New Hampshire Transmission’s Solution in Response to MPUC’s Reliability Investigation
Table of Contents
Executive Summary ......................................................................................................................... 1

Section 1 – Northern Maine Transmission System Background .................................................... 3
   1.1 History of Commission Review of Northern Maine Reliability and Competition Challenges ...... 3
   1.2 Current Reliability Challenges Facing Northern Maine .......................................................... 4
   1.3 Alternative Projects Before the Commission ........................................................................... 6

Section 2 – Project Description ....................................................................................................... 8
   2.1 Project Overview ..................................................................................................................... 8
   2.2 Description of Proposed Corridor ............................................................................................ 9
   2.3 Description of Type of Line and Facilities ............................................................................. 11
   2.4 Cost Estimate .......................................................................................................................... 13
   2.5 Preliminary Schedule .............................................................................................................. 13

Section 3 - Project Benefits and Economic Justification ................................................................. 15
   3.1 Project Benefits ....................................................................................................................... 15
      3.1.1 Meeting the Reliability Needs of Northern Maine ............................................................ 15
      3.1.2 Facilitating Development of New Generation to Enhance Competition ......................... 20
      3.1.3 Resource Diversity and Risk Mitigation ........................................................................... 21
      3.1.4 Promoting Retail Competition ......................................................................................... 22
      3.1.5 Local Investment and Economic Benefits ....................................................................... 22
   3.2 Economic Justification .......................................................................................................... 22
      3.2.1 Transmission Costs ......................................................................................................... 23
      3.2.2 Economic Benefits from Competitive Supply ................................................................. 25
      3.2.3 Previous NMTS Market Studies ...................................................................................... 27

Section 4 - Comparison of Alternative Projects ............................................................................. 30
   4.1 MPS’s Alternative ................................................................................................................... 30
   4.2 Maine GenLead’s Alternative ................................................................................................. 32

Section 5 – Legal and Regulatory Approvals ................................................................................. 33
   5.1 Commission Approval .......................................................................................................... 33
   5.2 ISO-NE Interconnection Approval and Cost Recovery ......................................................... 34

Section 6 - NHT is Prepared to Implement a Long-Term Solution ............................................... 35

Appendix A – NHT Technical and Financial Qualifications and Experience ............................... A-1
Appendix B – Detailed Routing Information ................................................................................. B-1
Table of Figures

Figure 1 - Northern Maine Reliability Tie Project Route ................................................................. 9
Figure 2 - Design characteristics of Northern Maine Reliability Tie Project ...................................... 12
Figure 3 - Proposed H-Frame structures ............................................................................................. 12
Figure 4 - Northern Maine Reliability Tie Cost Estimate ($2017 dollars) .............................................. 13
Figure 5 - Preliminary Project Schedule ............................................................................................ 14
Figure 6 - Reliability Comparison Summary ....................................................................................... 16
Figure 7 - MPS and NBSO Interconnection Points ............................................................................. 17
Figure 8 - Radial Mode Operation of the MPS System ........................................................................ 18
Figure 9 - Alternative Plan Comparison ............................................................................................. 20
Figure 10 - Cost Allocation Scenarios for Northern Maine Reliability Tie ........................................... 23
Figure 11 - Cost Allocation Scenarios Impact ...................................................................................... 25
Figure 12 - Northern Maine Market Interconnection Points ................................................................. 26
Figure 13 - Historical Basis (ISO-NE Maine Zone Less NBSO Average Monthly Price) .................. 26
Figure 14 - Standard Offer Prices - Small and Commercial Segments ................................................. 27
Figure 15 - Municipalities Crossed by Centerline of Corridor Study Area ........................................... B-1
Figure 16 - Mullen Substation to Haynesville Interconnection Corridor Study Area ......................... B-2
Figure 17 - Sampling of Maine’s Rare, Threatened, and Endangered Species ..................................... B-5
Figure 18 - Historic Properties Adjacent to ROW ............................................................................. B-7
Figure 19 - Architectural Resources Located within the Corridor Study Area ...................................... B-7
Executive Summary

Transmission reliability concerns in Northern Maine have been the subject of Maine Public Utilities Commission (“Commission”) and stakeholder analysis and discussion since 2009. In addition, the Commission has been concerned about the lack of competitive markets in Northern Maine dating back to 1998. The Commission has recently highlighted the urgency of addressing the reliability problems in the region by opening an investigation into these issues on December 18, 2012, and directing Maine Public Service Company (“MPS”) to identify its proposed solutions to the reliability problem in Northern Maine by January 15, 2014.1 The Commission also encouraged other interested parties to file proposals by that date. New Hampshire Transmission, LLC (“NHT”) anticipates that this proceeding will help the Commission evaluate: (1) which transmission project will best address the Northern Maine reliability and competitive market problems and provide the most benefit to Maine overall; and (2) what entity is best suited to develop the project successfully and timely.

In response to the Commission’s request, NHT presents its proposal for the Northern Maine Reliability Tie. The Northern Maine Reliability Tie would connect Northern Maine to the ISO New England Inc. (“ISO-NE”) transmission system via a 26-mile, 345-kV transmission line between the Mullen substation and Haynesville. While the primary driver of the project is to solve reliability problems in Northern Maine identified by the Commission, the Northern Maine Reliability Tie will also bring additional benefits. These benefits include:

- More effectively solving the reliability problems of Northern Maine by reducing instances where load shedding is required and minimizing the likelihood that the Northern Maine transmission system would be operated in Radial Mode;
- Increasing wholesale and retail competition by creating access to a the ISO-NE market, which will reduce supply prices over the long run and enable more competitive retail offerings;
- Adding resource diversity and providing local Northern Maine generation a new market to sell power;
- Providing economic benefits, primarily jobs and taxes, to Northern Maine; and
- Promoting the long-term development of one of the richest wind resources in New England, which will enable additional investment in the State of Maine.

