEV	-	-	Not likely
Moose Hill Pond	Livermore Falls	1.4 mi	95	AC	DEV	2	-	No
Mosher Pond	Fayette	2.9 mi	70, 10.5 acres within 3 miles	AC	DEV, low	1B		No
Long Pond	Livermore	2.3 mi	208	AC	DEV	2	-	No
Round Pond	Livermore	2.9 mi	151	AC	DEV	-	-	No
Bartlett Pond	Livermore	2.7 mi	28	AC	DEV	2	-	No
Rack Pond	Livermore Falls	1.7 mi	8	INAC	UNDEV	-	-	No
Round Pond	Livermore Falls	1.7 mi	3.4	AC	DEV, 1 camp	-		No
Turner Pond	Livermore Falls	1.5 mi	7.8	AC	DEV, 2 camps	-	-	No
Schoolhouse Pond	Livermore Falls	1.8 mi	17	AC	DEV	-	-	No
Pleasant Pond	Turner	2.8 mi	189	AC	DEV	2	-	No
Nezinscot River	Turner	0.9 mi	3.3 miles within 3 miles	AC	DEV	-	-	No
Androscoggin Lake	Leeds	2.4 mi	3980, 550 within 3 miles	AC	DEV	1A	-	Not within 3 miles
Dead River	Leeds	crosses	5.5 miles	AC	DEV	-	-	Yes
Deane Pond	Greene	1.3 mi	6.3	INAC	UNDEV	-		No
Allen Pond	Greene	250 ft	183	AC	DEV	2	-	Yes
Little Sabattus Pond	Greene	1.6 mi	25	AC	UNDEV	3	-	No
Berry Pond	Greene	0.3 mi	31	AC	UNDEV, 1 dock	3	-	Yes, tops of 1 or 2 structures
Lake Auburn	Auburn	2.0 mi	2260, 752 within 3 miles	AC	DEV	1B	-	No

Table 6--11. Conservation Lands within 3 miles of Segment 3

CONSERVATION LAND	HOLDER	LOCATION	DIST +/-	SIZE (ac)	ACCESS	PROJECT VISIBILITY
Tibbetts Pond	IFW	Bingham	0.8 mi	16.5	Public	No
Indian & Fowl Meadow Islands	SWT	Solon	1.5 mi	33.9	Private publicly accessible	No
Fahi Pond	WMA, IFW	Embden	700 ft	4 parcels, 337	Public	Not likely
Madison Easement	BPL	Madison	0.8 mi	6 parcels incl. Weston Island, 292	Public	No
Thompson & Dinsmore Island	SWT	Madison	1.1 mi	19.2	Private publicly accessible	Not likely
Sterry Hill	MFT	Starks	crosses	195	Restricted	Yes
Sunnyview	MFT	Farmington	1.8 mi	30.3	Restricted	Not likely
Clifford Woods	MWO	Farmington	1.0 mi	55.1	Public for certain uses	No
French Falls Recreation Area	AlT, BPL	Jay	1.3 mi	28 ac	Public	No
Whistlestop Rail Trail Jay to Farmington	BPL	Farmington, Wilton, Jay	1.3 mi	145, 116.2 within 3 miles	Public	No
Chesterville	WMA	Chesterville	1.7 mi	894, 708 within 3 miles	Public	No
Spruce Mountain	ALT, BPL	Jay	1.4 mi	157	Public	No
Meadowbrook / Sturtevant Farm Conservation Area	KLT	Fayette	2.6 mi	335, 118 within 3 miles	Private, publicly accessible	No
Tolla Walla	WMA, MIFW	Livermore	0.2 mi	515	Public	No
Nutting	MFT	Leeds	crosses	82	Restricted	Yes
Fish Farm	ALT	Leeds	1.1 mi	79	Restricted	No
River Rise Farm	ALT, BPL	Turner	1.0 mi	247	Restricted	No
Pleasant Pond	ALT	Turner	2.0 mi	220	Restricted	No
Brackett-Longley Rare Plant Preserve	KLT	Leeds	2.2 mi	46	Private publicly accessible	No
Androscoggin Riverlands State Park	BPL	Turner	crosses	2923	Public	Yes
Marden Chittick	ALT	Greene	0.1 mi	195	Restricted	No
Hooper Pond	ALT, IFW	Greene	1.6 mi	178	Private publicly accessible	No
Captain Harris	ALT	Greene	2.8 mi	301, 34 within 3 miles	Private Public allowed	No
Sunnyview	MFT	Farmington	1.8 mi	30.3	Restricted	Not likely

Table 6-12. Structures on the National Register of Historic Places within 3 miles of Segment 3

STRUCTURES on the NATIONAL REGISTER OF HISTORIC PLACES	TOWN	PUBLICALLY ACCESSIBLE	PROJECT VISIBILITY
Bingham Free Meetinghouse	Bingham	Yes	No
Concord Haven	Embden	No	No
Embden Town House	Embden	Yes	No
Carrabassett Inn	Anson	Yes	No
Anson Grange No.88	North Anson	Yes	No
Bailey Farm Windmill	North Anson	No	No
Steward--Emery House	North Anson	No	No
Temples Historic District	North Anson	Yes	No
Old Point and Sebastian Rale Monument	Mad	Yes	No
Madison Public Library	Madison	Yes	No
Weston Homestead	Madison	No	No
Thompson's Bridge	Industry	Yes	No
Cutler Memorial Library	Farmington	Yes	No
Farmington Historic District	Farmington	Yes	No
First Congregational Church; United Church of Christ	Farmington	Yes	No
Franklin County Courthouse	Farmington	Yes	No
Free Will Baptist Meetinghouse	Farmington	Yes	No
Greenacre	Farmington	No	No
Greenwood; Chester; House	Farmington	No	No
Little Red Schoolhouse	Farmington	No	No
Merrill Hall	Farmington	Yes	No
Nordica Homestead	Farmington	Yes	No
Old Union Meetinghouse	Farmington	Yes	No
Ramsdell; Hiram; House	Farmington	No	No
Tufts House	Farmington	No	No
Holmes-Crafts Homestead	Jay	Yes	No

Scenic Resources with potential Project views that were evaluated include the Lower Kennebec River and Arnold Trail from Moscow to Norridgewock; Fahi Pond Wildlife Management Area in Embden; the Carrabassett River in Anson; the Sandy River in Farmington; the Dead River in Leeds; Allen and Berry Pond in Greene; and the Androscoggin Riverlands State Park in Leeds and Turner. Monument Hill in Leeds was evaluated as the one elevated viewpoint with potential Project views.

6.2.3.3 Distance Zones

Foreground: 0 to 1/2 mile in distance. Views of the transmission line corridor are primarily limited to foreground views, primarily road crossings and waterbodies:

- Concord Twp.: Pleasant Ridge Road, Bluff Road, Jackson Pond Road, Owens Road, and 5 unnamed roads/farm roads.
- Embden: Bert Berry Road, Town Road, and three unnamed roads/farm roads.
- Anson: Solon Road, Madison Street, River Road, Campground Road, Bookerville Road, Lloyd Road, Starks Road, and 2 unnamed roads.
- Starks: Starks Road, Redneck Road, Mayhew Road, W. Mills Road.
- Industry: Industry Road (Route 43), Bailey Road.
- New Sharon: Goodrich Road, Clearwater Road.
- Farmington: Perham Hill Road, Osborne Road, Bailey Hill Road, Davis Road, US Route 2, Whittier Road, Knowlton Corner Road, Webster Road, Sandy River.
- Wilton: McCrillis Corner Road.
- Chesterville: Wilton Road.
- Jay: Soules Hill Road, Belanger Road, E. Jay Road, Claybrook Road, Turmel Road, Moose Hill Road.
- Livermore Falls: Fayette Road, Pomeroy Hill Road, Park Street, Hillman Ferry Road, Bear Brook Road, Androscoggin Bluff Road, Lyman Lane, River Road, Strickland Loop Road.
- Leeds: Knapp Road, Campbell Road, Howes Corner Road, Fish Street, River Road, Church Hill Road, N-Line Road.
- Greene: Linda Drive, Additon Road, Rose Road, Allen Pond Campground Road, Packard Road, Meadow Hill Road, Daggett Hill Road, Route 100.
- Lewiston: Merrill Road, Substation at Larrabee Road.

Midground: 1/2 mile to 3 miles in distance.

- Leeds: Monument Hill

Background: greater than 3 miles. None.

6.2.3.4 Inventory of Scenic Resources within the Viewshed

FIGURE 6-3 -Segment 3
MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST
(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Central Maine Power Company
Application Type: Site Law/NRPA
Activity Type: Segment 3, installation of co-located HVDC transmission line
Activity Location: Moscow, Concord Twp., Embden, Anson, Starks, Industry, New Sharon, Farmington, Wilton, Chesterville, Jay, Livermore Falls, Leeds, Greene, Lewiston
County: Somerset**,** Franklin, Androscoggin
GIS Coordinates, if known: See project location maps from POWERS Engineers.
Date of Survey: June 2, 21, 22, 26 and July 3, 5, 2017
Observer: Amy Segal, Steve Thompson

Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? None	□	□	□
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge?	□	□	□

There are three Wildlife Management Areas within Segment 3: Fahi Pond Wildlife Management Area in Embden
Tolla Wolla Wildlife Management Area in Livermore, and Chesterville Wildlife Management Area in Chesterville.
Fieldwork and computer modeling have confirmed that none of these Wildlife Management Areas should have Project views due to intervening vegetation.

C. A state or federal trail?	■	□	□

Segment 3 is crossed or paralleled by four ITS snowmobile trails: ITS 84 in Anson on the Kennebec Valley Trail, ITS 82 and ITS 115 in Jay, and ITS 87 in Leeds as well as within the corridor between Livermore Falls and Lewiston. Snowmobilers are accustomed to seeing the existing transmission line corridor. There will be minimal visual impact to the ITS trails.

The 14.5-mile Kennebec Valley Trail follows the edge of the Kennebec River from North Anson through, Embden and Solon to Bingham. The trail is multi-use allowing ATV's, snowmobiles, horseback riding, hiking, cross country skiing and biking. The Trail currently crosses the existing 115kV transmission line in North Anson to the east of the Carrabec High School playing fields. The proposed widening of the corridor will increase the duration of exposure for the users but the overall visual change will be minimal. See narrative for Route 8 crossing below.

D. A public site or structure listed on the National Register of Historic Places?	■	□	□

The Project will not be visible from any structures on the National Register in Segment 3. There will be no Project views from the Farmington Historic District or the Temples Historic District in Anson.

The Arnold Trail, as noted in Segment 2, is located along the Kennebec River through Segment 3. The only location where the Project will be visible from the Arnold Trail will be where it crosses the Lower Kennebec River directly below the Wyman Hydroelectric Dam. In this context, a visitor expects to the see the dam, substation and numerous transmission lines. The visual impact to the visitor should be minimal to none due to the context adjacent to the Dam.

E. A National or State Park?	■	□	□

The Androscoggin Riverlands is a 2,675-acre State Park located in Leeds and Turner with 12 miles of frontage on the Androscoggin River. The Park is split into two parcels; a 2,345 acre parcel on the west side of the river in

Turner, and a 330-acre parcel on the east side of the river in Leeds. The park includes a wide variety of trails for different users including skiers and snowmobilers in the winter and ATVs, pedestrian hikers, mountain bikers, and horseback riders in the other seasons. Hunting is also allowed within the Park. The park and river are part of the Androscoggin Greenway and Androscoggin River Water Trails, with numerous boat access points along the riverfront within the Park.

The pedestrian trails in the Turner parcel closest to the shoreline include remnants of several old homesteads, water access locations, a picnic area, and several overlooks. There will be no views of the Project from the trails or riverfront overlooks.

The Leeds parcel is less developed with less formal boat access. The existing 115kV transmission line crosses the Leeds parcel for approximately 0.6 miles west of Church Hill Road. The relatively flat topography allows for distant views into the corridors in both directions. Vegetation edging the corridor is mixed evergreen and deciduous at heights ranging from 50’ to 70’. The corridor contains one 115kV transmission line supported on wood H-frame structures typically 45’ in height and one 115kV transmission line supported on single pole wood structures typically 75’ in height. The existing 225’ corridor clearing will be widened by 75’ on the western side to accommodate the proposed co-located HVDC transmission line. Widening of the corridor will not make the corridor visible from the river. The proposed HVDC structures in the corridor will be typically 100’ in height and spaced typically 1,000’ apart. Visitors to this portion of the State Park expect to the see the transmission line and may even use the Project corridor for some recreation pursuits including snowmobiling, ATV riding, and hunting. Though there will be a moderate contrast in material, color, and structure height, the visual impact to users of the Androscoggin Riverlands State Park will be minimal due to the presence of the existing transmission lines. (See Photosimulation 23).

F. 1) A municipal park or public open space? ■ □ □

The only municipal parcel that will have views of Segment 3 will be the municipally owned Carrabec High School athletic fields on the west side of the existing corridor in Anson. The Kennebec Valley Trail (a multi-use trail) runs along the northern edge of the fields and crosses the existing transmission line about 800’ north of the Route 8 crossing. The existing 115kV transmission lines are currently visible across the street over a field to the southeast. Currently there is a 150’ to 250’ wide mixed evergreen/deciduous vegetative buffer between the fields and the existing corridor which screens the views of the transmission lines. The existing 225’ corridor clearing will be widened by 75’ on the western side to accommodate the proposed co-located HVDC transmission line which will decrease the buffer to 75’ to 175’ in width. The proposed HVDC structures in the corridor will be typically 100’ in height and spaced typically 1,000’ apart. The tip of one HVDC structure will be visible above the tree line from the athletic fields and one will be visible south of Route 8 over the open fields. The visual impact to users of the athletic fields will be minimal due to the limited amount of structures visible and the remaining vegetative buffer. Photosimulation 21 illustrates the change in the corridor visible from Route 8 looking northwest. See Appendix B for photographs from the area.

2) A publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities? □ □ ■

Monument Hill, located in Leeds, is a popular short local hike to a summit (elev 665') where a Civil War monument is located. Views from the summit look to the east over Androscoggin Lake and to the west towards the existing transmission lines located 1.5 miles to the west. The existing 115kV transmission line corridor is not readily visible due to intervening vegetation and topography. With the widening of the corridor, the tips of a few proposed HVDC structures may be visible. Because the structures will be made of self-weathering steel and seen against a wooded backdrop, they will be minimally visible. There are currently patches of visible agricultural fields from the summit. The widened cleared corridor will be minimally visible and appear similarly to the existing openings. The visual impact to Monument Hill will be minimal.

