

**SCOPING COMMENTS OF THE CONSERVATION LAW FOUNDATION
U.S. DEPARTMENT OF ENERGY ENVIRONMENTAL IMPACT STATEMENT
NORTHERN PASS TRANSMISSION, LLC, PRESIDENTIAL PERMIT APPLICATION, OE DOCKET NO. PP-371**

INTRODUCTION

The Conservation Law Foundation (“CLF”), an intervener in the above-referenced docket, respectfully submits the following comments on the scope of the U.S. Department of Energy (“DOE”) Environmental Impact Statement (“EIS”) in connection with the application of Northern Pass Transmission, LLC (“NPT”) for a Presidential Permit (the “Application”) to construct and operate an electric transmission line that crosses the United States-Canada border. These comments expand on and incorporate by reference CLF’s Protest, Comments and Motion to Intervene filed in this docket, dated December 16, 2010 (“CLF Protest”), and the comments of CLF staff attorney Christophe G. Courchesne at the public scoping meeting in Pembroke, New Hampshire, on March 14, 2011. We offer these comments without prejudice to any and all legal rights CLF may have, which are hereby expressly reserved.

CLF is a member-supported non-profit environmental advocacy organization with offices in New Hampshire, Massachusetts, Maine, Rhode Island, and Vermont. We use law, science, and markets to achieve solutions that protect New England’s environment and communities. CLF has substantial interests in the environmental and energy implications of the Application. CLF is working to secure a clean energy future for New Hampshire and New England—one in which our energy system (1) is cleaner and less carbon-intensive, (2) provides reliable power with minimal environmental impact and at reasonable cost, and (3) is supported by a robust, local clean-energy economy built on energy efficiency and renewables. Specifically, we believe that the Northern Pass project must move us toward—and not away from—this future. CLF is dedicated to promoting a fair, well-informed, and rigorous environmental permitting process for the Northern Pass project, including within this Presidential Permit proceeding, to achieve:

- A solution with minimal impact on the environment and communities;
- Equitable sharing of benefits and burdens;
- Displacement of dirty power; and
- A market that encourages energy efficiency and provides a level playing field for local renewable energy.

In brief, and as discussed in our detailed comments below, CLF urges DOE to:

- (1) stay this proceeding and prepare a comprehensive EIS addressing imports of electricity into the northeastern United States from Canada;

- (2) define the purpose and need for agency action on this proposal more broadly, as NEPA requires;
- (3) study all reasonable alternatives to the current proposal—including siting and routing alternatives; alternative project designs, technologies, and strategies; and the no-action alternative—and provide a well-supported rationale for excluding any alternatives from detailed review;
- (4) conduct a rigorous, independent assessment of the impacts of the proposed project and alternatives—including the impacts of project-related generation and transmission in Canada, effects on energy resources, greenhouse gas emissions, and the full range of environmental and community impacts—and identifies the alternatives with the fewest environmental impacts and adequate mitigation measures for those impacts that cannot be avoided or minimized; and
- (5) grant CLF's pending request for DOE to issue and accept public comments on a post-scoping, pre-draft-EIS report that will identify the purpose and need for agency action, the alternatives to be studied in detail in the EIS, and the specific categories of impacts that will be studied for each alternative.

DETAILED COMMENTS

I. DOE Should Prepare a Comprehensive EIS Addressing Northeastern United States Energy Imports from Canada.

The proposed importation of 1,200 megawatts ("MW") of Hydro-Québec-generated electricity is just one piece of a long-term, large-scale strategy on the part of Hydro-Québec and the Province of Québec to expand hydro-electric generation and increase exports to the United States. This strategy necessarily has significant implications for New England and the northeast region of the United States (the "Northeast"). Indeed, it squarely raises the questions whether—and how much—importation of Canadian power is in the best interests of the United States generally, and the New England and other Northeast states in particular.

This docket—and the associated NEPA process—responds to a specific Presidential Permit application proposing a specific, yet regionally significant, transmission proposal. Given the significant impact that this specific proposal could have on the energy future of the region as a whole, it is essential that it not be viewed in isolation. In this regard, other projects, proposals, and planning to achieve similar objectives are currently underway:

- DOE is currently considering the Presidential Permit application of another international transmission project—the Champlain Hudson Power Express ("CHPE")—which will import from Canada 1,000 MW of electric power into the New York grid via underground and

submerged High Voltage Direct Current (“HVDC”) transmission lines. DOE’s environmental review of CHPE under NEPA is underway.

- The Province of Québec’s ten-year energy strategy (2006-2015) calls for increasing generation capacity through new hydroelectric and other projects totaling 4,500 MW and, with this increased capacity, stepping up exports of power to neighboring control areas, including New England and New York. *See* Québec Energy Strategy (2006-2015), English summary at 9-10, *available at* <http://www.mrnf.gouv.qc.ca/english/publications/energy/strategy/energy-strategy-2006-2015-summary.pdf> (“The 4,500 MW added capacity will be sufficient to meet Québec’s long-term demand, promote wealth-creating industrial development, and support exports. . . . The Government also intends to ensure that Québec is able to increase its electricity exports, once its own needs have been met. It has therefore mandated Hydro-Québec to begin discussions with potential partners in view of signing electricity export agreements.”). Québec has also announced an economic development plan for its northern territory through 2035—“Plan Nord”—that emphasizes new generation projects totaling an additional 3,500 MW, including 3,000 MW of hydroelectric capacity, to support Québec’s energy strategy. *See, e.g.*, Plan Nord Working Document (Nov. 2009), *available at* <http://www.plannord.gouv.qc.ca/english/documents/plan-nord.pdf>.
- Similarly, a major objective of Hydro-Québec’s strategic plan (2009-2013) is increased generation capacity to step up exports to New York and New England. *See* Hydro-Québec Strategic Plan (2009-2013) at 19-27, *available at* http://www.hydroquebec.com/publications/en/strategic_plan/pdf/plan-strategique-2009-2013.pdf (“As a result of recent and ongoing hydroelectric development projects, Hydro-Québec Production expects to have the generating capacity needed to ensure export growth. By 2013, we will have nearly 24 TWh at our disposal. This margin of flexibility will enable us to increase the volume of our exports.”); *id.* at 42 (“We will continue our initiatives to increase interconnection capacity with the U.S. Northeast and neighboring Canadian provinces. Furthermore, subject to confirmation of requests for transmission services, we plan to build a 1,200-MW interconnection with New England by 2014. . . . We also plan to upgrade the New York interconnection (Châteauguay substation). With import and export capability, this interconnection plays a major role in energy interchanges between Québec and the United States. We will coordinate the work with the U.S. operators to reduce impacts on service. We are considering other projects to ensure long-term operability and are keeping up our efforts to maintain or increase the exploitable capacity of all our interconnection facilities.”). Hydro-Québec also envisions using increased interconnections with the Ontario grid to extend the reach of its exports to western New York and the U.S. Midwest. *See id.* at 26.
- Since 2009, DOE and Canadian officials have been engaged in a “U.S. – Canada Clean Energy Dialogue” (the “Dialogue”). One of the principal objectives of the Dialogue’s Electric Grid working group is “increasing opportunities for trade in clean electricity.” *See* U.S. – Canada

Clean Energy Dialogue Strategic Plan at 5 (Sept. 2009), *available at* [http://www.energy.gov/news/documents/CED_Action_Plan_\(color\)_pdf_2_\(2\).FINAL_9-15-09.pdf](http://www.energy.gov/news/documents/CED_Action_Plan_(color)_pdf_2_(2).FINAL_9-15-09.pdf). A final report on the Dialogue is forthcoming this year.