A project that provides another connection to the New Brunswick System Operator (“NBSO”) system, as MPS has proposed in this proceeding, is inferior to the Northern Maine Reliability Tie in terms of reliability, and will not provide the benefits of competition, resource diversity, or development of new generation in the region.

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The solution to Northern Maine's reliability and competitive market problems can be addressed using an existing transmission corridor, the “Bridal Path,” between the Mullen substation and Haynesville. The Commission and stakeholders previously identified this solution as one that would provide significant benefits to Northern Maine, but MPS has let the Bridal Path lie dormant and other prospective developers have been unable to successfully see the project through. NHT believes that the urgent reliability issues provide the opportunity for this project to finally come to fruition. NHT proposes that the Northern Maine Reliability Tie could be completed by mid-2017 for a total estimated cost of $59.4 million. NHT has identified three workable regulatory frameworks for cost recovery as further described in this proposal. Although NHT’s Project can be accommodated under any of these frameworks, NHT believes the best outcome for Northern Maine customers is one in which MPS joins ISO-NE under a negotiated transitional Regional Network Service (“RNS”) rate.

NHT is an ISO-NE Participating Transmission Owner experienced in owning, operating, and maintaining 345-kV transmission assets in New Hampshire. NHT is part of a larger organization, NextEra Energy, Inc. (“NextEra”), that has significant experience successfully developing transmission projects and offers the financial backing and technical expertise that would provide the Commission with great assurance that the project, once approved, will be completed on time and on budget.

NHT is in a position to commit its resources, backed by the substantial capital assets and infrastructure experience of its affiliated companies in the NextEra family, to deliver the Northern Maine Reliability Tie project on time and on budget. No other solution offers the advantages of solving both reliability and market issues. Other plans either continue down the wrong path of isolating Northern Maine from its Maine and New England neighbors, or offer too little transmission capacity connected to ISO-NE to be sufficient. The former approach is a potential boon for New Brunswick generation owners, but it is not the best way to promote the well-being of Northern Maine consumers and businesses, or the development of renewable generation in Maine.

Reliability and market issues affecting Northern Maine have lingered over a number of years. There has never been a better opportunity to address the long-standing issues in Northern Maine. NHT respectfully suggests that the Commission’s and Northern Maine customers’ priorities are served best by the proposal described in the following pages and by using NHT—with its significant financial capacity and history of successful transmission projects—as the developer. NHT looks forward to working collaboratively with the Commission, the Northern Maine Independent System Administrator (“NMISA”), ISO-NE, and other stakeholders to bring the Northern Maine Reliability Tie successfully to completion.
Section 1 – Northern Maine Transmission System Background

1.1 History of Commission Review of Northern Maine Reliability and Competition Challenges
The Northern Maine Transmission System (“NMTS”) presents unique challenges for transmission planners. With a peak load of roughly 128 MW and 42,000 electricity customers, the Northern Maine planning area is relatively small compared with neighboring regions. In addition, there is limited in-region generation and several recent generation retirements have further reduced capacity. Given the relatively small amount of load and remote location, there are significant challenges to developing new, efficient generation to serve the region. Moreover, while the NMTS is connected to the New Brunswick transmission system, it is not electrically connected to the ISO-NE system or any other part of the United States. This lack of adequate import capability compounded with limited in-region generation makes addressing reliability issues in NMTS one of critical importance.

The Commission has been carefully monitoring and evaluating the reliability of the NMTS for a number of years. To ensure that the Commission was aware of reliability developments in the region, the Commission requested that MPS and NMISA, either individually or collectively, file an annual report providing an assessment of the current reliability situation in Northern Maine, an update on reliability developments over the last year, and a summary of planned actions in the coming year to address reliability issues. Pursuant to this request, NMISA has presented its annual Seven-Year Outlook (“Outlook”) to the Commission.

In addition to addressing reliability concerns in Northern Maine, the Commission has also expressed concerns regarding the competitiveness of the market in the region. In 1997, the Legislature directed the Attorney General and the Commission “to conduct a study of market power issues raised by the prospect of competition in the electric industry,” and provide a report of their findings. In the final report, the Commission found that New Brunswick Power Corporation (“NB Power”) dominates the Northern Maine market and has preferential access to Northern Maine’s market because of their control of transmission access to the small region. One of the remedies, among others, to solve the fair market competition problem in Northern Maine was the “construction of alternative transmission connecting Northern Maine to New England and Quebec.”

In 2007, the Commission again evaluated the lack of competition in Northern Maine, noting that the extent of competition in the Northern Maine retail market was much less robust than in the rest of the

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3 Id.
4 Maine Public Service Company Request to Construct Transmission Line of 100 or More Kilovolts from Limestone, Maine to Canadian Border Near Hamlin, Maine, Docket No. 2004-538, Order at 37 (Oct. 21, 2005).
6 Id. at 11.
7 Id. at 74.
state following market restructuring in 2000, and that “the status quo in northern Maine is unacceptable and that, without structural change, this status quo is unlikely to change. . . The Northern Maine market, as currently configured, is too small and isolated to support a competitive market.”