3) A public resource, such as the Atlantic Ocean, a great pond or a navigable river? ■ □ □

Lower Kennebec River. As noted in the description of the Arnold Trail in Segment 2, the Project will cross the Lower Kennebec River south of Wyman Hydroelectric Dam. The existing 150' corridor clearing will be widened by 75' on the western side to accommodate the proposed co-located HVDC transmission line corridor. At this location, viewers also see the dam infrastructure, substation, and existing transmission line. The Kennebec River in this area has restricted access due to the potential for rapid water level rise. The visual impact to a viewer in this area will be minimal to none.

The lower portion of the **Kennebec River** between Madison and The Forks is rated as a "B" river in the Maine Rivers Study. The section of river between the headwater to the Kennebec River is rated for its Geologic/Hydrologic, Critical/Ecologic, Scenic, Inland Fisheries, Canoe Touring and Historic Resources. The viewshed analysis shows potential for Project views in several locations along the 27 miles of Kennebec River within the Segment 3 Study Area. This analysis is conservatively based on calculating visibility assuming maximum 40' tree height. Field work and 3D Modeling has concluded that the vegetation along the River in most locations is taller than 40' and will therefore screen the Project from view. In some isolated areas such as near the confluence of the Carrabassett River, portions of the proposed HVDC structures may be visible where the existing transmission line is also visible or where the riparian vegetation is below 40' in height.

The **Carrabassett River** is rated as a "B" river in the Maine Rivers Study. The section of river between the headwater to the Kennebec River is rated for its Geologic/Hydrologic, Critical/Ecologic, Inland Fishery, Whitewater Boating, Canoe Touring and Historic Resources. While the river is not necessarily ranked for Scenic resources, the Study notes that North Anson Gorge has been identified as 'Significant' by the Critical Areas Program because it's scenic and scientific attributes. The AMC River Guide: Maine notes that boaters "*need to take out above the village of North Anson because you come upon an unpassable falls in town*". There is no description of river east of the falls other than it is 1.0 miles to the Kennebec River. The existing transmission lines are not visible from the North Anson Gorge.

The Project will cross the Carrabassett River 0.5 mile downstream of the Route 8 bridge on the western side of the existing transmission line crossing in a relatively flat landscape where the River is 450' +/- wide. The existing 225' corridor clearing will be widened by 75' on the western side to accommodate the proposed co-located HVDC transmission line. The proposed structures on either side of the river will be setback 270' on the north side and 223' on the south side which is a similar or greater setback than the existing structures. The existing vegetation on either side of the corridor will partially screen the structures from view when approaching the corridor crossing. There will be no views of Segment 3 from the North Anson Gorge or from the Route 8 bridge due to intervening topography and vegetation. There will be minimal visual impact to users of the Carrabassett River due to the presence of the existing transmission line and screening effects of preserved riparian vegetation.

Clearwater Pond is a heavily developed 751-acre pond located in Industry. Clearwater Pond is not rated for Scenic qualities in the Maine Lakes Study. At its closest point the existing transmission line is located 1.2+/- miles southeast of the pond. Portions of the Segment 3 HVDC transmission lines may be visible from the central and northwestern ends of the pond at distances of 1.5 to 3.4 miles. Visual impact on the pond should be none to minimal due to intervening vegetation screening and the viewing distance.

The existing transmission line corridor crosses **Sandy River** in Farmington southwest of Route 2. (See Photosimulation 23 for view from Route 2.) The Maine Lakes Study determined that the scenic resources of this section of Sandy River were not unique or significant, *i.e.*, they did not meet a minimum standard of significance. (The portion from Phillips to the headwaters - not within the Project Study Area - is rated for scenic resources). The AMC River Guide: Maine describes the area of the crossing within a 6.0-mile section as "smooth and winding" with scenery of rural land use with towns. The areas on either side of the river crossing are agricultural fields with a buffer of riparian vegetation along the banks. The existing corridor is partially buffered except within the corridor. The existing conductors are visible for approximately 0.3 miles heading southeast downstream, and 0.25 mile looking to the northwest after the crossing.

In this area of Segment 3, the existing 225' wide cleared corridor will be widened by 75' on the western side to accommodate the new HVDC transmission line. Because of the existing open fields, the expanded corridor clearings may appear to be extended agricultural fields to recreational boaters on the river. Approximately five proposed HVDC structures and conductors will be visible from within the crossing along with 10+/- H-frame 115kV transmission line structures. The closest proposed HVDC structure will be 150' from the edge of the river, setback further than the existing structures. Visual impact on the Sandy River should be minimal due the presence of the existing transmission line and existing openings on both sides of the river.

The Project will be visible from the **Dead River** in Leeds within the existing cleared transmission line corridor. There is an approximately 125'+/- long suspension bridge for the ITS Route 87 across this section of river. The existing 225' wide cleared corridor will be widened by 75' on the western side to accommodate the new HVDC transmission line. There will be minimal visual impact to recreational users of the river and snowmobile bridge, due to the presence of the existing transmission line and the preserved riparian vegetation.

There are two ponds in Greene that may have Project visibility because of their close proximity to the existing transmission line corridor. The first, **Allen Pond**, is a 183 acre highly developed pond located approximately 250 feet east of the existing corridor. Recreational uses of the pond may see up to 5 to 6 HVDC structures above the treeline. **Berry Pond** is a 31-acre undeveloped pond located 1,800'+/- west of the existing corridor. Recreational uses of Berry Pond may see up to up to 2 structures. The visual impact to users of these two ponds will be minimal to moderate depending on the viewer's location on the resource.

2. What is the closest estimated distance to a similar activity? ■ □ □

The proposed transmission line will parallel the existing transmission structures within the corridor.

3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? ■ Yes □ No

The scenic resources described above are used throughout the year for a variety of recreational pursuits.

6.2.3.5 Affected Population/ User Expectations/Continued Use and Enjoyment

There are four general groups of people who already see the existing transmission lines at times during the year and may be affected by the Project.

Motorists

The primary viewing population is the year-round residents who live or work in or near Concord Twp, Embden, Anson, Starks, Industry, New Sharon, Farmington, Wilton, Chesterville, Jay, Livermore Falls, Leeds, Greene, and Lewiston and use State Routes 201 in Moscow, Route 16 in Concord Twp and Embden, Route 8 in Anson, Route 43 in Starks, Route 2 in Farmington, Route 156 in Chesterville, Route 133 in Jay and Livermore Falls, Route 219 in Leeds, Route 100/202 in Greene and Lewiston, and the surrounding local roads. Segment 3 will include 64 road crossings in its 70 +/- mile length.

At 39 of these crossings, motorists currently see an existing 115kV transmission line on H-frame structures that are typically 45' tall within a 150' cleared transmission line corridor. At the remaining 25 crossings, motorists see two 115kV transmission lines – one on wooden H-frame structures typically 45' in height and one on wooden single pole structures typically 75' in height within a 225' cleared transmission line corridor. The existing 150' or 225' wide corridors will be widened by 75' on the west side to accommodate the proposed HVDC transmission line corridor which will be supported on self-weathering steel structures that will be typically 100' in height. The Project should minimally increase the overall visual impact of the transmission line corridor as motorists cross under the lines.

Residents

There are approximately 96 homes located directly adjacent to or that have a view of the existing transmission line and proposed Segment 3. The majority are single family homes on individual lots or farmsteads in rural settings. For the most part, the homes are oriented away from the transmission line corridor. In most locations homeowners have maintained a sufficient amount

of woods on their properties to provide an adequate buffer between themselves and the proposed widened corridor. In a few locations, such as along Route 16 in Concord Twp, there will be open views towards the Project because of adjacent open fields. There will be minimal to moderate visual impact on the residential properties that are adjacent to or within view of the transmission line corridor, depending on the viewing distance and amount of intervening or preserved vegetation.

Recreating Population

Existing trails are used by ATV riders, snowmobilers, and hikers throughout Segment 3. Since current users are accustomed to riding or walking in the cleared transmission line corridors and seeing transmission structures and overhead conductors, there should be minimal visual impact to recreational trail users resulting from the Segment 3 activities. Recreational boaters using the Carrabassett, Sandy, and Dead Rivers are also accustomed to viewing the existing transmission lines and adjacent open fields on either side of the corridors while using these resources. Increasing the cleared width by 75' and installing HVDC transmission line structures will have minimal visual impact on canoeists and kayakers who cross under the lines and should not affect the continued use and enjoyment of the rivers. The Project views for boaters on Clearwater Pond will be in the midground/background viewing distance and should not affect the continued use and enjoyment of the pond. Allen Pond is a smaller pond located within foreground viewing distances from the Project. The Project will be most visible from the southern end of Pond where the existing transmission line is visible. The proposed HVDC transmission line should have minimal to no impact on the continued use and enjoyment of these water resources. Segment 3 will also be located adjacent to the Bowman Airfield in Livermore. The proposed Project will be located to avoid impacts to the airfield.

Working Population

The majority of the working population within the Segment 3 viewshed are agricultural and commercial forestry workers. There are also adjacent gravel pits and smaller commercial businesses (such as RV Sales and car repair). The project is located within the foreground of two high school campuses (Carrabec High School in Anson and Mt Blue High School in Farmington), but there will be no Project views for teachers/administrators from within the

school facilities. The visual impacts to the working population in the Segment 3 area should be minimal to none.

6.2.3.6 Visual Impact Assessment

Landscape Compatibility

Color: The proposed single-pole HVDC transmission structures will be constructed of weathering steel (self-oxidizing) that will have a dark brown, rusty appearance. From most of the Segment 3 viewpoints, the difference in color should result in a relatively minor contrast with the surrounding vegetation. Where the HVDC structures are seen adjacent to the existing wooden H-frame structures, there will be a strong color contrast.

Form: Most of Segment 3 will use one type of transmission structure: a single pole structure averaging 100± feet tall which will result in a minimal to moderate contrast in form. The angle structures will consist of two poles more similar in form to the existing H-frame structures.

Line: Segment 3 is co-located with an existing transmission line therefore the proposed conductors and cleared corridor will create minimal additional line contrast. Where the proposed conductors are visible and the existing conductors are not, there will be a moderate line contrast.

Texture: The HVDC structures will be single pole self-weathering steel, which have a smoother texture than the standard wooden poles. This texture should cause a minimal contrast in texture.

Scale Contrast

Scale contrast is determined by the size and scope of the proposed activity given its specific location within the viewshed of a scenic resource.

In general, there will be a moderate scale contrast created by co-locating the proposed HVDC structures, which average 100’ in height, with the existing H-frame structures that average 45’ in height and single pole structures averaging 75’ in height. With the corridor widened by 75’, the total cleared corridor width will be 225’ to 300’ which results in a moderate scale increase of the cleared corridor itself. The scale contrast will be most visible from the foreground corridor crossings at roads and river crossings where the existing transmission structures are visible.

Spatial Dominance

Spatial dominance is the degree to which an activity dominates the whole landscape composition or dominates landform, water, or sky backdrop as viewed from a scenic resource.

When viewed from road and river crossings, the Project will be co-dominant with existing transmission line structures. Segment 3 of the Project will not dominate the landscape composition or the surrounding land forms, water bodies, or sky.

6.4.8 Mitigation Strategies

The primary mitigation strategy utilized for Segment 3 was co-locating the line with an existing 115kV transmission lines. The structure material and form are also mitigation strategies. The HVDC structures will be made of self-weathering steel which will blend with the surrounding wooded landscape better than the silver gray color of galvanized steel.

6.2.3.8 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts, Segment 3 will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in the surrounding area including in the municipalities in which it is located or in neighboring municipalities, where applicable.

6.2.4 SEGMENT 4. Rebuild of Sections 62 and 64, Lewiston to Pownal

Segment 4 will include a new 345kV STATCOM Substation off Fickett Road in Pownal and a 0.3 mile 345kV AC Transmission Line (Section 3005) connection from this facility to the Surowiec Substation in Pownal. In addition, two 115kV transmission lines will be rebuilt: the 9.3 mile Section 62 between Crowley's Substation in Lewiston and Surowiec Substation in Pownal,

and the 16.1 mile Section 64 between Larrabee Road Substation and Surowiec Substation. The typical 45' wooden H-frame structures will be replaced with 75' wooden single pole structures. Both rebuilt sections are located in the towns of Lewiston, Auburn, Durham, and Pownal. This section assesses the rebuilt lines only. An analysis of Fickett Road Substation is found in the Substation Section 6.3.8.

6.2.4.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on May 24 and June 2 & 3, 2017. Representative views from road crossings within the Study Area are included in Appendix B: Study Area Photographs, Maps 19 and 10.

Other data sources include the aerial photographs and cross sections provided by POWER Engineers for the Project; project descriptions and maps from municipal comprehensive plans and zoning ordinances of Lewiston, Auburn, Durham, and Pownal; Maine Trail Finder website; Androscoggin Land Trust website; and Google Earth.

6.2.4.2 Study Area

Site Context

The area within one mile of Segment 4 is characterized by low rolling hills with average elevations of 100 to 350 feet above the surrounding landscape. The general topography is shaped by watershed drainage toward the No Name River, Sabattus River, and the Androscoggin River. The vegetation is mixed evergreen and deciduous second growth. The transmission line is edged with a mixture of light mixed hardwoods and stands of 50 to 70-foot tall evergreen trees. Land use in the immediate vicinity of the transmission line is predominantly woodland, farmland, and low to medium density rural residential.

Downtown Lewiston is within 0.5 miles to the west; Durham village is 3.0± miles to the south east; the village of New Gloucester is 4.2± miles to the west; and North Pownal is approximately 0.5 miles to the east.

Scenic resources with potential Project views that were evaluated include the Androscoggin River crossing in Auburn and No Name Pond in Lewiston.

