



**MAINE POWER
RELIABILITY PROGRAM**
A CENTRAL MAINE POWER COMPANY PROGRAM

**BIDDEFORD, MAINE
COMBINED MINOR SITE PLAN REVIEW,
CONDITIONAL USE,
AND SHORELAND ZONING PERMIT
APPLICATION**

**Section 3021 Transmission Line Construction,
Section 238 Transmission Line Rebuild,
and
Section 175 Rebuild**

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Application Forms

Agent Authorization Letter

Introduction

This application addresses the City of Biddeford's permitting requirements for the construction of a new 345 kV electric power transmission line and the rebuild of portions of a 115 kV electric power transmission line. The entire project takes place within an existing transmission line corridor situated in the northwestern portion of Biddeford, stretching from the Arundel town line to the Saco River. The application materials are divided into the following parts:

- Part A: Project Overview and Description, beginning on page 1.
- Part B: General Performance Standards, beginning on page 4.
- Part C: Conditional Use Application, beginning on page 11.
- Part D: Site Plan Review—Minor Development Application, beginning on page 18.
- Part E: Shoreland Zoning Application, beginning on page 20.
- Exhibits: Beginning on page 24.

A permit from the Maine Department of Environmental Protection (Site Location of Development permit and Natural Resources Protection Act) has been granted for the MPRP. A permit application to the Army Corps of Engineers has been submitted and is under review. A request for Certificate of Public Convenience and Necessity is under review by the Maine Public Utilities Commission.

PART A: PROJECT OVERVIEW AND DESCRIPTION

Maine Power Reliability Program Description

The Maine Power Reliability Program (MPRP) is a project by Central Maine Power Company (CMP) to upgrade Maine's bulk power system. The vast majority of Maine's bulk power transmission system was placed into service in the early 1970s and is now reaching the limits of its ability to meet the growing electrical demand of Maine customers. Since the last major transmission infrastructure was completed more than 30 years ago, the patterns of both available generation and customer load have shifted significantly. For example, population has become more concentrated in the southern part of the state, while the generation needed to serve that load is now more distant and dispersed. When these pattern changes are combined with the increasing peak demand the current transmission infrastructure in Maine will, in very few years, become inadequate. In addition, the reliability and security standards mandated by law and administered by the North American Electric Reliability Corporation (NERC), the Northeast Power Coordinating Council, Inc. (NPCC), and ISO New England (ISO-NE) have changed significantly in recent years. Central Maine Power Company must upgrade its bulk power system with this proposed project in order to meet the mandatory standards and to provide reliable electric service to Maine customers into the future.

CMP's 345 kV transmission system was built and put into service in 1971. Since then power consumption has more than doubled. In recent years, both CMP and ISO-NE have identified certain reliability issues with the 345 kV system that need to be assessed and addressed.

In January of 2007, the MPRP began a comprehensive needs assessment of CMP's bulk power transmission system. The study included a 10-year forecast to evaluate the system in Maine, including a review of system reliability and performance under various system conditions and operating scenarios, as well as a needs assessment to ensure a reliable transmission system in the most cost-effective manner possible. The study identified a number of significant reliability issues with Maine's bulk transmission system, including insufficient 345 kV transmission capacity, insufficient 115/345 kV transformation capacity, and insufficient transmission support and/or infrastructure in all regions served by CMP.

After completing the needs assessment, the MPRP team went to work to study possible solutions. This included both transmission and non-transmission alternatives, before designating its preferred solution.

CMP ultimately selected a primarily transmission solution (a small geographic area known as the South Portland loop will be addressed through non-transmission alternatives) based on a number of factors, including electrical performance, cost effectiveness, impacts to landowners, and Maine's environment under various forecasts of future conditions. The proposed solution consists of a network of 345 kV and 115 kV transmission lines and associated substations throughout CMP's service territory where particular needs were identified. The proposed transmission solution ranges from Eliot in the south, Rumford in the west, Warren and Searsport in the east, and Orrington and Pittsfield to the north. In all, MPRP will encompass more than 80 Maine communities. In addition to the permits already granted by the Maine Department of Environmental Protection, the project has received a Certificate of Public Convenience and Necessity from the Maine Public Utilities Commission, and will require approvals from the Army Corps of Engineers, and numerous municipalities.

The proposed upgrades in Biddeford, outlined below, are a part of the MPRP and are intended to help improve the reliability, safety, and security of the bulk power transmission system in Maine, while at the same time meeting the increasing demands for electrical power.

Project Description in Biddeford

The part of the program located in Biddeford involves work in the existing transmission line corridor that traverses the city. See attached maps (Exhibits 1-4).

The existing transmission corridor in Biddeford extends through the northwestern portion of the city for approximately 2.25 miles, from Arundel northeasterly to Saco. The corridor is approximately 300' in width although currently only about 260' of the corridor is cleared of trees. Currently the corridor contains two 115 kV lines, Section 163 and Section 238. Section 175, a 34.5 kV distribution line, is also within the corridor for a distance of about 370' from the Saco River, at which point it leaves the corridor and heads easterly in its own corridor. The proposed upgrades in Biddeford involve:

- Installing a new 345 kV transmission line to be known as Section 3021. This new transmission line will run on 21 wood H-frame structures which are typically 75' above ground, and will be located in the southeastern portion of the corridor.