The Commission made this finding shortly after it rejected a standard offer service bid to supply MPS’s service territory because only a single bidder participated. In the order, the Commission stated that, “now that we have only one bidder, the competitive situation in northern Maine has gone from worrisome to one of obvious failure.”

The Commission therefore sought “appropriate means to promote competition that would benefit customers, including the development of new generation and transmission infrastructure in the region.” The Commission found that a transmission line linking Northern Maine with New England “appears to be the most straightforward and promising means to bring competitive electricity markets to Northern Maine.” The Commission had serious doubt that competition could be brought into the region in the foreseeable future without such a connection.

It noted, however, that a transmission connection could increase rates in the short term, and that if costs of the line are included in the ISO-NE regional transmission tariff, Central Maine Power Company (“CMP”) and Bangor Hydro Electric Company (“BHE”) customers may pay somewhat increased rates without an offsetting benefit.

The Commission indicated that it would continue to review the feasibility of a transmission interconnection between Northern Maine and ISO-NE.

1.2 Current Reliability Challenges Facing Northern Maine

The NMISA Outlook first referenced a potential reliability problem stemming from a lack of resource adequacy in Northern Maine beginning in 2009. The 2009 Outlook noted that the three biomass facilities in Sherman, Ashland, and Fort Fairfield did not have contracts that extended through the seven-year Outlook study period, and that if those facilities were retired and not replaced with other generation, transmission upgrades or other action could be necessary to ensure compliance with National Electric Reliability Council (“NERC”) standards. As a result, NMISA declared the issue to be an emerging transmission reliability deficiency and commissioned further study. The resulting Report on Technically Feasible Options to Meet Reliability Standards concluded that the NMTS was unable to meet NERC’s N-1 contingency standard. The transmission system with no upgrades would be deficient in its

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9 Standard offer service is a competitive procurement of supply resources conducted by the MPUC pursuant to their statutory direction and authority. Though Maine has retail competition, the standard offer service represents the “default” service. In 2012, about 75% of Maine residential and small commercial customers use the standard offer service.
10 Maine Public Utilities Commission, Order Rejecting Standard Offer Bids and Directing MPS to Provide Standard Offer Service and Notice of Inquiry at 3 (Nov. 16, 2006).
13 Id.
14 Id.
15 Id. at 6.
17 Id.
Load Carrying Capacity ("LCC") by about 14-30 MW, depending on mode of system operation. The report then evaluated possible options, including shorter-term solutions (adding reactive capability, upgrading transformers, using Reliability Must Run ("RMR") contracts for retiring generation), as well as longer-term solutions (new transmission interconnections and new generation) for solving the problem. The report concluded that all but one option met reliability needs and evaluated the options on the basis of cost and LCC improvement. The report concluded that adding additional reactive capability to southern Aroostook and upgrading the Tinker Transformer, located in New Brunswick and owned by Algonquin Power Company, from 50 MVA to 100 MVA ("Tinker Upgrade") was less expensive than other options to resolve the reliability problem. Finally, the report acknowledged that while the study was narrowly focused on the known reliability issue, there could be additional benefits not considered with each of the options.

Subsequently, NMISA reconfirmed the single contingency reliability violation in the 2011 Outlook and determined that the need to address the issue was more immediate. NMISA also confirmed that the best solution to the emerging transmission constraint was to proceed with either the Tinker Upgrade or alternative proposals that are no less cost-effective. In the meantime, RMR contracts would be used as necessary as a stop-gap until the upgrades could be completed.

The 2012 Outlook again reiterated the reliability need and provided an update to the pursuit of a cost-effective solution. NMISA stated that though all affected parties agreed to proceed with the Tinker Upgrade and MPS agreed to pay for the upgrades, the NBSO Open Access Transmission Tariff ("OATT") rate structure prevented cost recovery on the New Brunswick side of the transaction and, as a result, the project was derailed.

Thereafter, on January 25, 2013, ReEnergy Holdings, LLC ("ReEnergy") notified NMISA that it would retire the Fort Fairfield generating unit on March 1, 2013. In order to maintain reliability for the region, NMISA executed an RMR contract with ReEnergy for Fort Fairfield through 2014. NMISA estimated that using an RMR contract to address reliability concerns would cost customers up to an incremental $2.8 million a year. In addition, the Commission has noted that addressing the reliability shortcoming

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18 Northern Maine Independent System Administrator, Report on Technically Feasible Options to Meet Reliability Standards at 15 (February, 2010).
19 Id. at 24.
20 Id. at 18, 24.
21 Id. at 24.
23 Id.
24 Id. at 12.
with RMR contracts is not sufficient for the future, as RMR contracts are generally not considered to be the most prudent means of maintaining long-term reliability.\(^{28}\) RMR contracts obviously also do nothing to enhance competition for the region.

In its most recent Outlook in late 2013, NMISA again reiterated the reliability need, stated that the Tinker Upgrade was still stalled and concluded that, based on new studies, the Tinker Upgrade alone was no longer sufficient to solve Northern Maine’s reliability needs.\(^{29}\) Consequently, MPS evaluated longer-term solutions, including connecting to ISO-NE or adding another connection to NBSO.\(^{30}\)

1.3 Alternative Projects Before the Commission

In addition to evaluating the Northern Maine Reliability Tie, the Commission will consider at least two other alternatives in this proceeding: MPS’s Draft Plan to Provide Long Term Transmission System Reliability to its Customers in Northern Maine (“Draft Plan”), and Maine GenLead LLC’s (“Maine GenLead”) proposal.