- In April 2010, Maine enacted legislation intended to promote new transmission infrastructure along designated highway and other corridors, which could be used to increase Maine's capacity for imports from New Brunswick. *See* 2010 Me. Laws ch. 655 (L.D. 1786). A new transmission line between New Brunswick and Maine has been the subject of significant recent study. *See, e.g.,* U. S. –Canada Clean Energy Dialogue, Increasing Trade in Clean Electricity, Presentation of Gordon van Welie, President and CEO, Independent System Operator New England ("ISO-NE"), at 12 (May 20, 2010), *at* http://www.iso-ne.com/pubs/pubcomm/pres_spchs/2010/post_uscanada_may2010.pdf; Phase III of Maine Power Connection project, *at* http://www.maineconnection.com/program_background.aspx.
- In August 2010, Vermont agreed to a long-term power purchase agreement with Hydro-Québec that allows Vermont to purchase up to 225 megawatts of power, predominantly hydroelectricity, starting in November 2012 and ending in 2038. *See* Press Release, Vermont and Québec reach new energy agreement (Aug. 12, 2010), *available at* http://www.hydroquebec.com/4d_includes/headlines/PcAN2010-129.htm.

In light of the foregoing, and to ensure that DOE is making decisions that are truly in the best interests of the United States and the Northeast (and is not merely reacting to Hydro-Québec-generated project proposals in piecemeal fashion), we urge DOE to stay this proceeding and instead initiate a broad, comprehensive EIS to study (i) the nature and extent of the Northeast's need for Canadian hydro-power, taking into account the nation's and region's energy policies and goals, and (ii) the most efficient, least impacting means of importing Canadian power to meet any such need. Such an analysis would be akin to a programmatic EIS and effectively establish a master plan for the region's importation of Canadian power, including whether and how that power fits into the region's broader energy needs and policies. Depending on the outcome of that comprehensive, region-wide analysis, DOE could then engage in project-specific Presidential Permit determinations with a broader view of how each project fits within—and either advances or hinders—an established region-wide, comprehensive plan.

Given the complexity of assessing the cumulative impacts of separate project proposals (*e.g.,* Northern Pass, CHPE, and other potential Canadian imports), and in light of the need to assess whether Canada's export plans are in the best interests of the United States and the Northeast, this broader, comprehensive approach makes far more sense (and will result in far superior decision-making) than responding to individual projects in piecemeal fashion, as proposed by individual private entities. *See* Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, 18,033 (Mar. 23, 1981) ("Forty Questions") ("The preparation

of an area-wide or overview EIS may be particularly useful when similar actions, viewed with other reasonably foreseeable or proposed agency actions, share common timing or geography. For example, when a variety of energy projects may be located in a single watershed. . . the overview or area-wide EIS would serve as a valuable and necessary analysis of the affected environment and the potential cumulative impacts of the reasonably foreseeable actions under that program or within that geographical area.”). Important regional authorities and bodies, such as ISO-NE, the New England Governor’s Conference, and the Eastern Canadian Premiers, could provide important input in such a comprehensive NEPA process.

A comprehensive EIS would be a valuable decision-making tool that would enable DOE to take the “hard look” in a more holistic and efficient manner at the international and regional impacts and alternatives that NEPA requires. Moreover, the Presidential Permit process is an important element of the United States’ foreign energy policy, making a broad regional review all the more appropriate. We strongly urge DOE to seize the opportunity to analyze the broader regional issue of Canadian imports, and its policy implications for the United States and the Northeast, before proceeding further with this project-specific Application and other relevant decisions.

II. DOE Should Define the Purpose and Need for Action More Broadly.

In its notice of intent to prepare an EIS and conduct a scoping process, DOE describes the purpose and need (and alternatives) for the project as follows:

Agency Purpose and Need and Alternatives: The purpose and need for DOE’s action is to decide whether to grant Northern Pass the subject Presidential permit. Under the Action alternative, DOE would grant the Northern Pass application for a Presidential Permit for the proposed international electric transmission line. Under the No Action alternative, DOE would deny the Northern Pass application for a Presidential Permit for the proposed international electric transmission line.

Notice of Intent to Prepare an Environmental Impact Statement and Conduct Public Scoping Meetings, and Notice of Floodplains and Wetlands Involvement; Northern Pass Transmission, LLC, 76 Fed. Reg. 7,828 (Feb. 11, 2011).

The above statement violates NEPA’s mandate that “an agency cannot define its objectives in unreasonably narrow terms.” *Nat’l Parks & Conservation Ass’n v. Bureau of Land Mgt.*, 606 F.3d 1058, 1070 (9th Cir. 2010) (citations omitted). More specifically, as the Ninth Circuit recently stated: “An agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency’s power would accomplish the goals of the agency’s action, and the EIS would become a foreordained formality.”

Id. (citations omitted).¹ A purpose and need statement cannot lawfully be premised on the narrow objective of determining whether or not to grant a permit for a particular proposal. Indeed, as written, DOE's purpose and need statement allows for just one alternative to NPT's proposal: denial of the project altogether. This fails to satisfy NEPA's mandate, further discussed *infra*, that agencies consider a reasonable range of alternatives—including alternative project configurations and designs—as well as permit conditions requiring mitigation of environmental impacts.

It is axiomatic that a purpose and need statement must be defined by the nature of a proposed project and the impacts associated therewith, and that it must be framed in such a way as to allow for a reasonable range of alternatives to be identified and analyzed. *See Border Power Plant Working Group v. Dept. of Energy*, 260 F. Supp. 2d 997, 1030 (S.D. Cal. 2003) (rejecting argument that purpose and need of project subject to DOE Presidential Permit process pertained solely to transmission lines, to the exclusion of generating facilities in Mexico, and stating in pertinent part: "Here, the scope of the action relates only to the transmission lines, but the nature of the action includes the full scope of the analysis, including the effects of the action. The nature of the action therefore includes the importation of power generated in Mexico."). In this case, NPT's stated purpose of the proposed project is to import into New Hampshire and New England 1,200 MW of energy generated in Canada by Hydro-Québec. The need for the project, as characterized by NPT, is to meet needs in New Hampshire and New England for clean, competitively priced power that will reduce greenhouse gas emissions and reduce price volatility. NPT has emphasized, in particular, the region's need for clean, low-carbon power. According to its Application, for example, the proposed project "will deliver competitively priced, low carbon power that will help satisfy the requirements of the Regional Greenhouse Gas Initiative (RGGI) by reducing greenhouse gas emissions, help achieve the goals of the New Hampshire Climate Action Plan by enabling importation of Canadian hydroelectric power, and help mitigate price volatility in the region's energy market by increasing the region's fuel diversity." Application at 4. *See also id.* ("The Project will provide clean, low carbon, competitively priced and reliable hydroelectric power from Québec to consumers in the adjacent State of New Hampshire and the New England region."). The need for

¹ DOE's own NEPA guidance states:

The statement of the agency's underlying purpose and need is critical to identifying the range of reasonable alternatives. If the purpose and need is defined too broadly, the number of alternatives that might require analysis would be virtually limitless. It is inappropriate in most situations, however, to define purpose and need so narrowly that only a single alternative could be identified for analysis. The proposed action is generally only one means of meeting the agency's underlying purpose and need for action.