- Rebuilding portions of the existing Section 238 115 kV transmission line. In order to accommodate the new Section 3021 transmission line where Section 175 also occupies the corridor, 2 existing Section 238 2-pole structures will be removed and replaced with 3 single-pole wood structures which will be typically 75' above ground. From the point where Section 175 leaves the transmission line corridor Section 238 will occupy its existing structures.
- Rebuilding portions of the Section 175 distribution line. In order to accommodate the new Section 3021 transmission line, one Section 175 structure will be replaced. The current structure is approximately 35' above ground, and the conductors are arranged horizontally. The new structure will be a wood 3-pole H-frame structure and will be approximately 26' above ground.
- In order to accommodate the proposed upgrades within the existing corridor, additional clearing in some portions of the existing corridor will be required. CMP, however, will not need to acquire additional lands for this purpose; rather the portion of the MPRP that will be located in Biddeford will be built entirely on land that CMP already owns.

Please note that structure heights will vary due to varying terrain and the need to achieve spans that will avoid or minimize impacts to natural resources. Typical above-ground structure heights are described above, although some structures may exceed those heights in specific instances. See the attached table (Exhibit 5) and maps (Exhibits 3 and 4) for a description of the height and type of each structure associated with the project. Please note that exact above-ground structure heights may vary slightly due to conditions encountered during construction of the project.

Clearing is scheduled to begin during the winter of 2011, and construction is scheduled to begin later that year. Construction is planned to be completed by the end of 2012.

City of Biddeford Permitting Requirements

The MPRP is considered an "Essential Service" in Biddeford, and is a conditional use in all zones. The project is also subject to Minor Development Review under the city's Site Plan Review ordinance, as it is subject to a conditional use permit and creates less than 5,000 sq. ft. of new impervious surface (the project will create approximately 600 sq. ft. of new impervious surface area). Since portions of the project are located in the Resource Protection (RP-1) and Limited Residential (LD) districts, those portions of the project are also subject to the standards contained within the city's Shoreland Zoning ordinance.

PART B: PERFORMANCE STANDARDS

From Part III, Article VI of the Ordinances

Note: Only those performance standards which are relevant to the project are addressed below. Those performance standards which do not apply to the project by its very nature are not addressed.

12. Buffers

- A. Not applicable. Outside of the shoreland zone the project is located entirely within the Rural Farm (RF) district. This is a residential district. Therefore the project is not located in a nonresidential district abutting a residential district.
- B. Not applicable. The project is not located in the industrial zone.
- C. Not applicable.

15. Clearing of Vegetation

Portions of the project are located within the RP district, and clearing of vegetation to remove safety hazards within those areas is planned. The amount of clearing will be limited to that which is necessary for development of the project, and is generally limited to removal of species that are capable of growing tall enough to interfere with the safe operation of the transmission lines (so-called "capable species"). Non-capable species are allowed to remain to ensure that the corridor is vegetated, which prevents erosion and provides wildlife habitat. No grubbing (i.e., stump removal) will take place as part of the clearing operations. The cutting work will be performed using equipment typical of logging operations, including cable and hook skidders, forwarders, tree movers, chain saws, and logging trucks. In general all trees, saplings of capable species, and sometimes tall shrubs are cut at ground level. Root systems are primarily left intact, as the ground is not grubbed and grading is limited to those areas that create unsafe travel conditions. All slash (i.e., limbs, tree trunks, wood chips, etc.) from the cutting operation is disposed of in accordance with the Maine Slash Law (12 M.R.S.A. § 9333). The remaining vegetation is typically composed of scattered growth of small shrubs of non-capable species and herbaceous plants. After initial clearing, the condition of these cleared areas generally resembles that of a high-quality forestry operation. Great care is taken to prevent rutting and erosion.

After construction is completed, non-capable species are allowed to grow to ensure that the corridor is vegetated, which prevents erosion and provides wildlife habitat. Over a relatively short period of time (generally within one calendar year), the newly cleared portions of the corridors will exhibit the early-successional habitat type that is typical of existing transmission line corridors in Maine.

See the attached map of the project within the Shoreland Zone, Exhibi

26. Erosion Control

The entire project is designed to minimize erosion and sedimentation. Once construction is complete, with the exception of the immediate area around the base of the support structures, there will be no increase in impervious surface area associated with the transmission line. During construction the amount of ground disturbance associated with this project will be limited to the immediate vicinity of the pole placements and the impacts associated with access ways. CMP has developed a standard manual, "Environmental Guidelines for Construction and Maintenance Activities on Transmission line and Substation Projects" (2010), which it uses as a routine part of all transmission and substation projects. (A copy of the manual is attached as Exhibit 8.) This manual contains erosion and sedimentation control requirements, standards, and methods that will be used to protect soil and water resources during construction of the various MPRP components. The manual, which was developed in consultation with the Maine Department of Environmental Protection (DEP), is largely based on DEP's *Maine Erosion and Sediment Control BMPs*, dated March 2003, and DEP's Chapter 500, and contains specific Best Management Practices appropriate for electric transmission line and substation construction.

All bid packages and contracts for work performed on the MPRP will include these guidelines. CMP representatives will ensure that the procedures contained in this manual are followed by regularly inspecting all work and requiring corrective action when necessary.

27. Essential Services

- A. The entire project is located in an existing transmission line corridor.
- B. See the Conditional Use Application, contained herein.
- C. The corridor along which the rebuilt and new transmission lines will run crosses two Resource Protection (RP) districts and one Limited Residential (LRD) district. Within the corridor, CMP has, to the greatest extent practicable, sited each individual single pole and H-frame structure so as to avoid, and where unavoidable to minimize, adverse impacts on surrounding uses and resources. As part of this avoidance and minimization effort, CMP has attempted to site the structures so that none is located within either the RP or LRD districts. As a result of this effort there will be no structures sited within either RP district that the project crosses.