Table 6-13. Elevated Viewpoints within 5 miles of Segment 4

MOUNTAIN	LOCATION	DIST	ELEV	DEVELOPMENT	SIGNIFICANCE	VISIBILITY
Bradbury Mountain	Pownal	2.5 mi	483'	Trail to Summit Picnic areas, Playground at lower elevation	State Park	No – Summit overlook is to the southeast away from the Project
Pisgah Hill	New Gloucester	1.0 mi	400'	Trail, parking at lower trailhead	RRCT – public access	No

Table 6-14. Waterbodies within 3 miles of Segment 4

WATERBODY	LOCATION	DIST +/-	SIZE (ac)	ACCESS	DEV	RES. CLASS/ MAN. CLASS	SCENIC RATING	PROJECT VISIBILITY
No Name Pond	Lewiston	0.3 mi	143	AC	DEV	3	-	Possible, up to 7 structures
Sabattus Pond	Greene, Sabattus	2.2 mi	1962, 566 within 3 miles	AC	DEV	1B	-	No
Runaround Pond	Durham	0.2 mi	91	AC	DEV, low	2	-	Not likely

6.2.4.3 Distance Zones

Foreground (0 to 1/2 mile in distance): Views of the transmission line corridor are limited to foreground views, primarily road crossings. Road crossings include:

- Lewiston: College Road, Old Green Road, Pond Road, Sabattus Street/Route 126, Riley Road, Grove Street, Old Webster Road, Maine Turnpike, Old Lisbon Road, Lisbon Street/Route 196, South Lisbon Road, Old Lisbon Road, Pinewoods Road, Ferry Road, Dyer Road, and Cotton Road.
- Auburn*:* Riverside Drive/Route 136.
- Durham: Cloutier Road, Bowen Road, Bowie Hill Rd. Ext, Stackpole Road, Auburn Pownal Road, Durham Road.
- Pownal: Fickett Road.

Midground (1/2 mile to four miles in distance): None

Background (greater than four miles): None

Table 6-15. Conservation Lands within 3 miles of Segment 4

CONSERVATION LAND	HOLDER	LOCATION	DIST +/-	SIZE (ac)	ACCESS	PROJECT VISIBILITY
Thorncrag Bird Sanctuary	SBC	Lewiston	730 ft	366	Private, publicly accessible	No
Garcelon Bog	ALT	Lewiston	1.5 mi	108	Private, publicly accessible	No
No Name Pond	ALT	Lewiston	0.6 mi	34	Restricted	No
Packard Farm	ALT	Lisbon	1.0 mi	194	Restricted	No
Packard-Littlefield Farm	ALT	Lisbon	1.5 mi	193	Restricted	No
Breton Preserve	ALT	Lisbon	1.6 mi	103	Private, publicly accessible	No
Durham Riverpark	ALT	Durham	2.5 mi	12.2	Private, publicly accessible	No
Davis Farm	RRCT, DA	Durham	1.7 mi	66	Restricted	No
Runaround Pond State Park	BPL	Durham	0.9 mi	129	Public	No
Pisgah Hill Preserve	RRCT, BPL	New Gloucester	1.0 mi	117	Public	No
Bradbury-Pineland Corridor	BPL	Pownal	0.9 mi	246	Public	No
Deerfield Pines Easements	RRCT	Pownal	0.5 mi	41	Private	No
Verrill Preserve	RRCT	Pownal	0.8 mi	17	Private	No
Snowfields Easement	RRCT	Pownal	1.1 mi	101	Private	No
Whitney Easement	RRCT	Pownal	2.0 mi	93	Private	No
Sweetser-Adcock Preserve	RRCT	Pownal	2.4 mi	14	Private	No
Crain-Lawrence Easement	RRCT	Pownal	1.9 mi	47	Private	No
Knight Farm Easement	RRCT	Pownal	2.9 mi	16.5	Private	No
Bradbury Mountain State Park	BPL	Pownal	1.7 mi	705	Public	No
Graham	RRCT	New Gloucester	1.5 mi	47	Private	No

Table 6-16. Structures on the National Register of Historic Places within 3 miles of Segment 4

STRUCTURES on the NATIONAL REGISTER OF HISTORIC PLACES	TOWN	PUBLICALLY ACCESSIBLE	PROJECT VISIBILITY
Briggs; William; Homestead	Auburn	No	No
Clifford, John D., House	Lewiston	No	No
Free Baptist Church	Lewiston	Yes	No
Frye; Sen. William P.; House	Lewiston	No	No
Hathorn Hall; Bates College	Lewiston	Yes	No
Holland; Captain; House	Lewiston	No	No
Holland-Drew House	Lewiston	No	No

STRUCTURES on the NATIONAL REGISTER OF HISTORIC PLACES	TOWN	PUBLICALLY ACCESSIBLE	PROJECT VISIBILITY
Jordan School	Lewiston	No - apts	No
Kora Temple	Lewiston	Yes	No
Lord; James C.; House	Lewiston	No	No
Marcotte Nursing Home	Lewiston	Yes	No
Martel; Dr. Louis J.; House	Lewiston	No	No
Saint Mary's General Hospital	Lewiston	Yes	No
St. Joseph's Catholic Church	Lewiston	Yes	No
Sts. Peter and Paul Church	Lewiston	Yes	No
Wedgewood; Dr. Milton; House	Lewiston	No	No
Webster Rubber Company Plant	Sabattus	No	No
Universalist Meeting House	New Gloucester	Yes	No
Pownal Cattle Pound	Pownal	Yes	No
Randall; Jacob; House	Pownal	No	No
West Durham Methodist Church	West Durham	Yes	No

6.2.4.4 Inventory of Science Resources within the Viewshed

FIGURE 6-4 - SEGMENT 4
MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST
(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Central Maine Power Company
Application Type: NRPA
Activity Type: Segment 4, Rebuild of Section 62 and 64
Activity Location: Lewiston, Auburn, Durham, and Pownal, Maine
Counties: Androscoggin and Cumberland
GIS Coordinates, if known: See project location maps from POWER Engineers
Date of Survey: May 24, June 2 and 3, 2017
Observer: Amy Segal, Steve Thompson
Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? None	□	□	□
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge? None	□	□	□
C. A state or federal trail?	■	□	□

The Thorncrag Bird Sanctuary is a 357-acre wildlife preserve in Lewiston established by the Stanton Bird Club. There will be no Project views from the Sanctuary.

A portion of the ITS snowmobile trail is co-located in the corridor for 3± miles of Segment 4.

D. A public site or structure listed on the National Register of Historic Places? ☐ ☐ ☐

There are no structures on the NRHP with Project views.

E. A National or State Park? ☐ ☐ ☐

Segment 4 will not impact Bradbury Mountain State Park, which is 2 miles to the southeast of the Surowiec Substation in Pownal.

F. 1) A municipal park or public open space? ☐ ☐ ☐

The Randall Road Ball Fields off Randall Road in Lewiston are located to the west to the existing transmission line corridor. There is currently a 130± foot wooded buffer between the fields and the transmission line which will remain. The proposed rebuilt Section 62 115kV transmission line structures will be shorter than the existing single pole structures that are now visible above the tree line. The typically 75' structures will be screened by the existing buffer remaining.

The Durham Boat Launch on the Androscoggin River in Durham is located 0.6 miles to the southeast of the Project. Views of the Project from the riverfront would be screened by a hedgerow of evergreen trees and existing riparian vegetation.

The 12-acre Durham River Park on the Androscoggin River, is owned by the Town of Durham and managed by the Durham Conservation Commission. The Androscoggin Land Trust holds a conservation easement on the property. The park is located approximately 3.2 miles downriver (southeast) from the proposed rebuilt Section 62 and 64 crossing of the River but intervening vegetation will screen the Project from view.

Runaround Pond Recreation Area, off Runaround Pond Road in Durham, is a 133 acre are managed by the Town of Durham for paddling, fishing, skating, and wildlife viewing. The boat launch is approximately 1.5 miles east of the existing transmission line. The transmission line and Section 62 and 64 do not cross the pond itself, but do cross the waterbodies that drain into the Pond. No additional vegetation will be removed therefore there will be no impacts to the Pond or Recreation Area.

2) A publicly owned land visited, in part, for the use , observation, enjoyment, and appreciation of natural or man-made visual qualities? ☐ ☐ ☐

See above.

3) A public resource, such as the Atlantic Ocean, a great pond or a navigable river? ■ ☐ ☐

The Rebuilt Section 64 crosses the No Name Brook, Stetson Brook, and Libby Brook, and both Sections 62 and 64 will cross Runaround Brook and the Androscoggin River. The No Name, Stetson, Libby, and Runaround Brooks are not rated in the Maine Rivers Study.

No Name Pond in Lewiston is a 143-acre pond located approximately 0.3 miles from Segment 4. From the pond, up to 7 structures and conductors may be visible above the treeline looking to the southwest at a distance of 1.6 miles. No Name Pond is not rated in Maine's Finest Lakes for scenic resources. It is a lightly developed pond with public access on the north end.

The proposed Rebuilt Sections 62 and 64 crosses the Androscoggin River between Lewiston and Auburn, adjacent to Riverside Drive/Route 136. The segment of the Androscoggin River where Segment 4 crosses was not rated as scenic by the Maine River Study. The existing wooden H-frame structures on the either side of the river crossing will be replaced with single pole steel structures made of self-weathering steel. The rebuilt section will be supported by single pole wooden structures typically 75' in height. No additional tree removal will be necessary. There will be minimal additional visual impact due to the presence of the existing 345kV transmission line and 115kV transmission lines. See Photosimulation 25.

2. What is the closest estimated distance to a similar activity? ■ ☐ ☐

The proposed Rebuilt Sections 62 and 64 transmission line will replace the existing H-frame structures in the same corridor adjacent to the existing 345kV transmission line corridor.

3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? ■Yes □No

The transmission line corridor is used throughout the year for a variety of recreational pursuits. The Androscoggin River is used for recreational boating and fishing.

6.2.4.5 Affected Population/User Expectations/ Continued Use and Enjoyment

There are four general groups of people who already see the existing transmission lines at times during the year and may be affected by the Project.

Motorists

The primary viewing population is the year-round residents who live or work in Lewiston, Auburn, Durham, New Gloucester, and Pownal. Motorists presently see the existing 115kV and 345kV transmission lines within the 340 to 400 feet wide corridor. The rebuilding of two 115kV transmission lines will minimally increase the overall visual impact of the transmission line as motorists cross under the lines. Segment 4 should not affect the continued use and enjoyment of the local roads.

Residents

There are approximately 102 homes located in Segment 4 that are directly adjacent to or have views of the existing transmission line corridor. The majority are single family homes on individual lots in rural settings or within small subdivisions or mobile home parks. For the most part, the homes are oriented away from the transmission line corridor. The majority of these homes will not be affected by the Segment 4 Rebuild. No additional tree removal will be required. Vegetation that was preserved abutting homes as part of the MPRP will be preserved in the proposed Segment 4.

Recreating Population

Current recreational users of the transmission line corridor are accustomed to seeing the existing transmission line corridors and structures. Local ATV and snowmobile clubs include northern portions of Segment 4 on their trail maps. The ITS 87 and ITS 115 snowmobile trails are located

on portions of Segment 4 in Lewiston. There should be minimal visual impact to recreational trail users. Recreational boaters using the Androscoggin River, or any of the small brooks crossed are accustomed to viewing the existing transmission lines while using the resource. Rebuilding Section 62 and 64 will have minimal visual impact to paddlers who cross under the lines and should not affect the continued use and enjoyment of those waterbodies. The Project views for boaters on No Name Pond will be in the midground/background viewing distance and should not affect the continued use and enjoyment of the pond.

Working Population

There are a several businesses located directly adjacent to or within close proximity to the existing transmission line corridor on in Lewiston. In both areas, the roadside character is generally open with minimal vegetative buffer and businesses oriented toward the roads. Interstate 95 crosses Lisbon Street 0.5 mile east of the transmission line corridor crossing. The proposal for Segment 4 should have a minimal visual impact to those working in these businesses. There are a few working farms within view of the transmission line corridor in Durham. In general, the workers are accustomed to seeing the transmission line, and the structures do not appear to interfere with the use of the land for farming operations.

6.2.4.6 Visual Impact Assessment

Landscape Compatibility

Color: The colors and materials to be used for most of the proposed Rebuilt Section 62 and 64 structures are similar in color to the existing wooden H-frame and single pole structures that viewers are familiar with. The new wood structures may initially be darker than the existing ones, but the contrast will diminish with time as normal aging occurs. The self-weathering steel structures used at the Androscoggin River crossing will present a moderate to strong color contrast with the existing wood structures. Where the 345kV transmission line is supported by 115' steel structures, the proposed single pole structures will contrast in color, similar to existing conditions.

Form: The forms of individual single pole structures are typical of those found throughout central and southern Maine. The single pole structures will present a minor contrast with the H-

frame structure within the corridor. The structures should result in a minimal contrast in form with the trees and occasional buildings that define or are visible from the edge of the corridor.

Line: New transmission lines will be parallel to the existing transmission lines within the corridor but slightly higher. The additional transmission lines are expected to result in a minor contrast in line due to their limited visibility outside of the transmission line corridor.

Texture: The texture of the proposed structures will be similar to the existing structures and should not cause a contrast in texture.

Scale Contrast

In most cases the proposed single pole 115V transmission line structures will be seen in context with the existing 345kV transmission line on H-frame structures already in the existing corridor, and against the 50 to 70-foot tall trees that line the corridor. The proposed single pole structures will typically be the same height as the 345kV transmission line structures. There will be no contrasts in scale as seen from the roads and rivers from the installation of the single pole structures.

Spatial Dominance

The Project will be contained within the existing transmission line corridor. When seen from the scenic resources identified above, the new transmission line will not dominate the landscape composition or the surrounding land forms, water bodies, or sky.

6.2.4.7 Mitigation Strategies

The primary mitigation strategy utilized for Segment 4 was rebuilding the 115kV transmission lines within the existing 115kV transmission line corridor which results in no additional tree removal. The structure material and form are also mitigation strategies. The proposed single pole 115kV structures will be made of wood which will be similar to the existing structures and minimize contrast in color, line, form and texture.

6.2.4.8 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts, Segment 4 will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in the surrounding area including in the municipalities in which it is located or in neighboring municipalities, where applicable.

6.2.5 SEGMENT 5

Segment 5 includes a new 26.5-mile 345kV transmission line from the existing Coopers Mills Substation in Windsor to the existing Maine Yankee Substation in Wiscasset and partial rebuilds of a 0.3 mile segment of the Section 3025 345kV transmission line and a 0.8mile segment of the Section 392 345kV transmission line outside of Coopers Mills Substation; and a 0.8 mile segment of the Section 66/80 115kV transmission line outside of Coopers Mills Substation. Segment 5 is located in the Towns of Windsor, Whitefield, Alna, Woolwich, and Wiscasset.