On December 18, 2013, MPS presented its Draft Plan to the MPS Planning Advisory Group\(^{31}\) and on December 20, 2013, filed it in this proceeding. The Draft Plan includes a new 138-kV transmission line linking MPS’s 69-kV Mullen Substation to NB Power’s 138-kV Woodstock Substation.\(^{32}\) NHT estimates that the line will span approximately 3-4 miles from Mullen to the Canadian border, and another 10-12 miles from the border to Woodstock. Under the Draft Plan, NB Power would fund capital costs for improvements in New Brunswick, and MPS would fund improvements in Maine and recover the costs through transmission charges to be paid by Northern Maine customers.\(^{33}\)

In addition, the Draft Plan calls for MPS entering into a 10-year supply contract with NB Power.\(^{34}\) The contract would be indexed to prices in ISO-NE.\(^{35}\) The purpose of the contract is to mitigate the risk that prices from suppliers in New Brunswick would ultimately be higher than could have been realized through a connection with ISO-NE.\(^{36}\) MPS has not yet provided any cost estimates or underlying analyses for its Draft Plan. Because it proposes another connection to New Brunswick, the Draft Plan does nothing to address the lack of competition in Northern Maine.

\(^{28}\) Public Utilities Commission Investigation into Reliability of Electric Service in Northern Maine, Docket No. 2012-589, Request for Comments at 2 (Aug. 12, 2013); see Maine Public Service Company Request to Construct Transmission Line of 100 or More Kilovolts from Limestone, Maine to Canadian Border Near Hamlin, Maine, Docket No. 2004-538, Order at 36 (Oct. 21, 2005) (“We have also suggested that RMR arrangements with generators might provide a vehicle to address short-term reliability problems that may arise, thereby giving the northern Maine market participants some breathing room to develop longer-term solutions.”).


\(^{30}\) Id. at 11.

\(^{31}\) The Planning Advisory Group provides input and feedback to MPS on MPS’s transmission plan.


\(^{33}\) Draft Plan at 11-12.

\(^{34}\) Draft Plan at 3.

\(^{35}\) Draft Plan at 3.

\(^{36}\) Draft Plan at 3.
In the Draft Plan, MPS evaluated a connection between MPS and ISO-NE as an alternative to the tie to New Brunswick, and specifically evaluated a 115-kV connection from the Mullen Substation to Haynesville. MPS concluded that the best option pursuing an ISO-NE based alternative would be to connect to, but not join, ISO-NE, and negotiate a reciprocity agreement between ISO-NE and NMISA was in place that would allow generators to export power out of their home system to avoid paying transmission tariffs. MPS believes that new ISO-NE RNS transmission charges to MPS customers would be greater than the revenue requirement associated with the capital costs of the project, and that the additional cost would not be offset by supply side savings. NHT explains below, in Section 3, how the costs of connecting to ISO-NE may be spread cost-effectively while still providing the significant benefits of that connection, which would not be provided under the MPS Draft Plan.

Another proposal before the Commission is Maine GenLead’s proposal. On August 2, 2013, Maine GenLead filed a petition in this proceeding requesting that the Commission take a number of actions, including ordering a transmission and distribution (“T&D”) utility in Maine to file a Petition for a Certificate of Public Convenience and Necessity (“CPCN”) seeking approval to acquire the Oakfield Generator Lead from Maine GenLead and to construct an extension of the Oakfield Generator Lead to the MPS Mullen Substation, constituting the “Oakfield Interconnection.” The Oakfield Interconnection was among nine interconnection alternatives evaluated by MPS in a recent Transmission Reliability Investigation. If completed, the Oakfield Interconnection would connect the NMISA to the ISO-NE system. For the reasons set forth in Section 3, a connection to ISO-NE is the best solution to the NMTS reliability problems and competitive-market concerns, but Maine GenLead's proposal offers less unreserved transmission capacity, constructed and operated by an as yet unidentified third party (or parties), and, as such, falls short of the benefits provided by the Northern Maine Reliability Tie.

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37 Draft Plan at 10.
38 Draft Plan at 12.
39 Draft Plan at 12.
41 Id.
42 Id. at 7.
Section 2 – Project Description

2.1 Project Overview

NHT proposes to construct, own, and operate an approximately 26-mile, 345-kV transmission line that would connect the existing MPS 69-kV Mullen Substation in the NMISA area in the town of Houlton, Maine to an interconnection point with the Maine Electric Power Company (“MEPCO”) 345-kV line in Haynesville, Maine (“Northern Maine Reliability Tie” or “Project”). The Project would primarily follow an existing, but unused, right of way (“ROW”) between these two points. The expected commercial operation date based on the regulatory approval process proposed by NHT is mid-2017.