DOE, Recommendations for the Preparation of Environmental Assessments and Environmental Impact Statements, Second Ed., (Dec. 2004) (hereinafter, "DOE NEPA Guidance") at 5 (emphasis added).

a reliable supply of clean, low-carbon energy has been a major emphasis of NPT's outreach on the project. As stated by the president of NPT affiliate PSNH, Gary Long, for example:

We take the idea of trying to reduce carbon very seriously. The state has a goal of trying to reduce carbon from all sources by 80 percent by 2050. If there wasn't a business opportunity, this wouldn't be happening, but if there wasn't policy that requires a greener, cleaner energy future, we wouldn't be doing this. . . . We're not looking for major new sources to meet the power needs; we're looking for major new sources to meet the 'green power' needs.

"PSNH President Looks to Future Flow of Power," Concord Monitor, Dec. 20, 2010 (emphasis added).²

In light of the foregoing, we urge DOE to broaden its purpose and need statement, and to frame its description of purpose and need in terms of the purpose the project seeks to serve, and the need in New England the project seeks to fulfill, taking into account the the nature and impacts of the project, and enabling an analysis of a full range of reasonable alternatives. More specifically, we urge DOE to adopt a purpose and need framework for the EIS that (i) is based on the purpose of importing energy into New England from Hydro-Québec,³ and (ii) requires an assessment of whether and to what extent the New England region has a need for Hydro-Québec imports to advance the goals of a clean, low-carbon energy future for the region, and whether and how the proposed project (and alternatives) can fulfill any such need.

² See also Gary A. Long, "Northern Pass: Building New Hampshire's energy future," Foster's Daily Democrat, Mar. 6, 2011 ("[A]s New Hampshire's largest electric company, we are . . . responsible for providing reliable service to our 500,000 customers and ensuring that the state has the power supply diversity and price stability it needs to build a strong economy. We view the hydroelectric power that the Northern Pass project will import as absolutely essential to our ability to fulfill these responsibilities and to help the state meet its long-term clean energy goals. Most renewable energy comes at a relatively small scale, at a premium price, and is heavily dependent on weather conditions. In New Hampshire, we are fortunate to live in close proximity to Canada's unparalleled hydroelectric resources. The Northern Pass project offers us the rare opportunity to tap into a significant amount of reliable, competitively priced clean energy."); Press Release, Northern Pass Project Takes Another Significant Step Forward With Filing of U.S. Federal Permit Application (Oct. 15, 2010), at <http://www.northernpass.us/uploads/files/USDOEPermitApplication101510.pdf> ("The Northern Pass transmission project aims to deliver firm, competitively priced, low-carbon power that will help to reduce greenhouse gas emissions; mitigate price volatility in the region's energy market; and potentially help to avoid or defer the need to construct fossil fuel generation plants that would otherwise be required to produce an equivalent quantity of firm, reliable power.").

³ The purpose statement must not include specific project parameters proposed by NPT, such as the volume of electricity proposed to be imported; the entry- and end-points of the proposed transmission line; and the proposed transmission route and design. See DOE NEPA Guidance, *supra*, at 5 ("Do not include requirements (e.g., conceptual design specifications) in the statement of purpose and need that unreasonably narrow or bias the range of reasonable alternatives.").

III. The EIS Must Include a Thorough Analysis and Comparison of All Reasonable Alternatives and Their Impacts.

DOE's analysis of alternatives to the proposal is "the heart of the environmental impact statement," and "should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." 40 C.F.R. § 1502.14 (emphasis added).

Council on Environmental Quality ("CEQ") regulations make clear DOE must "rigorously explore and objectively evaluate all reasonable alternatives. . . devot[ing] substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits." 40 C.F.R. §§ 1502.14(a)-(b) (emphasis added). DOE must consider the "no action" alternative and all reasonable alternatives, including those that are not within DOE's or the applicant's capabilities. *See* 40 C.F.R. § 1502.14(c)-(d); Forty Questions, *supra* ("In determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant" (emphasis added)). DOE's alternatives analysis must also include any "appropriate mitigation" that has not yet been proposed. *See* 40 C.F.R. § 1502.14(f). Our comments below describe, based on the limited information regarding the project provided in the Application,⁴ the alternatives that DOE should study in detail in the EIS, including alternative routes and sites, alternative technologies and designs, alternative means of providing energy resources, and no action. We also note DOE's obligations (i) to justify—as supported by independent, expert analysis—the exclusion of any of these alternatives from detailed analysis in the EIS, and (ii) to provide a detailed and holistic comparison of the impacts and benefits of the analyzed alternatives, which must guide DOE's ultimate determination.

A. Alternative Routes and Sites

DOE must consider not only the routing alternatives presented by the Application, as amended by the addendum dated February 15, 2011, but all other potential reasonable routes and configurations for the project. To that end, in its preparation of the EIS, it is essential that DOE obtain and analyze all routes considered and rejected by NPT, which NPT represented as numbering more than 500. *See* Application at 19-21. DOE must independently review these potential routes, with the goal of identifying the route with the least environmental, cultural, and socio-economic impacts. In particular, DOE should consider all alternative routes and route

⁴ CLF and others objected to the Application on grounds that it failed to provide adequate information on environmental impacts and alternatives to the project, and to include other mandatory application elements. *See, e.g.*, CLF Protest at 2-8. CLF repeats and renews those objections, which are incorporated herein by reference.

segments that avoid, for example, visually prominent locations seen from many other locations; historic and culturally significant sites; wetlands; protected conservation lands under state, local, or private ownership; the Appalachian Trail; the Silvio O. Conte National Fish and Wildlife Refuge; and the White Mountain National Forest.

With these principles in mind, DOE must rigorously explore and objectively evaluate other routes and configurations, including, at a minimum:

(1) Use of the Existing Lines, Towers, and/or Right of Way Associated with the Phase I/II

The towers and right of way for the existing HVDC and AC transmission lines between Des Cantons in Québec and Sandy Pond in Ayer, Massachusetts (“Phase I/II”) provide obvious alternatives to the proposed project, including addition of a new line and set of towers within the right of way, use of the existing towers for new lines, and increasing the capacity of the existing Phase I/II lines. Any of these approaches would have clear environmental advantages over the development of an additional transmission line requiring many new miles of wholly new right of way; increasing the capacity of the existing lines would have the fewest impacts. DOE must fully evaluate the potential uses of the Phase I/II lines and right of way as alternatives to the current proposal. To the extent there are potential technical impediments, DOE must rigorously study the means available to overcome those impediments.⁵ CLF believes that this alternative is facially reasonable and requires a comprehensive analysis as part of DOE’s preparation of the EIS.

(2) Use of Other Disturbed Rights of Way – Railroads and Highways.

DOE must include in its EIS alternatives analysis a detailed study of the use of railroad rights of ways, including the many active, inactive and abandoned railroad right of ways in New Hampshire, and in other New England states, for all or a portion of the project route. *See, e.g.,* New Hampshire Department of Transportation, Map of Railroads, http://www.nh.gov/dot/org/aerorailtransit/railandtransit/documents/RailRoad_by_Owner_State_2009.pdf. Constructing new transmission lines along such corridors will likely have fewer environmental impacts than clearing new rights of way through undisturbed lands; for example, these rights of ways are already disturbed and in many cases cleared of vegetation. In the EIS, DOE should inventory such rights of way and provide potential routes for the project utilizing those rights of way (in whole or in part), including but not limited to routes that would replace all or most of the proposal’s preferred or alternative routes that require new rights of way and/or traverse environmentally sensitive and recreationally significant areas.