Due to the fact that the existing corridor crosses an LRD at the Saco River, and the structures cannot be sited in a manner that allows the entire district to be spanned, two structures will be located in the LRD.

There is no reasonable alternative to locating these structures within the LRD. The amount of ground disturbance associated with the planned structures will be small, i.e., limited to the immediate vicinity of the pole placements, and because the project is

within the existing transmission line corridor (which contains structures of a similar bulk and style), locating structures within the LRD causes the least overall impact when compared to the alternatives. Avoiding this district would require expanding or moving the existing transmission line corridor or erecting much taller and much more substantial structures (e.g., steel towers with concrete footings) to achieve the required spans over the district. The overall environmental and visual impacts of either of these alternatives would be much greater than the impacts associated with the project as planned.

Please see the included Shoreland Zoning Application and Exhibit 4 for more detailed information.

- D. Please see other relevant portions of this application, including the Shoreland Zoning Application, starting on page 18, as well as Exhibit 4.
- E. The project will not produce any vibrations, fumes, odors, dust, or glare. While the transmission lines are in operation continuously, there will be no impacts to abutting properties as a result of the hours of operation of the lines.

Noise

Noise levels generated by the project will not create a nuisance for neighboring parties. For electric transmission lines, audible noise (AN) is relative to conductor (wire) size. CMP has selected conductor sizes that under ideal, dry conditions are designed to be noise free. Under adverse weather conditions (e.g., very high humidity and storm conditions) these same conductors will emit only a slight crackling sound, usually quieter than the sound of the adverse weather conditions. AN is produced when protrusions on the conductor surface--particularly water droplets on or dripping off of the conductors--cause the electric field intensity at the conductor surface to exceed the breakdown strength of air, producing AN. This AN can be characterized as a hissing, crackling sound. Therefore, AN from transmission lines is typically a foul-weather/wet conductor phenomenon. Based on the modeling done by Dr. Bailey, it was determined that the sound produced by the conductors at the edge of the transmission corridor right-of-way will be a maximum of about 40 decibels during foul weather (comparable to a quiet office) as the result of the proposed upgrades, usually quieter than the sound of the foul weather conditions themselves. AN levels will be lower than the anticipated maximum as one moves away from the edge of the right-of-way.

Audible noise modeling was done by Dr. William Bailey of ExPonent for the MPRP. Baseline noise monitoring was conducted using integrating sound level meters that were certified to American National Standards Institute (ANSI) traceable standards by a certified laboratory within one year of any monitoring conducted for this project. The meters were also calibrated in the field at the beginning and end of the monitoring period using a certified hand-held calibrator. An altitude of 2,000 feet was used for all sections in the calculation and an assumed height of a sound receiver of five feet. At lower altitudes the levels of AN will be lower.

Health

A health concern that is sometimes expressed revolves around the electric and magnetic fields produced by transmission lines. These fields are produced by any electric equipment or anything that carries electric current, including household appliances and the like. In response to concerns over a link between EMF and health risks, the National Institute of Environmental Health Sciences (NIEHS) has conducted numerous studies and a major review of the available research to evaluate the possible effects of EMF on health. In June 1999 the NIEHS reported to the U.S. Congress that the scientific evidence for an EMF-cancer link is weak. In its report, the NIEHS said that it “believes that the probability that ELF-EMF exposure is truly a health hazard is currently small. The weak epidemiological associations and lack of any laboratory support for these associations provide only marginal scientific support that exposure to this agent is causing any degree of harm.”

Likewise, after more than ten years of study, the World Health Organization (WHO) came to similar conclusions. In June 2007 the WHO concluded that “there are no substantive health issues related to ELF [extremely low frequency] electric fields at levels generally encountered by members of the public.” With regard to the possible effects related to magnetic fields, the WHO concluded that “the evidence related to childhood leukemia is not strong enough to be considered causal.” The primary conclusion of the testimony submitted by Dr. Bailey based on research by the World Health Organization and others is that there is broad, international, scientific acceptance that electric and magnetic fields from powerlines do not have long-term, adverse health effects.

In Biddeford there are only five residences within 500’ of the entire 2.25 mile course of the project area, and all of them are at least 300’ away from the new transmission line. While EMF levels are expected to rise somewhat as a result of the project, it is important to note that as one moves farther from the right-of-way EMF levels decrease dramatically. When one considers this fact along with the aforementioned conclusions of the scientific research on the subject of EMF and health, any concerns surrounding possible health impacts to abutting properties due to the project in Biddeford are unwarranted.

48. Noise

See the response to Article VI, Section 27, page 5, for a discussion of noise associated with the project. Accordingly, this standard and the standards of Part II, Chapter 34, Article III of the city’s ordinances have been met.

50. Preservation of landscape/natural vegetation

Since the project is located entirely within an existing transmission line corridor, the existing landscape and vegetation will be largely preserved. Approximately 40’ of the northeasterly portion of the corridor will be cleared of trees in order to accommodate the new transmission line. Please see the response to Article VI Sec. 15, page 4, for a discussion of vegetation removal practices. Once the project is complete the transmission line corridor will exhibit the same landscape and vegetation characteristics as it currently does.