The northern portion of Segment 5 (0.7 mile +/-) will be located between four existing 115kV transmission lines and two existing 345kV transmission lines near Cooper's Mills Substation. The majority of the co-located 345kV transmission line will be located between an existing 115kV transmission line supported on wooden single pole structures typically 75' in height and one existing 345kV transmission line supported by wooden H-frame structures typically 75' in height. The southernmost section (2.9 miles +/-) from the Maine Yankee Substation crossing Route 1 and Montsweag Brook in Wiscasset includes two or three steel lattice structures, typically 125' in height. The co-located 345kV structure will be supported by wooden H-frame structures typically 75' in height, similar to the existing 345kV structures except for the southern section which will be supported on existing steel double-circuit lattice structures.

The typical existing corridor clearing width in the northern section is 575' to 640', the majority of the corridor ranges from 300' to 480' in width, and the southern section closest to Maine Yankee has an existing cleared corridor width of 370' to 550'. No additional tree removal is anticipated with the exception of a 1.4 mile section located between Old Stage Road and Bradford Road in Wiscasset, where 75' of additional tree removal will be necessary on the eastern side of the existing cleared corridor.

6.2.5.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on June 27, and July 3, 5, 6, 2017. Representative views from each road crossing within the Study Area are included in Appendix B, Maps 11 and 12. Other data sources include aerial photographs and cross sections provided by POWER Engineers; Chewonki website regarding the Montsweag Brook Buffer project; Midcoast Conservancy website; Boothbay Regional Land Trust; municipal comprehensive plans and zoning ordinances where available; Maine Trail Finder; and Google Earth.

6.2.5.2 Study Area

Site Context

The area within three miles of the northern portion of Segment 5 is characterized by low rolling hills and numerous linear ponds, small rivers and meandering streams draining towards the Sheepscot River. Most landforms rise 60 to 400 feet above the surrounding landscape. Vegetative cover throughout the segment is mixed coniferous and deciduous second growth, with many open fields. The transmission line is predominantly edged with 40 to 60-foot tall mixed second growth hardwoods and softwoods.

The area within three miles of the southern section of Segment 5 is characterized by rolling topography with steep-sided wooded ravines cut by streams draining south to Montsweag Bay and the Back River. The former Maine Yankee site at the southern end of Segment 5 is flat, with little vegetation except along the access roads. The vegetation on the land surrounding Segment 5 north of the Maine Yankee site is mixed deciduous and coniferous. The transmission line is edged with 40 to 60-foot tall mixed deciduous and coniferous trees.

Land uses in the immediate vicinity of the northern portion of Segment 5 are predominantly woodland, farmland, gravel pits, rural residential, and some limited commercial along Route 17. Land uses in the immediate vicinity of the southern portion of the Segment 5 transmission line are predominantly woodland, farmland, and rural residential, with highway commercial along the Route One corridor and industrial development near the Maine Yankee Substation site. Windsor is 1.5 miles to the northwest of Coopers Mills Substation, the village of Whitefield is 0.25 miles

to the east, the Head Tide Historic District in Alna is 0.5 mile to the east, and the Wiscasset town center is approximately 1.0 mile to the east of Segment 5.

The Scenic Resources that were evaluated include the Alonzo Garcelon and Earle R. Kelley Wildlife Management Areas, the West Branch of the Sheepscot River, Sheepscot River, Back River between Wiscasset and Westport Island, Montsweag Brook on the Wiscasset/Woolwich town line, and several waterbodies (Savade Pond, Long Pond, Travel Pond, Clary Lake, Dresden Bog). Historic structures and districts including Wiscasset Historic District and Head Tide Historic District were evaluated. Additional locally sensitive resources evaluated included villages, private and public conservation lands, and municipal lands. See Resource Tables below.

Table 6-17. Waterbodies within 3 miles of Segment 5

WATERBODY	LOCATION	DIST +/-	SIZE (ac)	ACCESS	DEV	RES. CLASS/ MAN. CLASS	SCENIC RATING	PROJECT VISIBILITY
Savade Pond	Windsor	1.5 mi	42	AC	DEV, 1 camp	1B/-	-	No
Givens Pond	Whitefield	2.4 mi	20	AC	DEV, 1 camp	1B/-	-	No
Tinkham Pond	Chelsea	2.9 mi	17	AC	DEV, 1 camp	3/-	-	No
Long Pond	Windsor, Somerville	1.8 mi	490	AC	DEV	-	-	No
Travel Pond	Jefferson	2.3 mi	102	AC	DEV	1B/-	-	No
Clary Lake	Jefferson	2.5 mi	666	AC	DEV	1B/-	-	No, flat terrain and distant
Joys Pond	Pittston	1.6 mi	21	AC	DEV	3/-	-	No
Weary Pond	Jefferson	2.3 mi	42	AC	UNDEV	-	-	No
Pinkham Pond	Alna	1.2 mi	21	AC	DEV, 1 camp	3/-	-	No
Dresden Bog Reservoir	Dresden	1.6 mi	185	AC	DEV	-	-	No
Gardiner Pond	Wiscasset	1.6 mi	78	AC	UNDEV	2/-	-	No
Lily Pond	Edgecomb	2.7 mi	67	AC	DEV, 1 camp	1B/-	-	No

Table 6-18. Conservation Lands within 3 miles of Segment 5

CONSERVATION LAND	HOLDER	LOCATION	DIST +/-	SIZE (ac)	ACCESS	PROJECT VISIBILITY
Savade Pond Boat Access	IFW	Windsor	1.5 mi	2 parcels, 71	Public	No
Alonzo H. Garcelon	WMA, IFW	Windsor	2.1 mi	2,300, 700 within 3 miles	Public	No
Paradise Green	Private	Whitefield	1.5 mi	345	Restricted	No
Haines	Private	Whitefield	0.2 mi	88	Private	No
Whitefield Salmon Preserve	Private	Whitefield	1.0	32	Public access allowed	No
Crowe Rope	IFW	Whitefield	1.0 mi	57	Private, possible access	No
Happy Farm	Private	Whitefield	1.0 mi	64	Restricted	No
Uncas	MFT	Whitefield	1.5 mi	57	Restricted	Not likely
Hidden Valley Farm	MFT	Whitefield, Alna	1.5 mi	529	Restricted	No
Heart of the Watershed, Barth Parcels	Private	Alna	1.4 mi	194	Public	No
River Glen	Private	Whitefield	0.7 mi	26	Restricted	No
Holy Apostles	Private	Whitefield	0.4 mi	20	Restricted	No
Earle R. Kelly (Dresden Bog)	WMA, IFW	Alna, Dresden	1.0 mi	853	Public	No
McCullough	Private	Alna	1.3 mi	37	Private, allowed for some uses	No
Walker	Private	Alna	1.4 mi	91	Restricted	No
Bass Falls Preserve	Private	Alna	1.7 mi	31	Public access allowed	No
Fossell	Private	Alna	1.8 mi	4.3	Private, allowed for some uses	No
Wood	Private	Alna	2.2 mi	10.6	Restricted	No
Philbrick	Private	Alna	1.6 mi	60	Restricted	No
Biddle Preserve	Private	Alna	2.0 mi	16	Public access allowed	No
Brun Life Estate	Private	Wiscasset	1.4 mi	11.5	Private, allowed for some uses	No
Clark's Point	MCHT	Wiscasset	2.2 mi	83	Private, no public access	No
Sortwell Memorial Forest	NEFF	Wiscasset	0.6 mi	96	Public access allowed	No
Eaton Farm	CF	Woolwich	0.2 mi	198	Private, allowed for some uses	No
Oak Island	IFW	Woolwich	2.1 mi	71	Possible access	No
Ovens Mouth West Preserve	BRLT, MCHT	Boothbay	2.9 mi	49	Private, allowed for general uses	No
Fowle's Cove	MCHT	Westport Island	1.7 mi	56	Private, no public access	No

Table 6-19 Structures on the National Register of Historic Places within 3 miles of Segment 5

STRUCTURES on the NATIONAL REGISTER OF HISTORIC PLACES	TOWN	PUBLICALLY ACCESSIBLE	PROJECT VISIBILITY
Alna Meetinghouse	Alna	Yes	No
Alna School	Alna	Yes	No
Carleton; Moses; House	Alna	No	No
Head Tide Historic District	Alna	Yes	No
Parson's Bend	Alna	No	No
Nickels-Sortwell House	Wiscasset	Inn	No
Red Brick School	Wiscasset	No	No
Scott; Capt. George; House	Wiscasset	No	No
U.S. Customhouse (Old Customhouse) and Post Office	Wiscasset	Yes	No
Wiscasset Historic District	Wiscasset	Yes	No
Wiscasset Jail and Museum	Wiscasset	Yes	No
Congregational Church of Edgecomb	Edgecomb	Yes	No
Fort Edgecomb	Edgecomb	Yes	No
Moore; John; House	Edgecomb	No	No
Parsons; Stephen; House	Edgecomb	No	No
Parsons; Josiah K.; Homestead	Westport	No	No
Moody Mansion	Pittston	No	No
Clary Mill	Whitefield	No	No

6.2.5.3 Distance Zones

Foreground (0 to 1/2 mile in distance): The majority of views of the transmission line corridor are foreground views, primarily at road crossings. Road crossings include:

- Windsor: Maxcy's Mill Road, Griffin Road, Route 32/Augusta Rockland Road
- Whitefield: Doyle Road, Partridge Lane, Devine Road, Cooper Road, Route 126/Gardiner Road, Philbrick Lane, Route 194/Pittston Road, Route 218/Wiscasset Road
- Alna: Route 218/Wiscasset Road, Rabbit Path Rod, Lothrop Road
- Woolwich: Old Stage Road
- Wiscasset: Route 27/Gardiner Road, Foye Road, Willow Lane, Bradford Road, Old Bath Road, US Route 1 (Bath Road), Route 144 (Birch Point Road), Old Ferry Road

Midground (1/2 mile to 3 miles in distance): In a few locations there will be midground views of the project where the existing corridor crosses over open fields adjacent to roads. Those locations include:

- Windsor: Intersection of Route 17 and 32 where tops of a few structures may be visible approximately 1.4 miles to the east and approaching the existing crossing on Route 32
- Whitefield: Approaching the existing crossing over open fields near Route 194
- Wiscasset: Approaching Route 27

Background (greater than 3 miles): None.

6.2.5.4 Inventory of Scenic Resources within the Viewshed

FIGURE 6-5 - SEGMENT 5
MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST
(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Central Maine Power Company
Application Type: Site Law/NRPA
Activity Type: Segment 5, Co-located 345kV transmission line
Activity Location: Windsor, Whitefield, Alna, Woolwich, Wiscasset
County: Kennebec and Lincoln
GIS Coordinates, if known: See project location maps
Date of Survey: June 27, and July 3, 5, 6, 2017
Observer: Amy Segal
Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? None	□	□	□
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge? The Alonzo H. Garcelon Wildlife Management Area in Windsor and the Earle R. Kelley (Dresden Bog) Wildlife Management Area in Dresden and Alna are within the Study Area, but the Project will not be visible from either area due to intervening topography and vegetation.	□	□	□
C. A state or federal trail? None There are no ITS Routes crossing the corridor	□	□	□
D. A public site or structure listed on the National Register of Historic Places? None. There are 19 structures on the National Register of Historic Places within the Segment 5 APE, including the Wiscasset Historic District and the Head Tide Historic District in Alna. The Wiscasset Historic District includes most of the central village in Wiscasset with over 22 contributing structures. The village of Wiscasset is located 1.4 miles to the east of the Project. The Head Tide Historic District was formerly a mill town on the Sheepscot River on Head Tide Road. The mills have been removed but a dam, bridge, cluster of historic homes, the store, the Head Tide Church, and school house remain. The Head Tide Historic District is 0.5 miles east of the Project. The Project will not be visible from any of the structures or either District. See the Resource Chart for list of structures. Photos of the structures and districts are included in Appendix B.	□	□	□
E. A National or State Park? None	□	□	□

F. 1) A municipal park or public open space? None □ □ □

Several privately owned but publicly accessible conservation areas were evaluated. None of these areas will have Project views. See Resource Table.

2) A publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities? None. □ □ □

The Wiscasset Community Trails/West Woods Trails (including the Town-owned Forest, Sortwell Memorial Forest, and Morris Farm) are 0.5 miles east of the Project and will not have Project views. The Project will not be visible from the following evaluated local resources: Bass Falls Preserve in Alna, Drucker Parcel in Whitefield, and Clark's Point, Sortwell Memorial Forest, Eaton Farm, and Fowles Cove in Wiscasset. Private conservation parcels with restricted access were not evaluated (Paradise Green, Happy Farm, Uncas in Whitefield; Blueberry Hill Farm in Jefferson; Hidden Family Farm, River Glen, Holy Apostles, Sweet Fern Farm, Walker parcel, Philbrick parcel, Wood parcel, and Moses Carleton parcels in Alna).

3) A public resource, such as the Atlantic Ocean, a great pond or a navigable river? ■ □ □

None of the ponds or lakes within the 3 mile Study Area will have Project views. Resources evaluated include Savade Pond including the public boat launch in Windsor, Long Pond in Somerville, Barton Road boat launch on Long Pond and Travel Pond in Jefferson, Whitefield Salmon Preserve and IF&W on the Sheepscot River and Clary Lake (portion within 3 miles) in Whitefield, and Pinkham Pond in Alna.

The Project will be visible from the West Branch of the Sheepscot River in Windsor and from the Montsweag Brook in Wiscasset within the existing cleared transmission line corridor. Approximately 0.4 miles of West Branch of the Sheepscot River is located within existing cleared corridor south of Maxcy's Mill Road that ranges in width from 300' to 600'. The transmission line crossing of Montsweag Brook is at the southern end of the Montsweag Dam Preserve, a 22-acre area owned by the Town of Wiscasset. The Montsweag Brook and Montsweag Dam Preserve are used mainly for research by the State and Chewonki staff and students for ongoing monitoring after the removal of the Lower Montsweag Dam. There should be a minimal visual impact to these waterbodies since the cleared width of the transmission line corridor will not change and the riparian vegetation within the stream crossing will be preserved.