⁵ Contrary to NPT’s contentions in its April 12, 2011 letter, it is plainly not enough for DOE to rely on a representation, without technical or expert analysis, that an alternative is uneconomic or impractical.

For similar reasons, DOE should investigate and evaluate the potential use of highway rights of way. Several major interstate highways are in close proximity to the project route, including I-91, I-89, and I-93. Other state or federal highways may also be suitable for siting transmission lines. Using these rights of way for the project (in whole or in part) may involve use of median or shoulder areas that are readily accessible for construction and, as with the use of railroad rights of way, would avoid many of the environmental impacts associated with creating new rights of way. DOE should also consider potential combinations of railroad and highway rights of way.

With respect to both railroad and highway rights of way, DOE should consult the report prepared by the U.S. Government Accountability Office and the studies summarized therein. *See* Transmission Lines: Issues Associated with High-Voltage Direct-Current Transmission Lines along Transportation Rights of Way, GAO-08-347R, (Feb. 1, 2008). That report suggests there are potential advantages and challenges associated with siting HVDC lines along transportation rights of way, and that there are strategies to mitigate associated impacts and risks. For example, to minimize visual impacts, DOE should examine routing options that avoid disrupting scenic viewsheds, including viewsheds in which the rights of way to be utilized are currently difficult to see and viewsheds that travelers currently see from the rights of way to be utilized. It also must consider the burial of transmission lines in existing transportation rights of way, as discussed *infra*.

(3) Use of the CHPE Transmission Project

DOE must evaluate use of a portion of the CHPE transmission project currently under consideration as a means to transmit additional capacity into the New England grid. This analysis – which must not be dismissed or constrained by NPT’s desire to use PSNH lines, a converter station in Franklin, and an end-point in Deerfield – highlights the value and efficiency that would result from engaging in the comprehensive, regional analysis discussed in Part I, *supra*, and then determining the best, most effective means of importing needed Canadian power into the Northeastern states.

B. Alternative Designs, Technologies, and Strategies

The reasonable range of alternatives to be analyzed in the EIS must include not only routing and siting alternatives for traditional overhead transmission lines, but also reasonable alternative designs, technologies, and non-transmission alternatives that will achieve the same goals. Although the Application failed to provide any information regarding such alternatives, DOE must seriously consider them, utilizing all of DOE’s analytical and research expertise on transmission and energy issues. We discuss several of these alternatives below. We note that DOE is uniquely well-suited to perform a comprehensive and searching review of alternatives to the proposal and should not limit its inquiry only to the alternatives presented by the public during the scoping process.

(1) Location, Size, and Configuration of Converter Station and Substations

DOE must investigate and evaluate alternatives to the proposed converter station in Franklin and the upgraded terminus of the project at the Deerfield substation. Although NPT has structured its proposed route and configuration around these stations,⁶ it is DOE's obligation to consider the wide variety of other options for converting between Direct Current ("DC") and Alternating Current ("AC") transmission lines and the connection of the project to the New England grid.

For example, DOE should consider relocating the proposed DC-AC converter station. Moving the converter station closer to the Canadian border would require more of the project to utilize AC lines, which could allow for upgraded transmission connections with the existing grid in northern New Hampshire and, as a result, future opportunities for local energy generation facilities to tie in. In addition, relocation of the converter station to another location (in any direction) will facilitate consideration of alternative transmission routes with fewer environmental, cultural, and socio-economic impacts. NPT's selection of Franklin as the location of its proposed DC-AC converter station cannot limit DOE's evaluation of other potential sites. DOE should consider all reasonable alternative sites and independently assess their benefits and impacts.

There also are alternatives to siting the project terminus in Deerfield. NPT itself considered a substation in Londonderry for the terminus of the project, but rejected it despite various economic and technical advantages.⁷ As with NPT's undisclosed alternative routes, DOE should obtain NPT's assessment of the Londonderry terminus and should consider that site along with all other reasonable sites for the project's final interconnection with the New England electric grid, including sites that may benefit the overall electric grid through the associated transmission upgrades and improvements or that may allow for alternative project routes with fewer impacts.

In addition, DOE should evaluate whether there are alternative infrastructure, technology, or configuration options that would allow for interconnection with Hydro-Québec without the construction of a facility on the scale of the proposed \$250 million DC-AC converter terminal. It is possible that a smaller facility or an addition to an existing substation would meet technical requirements and also open up other alternatives for the siting of the terminal and for the project route.

⁶ See Application at 20.

⁷ See Report of Northern Pass Transmission, LLC on Open Season and the Cost and Feasibility of Project Expansion, FERC Docket No. EL09-20 (Dec. 15, 2010), at 5-7. *Contrast* Application at 19 ("Power flow studies were used to identify the DC facility end point in Franklin, and the AC terminal location at the existing Deerfield Substation.").

(2) Underground Transmission Lines

A promising alternative to overhead transmission lines that requires detailed review and consideration in the EIS is locating the transmission lines underground. Locating the lines underground would eliminate most of the permanent visual impacts associated with the project. Although the terrestrial impacts of construction associated with underground lines may be similar to overhead lines in some respects, DOE should investigate the available means to minimize any such impacts, such as drilling techniques (e.g., horizontal directional drilling) that avoid open-pit excavations. There are a number of competing HVDC and AC technological approaches to underground transmission lines, and all reasonable approaches require DOE's careful review.⁸

NPT representatives have objected to the potential costs of underground transmission lines in various media statements and in NPT's April 12, 2011 filing with DOE. Those objections are irrelevant to DOE's review; it is DOE's independent obligation to consider the technical challenges (including the means to overcome any such challenges), to evaluate the potential options (including, but not limited to, utilizing alternative routes and/or burying only a portion of the line where it would be visible in notable viewsheds), and to compare the environmental impacts with other alternatives. Moreover, DOE may readily reference and utilize its analysis and assessments of the CHPE project, discussed above, which includes plans to bury significant distances of HVDC transmission line in active railroad rights of way. DOE should conduct a comprehensive review of potential underground transmission technology options to inform the NEPA processes for the CHPE and Northern Pass projects alike.

Burying the lines may be appropriate for all or some of the project route, and DOE's consideration of the various options for line burial should be undertaken in concert with its evaluation of the many potential routes for the project. For example, locating underground lines in transmission and/or transportation rights of way would have fewer impacts and may prove more feasible than underground lines in new rights of way through presently undisturbed areas.

(3) Other Transmission Design and Technology Alternatives

DOE should also investigate design and technology alternatives to the traditional overhead infrastructure NPT has proposed. DOE must evaluate potential alternatives to all aspects of the project design identified in the Application, including but not limited to the height and proximity of towers, the depth of tower foundations, the aesthetic characteristics of the towers and wires, and the use of monopole versus multi-pylon towers. As with line burial, alternatives to the proposed design should be considered across the entire project as well as in localized instances where severe impacts are evident from comments received during the scoping process or from DOE's own review.

⁸ See, e.g., ABB, HVDC Light, at <http://www.abb.com/industries/us/9AAC30300394.aspx>.

