UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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April 25, 2019

Robert Desista
Acting Chief, Regulatory Division
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742

RE: Public Notice 2017-01342
Central Maine Power New England Clean Energy Connect
Electric Transmission Line Project

Dear Mr. Desista:

This letter provides comments on the U.S. Army Corps of Engineers (USACE) Clean Water Act (CWA) Section 404 public notice for the Central Maine Power (CMP) New England Clean Energy Connect (NECEC) proposal to build new and upgraded electrical transmission lines and related facilities to deliver up to 1,200 megawatts of electrical power from hydroelectric sources in Quebec to New England. EPA comments are largely focused on procedural and assessment issues, with recommendations for a complete application document, a comprehensive alternatives analysis, and reissuance of the Public Notice. EPA is not taking a substantive position on the project at this point.

The New England Clean Energy Connect project was selected following a request for proposals by the Massachusetts Department of Energy Resources seeking Long-term Contracts for Clean Energy Projects pursuant to Section 83D of Chapter 169 of the Acts of 2008, as amended by chapter 188 of the Acts of 2016, *An Act to Promote Energy Diversity*. The USACE also serves as the lead federal agency for the National Environmental Policy Act (NEPA) for this project.

The applicant's preferred alternative for the proposed project will consist primarily of the following:

- 53.5 miles of new HVDC transmission line, from the Canadian border to the Forks, located within a previously undeveloped 300-foot wide transmission line corridor;

- A 94-mile upgrade (widening) of an existing transmission line corridor (approximately 75' on average);
- Two 115 kV transmission line rebuilds between Lewiston and Pownal;
- Upgrades to 26.5 miles of 345 kV transmission line between Windsor and Wiscasset;
- A DC to AC Converter Station and associated approximately 1.2 mile 345 kV transmission line in Lewiston;
- A new substation and associated approximately 0.3 mile 345 kV transmission line in Pownal;
- Additional equipment installation and upgrades at Larrabee Road Substation (Lewiston), Crowley's Substation (Lewiston), Surowiec Substation (Pownal), Coopers Mills Substation (Windsor), Raven Farm Substation (Cumberland), and Maine Yankee Substation (Wiscasset).

The new transmission lines are proposed as an aerial installation on a new or expanded cleared corridor, including at all waterway and wetland crossings, with the exception of the Kennebec River Gorge, where transmission lines will be installed beneath the upper Kennebec River via horizontal directional drilling.

The proposed CMP project directly impacts 4.9 acres of wetlands, as well as numerous streams and vernal pools. The project will also cause temporary and secondary impacts to aquatic resources, including impacts to hundreds of acres of wetlands, mostly from vegetation clearing and installation of construction mats, as well as impacts from tree clearing adjacent to streams and vernal pools.

The applicant has proposed a compensatory mitigation plan including preservation of 1,022 acres of land and a payment of approximately $3 million into the Maine In-lieu-Fee (ILF) program. CMP also proposes preservation of other parcels and additional monetary contributions to offset impacts regulated under other programs, such as those that deal with rare species and fish and wildlife habitat protection.

Project Coordination

Recent opportunities for EPA to participate in interagency coordination on this project have been limited to our participation in a conference call with USACE staff and the applicant on March 19, 2019. During that conversation we received a general project update and were informed that the project had been revised several times since the Corps permit application was submitted, and that updated information on the project is located on the MDEP website. We requested information to support our review of the project, and CMP provided links to various documents on April 1, 2019 (a week after the public notice was issued) that included an Excel spreadsheet containing links to numerous documents. While EPA has only had limited time to review these documents in detail, some of the information presented appears to have bearing on the Section 404 permit review, while other information appears to be unrelated to the Section 404 review.

Based on conversations with USACE staff, we understand that the public notice for the project was issued in an attempt to synchronize the USACE review with the State review and public hearings held on April 1 through April 5, 2019. We also note that the State public hearings are being continued on May 9, 2019, and that final briefs and final minutes for the hearings will not be available until late May, 2019, well after the April 25, 2019 close of the public comment period.

We understand that USACE staff was available at the early April hearings to answer questions from the public regarding the CWA Section 404 permitting process. USACE participation in the state hearings seems reasonable and we support efforts to increase public understanding of the USACE process. However, based on the limited project information available at the time of public notice issuance (including the absence of a complete, up-to-date Section 404 application with a comprehensive alternatives analysis), the lack of adequate time to review recently submitted project information, and the fact that information presented at the state hearings will not be available until after the close of the public notice period, we believe the public notice was issued prematurely for the project. A suggested remedy for this deficiency is described below.