61. Stormwater management

The existing transmission line corridor currently manages stormwater by using natural features already associated with the site. This condition will continue once the project is complete. With the exception of the immediate area occupied by the support structures, there is no increase in impervious surface area associated with the proposed upgrades, therefore, there will be no significant storm water run-off generated from the project. All new construction will be designed to minimize storm water runoff from the site in excess of the natural predevelopment conditions. In addition, the corridor will remain vegetated in much the same manner as it is currently, with the only permanent clearing at the immediate base of the transmission line structures.

68. Water Quality

The MPRP electrical transmission line corridor will be maintained to encourage the growth of scrub-shrub vegetation that will not present safety or electrical reliability problems. Trees within the corridor that have the potential to grow up into the safety zone of the conductors (“capable species”) must be removed for safety and reliability reasons. Central Maine Power (CMP) will use a selective herbicide program to treat areas once every four years to maintain an early successional (scrub-shrub and herbaceous) stage of vegetation. All herbicide usage will be in compliance with all label requirements and standards established by the Maine Board of Pesticides Control (MBPC). Herbicides will be selectively applied (using a low-pressure backpack applicator) to capable species to prevent growth of individual plants (or re-growth of a cut plant). No broadcast application will be used, and CMP will not use herbicides within 25 feet of any waterbody or standing water. In addition, CMP will not use herbicides within 100 feet of a known well or spring. Furthermore, CMP will not store, mix or load any herbicide within 100 feet of any wetland or surface water. Only trained applicators working under the supervision of MBPC licensed supervisors will apply herbicides. Finally, herbicides will be applied only during periods when potential for rain wash off is minimal.

To minimize spill potential during construction, no fueling or maintenance of vehicles will be performed within 100 feet of wetlands, streams or other sensitive natural resources.

The selective use of herbicides on the MPRP’s transmission line corridors does not pose a threat to groundwater quality.

The multiple methods, plans, and procedures to prevent groundwater degradation during construction, operation, and maintenance of the proposed MPRP transmission lines are incorporated in CMP’s Environmental Control Requirements for Contractors and Subcontractors - Oil and Hazardous Material Contingency Plan (please see Exhibit 10). These procedures establish a set of minimum requirements for spill prevention and response. The procedures incorporated into the plan have proven successful for preventing spills and for addressing spills if they occur. CMP’s environmental inspectors will ensure that all personnel working on the site follow these procedures.

In addition, CMP employees follow the procedures outlined in CMP's Spill Management and Prevention section of CMP's Environmental Procedures Manual for response to any spills of oil, gasoline, hydraulic oil, or other similar substance. These procedures are similar to those outlined in Exhibit 10 for contractors, and cover reporting, immediate response, cleanup, and documentation. Employees operating construction vehicles will be trained to promptly contain, report, and clean up any spill in accordance with standard procedures. In the event of a spill of oil or hazardous material, on-site personnel will immediately invoke standard spill reporting and clean-up procedures. Spills that are properly cleaned up will not pose a risk to groundwater quality.

69. Wetlands protection

A permit from the Maine Department of Environmental Protection (Site Location of Development permit and Natural Resources Protection Act) has been granted for the MPRP. A permit application to the Army Corps of Engineers has been submitted and is under review. Please see Exhibit 8 and Section H of the Shoreland Zoning Application, page 21, for a description of construction practices which protect wetland areas.

Please see Exhibit 3 for the location of all wetlands associated with the project area.

70. Wildlife preservation

On behalf of CMP, TRC contacted state and federal natural resource agencies to obtain existing data on wildlife and fisheries resources in the vicinity of the proposed MPRP components. Specifically, resource agencies were consulted regarding the presence of deer wintering areas (DWAs), waterfowl and wading bird habitat (WWH), federal and state listed rare, threatened, and endangered (RTE) wildlife and fish species, and any other species or sensitive habitats of concern.

Data requests were sent to state and federal resource agencies including the U.S. Fish and Wildlife Service (USFWS), the Maine Natural Areas Program (MNAP), and the Maine Department of Inland Fisheries & Wildlife (MDIF&W). In addition, TRC staff consulted several times with USFWS and MDIF&W central office and regional biologists.

As a result of these inquiries it was determined that no significant wildlife habitat occurs within the scope of this project in Biddeford. The project does encompass a very small portion of a DWA. This DWA is approximately 647 acres in size and is listed by the MDIF&W as being indeterminate in value, meaning its value has not yet been determined. Only approximately 0.05 acres of this DWA is within the project area. This small area will be cleared of capable species. This activity will not affect the functionality of the deer yard. Please see Exhibit 3.

74. Blasting

During construction of the transmission line it is possible that occasional shallow-to-bedrock soil depths and subsurface boulders will be encountered. Blasting may be required in order to place transmission line support structures. This blasting activity will be limited to the small volume of material needed to be removed to fit and plumb the pole structures. If blasting is required within Biddeford the blasting contractor will be responsible for obtaining the necessary blasting permit(s) from the city pursuant to Part II, Chapter 34, Article V of the city's ordinances. The Maine DEP has approved the project Blasting Plan as part of the MPRP's Site Location of Development permit.

**PART C:
CONDITIONAL USE APPLICATION**

From Part III, Article VII of the City of Biddeford's Ordinances

Section 6. Standards.

- 1. The proposed use meets specific requirements set forth in this ordinance and would be in compliance with applicable state or federal laws.**

The materials included in this application demonstrate compliance with the city's ordinances. The MPRP has received Site Location of Development and Natural Resources Protection Act permits from the Maine DEP. A permit application to the Army Corps of Engineers is being reviewed by the Corps. A request for Certificate of Public Convenience and Necessity is under review by the Maine Public Utilities Commission.