(4) Regionally Planned Transmission Facilities

Another alternative to the current proposal is to utilize the existing regional planning process for transmission facilities, administered by ISO-NE under the auspices of its Federal Energy Regulatory Commission ("FERC") tariff. As extensively acknowledged in NPT's media statements and in its filings with FERC, NPT's proposal depends entirely on participant funding. DOE must consider the potential differences in the project configuration and route that would likely result from the project proceeding as a reliability project under ISO-NE procedures, and whether those differences would result in fewer or different environmental, cultural, or socio-economic impacts. In particular, and as discussed in more detail below, the EIS must consider the regional and New Hampshire energy and economic implications of the project's financing and how pursuing the project through regional transmission planning procedures would affect those implications.

(5) Non-Transmission Alternatives

DOE must also consider non-transmission alternatives to the project that would result in similar increases in regional electric capacity. These alternatives include: (i) enhanced development and utilization of renewable energy generation resources,⁹ (ii) distributed generation, (iii) demand response programs, (iv) energy efficiency investments, and (v) more aggressive energy conservation initiatives. These alternatives should be considered separately and in combination, and should also be assessed as a means of reducing the capacity of the proposed project, which may facilitate, or improve the technical feasibility of, utilizing one or more alternative routes, configurations, and designs.

It bears mention that NPT parents Northeast Utilities and NSTAR are sophisticated utilities that serve load throughout New England and are well-positioned to make investments in infrastructure and services that will benefit non-transmission efforts. Non-transmission alternatives also have been a research focus of DOE and have substantial regional support through ISO-NE and state programs. These alternatives require detailed analysis and consideration in the EIS.

C. No Action

DOE also must provide a fair and objective analysis of the "no action" alternative. During the scoping process, the public has insisted on such an assessment. It is clear that the proposed project is motivated principally and in the first instance by the economic benefits that will run to the project sponsors, and the Application therefore requires special scrutiny during the Presidential

⁹ Highlighting one example of the potential resources that could displace imported capacity, DOE and Oak Ridge National Laboratory recently released a study indicating that as much as 12.6 gigawatts of hydropower generation could be added by installing new equipment at the fleet of existing U.S. hydropower facilities. See Smith, U.S. Hydropower: Fleet and Resource Assessments, Presentation at National Hydropower Association Annual Conference (Apr. 5, 2011).

Permit process, which must determine whether the project is in the “public interest.” DOE should thus be open to deciding in the EIS that the impacts of the proposed project and other reasonable “action alternatives” are unacceptably significant and that the “no-action” alternative is the preferred alternative. Notwithstanding this context, NEPA itself requires DOE to perform a robust and impartial assessment of the environmental, cultural, and socio-economic implications of simply denying the Application. *See, e.g., Pit River Tribe v. U.S. Forest Service*, 469 F.3d 768, 786 (9th Cir. 2006) (EIS inadequate for failure to consider no-action alternative); *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228 (9th Cir. 1988) (NEPA alternatives analysis requires “agency decisionmakers ‘[have] before [them] and take[] into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost-benefit balance” (emphasis added)).

D. Rationales for Selection and Rejection of Alternatives to be Studied in the EIS

To the extent DOE excludes certain alternatives from detailed consideration, DOE must justify its decision with respect to each excluded alternative with expert analysis and appropriate rationales. In particular, and as discussed above in connection with underground transmission lines, DOE must support any determination that an alternative is infeasible, impractical, or otherwise unreasonable with DOE’s independent assessment of costs, technical issues, and other constraints.

DOE should be mindful of and fully account for the substantial private economic benefits that the project sponsors are seeking to realize through this project—both through the project’s FERC-approved return on NPT’s capital investments (which the New Hampshire Public Utilities Commission is currently challenging as excessive) and through the extraordinary wholesale power revenues the project will generate for Hydro-Québec. *See, e.g., FERC, Order Accepting Transmission Service Agreement*, 134 FERC ¶ 61,095 (Feb. 11, 2011); *New Hampshire Public Utilities Commission, Request for Rehearing*, FERC Docket No. ER11-2377 (Mar. 14, 2011). Because the proposal is a privately funded project structured to generate profits for the project sponsor, DOE should assume that the sponsor will make every effort to maximize those profits and thus should reach independent judgments regarding the costs and feasibility of each alternative with determinative weight to the importance of NEPA’s goals and the public interest.

IV. DOE Must Conduct a Searching, Rigorous Assessment of the Impacts of the Proposed Project and Alternatives.

NEPA requires a comprehensive assessment of the environmental impacts of the proposed Northern Pass project, and alternatives, including those discussed above. The EIS must provide a “full and fair discussion” of these impacts that will provide the “scientific and analytic basis” for meaningful and technically sound comparisons of alternatives. *See* 40 C.F.R. § 1502.16.

It is imperative that DOE consider all relevant impacts associated with the project, including direct, indirect, and cumulative impacts, whether they be local, regional, or international, including

the environmental impacts of the generation projects in Canada that will supply the power to be carried by this project. *See id.* Below, we briefly discuss certain environmental and other impacts that DOE must address in the EIS. Our comments are not intended as an exclusive or exhaustive list; DOE is obligated to consider all relevant impacts raised by other commenters or that emerge during DOE's independent study of the project.

A. Environmental Impacts of Generation and Transmission in Canada

All impacts associated with the source of the electric power that would be transmitted by the Northern Pass project are relevant, and indeed crucial, to a complete account of the environmental effects of the project as a whole. Understanding the environmental impacts in Canada is especially important where, as discussed *supra*, the project sponsors claim that the fundamental basis for the Application derives from the environmental characteristics, including reduced greenhouse gas emissions, of the generation resources supplying the power.

The impacts of hydroelectric generation and transmission projects on the natural environment and on cultural resources in Canada are dramatic in scale and a subject of tremendous controversy. With respect to generation, damming natural water bodies for hydroelectric power inundates geographically extensive areas upstream of dams. In those areas, such inundation dislocates human settlements, eliminates all existing ecosystems and habitat, and causes greenhouse gas emissions as vegetation and other biological material decompose underwater, and other greenhouse gases are released from inundated soils. Historically, Hydro-Québec's inundation of lands has caused significant environmental degradation and the destruction of indigenous Native American communities. In recent years, Hydro-Québec has acknowledged its obligations to pursue new developments only if coupled with major commitments to environmental protection and community benefits. Development of the vast network of transmission lines required to transport electric power generated in far northern Québec to the border with the United States also has important environmental impacts, which must also be considered in the EIS alongside the similar impacts of transmission within the United States, which we discuss in more detail below. Although the generation facilities that will supply the power and the transmission facilities that will connect those facilities to the United States portion of the project are in Canada, DOE must describe and consider their impacts in the EIS.

As the CEQ has definitively stated, such an evaluation is a core and unambiguous requirement of NEPA. *See* CEQ, Guidance on NEPA Analyses for Transboundary Impacts (July 1, 1997). Citing both federal case law and policy considerations, this guidance states:

Neither NEPA nor [CEQ] regulations implementing the procedural provisions of NEPA define agencies' obligations to analyze effects of actions by administrative boundaries. Rather, the entire body of NEPA law directs federal agencies to analyze the effects of proposed actions to the extent they are reasonably foreseeable consequences

of the proposed action, regardless of where those impacts might occur. Agencies must analyze indirect effects, which are caused by the action, are later in time or farther removed in distance, but are still reasonably foreseeable, including growth-inducing effects and related effects on the ecosystem, as well as cumulative effects. Case law interpreting NEPA has reinforced the need to analyze impacts regardless of geographic boundaries within the United States, and has also assumed that NEPA requires analysis of major federal actions that take place entirely outside of the United States but could have environmental effects within the United States.