The purpose of the Northern Maine Reliability Tie is to address reliability concerns identified in NMISA’s recent Outlooks and by the Commission in this proceeding. The Northern Maine Reliability Tie would also connect Northern Maine to ISO-NE to provide for retail and wholesale competition and accommodate renewable generation growth. The proposed transmission line would be capable of supporting up to 210 MW of load—substantially more than the 130 MW peak load today.44

The Northern Maine Reliability Tie is similar to the reliability solution previously identified as the one that would most effectively resolve the reliability problem in Northern Maine. In 2013, MPS asked RLC Engineering to prepare an assessment for the Planning Advisory Group of the existing reliability needs of the MPS transmission system, as well as the feasibility of five alternatives for interconnection with New England and the feasibility of four alternatives for additional transmission support from New Brunswick to address the identified needs. Based on RLC Engineering’s analysis, the 115-kV and 345-kV connection alternatives between the MPS Mullen Substation and a new Haynesville interconnection on the 345-kV MEPCO line in ISO-NE performed best.45

NHT evaluated RLC Engineering’s study and determined that of the options that would resolve the reliability problem in Northern Maine, a new tie to ISO-NE provides resiliency and risk mitigation benefits because it will decrease the region’s dependence on New Brunswick, as further discussed in the Project Benefits section of this proposal. NHT evaluated the respective costs and benefits of 345-kV and 115-kV connections to ISO-NE and determined that a 345-kV connection was not more costly than the 115-kV connection due to the configuration of the interconnection at the existing 345-kV MEPCO line, and provided additional capacity and benefits. NHT therefore identified the 345-kV alternative between the MPS Mullen Substation and a new Haynesville interconnection on the 345-kV MEPCO line in ISO-NE as the best solution to address the reliability and competition concerns in Northern Maine.

43 An expansion of the existing Mullen Substation and a new Haynesville Substation would be necessary to accommodate this proposed transmission line.
45 RLC Engineering, Maine Public Service Discussion of Reliability Solutions Presentation at the Planning Advisory Group (June 26, 2013).
2.2 Description of Proposed Corridor

Once NHT determined the type of project to pursue, consistent with the State of Maine’s desire to co-locate utilities within existing corridors, NHT identified existing linear corridors between the Mullen Substation in Houlton and the MEPCO 345-kV transmission line near Haynesville, shown on Figure 1 below.

Figure 1 - Northern Maine Reliability Tie Project Route

46 *Re CMP Natural Gas, L.L.C.*, Docket Nos. 99-477 and 99-739, Order (Dec. 13, 1999) ("if non-affiliates are excluded from access to and use of existing electric utility corridors, development of a competitive market for gas (or other services which might require use of the ROW) will be inhibited, which is clearly not in the public interest. Finally, as it becomes more difficult to site new transmission (whether for electricity, natural gas, or telecommunications), there is a public interest in ensuring that the existing corridors are used wisely."). *See also* 35-A M.R.S.A §122(2)(D) (the Commission may designate a petitioned corridor for siting energy infrastructure only after considering "[e]ncouraging collocation of energy infrastructure.").
NHT evaluated designated statutory corridors, and the potential co-location along existing railroad, pipeline, or transmission corridors. In this evaluation process, NHT identified the “Bridal Path” ROW, a well-known, existing, partially-cleared corridor containing no existing utility infrastructure. MPS has had the rights to the Bridal Path corridor for many years, but has left it undeveloped. The corridor is approximately 26 miles long with a width between 170 and 225 feet. The path has been left unmaintained for several years, and cleared corridor width and state of vegetation regrowth vary along its length. The corridor exits the Mullen Substation to the southwest, crossing over Ludlow Road, Interstate 95, and U.S. Route 2 before crossing an active Maine Northern Railway line and the Meduxnekeag River. It then stays along the northwest side of U.S. Route 2, passing to the east of Nickerson Lake and northwest of the town of Linneus, then crosses the East and West Branches of the Mattawamkeag River before connecting to the corridor of the existing MEPCO 345-kV transmission line.

NHT hired Tetra Tech to examine the entire length of the corridor for suitability for transmission development. Tetra Tech concluded that the Bridal Path corridor could easily accommodate the Project and do so with minimal impact on the surrounding community and environment. That study and NHT’s analysis is described in more detail in Appendix B. Based on those studies, NHT has determined that the likelihood of environmental, archeological, historic, and cultural impacts causing significant changes to the Project are low.

Because of its strategic location—connecting the Mullen Substation at the southern end of the Northern Maine power grid to the existing MEPCO 345-kV line that is connected to the ISO-NE power grid—and the fact that it is an already assembled linear corridor, the Bridal Path has been the focus of study for other transmission proposals, including the Northern Maine Interconnect (“NMI”) project, a merchant transmission project proposed by Algonquin Power Fund (America) Inc. (“Algonquin”) in 2009. The NMI would have connected the NMTS with ISO-NE using the Bridal Path corridor. MPS opposed Algonquin using MPS’s Bridal Path, arguing, inter alia, that it had its own plans to develop the path. The Commission dismissed Algonquin’s petition without prejudice before it ruled on the legal issues relevant to Algonquin’s proposed use of the Bridal Path, because Algonquin did not provide the additional information on the project requested by the Commission and the Commission therefore determined that the project was not ripe for consideration.

Given that prior development plans for the Bridal Path have not materialized, and MPS’s Draft Plan instead proposes another tie to New Brunswick, it is clear that MPS has no plans for putting this important corridor to use in the near future. Indeed, MPS specifically rejected connection to ISO-NE

48 Algonquin Power Fund (America) Inc. Request for Certificate of Public Convenience and Necessity to Construct the Northern Maine Interconnect Project, Docket No. 2009-421, Transcript at 6-7 (July 6, 2010).
through the Bridal Path or in any other manner in its Draft Plan. Moreover, Algonquin’s project was a merchant project, not a reliability project intended to benefit customers as in the case of the Northern Maine Reliability Tie. The reliability problem facing Northern Maine is much more urgent than it was in 2009, and Fort Fairfield was not on an RMR contract at that time. In this case, the Commission and NMISA should act now to resolve the reliability problem.