- 2. The proposed use would not create fire safety hazards by providing adequate access to the site, or to the buildings on site, for emergency vehicles and would not create hazards through the storage of chemicals and wastes.**

The Applicant provides safety training to local fire, police, and EMT departments on request. As a practical matter there is no difference in safety procedures for incidents within the corridor involving the existing lines or the completed project; the standards and practices are the same. There will be no storage of chemicals or waste associated with the project.

- 3. The proposed exterior lighting, where allowed, would not create hazards to motorists traveling on adjacent public streets or is adequate for the safety of occupants or users of the site or would not damage the value and diminish the usability of adjacent properties.**

Not applicable. There is no exterior lighting associated with this project.

- 4. The provisions for buffers and on-site landscaping provide adequate protection to neighboring properties from detrimental or unsightly features of the development.**

The proposed project will be located entirely within the existing transmission line corridor in a rural area of the city. This corridor, which has been in existence for decades and already contains structures of a similar nature, has long been associated with and integrated into both residential and commercial uses as part of the system that supplies electric power to those uses. This association and integration is common throughout the New England countryside.

In order to maintain required minimum operational safety clearances, vegetation within the corridor will be managed to ensure that it generally does not grow taller than ten feet. Natural buffering between the corridor and abutting properties, consisting primarily of native scrub-shrub non-capable species, will be maintained. Any areas that are cleared of capable species will become characterized by this same scrub-shrub environment. As noted earlier

there are no residences within 300' of the proposed upgrades. Most of the area adjacent to the project area is woodland and agricultural land. As a result there will be minimal to no detrimental impacts on neighboring properties.

5. **The proposed use would not have a significant, detrimental effect on the use and peaceful enjoyment of abutting property as the result of noise, vibrations, fumes, odor, dust, glare, hours of operation, or other causes.**

See the response to Article VI, Section 27, page 5.

6. **The provisions for vehicular loading and unloading and parking and for vehicular and pedestrian circulation on the site and onto adjacent public streets would not create hazards to public safety or traffic congestion.**

Not applicable. There will be no vehicular or pedestrian traffic generated by the project.

7. **The proposed use would generate a volume of traffic that can reasonably be accommodated by the existing road network, or would not create unreasonable traffic hazards or would not exacerbate an existing traffic hazard, or would not create unreasonable traffic congestion.**

Not applicable. Once the project is complete there will be no traffic generated by the project. There will be temporary, limited, intermittent traffic associated with the project during construction.

8. **The proposed use would not have a significant, detrimental effect on the value of adjacent properties which could be avoided by reasonable modification of the proposal.**

As noted above, the project is located entirely within an existing transmission line corridor which already contains structures of a similar nature. Adjacent properties are mostly woodland or agricultural land. The very few adjacent residences have long been associated with the existing transmission line corridor and are at a significant distance from the proposed upgrades, and no additional clearing of trees in this area is planned. In addition these adjacent properties have existing mature vegetation which helps to buffer their properties from the project area.

9. **The proposed use would not have an adverse impact on the privacy of the residents of the immediate area (within 500 feet) which could be avoided by reasonable modification of the proposal.**

There are only 5 residences within 500' of the entire 2.25 miles of the project area. Once construction is complete there will only be limited and occasional maintenance activities occurring within the project area. In addition, as noted above, no clearing of trees is planned for those areas of the project which are within 500' of any residences. Many people consider the existence of an adjacent transmission line corridor as protecting their privacy, as opposed

to having neighboring residences or active businesses. As a result the project will not have an adverse impact on the privacy of residences of the immediate area.

10. The proposed use would be in compliance with Biddeford's comprehensive plan.

The proposed project is in compliance with Biddeford's comprehensive plan.

11. The proposed use would not have an adverse impact on the immediate neighborhood or the community relative to architectural design, scale, bulk and building height, identity and historical character, or visual integrity, which could be avoided by reasonable modification of the proposal.

As noted earlier, the project is located entirely within an existing transmission line corridor which already contains structures of a similar nature and has been in existence for decades. As a result the project will not result in any adverse impacts on the immediate neighborhood or the community relative to the items listed in this standard.

12. The design of the site would not result in significant flood hazards or flood damage or would be in conformance with applicable flood hazard protection requirements.

The project area encompasses three areas of flood hazard. However, only one single-pole structure will be located within an area of flood hazard. This single-pole structure, located within the floodplain of the Saco River, will not result in significant flood hazard and is in conformance with applicable flood hazard protection requirements. The structure itself represents only 13 square feet of additional impervious surface to the area, the equivalent of a mature tree. The design of the proposed transmission structures and their associated supporting foundations will meet or exceed the strength and loading requirements of the National Electrical Safety Code (NESC2007), Section 250 and 251. In addition to those strength and loading requirements, the effects of buoyancy and any lateral loadings resulting from hydraulic loadings are considered, where applicable, and addressed in the design to prevent flotation, collapse or unacceptable lateral movement. In all other areas of flood hazard there will be no structures. Rather, the conductors will span these areas.

13. Adequate provision has been made for disposal of wastewater or solid waste or for the prevention of ground or surface water contamination.

There will be no wastewater generated by the project. For a discussion of measures taken to protect water quality see Article VI, Section 68, page 8.

Once the project is constructed there will be no solid waste generated at the site. CMP anticipates that solid waste generated from the proposed project will be limited to minimal land clearing and construction debris. This debris is inert, non-hazardous material that will be handled in accordance with the Maine State Solid Waste Management and Recycling Law (38 M.R.S.A. § 2101 *et seq.*).