Information Required for Project Review

As the lead Federal agency for the review of the project under NEPA and for CWA Section 404 permitting, USACE holds the primary responsibility to coordinate both in a predictable and transparent manner. The lack of an organized, consolidated presentation of complete project information to support the CWA Section 404 permit evaluation, combined with the premature public notice and inadequate time for review of current and anticipated additional information, is inconsistent with those goals.

To address these issues, we request a complete and up-to-date CWA Section 404 application, revised to reflect the project as currently proposed. The application should include a detailed alternatives analysis, and other supporting information to address project compliance with EPA's CWA Section 404(b)(1) guidelines. Currently, information on the project appears to be located in part with the USACE and in part on the ME DEP website. This information is voluminous and does not appear to all be directly related to the CWA Section 404 permit review. We recommend that the information necessary to support the USACE CWA Section 404 permitting decision be consolidated, organized, and provided by the USACE in manner that affords local, state, and federal agencies and the public a reasonable opportunity to review and comment on the project.

EPA also requests copies of or links to the final minutes of the state public hearings held in early April 2019, and scheduled to be continued in May 2019, along with any subsequent hearing submissions, briefs, final public comments, or other information pertinent to the CWA Section 404 permit evaluation, so we can consider that information as part of our review. It is our understanding that final hearing information will be available in mid-to-late May.

Request for Reissued Public Notice

One way to address the deficiency of important project information available during the comment period would be for the USACE to issue a revised public notice for the project. We recommend that the USACE take this step and that the revised public notice specifically reference the USACE responsibilities pursuant to the CWA Section 404 process and as the lead federal agency under the National Environmental Policy Act. We recommend that the notice provide a link to the draft Environmental Assessment the USACE is developing for the project. The revised notice should also explain that responses to the public notice will be considered by USACE to determine what issues should be assessed during the review of the project and whether project impacts warrant the preparation of an Environmental Impact Statement.

Impacts to Aquatic Resources

Degradation or destruction of aquatic resources correlates with loss of ecological functions and services, including habitat destruction, reduced primary and secondary productivity, and alteration of hydrological functions (e.g., flood storage, low flow maintenance, nutrient and toxicant transformation, sediment trapping, and groundwater discharge and recharge). These resources would be further impacted indirectly through temperature increases, removal of overwintering habitat, and reduction of overall productivity.

As proposed, the project would cause direct and secondary impacts to many wetlands, streams and vernal pools. The proposed project would fill 4.9 acres of wetlands and cause substantial temporary and secondary impacts to aquatic resources, mostly from vegetation clearing in forested wetlands and the removal of trees next to streams and vernal pools. The transmission line would clear 1,800 acres of land and cross more than 200 rivers, streams, and brooks, removing over 11 linear miles of riparian vegetation adjacent to these aquatic resources. The project would impact hundreds of acres of wetlands, including 242 vernal pools, mostly through secondary impacts.

Vernal Pools

High value vernal pools are one of the most valuable aquatic systems we have in New England, rivaling salt marshes in their productivity, yet the bulk of breeding animals only use them in the spring. These animals typically live in the forest and must travel to and from the vernal pools each year. Tree clearing near vernal pools would cause secondary impacts to the pools, especially where clearing occurs within the 100-foot envelope adjacent to the vernal pool. This 100-foot envelope is of critical importance to vernal pool ecosystems, containing vegetation that provides shade, regulates temperature, maintains water quality, contributes leaf litter and woody debris, and provides terrestrial habitat for pool-breeding amphibian populations. Juvenile pool-breeding organisms are particularly susceptible to loss of tree canopy in the areas immediately surrounding vernal pools.

Wetland Conversion
The proposed project will result in considerable conversion of forested wetland cover, both in the new alignment areas and along the widening of existing corridors. Due to the nature of the maintained corridor, this forested wetland conversion will be permanent. Conversion of forested wetlands to emergent and scrub-shrub systems can have major ecological impacts by changing habitat types, community structure, and wetland functions and services.

Temporary Impacts
While not permanent, temporary impacts can be extensive and persist long after the initial impact causing activity. For example, even after temporary fill is removed, the resulting soil compaction can greatly alter surface and groundwater flow in and near the site of the temporary road or work area. These areas can take much longer to revegetate and can serve as vectors for invasive species to gain a foothold.