Courts that have addressed impacts across the United States' borders have assumed that the same rule of law applies in a transboundary context. . . .

In sum, based on legal and policy considerations, CEQ has determined that agencies must include analysis of reasonably foreseeable transboundary effects of proposed actions in their analysis of proposed actions in the United States.

Id. (citing, *inter alia*, *Swinomish Tribal Cmty. v. FERC*, 627 F.2d 499 (D.C. Cir. 1980); *Wilderness Soc'y v. Morton*, 463 F.2d 1261 (D.C. Cir. 1972)) (emphasis added). *See also Province of Manitoba v. Salazar*, 691 F. Supp. 2d 37, 51 (D.D.C. 2010) (requiring analysis of effects in Canada of interbasin water transfer project); *Border Power Plant Working Group*, 260 F. Supp. 2d at 1012-15 (environmental impacts of generating facility that will export power through international transmission line requiring Presidential Permit must be considered under NEPA). DOE's statements that it intends to exclude impacts in Canada from its environmental review¹⁰ are erroneous as a matter of law and must be reconsidered and reversed to ensure compliance with NEPA.

It is clear both as a matter of common sense and from published Canadian strategy documents that the present and future impacts of generation and transmission in Canada, including continued and increased utilization of existing facilities and the development of new facilities, are "reasonably foreseeable" impacts of developing the Northern Pass project. With respect to additional generation, both the Province of Québec and Hydro-Québec have declared that they are pursuing ongoing and proposed hydroelectric generation projects in Canada to grow exports,

¹⁰ *See* 76 Fed. Reg. at 7,830 ("The EIS will evaluate potential environmental, social, cultural, and economic impacts in the U.S. from the construction and operation of the proposed new electric transmission line facilities."); DOE, The Northern Pass EIS Permitting Process, at http://northernpasseis.us/Permitting_Process/index.asp ("The EIS will evaluate the full range of potential environmental, social, cultural, and economic impacts in the U.S. from the construction and operation of the proposed new electric transmission line facilities.").

including through the Northern Pass project. *See* Hydro-Québec Strategic Plan (2009-2013), *supra* (“As a result of recent and ongoing hydroelectric development projects, Hydro-Québec Production expects to have the generating capacity needed to ensure export growth”); Québec Energy Strategy (2006-2015), *supra* (“The 4,500 MW added capacity will be sufficient to meet Québec’s long-term demand, promote wealth-creating industrial development, and support exports. . . . The Government also intends to ensure that Québec is able to increase its electricity exports, once its own needs have been met.”). *See also* NPT Transmission Service Agreement Filing, FERC Docket No. ER11-2377 (Dec. 15, 2010), at Attachment G, p. 28 (Charles River Associates, LMP and Congestion Impacts of Northern Pass Project (hereinafter, “Charles River Associates”)) (“In reality, the additional transmission capacity provided by the NPT Line could lead to additional development of resources to support exports from Québec, leading to higher total exports in the case with NPT in service.”).¹¹ Thus, at a minimum, DOE must fully consider the impacts of Hydro-Québec’s export-related plans to expand its generating capacity. Of course, DOE may and should reference environmental assessments prepared by the Canadian government and other authorities, although DOE has an independent obligation to critically evaluate such assessments and seek out supplemental information to verify and supplement their findings.

B. Energy Resources

CEQ regulations emphasize the importance, in all EISs, of describing the proposed action’s energy implications, *see* 40 C.F.R. § 1502.16(e), and that task is especially crucial in the context of a major international transmission project. As the federal government’s energy agency, DOE has a special responsibility to employ its technical expertise and resources in this review. DOE also must consider and reference the myriad federal, regional, state, and local energy planning efforts of recent years, including but not limited to the U.S.-Canada Energy Dialogue, DOE’s own renewable energy initiatives, transmission siting and congestion studies performed by DOE and FERC, ISO-NE’s transmission plans, the energy initiatives of the New England Governors and Council of Atlantic Premiers, orders and publications by the New Hampshire Public Utilities Commission, the New Hampshire Climate Action Plan and similar plans of other New England states, reports by the North Country Transmission Commission, and local plans and efforts intended to maintain and facilitate development of renewable energy facilities.

The EIS must address the project’s impacts on energy resources, use, markets, reliability, and prices. In particular, DOE must analyze the effects of the project and all reasonable alternatives on the specific issues discussed below.

¹¹ NPT’s contention in the Application that the power is merely “excess” capacity (*see, e.g.*, Application at 4) is thus at odds with not only these strategic plans, but also its own expert’s analysis.

(1) Renewable Energy Resources in New Hampshire and the Northeastern United States

Major new importation of low-priced electric power from Canada will have profound effects on the development and maintenance of domestic energy resources, including new renewables such as solar, wind, efficient low-emitting biomass, and small-scale hydroelectric facilities. Federal and state public policies, including federal and state tax incentives and renewable portfolio requirements, promote new and continuing development of these resources. CLF has strongly advocated and supported these policies as critical to creating a clean energy future for New England and the nation that will move us away from reliance on inefficient and dirty power plants that contribute to climate change and threaten public health. As proposed, the Northern Pass project, as a DC line between Canada and Franklin, New Hampshire, will preclude access to renewable energy sources in northern New Hampshire, where significant wind and other renewable projects are and will be proposed. This fact reinforces the need to study alternative, more northerly sites for the DC-AC converter, discussed *supra*.

DOE should also take into account the potential for legislative changes that will qualify large-scale hydroelectric power for renewable portfolio incentives, which have already been proposed in several states (*see, e.g.*, House Bill 302 in New Hampshire, and Senate Bill 1 in Connecticut), and the potential effects of those changes on the market for renewable energy credits and the financing of existing and proposed renewable projects. CLF opposes these legislative changes as contrary to the spirit and purpose of renewable portfolio requirements, which are intended to spur investment in new renewable resources and the modernization of existing facilities within the region. With respect to these resources, New Hampshire's Climate Action Plan emphasizes that any importation of Canadian hydropower "should be developed with consideration for the broader environmental impacts of the power sources as well as the impacts that this imported power would have on the development of in-state renewable resources." N.H. Climate Action Plan at 44-45, *available at* http://des.nh.gov/organization/divisions/air/tsb/tps/climate/action_plan/nh_climate_action_plan.htm. Taking the above issues into account, the EIS must address the impacts of the proposal and its alternatives on local renewable energy resources, including but not limited to their financial viability, their role in New England's energy portfolio, and the project's potential effect on the region's renewable energy goals.

(2) Displacement of Fossil-Fuel Generation

DOE must address the potential effect of the project on other energy resources, including the impact of imported power from Canada on the utilization and future of New England's fossil-fuel generating facilities. The potential changes in these facilities' output have significant environmental implications because all such facilities have their own environmental impacts that vary with utilization. The displacement of fossil fuel generation also is an important element of the qualified endorsement for importation of Canadian hydropower in New Hampshire's Climate Action Plan. *See* N.H. Climate Action Plan at 44. In media statements and regulatory filings, NPT has

represented that these effects will occur. *See, e.g.*, Press Release, Northern Pass Project Takes Another Significant Step Forward With Filing of U.S. Federal Permit Application (Oct. 15, 2010), *supra* (“The Northern Pass transmission project aims to deliver firm, competitively priced, low-carbon power that will . . . potentially help to avoid or defer the need to construct fossil fuel generation plants that would otherwise be required to produce an equivalent quantity of firm, reliable power.”); NPT, Transmission Service Agreement Filing, Cover Letter at 29, FERC Docket No. ER11-2377 (Dec. 15, 2010) (“The NPT Line will provide New England with access to 1,200 MW of low carbon, predominantly hydro-electric power. This will displace fossil-fired generation in New England. Northern Pass estimates that greenhouse gas emissions associated with producing electricity will be reduced by up to five million tons of carbon dioxide per year. . . .” (emphasis added).); Charles River Associates, *supra*, at pp. 1-2, 18, 28, 31-35 (describing modeled displacement of natural gas-fired generation).