Removed poles and crossarms resulting from the rebuild of Sections 238 and 175 will either be transferred to private entities or shipped to an approved special waste landfill for disposal. CMP requires recipients of surplus treated wood to sign a Pole Transfer Agreement, in which they agree to utilize the treated wood beneficially in accordance with Maine DEP

Regulations Chapter 418 (Beneficial Reuse), as well as any other applicable federal, state, and local laws. This Agreement also obligates recipients to accept full responsibility for the use and proper disposal of these treated wood items. In this way, CMP alerts treated wood recipients of management requirements so that this material is utilized in a way that does not adversely affect any natural resources.

The project will generate other construction-related debris during the construction phase. Waste electrical system and construction process components such as scraps of cable, cable spools, and ceramic insulators will be generated. Most of these materials will be recycled or reused. Small amounts of waste plastic containers for oils and lubricants, broken filters and belts, and damaged tires, etc., will be generated from the use of construction equipment. Construction and managerial staff will generate some incidental waste such as paper, bottles, cans, plastics, and food scraps. All of these materials will be recycled or shipped to a licensed landfill, transfer station, or incinerator. Contractors will hire a licensed waste management company for the collection and disposal or recycling of such incidental waste. Please refer to the table below.

| MPRP Solid Waste Disposal Plan | |
|---------------------------------------|---|
| MATERIAL | DISPOSITION |
| Wood (timber, slash, stumps, etc.) | Chipped on site or hauled off site to boiler, chip plant, or mulch production facility |
| Treated wood (poles, crossarms) | Donated or landfilled in licensed special waste landfill |
| Galvanized Steel | Maine Metals Recycling (Auburn) |
| Porcelain Insulators | Commercial Paving Recycling Corporation, Scarborough (CPRC), crushed and used as road sub-base material |
| Food waste, plastics, common trash | Shipped to licensed MSW landfill, transfer station, or incinerator |
| Redeemable drink containers | Redeemed for recycling |
| Ferrous Metals | Maine Metals Recycling |
| Wooden Cable Spools & Pallets | Stuart C. Irby Company (Waterville) for reuse |
| Wooden Insulator Crates | Shipped to licensed MSW landfill, transfer station, or incinerator |
| Paper | Recycled thru FCR Goodman (various Maine locations) |
| Scrap Cable | Maine Metals Recycling |
| Aluminum | Maine Metals Recycling |
| Concrete Debris | CPRC for use in road sub-base |

In addition, wood cut and cleared from the MPRP right of way will be limited to capable species, i.e., tree species that grow tall enough that they are capable of growing into the safety zone beneath conductors (wires). All merchantable wood will be hauled off and sold for lumber or firewood. All other woody material will be managed in compliance with the Maine Slash Law (12 M.R.S.A. §§ 9331-9338). All other wood waste generated in the

process of land clearing will be shipped off site to be used as fuel at an appropriate licensed boiler, provided to a licensed chip processing plant, or transferred to a facility to be utilized in the production of erosion control mulch.

14. Adequate provision has been made to control erosion or sedimentation.

Please see the response to Article VI, Section 26, page 5, and Exhibit 8.

15. Adequate provision has been made to handle stormwater runoff or other drainage problems on the site; and the proposed development will not unduly burden off-site surface water systems.

Please see the response to Article VI, Section 61, page 8.

16. The proposed water supply would meet the demands of the proposed use for fire protection purposes.

There will be no water supplied to the site. As a practical matter the project does not increase the need for the water supply necessary for fire protection services. Please see the response to Article VII, Section 6(2), page 11 for information regarding emergency service needs of the project.

17. Adequate provision has been made for the transportation, storage, and disposal of hazardous substances and materials as defined by state law.

Please see the response to Article VI, Section 68, page 8.

18. The proposed use would not have an adverse impact on scenic vistas or on significant wildlife habitat or wetland areas and water bodies which could be avoided by reasonable modification of the proposal.

Scenic Vistas

Not applicable. The project is not within the viewshed of any scenic vistas.

Significant Wildlife Habitat

Please see the response to Article VI, Section 70, page 9.

Wetland Areas and Water Bodies

For a discussion of measures taken to protect groundwater and surface water quality, please see the response to Article VI, Section 68, page 8.

The proposed project has been designed to avoid having an undue adverse impact on wetlands and water bodies. Structures and temporary access ways have been sited to

avoid wetlands wherever practicable. Measures will be taken to avoid and to minimize impacts to wetlands through the use of crane mats, temporary bridges, geo-textile fabrics, and culverts, when necessary. Appropriate erosion controls will be installed wherever necessary. If necessary, mats will be placed parallel to the upland edge as abutments to further protect bank stability. No extensive grubbing (grading to remove root systems) within wetland crossing areas will be done prior to mat placement. However, some minor grading may be required to ensure mat stability and construction access safety. All such grading will be performed on a limited basis and only with prior approval by CMP's environmental representatives. Please see Exhibit 8 for more information on construction practices and erosion control measures.

19. When located in the shoreland district or in the resource protection district, the proposed use would meet state shoreland zoning objectives, including:

- a. The prevention and control of water pollution and sedimentation

Please see the response to Article VI, Section 68, page 8, and Exhibit 8.

- b. The control of building sites, placement of structures, and land use

As noted earlier, the entire project is located in an existing transmission line corridor which already contains structures of a similar nature and has been in existence for decades. Structures have been carefully sited to avoid or minimize impacts to natural resources while achieving the necessary spacing requirements in order to assure the safe and reliable operation of the line.