If NHT is unable to obtain the rights to the Bridal Path, NHT would move forward by developing a ROW adjacent and parallel to the Bridal Path. Doing so will allow NHT to avoid the need to create an entirely new corridor in the event that NHT cannot acquire the rights necessary to construct the project in the Bridal Path. Given the current state of the Bridal Path and the need for clearing and development work in that ROW if it is to be used, NHT anticipates that use of a parallel ROW would not materially affect the cost or timing of the project. While developing the Northern Maine Reliability Tie in the existing unused Bridal Path is the logical and least impactful approach, NHT has a reasonable alternative plan.

In addition to increased urgency for a solution, a difference between the Northern Maine Reliability Tie and those that unsuccessfully preceded it is NextEra’s experience and background in successfully completing transmission projects and overcoming the obstacles that inevitably occur in any significant transmission development project. That expertise and track record, combined with NHT’s financial wherewithal, provide the highest level of assurance that the project—once approved—will be developed and implemented in a timely and cost-effective manner.

2.3 Description of Type of Line and Facilities

NHT proposes a new, approximately 26-mile, 345-kV transmission line, which will be constructed on two-pole wood H-frame-type structures at tangent structure locations shown in the figure below. Three-pole angle structures could be required where structures must withstand additional stress. The selection of the preferred structure type is based on a number of factors including cost, structure height, and environmental impacts. For major crossings, such as Interstate I-95 or rivers, steel structures may be required due to the potential longer span. In these cases, guy wires may be necessary to support the angle and dead-end structures at line deflection angles. The existing corridor width is expected to be sufficient for the majority of the structures, but additional easements may be required for guys and anchors due to line deflection angles.

These structures will be spaced approximately 700 - 1,000 feet apart, although the exact spacing will vary depending upon a number of factors, including but not limited to: structure height, wire design tensions, terrain topography, environmental constraints, and facility crossings. Pole heights will vary depending upon span length and terrain with the typical structure ranging from 75 to 95 feet above existing grade. The exact height of each tower will also be governed by topography and safety requirement for conductor clearance.

The 345-kV transmission line will consist of a two-conductor bundle with each being a 795 ACSR Drake conductor. Each conductor is approximately one inch in diameter.
The Northern Maine Reliability Tie will include new substation locations at:

1) New Mullen 345-kV Substation:
   The substation will include a 345-kV / 69-kV autotransformer. The 345-kV circuit from Haynesville will terminate at the substation.

2) New Haynesville 345-kV Switchyard:
   The switchyard will be a ring bus design and will accommodate the termination of the new Mullen 345-kV circuit and the termination of the existing line segment from Haynesville to Keene Rd. and Haynesville to Keswick.

The Northern Maine Reliability Tie will be designed and constructed to meet or exceed all requirements for electrical clearances and mechanical strength for Grade B Construction as set forth in the American
Standard, National Electrical Safety Code (ANSI C2, 2012 edition). The lines will be designed in accordance with the latest edition of the National Electrical Safety Code (“NESC”) in effect at the time of design. The Northern Maine Reliability Tie will be operated in accordance with applicable federal, state, and local codes and industry standards in effect at the issue of the design standard. The industry codes and standards shall include but shall not be limited to the following:

- ACCE/SEI 48-05, Design of Steel Transmission Pole Structures
- ASCE 74, Guidelines for Electrical Transmission Lines Structural Loads

### 2.4 Cost Estimate

The construction cost estimate for the Northern Maine Reliability Tie is approximately $51.5 million, of which approximately $26.0 million is associated with transmission line work and $25.5 million is associated with substations. The total cost estimate for the Project is $59.4 million, as summarized in the following table:

**Figure 4 - Northern Maine Reliability Tie Cost Estimate ($2017 dollars)**

<table>
<thead>
<tr>
<th></th>
<th>Line</th>
<th>Substation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor, Material, and Installation</td>
<td>$26.0</td>
<td>$25.5</td>
<td>$51.5</td>
</tr>
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<td>Permitting and Other Studies</td>
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</tr>
<tr>
<td>Land</td>
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<td>$0.3</td>
<td>$5.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>$59.4</strong></td>
</tr>
</tbody>
</table>

(1) NHT assumes 26.1 miles of 345-kV H-frame wood pole transmission.
(2) NHT assumes an expansion of the 69-kV Mullen ring bus configuration to accommodate a new 345-kV / 69-kV autotransformer, and assumes a new 345-kV switching station on the 345-kV MEPCO line near Haynesville.

These preliminary costs are expressed in 2017 dollars and include costs for development, land acquisition, permitting, construction, and contingency, but exclude AFUDC and any contingency amounts. NHT will continue to refine its cost estimate as the development of the project progresses.