At its closest point, the Maine Yankee Substation is approximately 1,000 feet from the main channel of the Back River in Wiscasset. The Back River is not included in the Maine Rivers Study. The additional 345kV conductors (on existing lattice structures) connecting to Maine Yankee will not be visible from the river due to shoreline topography and riparian vegetation. There will be no Project views from the Old Ferry Road boat landing in Wiscasset or from the Wright Landing Public Boat Launch in Westport.

The Sheepscot River from Wiscasset to the headwaters is rated as an "A" river by the Maine Rivers Study for its geologic/hydrologic, critical/ecologic, scenic, anadromous fisheries, inland fisheries, whitewater boating, and historic resources. The Project will not be visible from the main branch of the Sheepscot River.

2. What is the closest estimated distance to a similar activity? ■ □ □

For its entire length Section 5 will be constructed within the existing transmission line corridor.

3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? ■Yes □No

The West Branch of the Sheepscot River may be used in the spring, summer, and fall for boating and fishing.

6.2.5.5 Affected Population/User Expectations/ Continued Use and Enjoyment

There are four general groups of people who already see the existing transmission lines at times during the year and may be affected by the construction of the project. No recreational resources would be affected by or within Segment 5.

Motorists

The primary viewing population is the year-round residents who live or work in or near Windsor, Whitefield, Alna, Woolwich, and Wiscasset as well as the general population who use US Route 1 and State Routes 32, 126, 194, 218, 27, and 144. Motorists presently see a variety of configurations within the transmission line corridor in Segment 5: two or three steel lattice structures for 115kV and 345kV transmission lines crossing the southern areas of Wiscasset and Woolwich and a 345kV transmission line on 75' tall H-frame structures and 115kV transmission line on 75' single pole structures in Alna, Whitefield, and Windsor. The additional double circuit 345kV conductors on the existing lattice structures crossing Route 1 will be minimally visible. The additional 345kV transmission line between the existing 115kV and 345kV transmission lines within an existing clearing will minimally increase the overall visual impact for motorists crossing under the lines.

Residents

There are approximately 33 homes located directly adjacent to, or that may have a view of, the existing transmission line and the proposed Segment 5. The majority are single family homes on individual lots or farms in rural settings. All of the homes have views of the existing transmission lines over open fields or openings in wooded areas. For the most part, the homes are oriented away from the transmission line corridor, and in most locations homeowners have maintained a sufficient amount of vegetation on their properties to provide an adequate buffer between themselves and the existing transmission lines. No additional tree removal is anticipated except for a 1.4 mile section located between Old Stage Road and Bradford Road in Wiscasset, where 75' of additional tree removal will be necessary on the eastern side of the existing cleared corridor. This section of additional clearing will not decrease any existing buffers between homes and the existing clearing. There should be a minimal visual impact on the residential properties that are adjacent to or within view of the transmission line corridor.

Recreating Population

The existing transmission line corridor is used informally by ATV riders, snowmobilers, and walkers. Snowmobile / ATV trails are not considered scenic resources of state or national significance. There are no designated ITS routes that use the transmission line corridor or cross it. Current recreational users are accustomed to seeing the existing 115kV and 345kV structures and conductors. There should be minimal visual impact to these informal recreational users.

Working Population

The major concentration of workers is at the former Maine Yankee site, at the farms on the surrounding roads, and at commercial establishments on Routes 1, 27, and 32. The additional conductors and structures should be a minimal change in context given the existing transmission structures. There will be minimal visual impacts to the working population in the area.

6.2.5.6 Visual Impact Assessment

Landscape Compatibility

- **Color**: The colors and materials to be used for the proposed structures are similar to the existing wooden H-frame structures that are already used in the existing transmission line corridor. The new wood structures may initially be darker than the existing ones, but the contrast will diminish with time as normal aging occurs.
- **Form**: The forms of individual 345kV H-frame structures are typical of those found throughout central and mid-coast Maine. There should be no contrast in form.
- **Line**: The relocated 345kV transmission line will be parallel to the existing transmission lines within the corridor. There should no contrast in line.
- **Texture**: The texture of the proposed structures will be similar to the existing structures and should not cause a contrast in texture.

Scale Contrast

The relocated 345kV transmission line will be installed on H-frame structures that are typically 75± feet tall, in an existing transmission line corridor that is 370 to 550± feet wide, and will be

seen in context of the existing 115kV and 345kV structures that are typically 75± feet in height. Where trees line the transmission line corridor, they average 50 to 70 feet in height. The new transmission structures will be in scale with the existing structures and surrounding vegetation, so there will not be a contrast in scale.

Spatial Dominance

Throughout most of its length, the new 345kV transmission line for Segment 5 will be contained within the existing cleared transmission line corridor. The only scenic resources with visibility will be the West Branch of the Sheepscot River and Montsweag Brook, which are both within existing cleared corridors. In these locations, Segment 5 will not dominate the landscape composition or the surrounding land forms, water bodies, or sky.

6.2.5.7 Mitigation Strategies

The primary mitigation strategy utilized for Segment 5 was co-locating the proposed 345kV transmission line within an existing 115kV and 345kV transmission line corridor. The structure material and form are also mitigation strategies. The proposed H-frame 345kV structures will be made of wood which will be similar to the existing structures and minimize contrast in color, line, form and texture.

6.2.5.8 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts, Segment 5 of the NECEC Project will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in the surrounding area including in the municipalities in which it will be located and in neighboring municipalities, where applicable.

6.3 SUBSTATION ASSESSMENTS

6.3.1 COOPERS MILLS ROAD SUBSTATION

The Coopers Mills Road Substation is located on the west side of Coopers Mills Road in Windsor. The NECEC Project includes installing an additional 345kV AC Transmission Line Terminal and additional 345kV +/-200MVAR STATCOM (+/-400MVAR total with the +/-200MVAR existing) at the existing Coopers Mills Substation. The additional components will be located on the north side of the Substation within the existing 17.0 acre substation area. No additional tree removal is required. The Substation is currently most visible from the northern end of Coopers Mills Road.

6.3.1.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on July 5, 2017. Representative views from road crossings within the Study Area are included in Appendix B: Study Area Photographs, Map 12. Other data sources include the site plans and cross sections provided by POWER Engineers for the Project; Windsor comprehensive plans and zoning ordinances; Maine River Study; and Google Earth.

6.3.1.2 Study Area

Site Context

The area within three miles of the Coopers Mills Road Substation is characterized by open fields and woodland, and meandering streams. Nearby land uses include rural residential, forestland, agriculture, and existing transmission lines. The closest population centers are the villages of Windsor, approximately 1.5 miles to the northwest of the Substation site. There are no views of the Substation from the village. The closest scenic resource is the West Branch of the Sheepscot River, 0.3± miles west of the Substation. Likewise, the NECEC Project components will not be visible from the West Branch of the Sheepscot River.

Distance Zones

Foreground (0 to 1/2 mile in distance): Views of the Substation will be primarily limited to foreground views from Coopers Mills Road in Windsor. The Substation is set back approximately 1,000 feet from the road.

Midground (1/2 mile to 3 miles in distance): None.

Background (greater than 3 miles): None.

6.3.1.3 Inventory of Scenic Resources within the Viewshed

FIGURE 6-1-Coopers Mills Road Substation
MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST
(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Central Maine Power Company
Application Type: Site Law /NRPA
Activity Type: Additions to the Coopers Mills Substation
Activity Location: Windsor
County: Kennebec
GIS Coordinates, if known: See project location maps from POWER Engineers
Date of Survey: July 5, 2017
Observer: Amy Segal
Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? None	☐	☐	☐
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge? None	☐	☐	☐
C. A state or federal trail? None	☐	☐	☐
D. A public site or structure listed on the National Register of Historic Places? None.	☐	☐	☐
E. A National or State Park? None	☐	☐	☐
F. 1) A municipal park or public open space? None	☐	☐	☐
2) A publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities? None.	☐	☐	☐

The NECEC Project will not be visible from the Alonzo H. Garcelon Wildlife Management Area, located 2.4 miles to the west of the NECEC Project.

The NECEC Project will not be visible from Savade Pond or its boat access, located 1.5 miles to the northeast.

3) A public resource, such as the Atlantic Ocean a great pond or a navigable river? ☐ ☐ ☐

The West Branch of the Sheepscot River is 0.3± mile west of the site of the proposed substation and separated by dense woodland (some of which has been selectively harvested recently). The West Branch is rated as an "A" river by the Maine Rivers Study for its anadromous fisheries resources. The Study determined that the scenic resources of the West Branch were not unique or significant (*i.e.*, they did not meet a minimum standard of significance). The NECEC Project will not be visible from the River due to intervening vegetation. The proposed NECEC Project will have no visual impact on the West Branch of the Sheepscot River.

2. What is the closest estimated distance to a similar activity? ■ ☐ ☐

The NECEC Project components are located within the existing Coopers Mills Substation.

3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? ■ Yes ☐ No

None

6.3.1.4 Affected Population/User Expectations/Continued Use and Enjoyment

There are three general groups of people who already see the existing Coopers Mills Substation and may be affected by the NECEC Project.

Motorists

The primary viewing population are the year-round residents who live or work in the vicinity of the Substation. Motorists on Coopers Mills Road currently see the Substation and existing 345kV and 115kV transmission lines in a 270± foot-wide transmission line corridor east of the Substation site. From Coopers Mills Road the northern portion of the Substation and the upper part of the Substation A-frame dead end structures and 180'± microwave tower are visible across the fields and cleared transmission line corridor at a distance of 1,200' to 1,500'±. The additional 345kV AC Transmission Line Terminal and additional 345kV +/-200MVAR STATCOM will be visible in context of the existing components. The NECEC Project will have minimal to no additional visual impact on motorists.

Residents

Three abutters on the north side of Coopers Mill Road will have foreground views of the NECEC Project. These residential properties are single family homes surrounded by open agricultural fields. There will be minimal additional visual impact to these properties due to the presence of

the Substation, the existing topography, and vegetation located on the north side of the Substation.

Working Population

There should be virtually no visual impacts to the working population in the area (primarily farmers) since the NECEC Project will be located within the existing substation boundary.

6.3.1.5 Visual Impact Assessment

Landscape Compatibility

Color: The 345kV AC Transmission Line Terminal and additional 345kV +/-200MVAR STATCOM structures will be the same galvanized metal color as the existing substation components. There will be minimal contrast in color within the substation site.

Form: The forms proposed for the 345kV AC Transmission Line Terminal and additional 345kV +/-200MVAR STATCOM will be the similar to the existing substation components. There will be no additional contrast in form with the existing substation.

Line: While these components will be minimally visible, they will appear similar in form and line to the existing substation.

Texture: The texture of the NECEC Project components will be the same as the existing substation. There will be no additional contrast in texture.

Scale Contrast

The Terminal structure and STATCOM components will be the same height as the existing substation components permitted for MPRP. There should be no scale contrast with the existing substation.

Spatial Dominance

Most of the components within the existing substation are approximately the same height as or shorter than the surrounding trees. The additional Terminal structure and STATCOM components will be visible in the context of the Substation and existing transmission structures. The Substation will not be visible from any scenic resources, nor will it dominate the landscape composition or the surrounding land forms, water bodies, or sky.

6.3.1.6 Mitigation Strategies

The primary mitigation strategy used is to site the NECEC Project within the existing substation facility. No additional tree removal will be required. Mitigation completed for MPRP (earth berms and preserved vegetation) have been installed and provide partial screening of the facility from Coopers Mills Road.

6.3.1.7 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts, the 345kV AC Transmission Line Terminal and additional 345kV +/-200MVAR STATCOM at the Coopers Mills Substation will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in the surrounding area including in the municipalities in which it is located or in neighboring municipalities, where applicable.

6.3.2 CROWLEY SUBSTATION

The Crowley Substation is located approximately 1,400' south of Route 196 in Lewiston. The NECEC Project includes installing 115kV Switch and bus wire replacements at the existing Substation. The additional components will be located within the existing structure. No additional tree removal is required. The substation is currently not visible from any public viewpoints.

6.3.2.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on May 24, 2017. Representative views from road crossings near the Study Area are included in Appendix B: Study Area Photographs, Map 9 and 10. Other data sources include the site plans and cross sections provided by POWER Engineers for the Project; Lewiston comprehensive plans and zoning ordinances; and Google Earth.

6.3.2.2 Study Area

Site Context

The area within three miles of the Crowley Substation is characterized by open fields and woodland, and meandering streams/wetlands. Nearby land uses include rural residential, forestland, agriculture, existing 115kV transmission lines, light commercial along Route 196 and Interstate 95. The closest population centers is Lewiston to the west. The closest scenic resource is the Androscoggin River approximately 3.0 miles to the southwest.

Distance Zones

Foreground (0 to 1/2 mile in distance): None.

Midground (1/2 mile to 3 miles in distance): None.

Background (greater than 3 miles): None.

6.3.2.3 Inventory of Scenic Resources within the Viewshed

FIGURE 6-1-Crowley Substation
MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST
(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Central Maine Power Company
Application Type: Site Law /NRPA
Activity Type: Additions to the Crowley Substation
Activity Location: Lewiston
County: Androscoggin
GIS Coordinates, if known: See project location maps from POWERS Engineers
Date of Survey: May 24, 2017
Observer: Amy Segal
Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? None	☐	☐	☐
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge? None	☐	☐	☐
C. A state or federal trail? None	☐	☐	☐

D. A public site or structure listed on the National Register of Historic Places? None.	□	□	□
E. A National or State Park? None	□	□	□
F. 1) A municipal park or public open space? None	□	□	□
2) A publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities? None. None.	□	□	□
3) A public resource, such as the Atlantic Ocean a great pond or a navigable river? None.	□	□	□
2. What is the closest estimated distance to a similar activity? The NECEC Project components are located within the existing Crowley Substation.	■	□	□

3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? ■Yes □ No None. If there are recreational users of the transmission corridor their use would be potentially year-round.

6.3.2.4 Affected Population/User Expectations/Continued Use and Enjoyment

There are no motorists, residents or working population who would be affected by upgrades to the Crowley Substation. There do not appear to be any ITS Snowmobile Routes located within the Section 62 and 64 transmission line corridor adjacent to the Crowley Substation. The corridor maybe used as a local trail.