In the EIS, DOE must undertake its own quantitative assessment of the proposal and its alternatives to ascertain their effects on these resources. For example, it is critical that DOE model the displacement effects within the New England market based on the assumptions underlying NPT’s application—Hydro-Québec selling power almost wholly through the ISO-NE wholesale market with some small portion being sold to NPT affiliate PSNH—as well as alternative assumptions based on the studied alternatives. Notably, PSNH operates several fossil-fuel generation assets in New Hampshire, many of them dating to the 1950s with extraordinarily high carbon emissions and with high costs due to their inefficiency in comparison with other units in the New England wholesale market; any analysis PSNH has performed on the impacts of the Northern Pass project on those assets’ operating profile would be highly relevant to DOE’s analysis and must be studied in detail in the EIS. Consistent with the New Hampshire Climate Action Plan, it is CLF’s position that the project *must* displace the output of existing inefficient, dirty facilities (particularly coal- and oil-fired units) to be considered in the public interest, especially in light of the environmental and clean-energy benefits touted by NPT as a fundamental basis for its Application.

(3) Impacts on Demand Management, Demand Response, Energy Efficiency, and Conservation

As with other energy resources, DOE must evaluate the effects of the project on existing and potential non-generation resources, including demand management, demand response, energy efficiency investments, and conservation efforts. All of these resources reflect avoided energy use, with the unassailable benefit of reducing utilization of existing, polluting resources and virtually no adverse environmental impacts. DOE should address, in detail, how substantial new capacity into the New England electric grid may diminish the economic incentive for these resources to continue to grow—and the value of the many federal, state, local, and utility investments promoting them. As discussed above, non-generation alternatives to the project that DOE must consider in the EIS would have vastly different effects on these resources, which must also be quantified and described.

(4) Impacts on Transmission System, Energy Markets, and Rates

In addressing the project's effect on energy resources, the EIS must fully describe the impacts of the proposal, and alternatives, on the regional transmission system, electric markets, and rates. NPT has acknowledged the need for substantial upgrades to the AC transmission infrastructure beyond the terminus of the DC portion of the project, suggesting that the project will have significant impacts on the regional transmission system. The extent, cost, and effects of these impacts have not yet been addressed by NPT, but are plainly consequences of the project.

NPT commissioned a brief study by Charles River Associates on the project's economic effect within the New England market, which it appended to a filing with FERC in December 2010 but has not submitted to DOE as part of this proceeding. *See* Charles River Associates, *supra*. Although the Charles River Associates study should be included in the NEPA administrative record, DOE should undertake a more comprehensive, impartial analysis of the project's (and alternatives') potential effects on the reliability and other characteristics of ISO-NE's transmission system, wholesale energy markets, other markets for capacity and ancillary services, and, most importantly, retail energy prices for New England and New Hampshire customers. DOE should work collaboratively with ISO-NE and the state regulatory bodies to obtain necessary data and projections.¹² DOE's analysis will serve as a crucial foundation for the EIS, which must describe the project's energy implications and also its socio-economic impacts in New Hampshire and throughout the region.

C. Greenhouse Gas Emissions

As discussed in the CLF Protest (at p. 12), the EIS must assess the project's net effect on greenhouse gas emissions, including the direct emissions caused by generating facilities utilizing the project and the indirect changes in emissions from other facilities and in energy usage in New England. A detailed assessment is required under NEPA because electricity generation is among the most significant sources of greenhouse gas emissions and the project has critically important implications for electric systems in New England and Canada, as outlined above. *See* EPA, Human-Related Sources and Sinks of Carbon Dioxide, at http://www.epa.gov/climatechange/emissions/co2_human.html ("The process of generating electricity is the single largest source of CO₂ emissions in the United States."); CEQ, Draft NEPA Guidance on Consideration of Effects of Climate Change and Greenhouse Gas Emissions (Feb. 18, 2010) ("By statutes, Executive Orders, and agency policies, the Federal government is committed to the goals of energy conservation, reducing

¹² As DOE is aware, ISO-NE's review of the project is required to ensure that it will have no adverse effect on system reliability. *See* ISO-NE, Transmission, Markets, and Services Tariff, § I.3.9. The project's effect on system reliability is also a key issue in DOE's determination of whether the project should be granted a Presidential Permit. *See* 75 Fed. Reg. at 69,990 (Nov. 16, 2010). As discussed above, DOE must address these issues in the EIS in their broader context. Even if ISO-NE's regulatory role may be limited to system reliability issues, DOE should consult with ISO-NE's planning staff on transmission and market issues more generally.

energy use, eliminating or reducing GHG emissions, and promoting the deployment of renewable energy technologies that are cleaner and more efficient. Where a proposal for Federal agency action implicates these goals, information on GHG emissions (qualitative or quantitative) that is useful and relevant to the decision should be used when deciding among alternatives.”); *see also Center for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1217 (9th Cir. 2008) (“The impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.”). DOE has already committed to conducting this analysis. *See* 76 Fed. Reg. at 7,830.

In particular, DOE should evaluate the greenhouse gas emissions of the large-scale hydroelectric facilities in Québec that will utilize the project with a survey of available scientific studies on the issue. Any failure to do so will render DOE’s analysis fatally incomplete. As referenced above, inundation of vegetated areas releases methane and other greenhouse gases to the atmosphere as organic material decomposes underwater. Based on this information, the EIS must describe the current and projected emissions from the facilities intended to deliver power through the project. With respect to emissions in the United States, the EIS must incorporate the results of its analysis of the project’s impacts on energy resources relative to, among other things, renewable energy facilities and displacement of fossil fuel generation. Finally, DOE must determine the net greenhouse gas emissions of all analyzed alternatives to the project in order to facilitate a meaningful comparison of alternatives in the EIS.

This independent assessment should provide an evaluation of NPT’s claims, discussed *supra*, that the project has environmental merit as a “green” source of “low carbon” power and will provide substantial net reductions in greenhouse gas emissions. It also must be used to assess whether and to what extent the proposed project is consistent with the goals and recommendations of the New Hampshire Climate Action Plan.