- c. The protection of spawning grounds, fish, aquatic life, bird, and other wildlife habitat**

Impacts to spawning grounds, fish, aquatic life, bird or other wildlife habitat will be largely avoided by co-locating the project entirely within the existing service corridor, which has been in place for several decades. In general, given the existing landscape characteristics of the site, construction and maintenance of the project is not expected to create conditions that are not already common to the project area. It is fully anticipated that local wildlife populations will adapt and respond to any additional alterations much as they already do to ongoing land uses within the vicinity of the proposed project. Therefore, impacts to wildlife are expected to be minimal to non-existent.

- d. The conservation of shore cover, visual as well as actual points of access to inland and coastal waters, and natural beauty**

Shore cover

No additional clearing of trees is planned where the transmission line corridor crosses the Saco River, thereby preserving a level of shore cover which currently exists. There will be limited clearing of trees where the transmission line corridor crosses two

streams in the Shoreland Zone. The cleared portion of the corridor will be maintained in a vegetated state consisting of a scrub-shrub environment, in the same manner as the rest of the corridor has been for decades, thereby preserving a similar degree of shore cover which currently exists. Please see Exhibit 3.

Visual points of access to inland or coastal waters

Impacts on visual points of access to inland waters will be minimal since the entire project is located in an existing transmission line corridor and the corridor already contains structures of a similar nature.

Points of access to inland or coastal waters

The project does not impact any points of access to inland or coastal waters. There are no points of access on the two streams that the project crosses within the Shoreland Zone. From the point where the transmission line corridor crosses the Saco River the closest upstream boat put-in is seven miles away, and the closest downstream put-in is two miles away.

Natural beauty

The primary means by which the project preserves the natural beauty of areas within the Shoreland Zone is through locating the project within the existing transmission line corridor, which has been in existence for decades and already contains structures of a similar nature. In general, given the existing landscape characteristics of the site, construction and maintenance of the project is not expected to create conditions that are not already common to the project area. In this way the project largely preserves the natural beauty of the areas through which it passes.

e. The specific location is needed for this particular use

The project area was chosen because, as an existing transmission line corridor already owned in fee by CMP, it is the most technically sound and cost-effective location. In addition the avoidance and minimization of social, private property, community, and environmental impacts were also key considerations.

PART D
MINOR SITE PLAN REVIEW APPLICATION

From Part III, Article XI, Section 5 (B) of the City of Biddeford's Ordinances

1. Drainage

The Applicant requests that this standard be waived. Apart from the structures there will be no new permanent impervious surface added to the project area. New impervious surface associated with the project area will represent less than 0.01% of the entire project area. Post-development runoff will not exceed that of predevelopment runoff. Please also see the response to Article VI, Section 61, page 7. As a result there are no catch basins, drainage pipes, etc. planned as part of this project.

2. Utilities

Not applicable. There will be no utilities associated with the project.

3. Parking

Not applicable. There will be no parking associated with the project.

4. Structural layout and design

a. Design of buildings

Please see the response to Article VII, Section 6(11), page 13.

b. Setbacks

Pursuant to Part III, Article 2, Section 2 of the City of Biddeford's Ordinances, Essential Services are exempt from dimensional requirements, including setbacks.

c. Fire protection

Please see the response to Article VII, Section 6(2), page 11.

d. Landscaping

As noted earlier, the transmission line corridor is maintained in a vegetated state characterized primarily by a shrub/scrub environment. For safety and reliability reasons capable species must be cleared from the project area. Only approximately 40' of additional tree clearing within the 300' transmission line corridor is planned. Existing vegetation will be allowed to remain, or, if disturbed during construction, to reestablish itself. Once construction is complete the corridor will exhibit landscape characteristics similar to those which exist in the currently cleared portion of the corridor. Please see the

response to Article VII, Section 6(4), page 11, for a discussion of the impact of transmission line corridor vegetation management practices on abutting properties. Please also see Exhibit 3.

e. Service, storage, and utility areas

Not applicable. There are no service, storage, or utility areas associated with the project.

f. Paving, parking, and storage areas

Not applicable. There are no paving, parking, or storage areas associated with the project.

g. Handicapped accessibility

Not applicable. There are no pedestrian facilities or parking areas associated with the project.

h. Loading facilities

Not applicable. There are no loading facilities associated with the project.

i. Parking, loading, and protective buffers

Not applicable. There are no parking or loading areas associated with the project.

j. Open space

Not applicable. The project is not a residential development.

k. External lighting

Not applicable. There is no lighting associated with this project.

l. Signs

Not applicable. There are no permanent signs associated with this project.

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PART E
SHORELAND ZONING APPLICATION

Overview of the project within the Shoreland Zone

The project passes through three areas within the Shoreland Zone. Please see Exhibit 4 for maps of these project areas.

A Limited Residential District at the Saco River

There will be two structures sited within this district. No clearing of trees is planned to take place within this district. A temporary access way will be constructed for the construction of the two structures. Construction vehicles will not cross the river. A permit application to the Saco River Corridor Commission was approved on May 19, 2010.

An RP-1 District at a tributary of Swan Pond Brook, at an area just south of South St.

There will be no new structures located within this district, rather the conductors will span the district. Approximately 0.7 acres of land will be cleared of trees within this district. In order to install new structures outside of the district, a temporary access way will be constructed which will cross the district and the stream.

An RP-1 District at Sawn Pond Brook

No structures will be sited within this district, rather the conductors will span the district. There will also be no temporary access way within this district. Approximately one acre of land within this district will be cleared of capable species.