6.3.2.5 Visual Impact Assessment

Landscape Compatibility

Color: The 115kV Switch and bus wire replacements will be the same galvanized metal color as the existing substation components. There will be no contrast in color.

Form: The forms proposed for the 115kV Switch and bus wire replacements will be the similar to the existing substation components. There will be no additional contrast in form.

Line: The lines created by the 115kV Switch and bus wire replacements will not be visible from public viewpoints.

Texture: The texture of the 115kV Switch and bus wire replacements components will be the same as the existing substation. There will be no additional contrast in texture.

Scale Contrast

The 115kV Switch and bus wire replacements components will be the same height as the existing substation components. There should be no scale contrast with the existing substation.

Spatial Dominance

Most of the components within the existing substation are approximately the same height as or shorter than the surrounding trees. The additional 115kV Switch and bus wire replacements would be visible in the context of the substation and existing transmission structures. The substation will not be visible from any scenic resources, nor will it dominate the landscape composition or the surrounding land forms, water bodies, or sky.

6.3.2.6 Mitigation Strategies

The primary mitigation strategy used is to upgrade within an existing substation. No additional tree removal will be required.

6.3.2.7 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts, the 115kV Switch and bus wire replacements at the Crowley Substation will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in the surrounding area including in the municipalities in which it is located or in neighboring municipalities, where applicable.

6.3.3 LARRABEE ROAD SUBSTATION

The Larrabee Road Substation is located at the eastern end of Larrabee Road in the northern part of Lewiston. The Substation was constructed as part of MPRP at the terminus of, or adjacent to, several existing transmission line corridors. As part of the NECEC Project, the existing Larrabee Road 345/115 kV 448MVA autotransformer will be replaced by a 600MVA autotransformer and an additional 345kV AC Transmission Line Terminal will be installed within the Substation.

6.3.3.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on June 2, 2017. Representative views from road crossings within the Study Area are included in Appendix B: Study Area Photographs, Map 9. Other data sources include the aerial photographs and cross sections provided by POWER Engineers for the Project; Lewiston comprehensive plans and zoning ordinances; Maine Trail Finder; and Google Earth.

Site Context

The area within three miles of the Larrabee Road Substation is characterized by mixed woodland, open fields, and widespread commercial, light industrial, and residential development. Nearby land uses include single-family homes, commercial development along Route 11/100/202, gravel pits, and existing transmission lines.

The scenic resources within the 3 to 5 mile Study Area of the Larrabee Road Substation are the Androscoggin River, (0.5 mile to the west), the Androscoggin Riverlands State Park in Turner (3.3 miles to the northwest), Thorncrag Sanctuary in Lewiston (1.4 miles to the southeast), Androscoggin River Preserve in Lewiston (1.0 mile to the southwest), the East Auburn Community School (1.6 miles to the southwest) and Mount David on the Bates College Campus in Lewiston (2.5 miles to the southwest). The only scenic resource with potential views of the additions to the Larrabee Road Substation is Mount David.

Distance Zones

Foreground (0 to 1/2 mile in distance): Public views of the Substation will be limited to foreground views from the end of Larrabee Road in Lewiston. The Substation will be located approximately 400 feet from the nearest homes on Larrabee Road. Preserved riparian vegetation and buffer plantings on the western side of the property screen the Substation from view from most of the homes on the road.

Midground (1/2 mile to 3 miles in distance): The only scenic resource and elevated viewpoint with potential Project views is Mount David on the Bates College Campus in Lewiston, located 2.5 miles southwest of the Substation.

Background (greater than 3 miles): None.

6.3.3.2 Inventory of Scenic Resources within the Viewshed

FIGURE 6-1-Larrabee Road Substation Upgrades
MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST
(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Central Maine Power Company
Application Type: Site Law/NRPA
Activity Type: Upgrades to the Larrabee Road Substation
Activity Location: Lewiston
County: Androscoggin
GIS Coordinates, if known: See project location maps from POWER Engineers
Date of Survey: June 2, 2017
Observer: Amy Segal
Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? None	□	□	□
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge? None	□	□	□
C. A state or federal trail? None	□	□	□
D. A public site or structure listed on the National Register of Historic Places? None	□	□	□
E. A National or State Park? None	□	□	□
F. 1) A municipal park or public open space? None	□	□	□
2) A publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities?	□	□	■

Mount David is a 5 minute hike within the Bates College Campus on the corner of College Street and Mountain Avenue in Lewiston. The short hike to the rock outcrop at the summit affords 360 degree views of Lewiston and the surrounding landscape. The existing Larrabee Road Substation is visible 2.5 miles +/- to the northeast from the summit Upgrades to the Substation, the new Section 64 Rebuild transmission line, and the 345 kV transmission line connection between the new Merrill Road Converter Station and Larrabee Road Substation will be minimally noticeable at this distance. There will be minimal visual impact to Mount David.

3) A public resource, such as the Atlantic Ocean a great pond or a navigable river? None	□	□	□

2. What is the closest estimated distance to a similar activity? ■ □ □

The additions to the Larrabee Road Substation will occur within the existing facility.

3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? ■ Yes □No

Mount David is used throughout the year.

6.3.3.3 Affected Population/User Expectation/Continued Use and Enjoyment

There are three general groups of people who may be affected by the construction of the new Substation.

Motorists

The proposed Substation is located at the end of a dead-end road, therefore the number of motorists who will see the facility is very limited. The Substation should have a minor visual impact on motorists.

Residents

One home at the eastern end of Larrabee Road abuts the Substation site. The existing 150' +/- vegetative buffer will remain for the home on the north side of the road. Visual impacts on this property should be none to minimal. The other seven private homes on Larrabee Road do not have views of the Substation.

Recreating Population

Hikers using Mount David currently see the Larrabee Road Substation from the summit. The view is of a mostly wooded landscape but it also includes open fields, buildings on Bates Campus and in the City of Lewiston, and communication towers. The vegetation at the summit screens the majority of the foreground development. The additions to the Larrabee Road Substation will be minimally visible from the summit and therefore should not negatively affect the continued use and enjoyment of the resource.

6.3.3.4 Visual Impact Assessment

Landscape Compatibility

Color: The new 600MVA autotransformer will be the same galvanized metal color as the existing 345/115 kV 448MVA autotransformer. The additional 345kV AC Transmission Line Terminal will be similar in color to the existing terminal structures.

Form: The forms proposed for the 600MVA autotransformer and 345kV AC Transmission Line Terminal will be similar to the existing Substation components. There will be no additional contrast in form with the existing Substation.

Line: While these components will be minimally visible, they will appear similar in form and line to the existing Substation.

Texture: The texture of the NECEC Project components will be the same as the existing Substation. There will be no additional contrast in texture.

Scale Contrast

The proposed 600MVA autotransformer and 345kV AC Transmission Line Terminal will be located on the west and north side of the existing Larrabee Road Substation. The proposed components will be the same heights as the existing Substation components which range from 25' to 105' in height, so there will be no scale contrast. The vegetation surrounding the Substation is approximately 50 to 70 feet tall and is generally sufficient to screen most of the facility from public view. There will be minimal scale contrast.

Spatial Dominance

Most of the components within the existing Substation are approximately the same height as or shorter than the surrounding trees with the exception of the 105' A-frame structure. The additional 600MVA autotransformer and 345kV AC Transmission Line Terminal components will be visible in the context of the Substation and existing transmission structures. The additional Substation components will not be highly visible from any scenic resources, nor will they dominate the landscape composition or the surrounding land forms, water bodies, or sky.

6.3.3.5 Mitigation Strategies

The primary mitigation strategy used is to site the NECEC Project within the existing Substation facility. No additional tree removal will be required. Mitigation completed for MPRP (buffer planting plan) has been installed and provides partial screening of the facility from the end of Larrabee Road. The Substation will not be visible from any public roads, with the exception of the end of Larrabee Road. Preserved vegetation surrounding the Substation will screen the NECEC Project components from most public views.

6.3.3.6 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts, the replacement 600MVA autotransformer and 345kV AC Transmission Line Terminal at the Larrabee Road Substation will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in the surrounding area including in the municipalities in which it is located or in neighboring municipalities, where applicable.

6.3.4 MERRILL ROAD CONVERTER SUBSTATION

The new 345kV AC to +/-320kV HVDC 1200MW Merrill Road Converter Substation will be located approximately 2,400 feet north of Merrill Road and approximately 1.0 mile north of the Larrabee Road Substation in Lewiston. The major components of the Converter Substation which include the HVDC Plus Converter Equipment Enclosure Building, Control Building, Converter Precharging Unit and Transformers will be screened from public views by preserved vegetation. The required grading (cut slopes) on the east side of the Substation will also provide additional screening from abutters to the east of the Substation. The Enclosure Building will be approximately 60’ in height and the tallest component of the converter Substation will be approximately 85’ in height. The surrounding mixed deciduous and evergreen tree range in height from 50’ to 80’+/-. A 20’ wide gravel access road, gate, and grassed lined stormwater facility within the existing transmission line corridor will be visible from Merrill Road. The Project also includes a new 1.2 mile 345kV AC Transmission Line from the new Merrill Converter Substation to the existing Larrabee Road Substation (Section 3007). The cleared corridor will be widened by 75’ on the west side to accommodate the proposed 345 kV to +/- 320 kV transmission line connection to the Larrabee Road Substation.

6.3.4.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on June 2, 2017. Representative views from road crossings within the Study Area are included in Appendix B: Study Area Photographs, Map 9. Other data sources include the aerial photographs and cross sections provided by POWER Engineers for the Project; Lewiston comprehensive plans and zoning ordinances; and Google Earth.

6.3.4.2 Study Area

Site Context

The area within three miles of the Merrill Road Converter Substation is characterized by mixed woodland, open fields, and widespread commercial, light industrial, and residential development. Nearby land uses include single-family homes, commercial development along Route 11/100/202, gravel pits, and existing transmission lines.

There are no scenic resources with potential views of the proposed Converter Substation. The closest scenic resources are the Androscoggin River, (0.6 mile to the west), the Androscoggin Riverlands State Park (2.5 miles to the northwest), Thorncrag Sanctuary (2.4 miles to the southeast), Androscoggin River Preserve (2.1 miles to the southwest), the East Auburn Community School (1.9 miles to the southwest) and the ITS Snowmobile Route 87. The view from Mount David will not include the Converter Substation.

Distance Zones

Foreground (0 to 1/2 mile in distance): Public views of the Converter Substation will be very limited. The access road, gate and stormwater facilities will be the most visible component from Merrill Road.

Midground (1/2 mile to four miles in distance): None.

Background (greater than four miles): None.

6.3.4.3 Inventory of Scenic Resources within the Viewshed

FIGURE 6-1-Merrill Road Converter Substation
MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST
(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Central Maine Power Company
Application Type: Site Law/NRPA
Activity Type: New Merrill Road Converter Substation and 1.2 mi 345kV transmission line
Activity Location: Lewiston
County: Androscoggin
GIS Coordinates, if known: See project location maps from POWER Engineers
Date of Survey: June 2, 2017
Observer: Amy Segal
Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? None	□	□	□
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge? None There will be no views from the Thorncrag Sanctuary or the Androscoggin River Preserve.	□	□	□
C. A state or federal trail? ITS snowmobile 87 is currently located within the existing transmission line corridor adjacent to the Converter Substation site. The trail may need to be relocated within the corridor during and after the construction of the proposed Converter Station.	■	□	□
D. A public site or structure listed on the National Register of Historic Places? None	□	□	□
E. A National or State Park? None The Converter Station will not be visible from the Androscoggin Riverlands State Park in Turner, 2.5 miles to the northwest.	□	□	□
F. 1) A municipal park or public open space? None	□	□	□
2) A publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities? None	□	□	□
3) A public resource, such as the Atlantic Ocean a great pond or a navigable river? None The Converter Station will not be visible from the Androscoggin River.	□	□	□
2. What is the closest estimated distance to a similar activity? The Converter Substation will be 1,200' north of the existing Larrabee Road Substation	□	□	□

3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible?	■ Yes	□No

6.3.4.4 Affected Population/User Expectations/ Continued Use and Enjoyment

There are three general groups of people who may be affected by the construction of the new Substation.

Local Motorists

The proposed converter Substation will be located off an access road north of Merrill Road, so the number of motorists who will see the facility or site improvements will be very limited. The Substation should have a minor visual impact on motorists.

Residents

There are 4 single family homes and one apartment building immediately adjacent to the Project site. One abutter on northwest side of Merrill Road will be impacted the most by the cleared corridor widening of 75' on the west side to accommodate the 345kV AC Transmission Line. Currently the home has approximately 300' of vegetative buffer on the eastern side. After the corridor is widened, the buffer will be reduced to 120'+/-. The existing 120' vegetative buffer for the home on the northeast side of the corridor will remain. Visual impacts on these properties will be minimal to none.

The two single family homes and apartment buildings off Route 11, west of the site are 250', 350', and 580' from the proposed Converter Substation. With the widening of the cleared corridor, the buffers will be reduced by 75' but the Converter Substation and transmission lines will continue to be screened by the remaining vegetation. There will be no visual impact to those homes closest to Route 11.

There is one home located approximately 560' to the east of the proposed Converter Substation site. The intervening vegetation will screen the Converter Substation from view. In addition, because the site will require grading in order to create a level elevation for the facility, the buildings will be lower in the landscape and less potentially visible. There will be no visual impact to the home located on the east side of the Converter Substation site.

Recreating Population

The only recreating population that would be affected by the Converter Substation would be snowmobilers using ITS Route 87. Snowmobilers frequently use transmission line corridors in this area and are accustomed to seeing the transmission line structures and nearby Larrabee Road Substation. The Project should not affect the continued use and enjoyment of the snowmobilers.

6.3.4.5 Visual Impact Assessment

Landscape Compatibility

Color: Most of the Converter Substation structures will be galvanized metal, which will have a moderate color contrast with the existing and proposed wooden transmission structures and wooded surroundings. The materials used for the siding and roof of the Equipment Enclosure and Control Buildings will be a muted tan color which will generally blend in with the surrounding wooded landscape. The proposed 345kV transmission line structures will be made of wood and are similar in color to the existing structures.