Fragmentation
Construction, operation and maintenance of the new transmission lines along Segment 1 between the Canadian border and the Forks would result in extensive secondary impacts. For example, tree clearing, especially along linear corridors, would fragment forests which would result in changes in the vegetation community, reduction of interior forest available to area-sensitive species, increased nest predation and parasitism in forested areas adjacent to the clearing. As a result, secondary impacts would extend well beyond the project footprint, resulting in a loss of biological diversity. Aquatic dependent birds such as Louisiana waterthrush, northern waterthrush, hermit thrush, yellow-throated vireo, and red-shouldered hawk, are especially vulnerable to fragmentation.

Cumulative Impacts
In addition, the cumulative effects of the proposed project in combination with past, present or reasonably foreseeable future development need to be further assessed and described. For example, the new transmission lines in Segment 1 are proposed to be installed on a 300' wide new corridor, with only 150' of the new corridor being cleared for the proposed project. It is not clear from our review whether the remaining 150' of the new corridor might be cleared or expanded at some point in the future for new transmission projects or other development.

Given the substantial aquatic impacts described above, it is especially important to conduct a complete alternatives analysis with the goal of avoiding and minimizing project impacts, fully considering alternative border crossing locations, alternative transmission line routes, and alternatives to aerial installation. The analysis must consider alternatives and design measures to avoid, and where unavoidable, minimize impacts to aquatic resources.

Alternatives Analysis - 40 CFR 230.10(a)

EPA's CWA Section 404(b)(1) guidelines set forth the environmental standards which must be met in order for a CWA Section 404 permit to issue. Two key provisions of the

guidelines are critical when considering the proposed project. First, the guidelines generally prohibit the discharge of dredged or fill material if there exists a practicable alternative which causes less harm to the aquatic ecosystem. This fundamental requirement is often expressed as the regulatory standard that a permit may only be issued for the "least environmentally damaging practicable alternative" or LEDPA. The term "practicable" means available and capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes [40 CFR 230.3(q)]. Where, as here, the project is not water dependent and involves fill in wetlands and other special aquatic sites, practicable, less environmentally damaging alternatives are presumed to exist unless clearly demonstrated otherwise by the applicant. Second, the guidelines prohibit issuance of a permit if the discharge would cause or contribute to significant degradation of waters of the United States.

To demonstrate compliance with the CWA Section 404(b)(1) guidelines, the applicant must provide a complete and detailed alternatives analysis that fully considers a range of alternatives with the goal of avoiding, and where unavoidable, minimizing aquatic impacts. This includes but is not limited to consideration of alternative routes for the project, including alternative border crossing locations, as well as alternative installation methods, such as full or partial underground installation of the transmission lines. It is premature and difficult for us to offer informed comments on the project under NEPA and regarding the selection of the LEDPA without this information.

Alternatives to the proposed action that would cause less impact to the aquatic ecosystem have not been fully explored. For example, approximately 54 miles of the proposed alternative, identified as Segment 1, is proposed on a new alignment between the Canadian border and the Forks. Substantial aquatic impacts and fragmentation of forest resources would occur in this segment. Direct and secondary impacts to many streams and wetlands could be avoided and minimized by practicable alternative project designs including, amongst other design features, modification of the proposed route and underground installation of transmission lines. We recommend that these measures be fully explored.

We recommend that specific routing alternatives be considered, including underground routing along existing local, state and/or federal roadway or railway corridors, or along other existing previously disturbed linear corridors, including logging roads, as well as underground routes along the proposed corridor on new alignment (with minimized vegetation clearing) between the Canadian border and the Forks, or other new alignment corridors. Hybrid combinations of alternatives (e.g., an alternate border crossing location with a shorter segment on new alignment connecting to a roadway corridor, or other combinations) should also be fully considered. Alternatives that include widening of existing transmission corridors, including alternatives combining underground routes for segments leading to those corridors, must also include measures to avoid and minimize adverse impacts, including but not limited to conversion of forested wetlands to other wetland types, and alteration or loss of riparian habitat.

Underground installation of transmission lines, especially if located adjacent to or within existing roadway, railway or other previously disturbed linear corridors, would typically result in less adverse impact to the aquatic ecosystem, and to the adjacent supporting terrestrial habitat. This is especially true when one compares the potential impacts of underground installation to the potential impacts of aerial installation in project segments proposed on new alignment. Construction, operation and maintenance of a project on new alignment would cause major disruptions to the forest matrix, resulting in extensive adverse impacts to aquatic resources and supporting habitat.

In addition, we note that similar project proposals in New England have incorporated underground installation of HVDC transmission lines over significant distances. In one instance, the 154-mile Vermont Clean Power Link project is proposed entirely underground, within existing roadway corridors and the Lake Champlain lake bed. The practicability of this design approach is supported by the USACE CWA Section 404 permit for the project issued in January 2016.