### 2.5 Preliminary Schedule

NHT’s proposal will require Commission review and approval, as described more fully in Section 5, ISO-NE and NMISA study and approval, as well as approval for cost recovery from the Federal Energy Regulatory Commission (“FERC”). To ensure that the ISO-NE quickly becomes involved in project evaluation, NHT proposes that the Commission identify the Northern Maine Reliability Tie as the preferred solution to the reliability and competitive needs and the best way to bring the other identified benefits to Northern Maine. Upon the Commission identifying the Northern Maine Reliability Tie, NHT will proceed with applicable regulatory approvals as set forth in Section 5. NHT recognizes that time is of the essence in addressing the reliability and competitive problems in Northern Maine and will work to put the project in service as expeditiously as possible.
### Figure 5 - Preliminary Project Schedule

<table>
<thead>
<tr>
<th>Activity</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPUC RFP Due</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPUC endorse NHT proposal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.9 ISO-NE study</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost allocation discussions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FERC approval</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepare CPCN application</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MPUC CPCN</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Env. studies, routing, permit design</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other federal &amp; state approvals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final design, procurement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project in-service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Section 3 - Project Benefits and Economic Justification

The Northern Maine Reliability Tie will provide significant benefits to Northern Maine. While the primary benefit of the project is solving reliability problems in Northern Maine, the Northern Maine Reliability Tie will also facilitate a more competitive market for customers, provide resource diversity and risk mitigation benefits, promote retail competition, and provide local economic benefits, all in a cost-effective manner.

3.1 Project Benefits

3.1.1 Meeting the Reliability Needs of Northern Maine

With the retirement of several key generators, the NMTS is currently not able to satisfy several reliability concerns. Several studies have been performed to determine the best possible solution in resolving these concerns. Last year, RLC Engineering was tasked by MPS to study various transmission alternatives and their impact on the MPS Transmission System. On September 17, 2013, RLC Engineering presented the results of their study comparing two solutions: one that connected the NMTS with ISO-NE and one that provided an additional connection to NB Power. From an electrical standpoint, the solutions studied by RLC Engineering were the same as the Northern Maine Reliability Tie and MPS’s Draft Plan.

RLC Engineering modeled these projects within a loadflow model, and proceeded with a contingency analysis to determine reliability concerns and the impact the projects had on them. The studies were conducted using a 2013 summer peak model monitoring voltage and thermal ratings of the MPS and New Brunswick transmission systems. The following table shows the reliability concerns with the system prior to installation of the proposed projects, and whether the project will resolve those concerns.
As evidenced from the table above, both solutions resolve all major reliability concerns. One key difference between the solutions, however, relates to resolving thermal overloads related to the Keswick contingency. In this case, the Northern Maine Reliability Tie will resolve the issue and remove the need to shed load at the Beechwood Substation. By contrast, MPS’s proposal will still require load shedding in order to avoid voltage collapse. This indicates that the Northern Maine Reliability Tie has an advantage over MPS’s proposal with respect to reliability benefits.

RLC Engineering also studied the load growth potential of each transmission alternative and concluded that either option would be capable of supporting 210 MW of load.\(^5\) When compared to the 2013

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Outlook, in which load is expected to grow to 135 MW by 2019, either project will provide a reliable long-term solution for the NMTS.\footnote{52}

In addition to resolving existing reliability concerns in Northern Maine, the Northern Maine Reliability Tie also provides operational reliability benefits by virtue of connecting Northern Maine with ISO-NE. MPS and NBSO are currently interconnected via two 69-kV lines (Iroquois Ties) and two 138-kV lines (Tinker and Flo’s Inn). See Figure 7.

\textbf{Figure 7 - MPS and NBSO Interconnection Points}

As the current system operator for MPS, NBSO has, under certain operating conditions, the ability to operate the MPS system in “Radial Mode.” Radial Mode essentially splits the MPS system into two parts, isolating approximately 15-20 MW of load in the northern half of the NMTS, served radially by the Iroquois Tie points. The remaining southern half of the NMTS is served by the Flo’s Inn and Tinker Tie Points. See Figure 8. NBSO enables this operation mode in order to increase import capability from Hydro-Quebec when generation on the New Brunswick system is incapable of meeting demand.\footnote{53}


\footnote{53} Report on Technically Feasible Options to Meet Reliability Standards, Pg. 15 http://www.nmisaa.com/docs/NMISA_Reliability_Evaluation__(Feb_1_2010)_--_Redacted_Version.pdf . This report states that the refurbishment of the Point LePreau nuclear plant increased the usage of radial mode operation, indicating that any
Therefore, any decrease in generation capacity of the New Brunswick system will increase the likelihood that NBSO subjects MPS to a Radial Mode of operation.

**Figure 8 - Radial Mode Operation of the MPS System**


When NBSO operates the MPS system in Radial Mode, the northern half served from the Iroquois Tie Points are radial loads. This means that any single contingency downstream of the Iroquois substation would result in loss of load. This could leave approximately 10,000 residents a single contingency away from load loss, and potentially during the winter when power is needed the most. It is important to note that NBSO is subjecting the MPS transmission system to a less reliable and flexible mode of operation in order to increase import capability from Hydro-Quebec. As Figure 8 shows, the northern half of NMTS is fed only by one tie at Iroquois during Radial Mode of operation and the southern half of NMTS is fed by two ties at Tinker and Flo’s Inn in Radial Mode. Thus, both portions of the system experience *less reliability* during Radial Mode than during non-Radial Mode. This mode of operation is more likely to occur during peak periods of demand, resulting in NBSO subjecting MPS to a less reliable, flexible mode of transmission operations when MPS needs the most transmission reliability and flexibility.

decrease in supply in NBSO, whether it’s a planned outage or unplanned outage, increases the chances of placing MPS in Radial Mode.
While planning studies show that there are currently no reliability concerns with the Radial Mode of operation, the day-to-day, real world operations of the transmission system are another matter. During operations, operators prefer to have more lines in service to increase the flexibility and robustness of the transmission system. A more interconnected system is a more reliable system, as it can withstand more contingencies. By disconnecting existing lines, the transmission system begins to lose flexibility in how it can be reliably operated, and when combined with maintenance outages and unplanned outages, the system can experience loss of load or worse. NMISA’s 2010 Reliability Evaluation states that, when operated in an interconnected mode, the MPS transmission system can be expected to experience one loss of load event every 36 years. However, when operated in a Radial Mode, the MPS transmission system can expect to experience one loss of load event every 2.7 years. This translates into more than thirteen expected load losses in Radial Mode to every one load loss expected when operated in an interconnected mode, as contemplated by the Northern Maine Reliability Tie. Avoiding Radial Mode therefore reduces risk to the system by an order of magnitude. Although a new tie to New Brunswick resolves reliability issues, it does not resolve any concerns with NBSO subjecting the MPS system to Radial Mode operation.