Form: The forms proposed for the Converter Substation are similar to those found at the Larrabee Road Substation. If the Substation were highly visible from public vantage points, it would have a moderate contrast in form. However, since visibility will be limited by its location and the dense vegetation being preserved around portions of the site, there will be minor contrasts in form. The forms of the proposed 345kV H-frame transmission line structures will be similar to the existing 115kV transmission lines structures.

Line: If it were highly visible from public vantage points, the horizontal, vertical, and angular lines of the Converter Substation components would result in a moderate contrast in what is mostly a vertical line form of trees and transmission structures surrounding the site. Visibility and contrast in line will be limited by the Converter Substations location and the dense vegetation that is being preserved around portions of the site. The proposed 345kV transmission line will result in minimal contrast in line.

Texture: The texture of the Converter Substation components will result in a moderate contrast to the natural vegetation that surrounds the site. The proposed 345kV transmission line will have no contrast in texture with existing transmission line structures.

Scale Contrast

The Merrill Road Converter Substation will be located on the east side of two 115kV transmission lines located in a 225’ wide cleared transmission line corridor. The proposed NECEC Project will widen the transmission line corridor from 225’ to 340’ and construct a 345kV transmission line supported by H-frame structures that are typically 75’ +/- feet tall. The tallest components in the Converter Substation will be 85’+/- in height and the Enclosure Building will be 60’+/- to the ridge. The vegetation surrounding the Substation is approximately

50’ to 70’ tall and should be sufficient to screen the facility from public view. The Converter Substation and 345kV transmission line corridor will have minimal scale contrast.

Spatial Dominance

The Converter Substation will not be visible from any scenic resources, nor will it dominate the landscape composition or the surrounding land forms, water bodies, or sky. With the preserved vegetation surrounding the development site, the Substation will not dominate the landscape.

6.3.4.6 Mitigation Strategies

The primary mitigation strategy used to minimize potential visual impacts from the Merrill Road Converter Substation include siting the facility in a wooded area that provides the opportunity to preserve a significant vegetative buffer on all sides of the Converter Substation and where there is minimal potential for public viewpoints or roads. The only potential impacts will be to snowmobile users.

6.3.4.7 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts, new 345kV AC to +/-320kV HVDC 1200MW Merrill Road Converter Substation and the 1.2 mile 345kV AC Transmission Line from the new Merrill Converter Substation to the existing Larrabee Road Substation (Section 3007) will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in the surrounding area including in the municipalities in which it is located or in neighboring municipalities, where applicable.

6.3.5 MAINE YANKEE SUBSTATION EXPANSION

The existing Maine Yankee Substation is located on a 3.7-acre site off Old Ferry Road in Wiscasset, on a peninsula surrounded on the east, south, and west by the Back River. The Substation expansion includes the installation of an additional 345kV AC Transmission Line Terminal on the western side of the facility within the existing fence line. No additional tree removal is required.

The existing transmission line corridor entering the Substation includes four 345kV transmission lines located on two sets of lattice structures and one set of H-frame structures. The proposed

Segment 5 activities will relocate one of the 345kV transmission lines to an existing lattice tower and add one 345kV transmission line conductor to one of the existing lattice towers. No additional transmission line structures will be installed.

6.3.5.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on June 26, 2017. Representative views from road crossings within the Study Area are included in Appendix B: Study Area Photographs, Map 11. Other data sources include the site plans and cross sections provided by POWER Engineers for the Project; Wiscasset comprehensive plans and zoning ordinances; and Google Earth.

6.3.5.2 Study Area

Site Context

The area surrounding the Maine Yankee Substation is a mixture of open fields, mixed woodlands, rivers, embayment, and transmission line corridors. The Substation itself is located within the site of the former Maine Yankee nuclear power plant and adjacent to industrial buildings and the storage facilities. The Wiscasset town center is approximately 2.5 miles to the north. An inlet off the Back River would be the only scenic resource to have potential views of the expansion.

Distance Zones

Foreground (0 to 1/2 mile in distance): Views of the Substation upgrade will be limited to foreground views from Old Ferry Road in Wiscasset and an inlet off the Back River. The Substation expansion is set back 1,800'± from the road and 300'+/- from the inlet.

Midground (1/2 mile to four miles in distance): None

Background (greater than four miles): None.

6.3.5.3 Inventory of Scenic Resources within the Viewshed

FIGURE 6-1-Maine Yankee Substation Expansion
MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST
(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Central Maine Power Company
Application Type: Site Law/NRPA
Activity Type: Maine Yankee Substation Expansion
Activity Location: Wiscasset
County: Lincoln
GIS Coordinates, if known: See project location maps from POWER Engineers
Date of Survey: June 26, 2017
Observer: Amy Segal
Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? None	☐	☐	☐
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge? None	☐	☐	☐
C. A state or federal trail? None	☐	☐	☐
D. A public site or structure listed on the National Register of Historic Places? None.	☐	☐	☐
E. A National or State Park? None	☐	☐	☐
F. 1) A municipal park or public open space? None	☐	☐	☐
2) A publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities? None	☐	☐	☐

Eaton Farm/Chewonki, a private environmental education institution is located 0.2 mile to the west of the existing Substation. The proposed upgrade will not be visible from Eaton Farm or it's frontage along the Back River. The proposed upgrade will not be visible from the Wright Landing public boat launch on Westport Island or the Old Ferry Road boat landing in Wiscasset.

3) A public resource, such as the Atlantic Ocean, a great pond or a navigable river? ☐ ☐ ☐

At its closest point, the existing Maine Yankee Substation is approximately 600 feet from the main channel of the Back River and 300 feet from a tidal inlet of the Back River in Wiscasset. The expansion will be 1,000 feet from the river at its closest point. Back River is not included in waterbodies rated by the Maine Rivers Study. From the main channel of the Back River, the Substation expansion will be screened by the shoreline topography, riparian vegetation, and the structures in the existing Substation. The expansion may be partially visible from the upper end of the tidal inlet on the west side of the peninsula. There should be minimal visual impact on the Back River from the Maine Yankee Substation expansion.

2. What is the closest estimated distance to a similar activity? ■ □ □

The expansion will be similar to existing components within the existing Maine Yankee Substation.

3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? ■Yes □No

Inlet off the Back River may have year-round use.

6.3.5.4 Affected Population/User Expectation/ Continued Use and Enjoyment

There are four general groups of people who already see the existing Substation from Old Ferry Road and other locations at all times during the year and may be affected by the Substation expansion.

Motorists

The primary viewing population are the year-round residents who live or work in or near the Maine Yankee Substation. Motorists presently see the existing Substation at a distance of 1,500 to 1,800± feet from Old Ferry Road. The proposed expansion will be on the west side of the existing Substation and not any closer to the road. No additional tree removal will be required. The overall visual impact of the Substation expansion to motorists should be minimal.

Residents

There are approximately four single-family homes near the intersection of Old Ferry Road and Ready Point Road on the north side of the Maine Yankee Substation. These homes will not have views of the expansion due to intervening vegetation. There will be no visual impact on the residential properties that are adjacent to or within view of the Substation.

Recreating Population

Portions of the expansion may be visible from boaters on the Back River tidal channel on the west side of the peninsula at mid to high tide. The expansion will be partially screened by riparian vegetation on the river bank and will be seen in the context of the existing Substation.

There should be minimal visual impact on the recreational population on this limited section of the Back River.

Working Population

The major concentration of workers who may see the expansion would be at the former Maine Yankee site. The additional Substation expansion components should be insignificant in comparison to the existing Substation. There should be no visual impacts to the working population in the area.

6.3.5.5 Visual Impact Assessment

Landscape Compatibility

Color: The colors and materials to be used for the proposed Substation structures should be similar to the existing Substation materials. There should be no contrast in color.

Form: The forms of the Substation expansion structures are already used at the Maine Yankee Substation. There should be no contrast in form.

Line: The lines created by the expansion components should be seen in context of similar linear elements used in the existing Substation. There should be no contrast in line.

Texture: The texture of the proposed Substation structures should be similar to those already present at the existing Substation. There should be no contrast in texture.

Scale Contrast

The Maine Yankee Substation expansion will be located adjacent to an existing Substation. The new 345kV AC Transmission Line Terminal will be approximately the same size and height as the existing equipment at the Substation. The expansion components should be in scale with all of the existing elements, so there should not be a contrast in scale.

6.3.5.6 Mitigation Strategies

The primary mitigation strategy being employed is to expand an existing Substation adjacent to an existing transmission line within an existing industrial area.

Spatial Dominance

The proposed expansion will be a minimal addition to the existing Substation and will not dominate the landscape as seen from public roadways or scenic resources.

6.3.5.7 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts, the 345kV AC Transmission Line Terminal at the Maine Yankee Substation will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in the surrounding area including in the municipalities in which it is located or in neighboring municipalities, where applicable.

6.3.6 Raven Farm Substation

The Raven Farm Substation is located approximately 500 feet from Greely Road in Cumberland, approximately 0.2 mile southwest of the existing Elm Street Substation in Yarmouth. The substation occupies 14.4 acres within a mostly wooded parcel. An existing buffer of mixed vegetation approximately 40 to 60 feet tall and ranging in width from 70' to 300' remains around the northwestern side of the substation. The proposed upgrade to Raven Farm includes the installation of an additional 345/115kV 448MVA Autotransformer, associated 115kV buswork and terminating the existing 115kV Sections 164, 164A, and 165 at the existing Raven Farm Substation.

6.3.6.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on April 11, 2017. Representative views from road crossings within the Study Area are included in Appendix B: Study Area Photographs, aerial photos on Map 13. Other data sources include the site plans and cross sections provided by POWER Engineers for the Project; Cumberland comprehensive plans and zoning ordinances; and Google Earth.

6.3.6.2 Study Area

Site Context

The area within one mile of the Raven Farm Substation is characterized by rolling open fields and second growth woodlands and suburban residential development. Nearby land uses include single-family homes, residential subdivisions, a commercial fencing company, a landscape supply company, construction company, forestland, active agriculture, the Elm Street Substation, and existing transmission lines. The center of Yarmouth Village is 1.5± miles to the northeast; the center of Cumberland is 2.9± miles to the northwest. There are no scenic resources within the viewshed of the substation site. The closest scenic resource is Casco Bay, 0.9 mile to the southeast. Twin Brooks Recreation Area in Cumberland is 1.0 mile to the west. The project will not be visible from the scenic roadway portion of Greely Road as designated in the Cumberland Open Space Plan. There should be minimal additional visual impact to Greely Road. There will be no visual impacts to any scenic resources.

Distance Zones

Foreground (0 to 1/2 mile in distance): Public views of the substation expansion will be limited to foreground views from Greely Road down the existing access road. The existing planted earth berm installed as part of MPRP will screen the majority of the additional 345/115kV 448MVA Autotransformer, associated 115kV buswork and termination of the existing 115kV Sections 164, 164A, and 165. The Autotransformer will be set back approximately 750' from Greely Road, within the cleared area west of the existing substation.

Midground (1/2 mile to four miles in distance): None.

Background (greater than four miles): None.

6.3.6.3 Inventory of Scenic Resources within the Viewshed

FIGURE 6-1-Raven Farm Substation

MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST

(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Central Maine Power Company
Application Type: Site Law/NRPA
Activity Type: Raven Farm Substation Expansion
Activity Location: Cumberland
County: Cumberland
GIS Coordinates, if known: See project location maps from POWER Engineers
Date of Survey: April 11, 2017
Observer: Amy Segal
Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? None	☐	☐	☐
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge? None	☐	☐	☐
C. A state or federal trail? None	☐	☐	☐
D. A public site or structure listed on the National Register of Historic Places? None.	☐	☐	☐
E. A National or State Park? None	☐	☐	☐
F. 1) A municipal park or public open space? None	☐	☐	☐
2) A publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities?	☐	☐	☐
3) A public resource, such as the Atlantic Ocean a great pond or a navigable river? None	☐	☐	☐
2. What is the closest estimated distance to a similar activity?	■	☐	☐

A portion of Greely Road west of the existing transmission line corridor is designated as a Scenic Roadway in the Town of Cumberland's Open Space Plan. The Raven Farm Substation will not be visible from the designated scenic road section of Greely Road due to preserved vegetation. An earthen berm and buffer plantings installed for MPRP will screen the majority of the proposed expansion.

The expansion will be located adjacent to the existing Raven Farm substation.

3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? ■ Yes ☐ No Greely Road

6.3.6.4 Affected Population/User Expectations/Continued Use and Enjoyment

There are two general groups of people who may be affected by the construction of the new substation.

Motorists

The primary viewing population are the year-round residents who travel on Greely Road to their homes or workplaces. Motorists presently see the existing substation, access road, two existing 115kV transmission lines and a 345kV transmission line crossing Greely Road within a 360' +/- cleared opening. The earth mound screens a substantial portion of the substation from view. The substation expansion should have a relatively minor visual impact on motorists on Greely Road,

Residents

There are no homes with direct views of the expansion area. One home on Middle Road that accepted earth berms, evergreen plantings and fencing as part of visual mitigation for the initial construction of Raven Farm should not have views of the additional 345/115kV 448MVA Autotransformer, associated 115kV buswork and termination of the existing 115kV Sections 164, 164A, and 165. There should be minimal to minor visual impact on the majority of the residential properties due to the vegetative buffer that surrounds the substation.

6.3.6.5 Visual Impact Assessment

Landscape Compatibility

Color: The proposed additional 345/115kV 448MVA Autotransformer, associated 115kV buswork and termination of the existing 115kV Sections 164, 164A, and 165. Components of the substation will be galvanized metal, similar to the existing components which should have no color contrast with the existing substation and minimal color contrast with the existing wooden and self-weathering steel structures.

Form: Because the forms proposed for the expansion are similar to the existing substation and there is limited public visibility there should be a minor contrast in form.

Line: The proposed expansion will create minimal additional contrast in line compared to the existing substation and transmission lines.

Texture: The texture of the expansion will be similar in texture to the existing substation structures resulting in no additional contrast in texture. The existing visual buffer vegetation and the distance from Greely Road will help to minimize the contrast in texture.

Scale Contrast

The substation expansion will be partially visible on the west side of the existing substation. The tallest components in the substation expansion will be similar in height to the existing substation components which range in height from 105' to 65' with the majority of the electrical equipment 22 to 25' in height. The vegetation surrounding the substation, in addition to the earth mound and planted vegetation will screen most of the 345/115kV 448MVA Autotransformer, associated 115kV buswork and termination of the existing 115kV Sections 164, 164A, and 165 from view so there will not be any scale contrast visible to the general public.