The alternatives analysis must include a description of how the location of the proposed Canadian border crossing was selected, and if other locations were considered. The alternatives analysis must determine whether modifications to the crossing location would potentially reduce impacts to the aquatic ecosystem or facilitate less damaging alternative routes, such as along road or rail corridors.[1]

The alternatives analysis should address the practicability of alternatives in light of cost, existing technology, and logistics. Cost is a legitimate consideration in the alternatives analysis. However, increased costs do not necessarily render an alternative impracticable. The alternatives analysis should present adequate information on costs of alternatives relative to overall project costs to justify rejection of any of the alternatives based on economics. We also note that any higher construction costs associated with potentially less environmentally damaging alternatives (such as underground alternatives) would be at least partially offset by a reduction in compensatory mitigation costs related to reduced project impacts.

Mitigation - 40 CFR 230.10(d)

For a proposed project to comply with 40 CFR 230.10(d) of the CWA Section 404(b)(1) guidelines, impacts to waters of the U.S. must be avoided and minimized to the extent practicable and all appropriate and practicable steps must be taken to compensate for unavoidable impacts. The appropriate sequence for mitigating project impacts are to first avoid, and where unavoidable, minimize direct and secondary impacts to the aquatic ecosystem. The remaining unavoidable, minimized direct and secondary impacts must then be offset through compensatory mitigation.

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[1] We note that, on page 47 of the pre-filed testimony (2/28/19), CMP states that they did not consider underground installation or alternative locations for the border crossing.

It is EPA's understanding that a compensatory mitigation plan for the proposed project has been under development for some time. We did not have the opportunity to assist the USACE and the applicant with devising the conceptual mitigation plan. EPA believes that while the development of a conceptual mitigation plan for the proposed project is appropriate, it is premature to develop a specific, detailed compensatory mitigation plan prior to the completion of a thorough alternatives analysis to assure compliance with the CWA Section 404(b)(1) guidelines and to support a LEDPA determination. As noted earlier, under the CWA Section 404(b)(1) guidelines, because the project is not water dependent and involves fill in wetlands and other special aquatic sites, practicable, less environmentally damaging alternatives are presumed to exist. It is the applicant's responsibility to demonstrate that there is no less damaging practicable alternative to the proposed project, and that the proposed project represents the LEDPA. If a less environmentally damaging practicable alternative does in fact exist, the associated compensatory mitigation plan should be designed to offset the impacts of that alternative.

From our limited review of the proposed compensatory mitigation plan, with some exceptions, it appears that the plan is conceptually sound, being generally comprised of a combination of compensation through land preservation and monetary contributions to Maine's ILF program. However, the mitigation plan appears to be incomplete with respect to compensation for secondary impacts to streams and lacks adequate information on the threat of development of the proposed preservation parcels.

The proposed project would result in the removal of over 11 linear miles of riparian vegetation along streams and brooks. Some of that loss requires mitigation under MEDEP and MDIFW rules. However, the USACE also has mitigation guidance for secondary impacts to streams (see page 60 of the 2016 USACE Compensatory Mitigation Guidance document). In addition to meeting state mitigation requirements, the compensatory mitigation plan should also comport with the USACE Compensatory Mitigation Guidance.

Also, because the value of preservation as compensatory mitigation is linked to the prevention of loss or impairment of the ecological functions and services of the preserved parcel, more detail should be provided on the level of threat of development or other potential loss or impairment of the ecological functions and services of proposed preservation parcels. In addition, more information on the appropriateness of particular preservation measures to offset the impairment or loss of specific habitat or ecological functions and services is needed. For example, preservation of riparian corridors to offset impacts to specific habitat types (e.g., coldwater fisheries) must target in-kind (e.g., coldwater fisheries) rather than of out-of-kind (e.g., warmwater fisheries) riparian habitat.

Recommendations for Further Review

EPA remains willing to continue to work with the USACE and the applicant during the review of the project and think an interagency meeting with the applicant in the near future would be helpful. We request the opportunity to review a draft of the USACE Environmental Assessment for the project and look forward to reviewing a revised

project application with supporting information, including a complete alternatives analysis and the additional information requested above. We reserve the right to provide additional comments based on our ongoing review and as new information is provided. Thank you for your careful consideration of our comments. If you have any further questions, please call Mark Kern (617-918-1589) or Michael Marsh (617-918-1556) of my staff.

Sincerely,

Beth Alafat

Beth Alafat, Acting Chief
Wetlands Protection Unit

cc: Lindsey Lefebvre, USACE (electronically)
Jay Clement, USACE (electronically)
Mark Bergeron, Maine DEP (electronically)