The project is a permitted use in all of the above areas, subject to the standards below.

From Part III, Article IX, Section 15 of the City of Biddeford's Ordinances

A. Minimum lot standards

Not applicable.

B. Principal and accessory structures

Not applicable.

C. Piers, docks, wharfs, bridges

Not applicable.

D. Campgrounds

Not applicable.

E. Individual private campsites

Not applicable.

F. Commercial and industrial uses

Not applicable.

G. Parking areas

Not applicable.

H. Roads and driveways

There will be no new permanent roads or driveways associated with the project. CMP has historically maintained access points and ways suitable for routine and emergency maintenance of the corridor and transmission facilities. This practice will continue. More specifically, within the LR District through which the project passes, temporary access ways, which are not considered roads or driveways, and will not add any impervious surface area, will be established for use during the construction phase (see Exhibit 3). This will be an ongoing process as access will be established to areas undergoing immediate construction. Determinations surrounding the exact nature of the construction of these temporary access ways will be made by the contractor in consultation with an environmental representative. All access ways are temporary and will be removed once construction is complete.

General access to the corridor for construction purposes will be achieved by the construction of temporary access ways which will be in place for more than one growing season, but will be removed once all aspects of construction in that area are complete. Access to pole sites, either for removal or construction, will be achieved by temporary access ways which will be in place for no more than one growing season. Areas where soils have been disturbed will then be mulched with hay. Vegetation will be allowed to reestablish itself once the temporary access ways have been removed.

Measures will be taken to avoid and to minimize impacts to streams and wetlands through the use of crane mats, temporary bridges, geo-textile fabrics, and culverts, when necessary. Appropriate erosion controls will be installed wherever necessary. If necessary, mats will be placed parallel to the upland edge as abutments to further protect bank stability. No extensive grubbing (grading to remove root systems) within wetland crossing areas will be done prior to mat placement. However, some minor grading may be required to ensure mat stability and construction access safety. All such grading will be performed on a limited basis and only with prior approval by CMP's environmental inspectors. Please see Exhibit 8

for a discussion of temporary access way and bridge construction, and the environmental controls used during and after construction and removal.

I. Signs

Not applicable.

J. Stormwater runoff

Please see the response to Article VI, Section 61, page 8.

K. Septic waste disposal

Not applicable.

L. Essential services

Please see the response to Article VI, Section 27(C), page 5.

M. Mineral exploration and extraction

Not applicable.

N. Agriculture

Not applicable.

O. Timber harvesting

Not applicable.

P. Clearing of vegetation for development

Please see the response to Article VI, Section 15, page 4.

Q. Erosion and sedimentation control

Please see the response to Article VI, Section 26, page 5, and Exhibit 8.

R. Soils

The proposed project will be located, constructed, and maintained so as to avoid adverse environmental impacts, including severe erosion, mass soil movement, improper drainage, and water pollution.

Based on the applicants' analysis of the Soil Survey Geographic Database compiled by the United States Department of Agriculture – Natural Resources Conservation Service, soils within the transmission line corridor will accommodate the proposed MPRP construction and maintenance activities. Soil constraints within the transmission line corridor will be managed and mitigated through implementation of erosion and sedimentation control measures, proper site and project design, and special construction procedures.

Because the proposed use does not require subsurface waste disposal, is not a commercial or industrial development, and is not an intensive land use, a soils report prepared by a State certified soil scientist or geologist and based on an on-site investigation is not required.

S. Water quality

Please see the response to Article VI, Section 68, page 8.

T. Archaeological sites

During the past several years, CMP has engaged in extensive consultation with the Maine Historic Preservation Commission (MHPC) regarding the investigation of precontact archeological, postcontact archeological, and historic architectural resources within the MPRP area of potential effect (APE) that are listed on or eligible for listing on the National Register of Historic Places (NRHP). During the period 2008-2009, CMP's consultants conducted reconnaissance level precontact and postcontact cultural resource surveys to identify resources that might be impacted by project related activities within the MPRP APE. After consultation with the MHPC regarding the results of the reconnaissance level surveys, CMP conducted more intensive level surveys to determine site significance (eligibility for listing in the National Register of Historic Places) on a number of potentially eligible archaeological sites within the MPRP APE. Similarly, during the period 2008-2009, CMP's consultants conducted architectural surveys in accordance with MHPC guidelines to identify any potential historic above-ground structures that are listed on or eligible for listing on the NRHP that are located within the MPRP APE and to determine any adverse impacts on those properties from MPRP.

As a result of these surveys, the MHPC determined that MPRP would not have an adverse effect on any precontact or postcontact archaeological sites that are listed on or eligible for listing on the NRHP in Biddeford. The MHPC also determined that MPRP would not have an adverse effect on any historic architectural structures in Biddeford that are listed on or eligible for listing on the NRHP.

EXHIBIT 1
Project Overview Maps

EXHIBIT 2
Transmission Line Configuration Cross Section

EXHIBIT 3
Project Scope and Natural Resources Maps

EXHIBIT 4
Project Scope Within the Shoreland Zone

EXHIBIT 5
Table of Structure Heights and Types

EXHIBIT 6
Table of Project Abutters

EXHIBIT 7
Proof of Right, Title, or Interest

EXHIBIT 8
**CMP's Environmental Guidelines for Construction and
Maintenance Activities on Transmission Line and Substation
Projects**

EXHIBIT 9
Soils Maps

EXHIBIT 10
**CMP's Environmental Control Requirements for Contractors and
Subcontractors - Oil and Hazardous Material Contingency Plan**