D. Environmental and Community Impacts

As one of the largest infrastructure projects in recent New Hampshire history, the project as proposed is likely to have major environmental, cultural, and socio-economic impacts on all communities along its route. DOE must look to cooperating federal and state resource agencies to describe and analyze these impacts. With respect to the data collection that will be necessary to support its review, DOE should ensure that all data and information from NPT on which DOE intends to rely are technically sound and of objectively high quality, and DOE must critically review and supplement such data and conduct its own investigations where appropriate to satisfy its obligation to prepare an impartial and objective EIS.¹³ Ultimately, the EIS must provide a complete

¹³ As discussed in the CLF Protest, the Application fails to reflect the data on environmental conditions and impacts that NPT apparently already has collected in the project study area, and on which DOE intended to rely prior to the withdrawal of NPT’s contractor from the EIS preparation process. All such information should be made publicly available in conjunction with the draft EIS or before. CLF

discussion of all relevant impacts associated with the project and its alternatives (from either construction activities or permanent infrastructure), including but not limited to:

- Impacts to forest, wetland, and other wilderness areas, including fragmentation or disruption of wildlife habitat and other losses of ecological services;
- Impacts to endangered and threatened species of animals and plants, whether under federal or state protection, including all species with ranges near the proposed routes (per the Application, Indiana bat, grey wolf, dwarf wedgemussel, the Karner blue butterfly, Canada lynx, Jesup's milk-vetch, Robbin's cinquefoil, and small whorled pogonia) and species reportedly in proximity to the proposed or alternative routes (again, per the Application, northern harrier, peregrine falcon, northern black racer, wild comfrey, golden fruited sedge, muskflower, Kalm's lobelia, Pickering's bluejoint and wild lupine);
- Impacts to air quality, including vehicle and equipment emissions associated with construction and, as discussed above relative to the project's energy implications and greenhouse gas emissions, the reductions in conventional and toxic air emissions from displacement of other generation facilities;
- Alteration and industrialization of scenic landscapes throughout New Hampshire and other visual impacts from transmission infrastructure, including through the use of detailed, site-specific simulated visual renderings of all proposed structures and alternatives in different landscapes, geographic locations, and seasonal conditions;
- Impacts to public lands and lands dedicated to conservation, including the White Mountain National Forest, the Appalachian Trail, the Silvio O. Conte National Wildlife Refuge, state forests and parks, and all local and private conservation land;
- Noise impacts, including construction and operational corona effects associated with high voltage transmission;
- Socio-economic impacts to communities along the route as well as to New Hampshire and the region as a whole, including to employment generally, agriculture, the forest industry, tourism, recreational attractions, property values for land held by existing landowners, the second-home market, master-planned real estate developments, and the construction and skilled trades;
- Impacts to historic sites and districts, and to geographic areas with cultural importance;
- Disproportionate impacts in "environmental justice areas," including all areas with high levels of poverty, as measured relative to state-wide per capita income; and
- Impacts on implementation of local, regional, state, and federal land use, conservation, and other plans, including, *e.g.*, the White Mountain National Forest Land and Resource Management Plan, the New Hampshire Climate Action Plan, the New Hampshire Wildlife

reserves all rights to object to DOE's use of or reliance on data and information that was generated by NPT or its consultants.

Action Plan, and local comprehensive, zoning, open space, and conservation plans, *see* 40 C.F.R. § 1502.16(c).

In describing and evaluating the impacts of the project and alternatives in the EIS, the following principles are of paramount importance:

- DOE must consider the cumulative impact of the project and its alternatives, *i.e.*, “the impact on the environment which results from the incremental impact of the action when added to the past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such actions.” 40 C.F.R. § 1508.7. As discussed in Part I of these comments, CLF urges DOE to stay this proceeding and prepare a comprehensive EIS addressing energy imports into the northeastern United States from Canada. If DOE elects to continue with this project-specific EIS for the Northern Pass project, it nonetheless retains the obligation to consider the cumulative impacts—from other “past, present, and reasonably foreseeable future” projects, and from the overall Canadian plan to increase exports to New England and New York—that it would consider in a comprehensive EIS. For example, DOE must consider the energy implications and environmental consequences of foreseeable additional transmission projects, including the potential for future expansion of rights of way for the Northern Pass project and other transmission corridors from Canada into the northeastern United States and corresponding additional growth of hydroelectric generating capacity in Québec. For the reasons set forth in Part I, we believe such an effort will benefit enormously from a comprehensive EIS that proactively establishes the nature and extent of the Northeast’s need for Canadian imports and—rather than reacting to individual, piecemeal projects proposed by private interests—engages in planning and the assessment of impacts accordingly.
- In its preparation of the EIS, DOE should supplement its conventional description and assessment of project impacts (by category) with holistic assessments wherever possible. In particular, DOE should undertake an independent social and economic impact assessment, which would culminate in a cost-benefit analysis of the project and alternatives that addresses the full range of social costs and benefits, with appropriate weight for “unquantified environmental impacts, values, and amenities,” such as the non-use benefits associated with wilderness and rural areas. *See* 40 C.F.R. § 1502.23. Such an analysis will allow for a meaningful comparison of disparate alternatives and may be the only mechanism for DOE to prepare an analytically defensible EIS.
- Finally, and fundamentally, any alternative that DOE ultimately selects as its “preferred” alternative must minimize significant impacts and include adequate mitigation. DOE’s first obligation is to describe all reasonable alternatives as complete and fully conceived substitutes for the current proposal and to select the least impacting alternative that accomplishes the purpose and need discussed in Part II of these comments. If, however, the

least-impacting alternative cannot minimize all significant impacts, DOE must identify and require appropriate mitigation measures.¹⁴ To take one important example, to the extent that the selected alternative does not assure displacement of fossil fuel generation provided dirty, inefficient generating facilities using coal and oil, DOE should require NPT to commit to securing the retirement of those resources that are within its or its affiliates' control.

V. Renewal of Request for Post-Scoping, Pre-Draft-EIS Report

In Mr. Courchesne's comments at the public scoping meeting and by letter dated March 31, 2011, CLF requested that DOE prepare and issue for public comment a post-scoping, pre-draft-EIS report that describes the alternatives and categories of impacts that DOE intends to study in depth in the EIS. For the reasons in that letter, which is incorporated by reference herein, CLF repeats and renews that request. The report should also include DOE's proposed definition of the purpose and need for agency action, as discussed in Part II, *supra*. In light of the importance of DOE's decisions about the scope of the EIS, including DOE's decisions with respect to the comments set forth above, such a report will help ensure that the EIS appropriately satisfies DOE's legal obligations and addresses the extraordinary public input DOE has received during the scoping process.

*

*

*

CLF appreciates the opportunity to provide these comments on the proper scope of the EIS for the Northern Pass project. We understand that DOE intends to re-open the scoping process and accept additional public comments; CLF reserves its rights to submit additional comments and information during any further public comment period. We look forward to DOE's prompt action on CLF's pending filings in the Presidential Permit docket and to the remainder of the NEPA process.

¹⁴ All elements of the reviewed alternatives should be considered as potential mitigation measures and enumerated in the EIS. For example, even if non-generation alternatives to the current proposal are not considered the "preferred" alternative, it is likely that investment in energy efficiency and conservation programs would be an important mitigating measure that should be required. Likewise, even if the preferred infrastructure plan for the project itself cannot accommodate all desirable elements, those elements can be pursued in tandem with the project as mitigation measures. For example, if relocation of the Franklin converter terminal were somehow determined infeasible, DOE could and should require the project sponsors to improve transmission facilities in northern New Hampshire to increase access for renewable energy facilities.

Respectfully submitted,

/s/ Thomas F. Irwin
Thomas F. Irwin, Esq.
N. Jonathan Peress, Esq.
Christophe G. Courchesne, Esq.*
Conservation Law Foundation
27 North Main Street
Concord, NH 03301
(603) 225-3060
tirwin@clf.org

*admitted in Mass., motion for admission pending in
N.H.

Dated: April 12, 2011