Spatial Dominance

Most of the components that comprise the substation expansion will be approximately the same height as the existing substation and seen in context with the existing transmission line structures some of which range from 75' to 100'± tall. The substation expansion will not be visible from any scenic resources, nor will it dominate the landscape composition or the surrounding land forms, water bodies, or sky.

6.3.6.6 Mitigation Strategies

The primary mitigation strategy used to minimize potential visual impacts for the expansion to the Raven Farm Substation is to locate the proposed components within the cleared/developed area west of the existing substation. No additional tree removal will be necessary. The existing planted earthen berm and buffer plantings will screen the majority of the expansion from Greely Road.

6.3.6.7 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts, the 345/115kV 448MVA Autotransformer, associated 115kV buswork and termination of the existing 115kV Sections 164, 164A, and 165 at the Raven Farm Substation will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in

the surrounding area including in the municipalities in which it is located or in neighboring municipalities, where applicable.

6.3.7 Surowiec Substation

The Surowiec Substation is located on a 10± acre site on the east side of Allen Road in Pownal. There are currently five 345kV transmission lines and seven 115kV transmission lines entering the substation from the east and west. As part of MPRP, the Surowiec Substation was expanded on the north and east sides. The NECEC Segment 4 proposes to rebuild two of the 115kV transmission lines (Section 62 and 64) that enter the substation. The proposed expansion to the substation includes an additional 345kV AC Transmission Line Terminal and 115kV switch replacements at the existing Surowiec Substation.

6.3.7.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on May 24, 2017. Representative views from road crossings within the Study Area are included in Appendix B: Study Area Photographs, on Map 10. Other data sources include the site plans and cross sections provided by POWER Engineers for the Project; Pownal comprehensive plans and zoning ordinances; and Google Earth.

6.3.7.2 Study Area

Site Context

The area within three miles of the Surowiec Substation is characterized by open fields, freshwater wetlands, wet meadows, and woodland. Predominant land uses near the facility include low-density single-family homes, overgrown fields, hayfields, forestland, and electrical transmission line corridors. The closest population center is North Pownal, approximately 0.6 miles to the northeast of the substation. The closest scenic resource is the Bradbury-Pineland Corridor, approximately 0.8 mile south of the substation. The Pisgah Hill Parcels are 1.0 mile to the southwest, and Bradbury Mountain State Park is 2.5 miles to the southeast near Pownal Center. No scenic resources will be affected by the additional 345kV AC Transmission Line Terminal and 115kV switch replacements at the existing Surowiec Substation.

Distance Zones

Foreground (0 to 1/2 mile in distance): Public views of the substation will be limited to foreground views from Allen Road and Fickett Road in Pownal. The existing facility is set back approximately 420'± from Allen Road on the northeastern corner of the facility. The proposed components will be located in an expanded area permitted for the MPRP. No additional tree removal will be required.

Midground (1/2 mile to four miles in distance): None.

Background (greater than four miles): None.

6.3.7.3 Inventory of Scenic Resources within the Viewshed

FIGURE 6-1-Surowiec Substation
MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST
(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Central Maine Power Company
Application Type: Site Law/NRPA
Activity Type: Surowiec Substation: Additional 345kV AC Transmission Line Terminal and 115kV switch replacements
Activity Location: Pownal
County: Cumberland
GIS Coordinates, if known: See project location maps from POWER Engineers
Date of Survey: May 24, 2017
Observer: Amy Segal
Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? None	☐	☐	☐
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge? None	☐	☐	☐
C. A state or federal trail? None	☐	☐	☐
D. A public site or structure listed on the National Register of Historic Places? None.	☐	☐	☐
E. A National or State Park? None	☐	☐	☐

Bradbury Mountain State Park is 2.5 miles to the southwest. The Project will not be visible from the summit of the mountain.

F. 1) A municipal park or public open space? None	□	□	□
2) A publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities? None	□	□	□
3) A public resource, such as the Atlantic Ocean a great pond or a navigable river? None	□	□	□
2. What is the closest estimated distance to a similar activity? The closest similar activity is the existing Surowiec Substation that will be expanded.	■	□	□
3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? None		□ Yes	□No

6.3.7.4 Affected Population/User Expectation/Continued Use and Enjoyment

There are two general groups of people who currently see the existing substation and the transmission lines crossing Allen Road and may be affected by the expansion.

Motorists

The primary viewing population are the year-round residents who live or work in the immediate vicinity of the substation. Motorists presently see the existing 115kV and 345kV transmission lines crossing Allen Road. Motorists on Fickett Road presently see two 115kV transmission lines crossing the road. Since there are so many existing transmission lines and a large existing substation in the immediate area, the expansion should have a relatively minor visual impact on motorists.

Residents

The proposed expansion may be minimally visible from one single family home on the north side of Fickett Road, especially during leaf-off periods. There should be minimal to no visual impact on these residential properties from the expansion at Surowiec Substation.

6.3.7.5 Visual Impact Assessment

Landscape Compatibility

Color: Most of the substation components to be added will be galvanized metal, which should match the color used in the existing substation. There should be no contrast in color.

Form: The forms of the structures used in the expansion should be very similar to those already used in the Surowiec Substation. There should be minimal contrast in form.

Line: The lines of the substation components that will be added should match the strong horizontal and vertical lines of the existing substation, so there should be no contrast in line.

Texture: The texture of the proposed substation components should be similar to the existing substation. There should be no contrast in texture.

Scale Contrast

The expansion will be located on the north or back side of the existing Surowiec Substation and seen in context of 115kV and 345kV transmission structures that typically vary in height from 45' to 75'. The tallest components in the existing substation are 102'± in height, the tallest proposed components will be 80'+/- in height and seen behind the taller structures. The predominantly evergreen trees that surround the substation are approximately 40' to 60' tall. The expansion will be in scale with all of these elements and the surrounding vegetation, so there should not be a contrast in scale.

Spatial Dominance

The substation is already a dominant feature on Allen Road. The expansion will be visible in context of the existing substation and will not make the substation more dominant. Visual buffer plantings installed for the MPRP screen a portion of the substation.

Mitigation Strategies

The primary mitigation strategy used to minimize potential visual impacts for the expansion to the Surowiec Substation was to locate the proposed components within the cleared/developed area north of the existing substation. No additional tree removal will be necessary.

6.3.7.6 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts, the additional 345kV AC Transmission Line Terminal and 115kV switch replacements at the Surowiec Substation will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in the surrounding area including in the municipalities in which it is located or in neighboring municipalities, where applicable.

6.3.8 Fickett Road Substation

The proposed Fickett Road Substation with 345kV +/-200MVAR Static Compressors (STATCOM) will be located on a 4± acre site on the south side of Fickett Road and west side of Allen Road in Pownal. The proposed Substation will be 60'+/- from Allen Road and 115' to 380' from Fickett Road. The proposed Substation components will range from 15' to 60' in height and will be galvanized gray in color. The closest substation components will be 450 +/- feet from Fickett Road. Other proposed visible components will include the gravel access road and gates off Allen Road and Fickett Road and the enclosure fence. To the extent possible, existing vegetation along the south side of Fickett Road will be preserved. The 0.5 acre clump of mature evergreen trees in the field south of Fickett Road will be removed.

In proximity to the proposed Substation site there are currently five 345kV transmission lines and seven 115kV transmission lines entering the Surowiec Substation on Allen Road. Segment 4 of NECEC includes rebuilding Sections 62 and 64, from two 115kV transmission lines on H-frame structures to single pole structures and connecting into the Surowiec Substation. The Surowiec Substation will be expanded and connected to the proposed Fickett Road Substation. See Section 6.3.7.

6.3.8.1 Data Collection

TJD&A staff collected field data in the Study Area to assess visibility from public roads and other vantage points on May 24, 2017. Representative views from road crossings within the Study Area are included in Appendix B: Study Area Photographs, on Map10. Other data sources include the site plans and cross sections provided by POWER Engineers for the Project; Pownal comprehensive plans and zoning ordinances; and Google Earth.

6.3.8.2 Study Area

Site Context

Similarly to the Surowiec Substation site, the area within three miles of the proposed Fickett Road Substation is characterized by open fields, wetlands, and woodland. Predominant land uses near the facility include rural residential (single-family homes), horse farm, hayfields, forestland, and electrical transmission line corridors. The closest population center is North Pownal, approximately 0.6 mile to the northeast of the substation. The closest scenic resource is the Bradbury-Pineland Corridor, approximately 0.8 miles south of the Substation. Bradbury Mountain State Park is 2.5 miles to the southeast near Pownal Center. No scenic resources will be affected by the proposed Substation.

Distance Zones

Foreground (0 to 1/2 mile in distance): Public views of the Substation will be limited to foreground views from Fickett Road and Allen Road in Pownal.

Midground (1/2 mile to four miles in distance): None.

Background (greater than four miles): None.

6.3.8.3 Inventory of Scenic Resources within the Viewshed

FIGURE 6-1-Surowiec Substation

MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST

(Natural Resources Protection Act, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Central Maine Power Company
Application Type: Site Law/NRPA
Activity Type: Fickett Road Substation
Activity Location: Pownal
County: Cumberland
GIS Coordinates, if known: See project location maps from POWER Engineers
Date of Survey: May 24, 2017
Observer: Amy Segal
Phone: 207-846-0757

Visibility	**Distance Between the Proposed Activity and Resource (in Miles)**		
1. Would the activity be visible from:	**0-1/4**	**1/4-1**	**1+**
A. A National Natural Landmark or other outstanding natural feature? None	□	□	□
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge? None	□	□	□
C. A state or federal trail? None	□	□	□
D. A public site or structure listed on the National Register of Historic Places? None.	□	□	□
E. A National or State Park? None Bradbury Mountain State Park is 2.5 miles to the southwest. The Project will not be visible from the summit of the mountain.	□	□	□
F. 1) A municipal park or public open space? None	□	□	□
2) A publicly owned land visited, in part, for the use, observation, enjoyment, and appreciation of natural or man-made visual qualities? None	□	□	□
3) A public resource, such as the Atlantic Ocean a great pond or a navigable river? None	□	□	□
2. What is the closest estimated distance to a similar activity? The closest similar activity is the existing Surowiec Substation that will be expanded.	■	□	□
3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? None	□ Yes	□ No	

6.3.8.4 Affected Population/User Expectations/Continued Use and Enjoyment

There are two general groups of people who will see the proposed Substation and may be affected by the expansion.

Motorists

The primary viewing population are the year-round residents who live or work in the immediate vicinity of the proposed Substation. Motorists on Fickett Road presently see two 115kV transmission lines crossing the road and the existing 115kV and 345kV transmission lines crossing the fields and Allen Road connecting into the Surowiec Substation. There is an

intermittent hedgerow of mixed deciduous and evergreen trees along the south side of Fickett Road that will partially screen the transmission line infrastructure. Most motorists who travel on this road regularly expect to see the existing transmission lines and the Surowiec Substation. The proposed Substation should have a moderate visual impact on motorists.

Residents

Three single-family homes on the north side of Fickett Road, all with driveways adjacent to the proposed Substation, will have filtered views of the proposed Substation from their property/driveways, especially during leaf-off periods. Two of the four homes have sufficient existing vegetative buffers around their homes to adequately screen views toward the proposed Substation. One home will have a direct view into the proposed Substation across the proposed access road off Fickett Road. All of these homes currently have filtered views of the existing Substation and transmission lines from the southern portion of their property along Fickett Road. With the removal of the 0.5 acre clump of mature evergreens located in the middle of the proposed Substation site, more of the existing transmission lines and Surowiec Substation will be visible. The proposed Substation will have a moderate to strong visual impact to the three homes directly north of the proposed Substation site and may reduce the continued use and enjoyment of a portion of the abutters property. The remainder of the homes along Fickett Road will not have Project views. See Photosimulation 26 in Appendix D.

6.3.8.5 Visual Impact Assessment

Landscape Compatibility

Color: The Substation components will be galvanized metal, which will look similar to the existing Surowiec Substation. The existing transmission lines are a combination of wood H-frame structures and self-weathering steel single poles. There should be minimal contrast in color.

Form: The forms of the structures used in the proposed Substation will similar to those already used in the Surowiec Substation. There should be minimal contrast in form.

Line: The lines of the Substation components will be similar to the horizontal and vertical lines of the existing Substation and transmission line structures so there should be no contrast in line.

Texture: The texture of the proposed Substation components should be similar to the existing Substation. There should be no contrast in texture.

Scale Contrast

The expansion will be located across Allen Road from the existing Surowiec Substation and seen in context of 115kV and 345kV transmission structures that typically vary in height from 45' to 75' in height. The proposed Substation components will range from 15' to 60 in height, similar to most of the Substation and transmission line structures. The proposed Substation will be in scale with all of these elements and the surrounding vegetation, so there should be no contrast in scale.

Spatial Dominance

When viewed from Fickett Road, the new components will appear to break the skyline, similar to the existing transmission line structures. While the proposed Substation will not be visible from any scenic resources, it will be seen as a co-dominant element with the existing Substation.

6.3.8.6 Mitigation Strategies

The proposed Substation has been cited within a landscape filled with electrical infrastructure in an area that requires minimal additional clearing and within a desired distance from Surowiec Substation. Though there are no scenic resources impacted, the adjacent homes will have expanded views of the entire developed landscape. As part of NECEC, visual buffer plantings will be installed on the south side of Fickett Road to minimize adverse effects on the scenic character of the surrounding area. This additional buffer will also minimize views of the Surowiec Substation. Buffer plantings will take into consideration the need for proper setbacks, avoiding wetland impacts, limitations on planting within and adjacent to transmission line corridors, and visibility requirements for security around the proposed Substation. The proposed visual buffer plantings will be designed by the Project Landscape Architect.

6.3.8.7 Conclusion

Based upon this VIA review of the Project, and the range of potential visual impacts and proposed visual buffer mitigation, the proposed Fickett Road Substation with 345kV +/- 200MVAR Static Compressors (STATCOM) will not unreasonably interfere with existing scenic and aesthetic uses and will not adversely affect scenic character in the surrounding area including in the municipalities in which it is located or in neighboring municipalities, where applicable.