A new tie to ISO-NE, such as the Northern Maine Reliability Tie, would improve the operational flexibility of the MPS transmission system. Since ISO-NE would likely assume system operation of the MPS transmission system, ISO-NE would not have a reason to subject the MPS transmission system to Radial Mode, as MPS would have no need to increase imports from Hydro-Quebec.

Another distinguishing feature between the Northern Maine Reliability Tie and the MPS Draft Plan is that the Draft Plan would require numerous upgrades in the New Brunswick system to meet N-1 reliability standards, while a tie to the ISO-NE transmission system will require upgrades only in the MPS system. The Tinker Upgrade would have addressed Northern Maine reliability issues, but cost recovery issues stymied the project because upgrades would have occurred in New Brunswick. The Northern Maine Reliability Tie and associated upgrades would occur solely in Maine, avoiding such concerns.

54 Northern Maine Independent System Administrator, Report on Technically Feasible Options to Meet Reliability Standards at 9 (February, 2010).
55 Upgrades identified herein associated with Northern Maine Reliability Tie are based on studies completed to-date. Additional studies will likely be required from ISO-NE pursuant to Section I.3.9 of the ISO-NE OATT in order to obtain approval to implement the project.
Figure 9 - Alternative Plan Comparison

<table>
<thead>
<tr>
<th>Project</th>
<th>Transmission Upgrades for New Brunswick Alternative</th>
<th>Transmission Element Location:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHT’s Northern Maine Reliability Tie</td>
<td>• New Mullen - Haynesville 26 mile 345-kV line and associated substation work</td>
<td>Maine</td>
</tr>
<tr>
<td></td>
<td>• Upgrade Line 6910</td>
<td>Maine</td>
</tr>
<tr>
<td></td>
<td>• Add 15 MVAR capacitor at Flo's Inn</td>
<td>Maine</td>
</tr>
<tr>
<td>MPS’s Draft Plan</td>
<td>• Rebuild of Line 6901</td>
<td>Maine</td>
</tr>
<tr>
<td></td>
<td>• New Mullen - Maine border 3-4 mile, 138 kV line</td>
<td>Maine</td>
</tr>
<tr>
<td></td>
<td>• New Maine border - Woodstock 10-12 mile, 138 kV line</td>
<td>New Brunswick</td>
</tr>
<tr>
<td></td>
<td>• Upgrade Tinker Transformer</td>
<td>New Brunswick</td>
</tr>
<tr>
<td></td>
<td>• Reterrminate Perth-Andover load</td>
<td>New Brunswick</td>
</tr>
<tr>
<td></td>
<td>• Beechwood 1126 Series Breaker (in NB)</td>
<td>New Brunswick</td>
</tr>
</tbody>
</table>


3.1.2 Facilitating Development of New Generation to Enhance Competition

The Northern Maine Reliability Tie also addresses long-standing concerns identified by the Commission regarding the lack of wholesale competition in Northern Maine. Because the NMTS is connected solely to NB Power’s transmission system and does not have a direct connection to ISO-NE, Northern Maine’s wholesale power supply has been subject to NB Power’s willingness to sell power. Because Northern Maine’s access to the ISO-NE wholesale electricity market is reliant on transacting through New Brunswick’s transmission system, and because New Brunswick, MPS, and ISO-NE have not agreed to a reciprocity agreement under their respective OATTs for service to or from ISO-NE, transactions between Northern Maine and ISO-NE have typically been economically disadvantaged because of wheeling fees. Furthermore, because New Brunswick Power Marketing and Algonquin have reserved all of the existing firm transfer capacity on the lines connecting Northern Maine to the New Brunswick transmission system for their own transactions, other transactions have been available only on a non-firm basis. These conditions have severely limited the degree of competition and alternative supply opportunities that might otherwise have been available to Northern Maine.

This lack of direct access to ISO-NE has also stifled generation development in Northern Maine and contributed to the shutdown of existing in-region generators as well as led to the condition that necessitated the Fort Fairfield RMR contract with ReEnergy. Having direct access to the ISO-NE wholesale electricity market may have allowed some of the existing in-region generators to remain in operation without the need for an RMR contract, and would likely have led to the development of new, more efficient supply-side resources.
Northern Maine has been long recognized as having some of the best wind resources in New England, ripe for developing large-scale wind generating facilities. In fact, some of the best wind resources in all of New England are in Northern Maine. Numerous wind generating facilities have been under consideration in this region for some time, but the lack of transmission and market opportunities have thwarted the development of all but a few of these projects. The current interconnection queue for MPS shows over 1300 MW of wind resources in Northern Maine that have requested study. Of that amount, 1250 MW have been withdrawn from the queue since 2009.\(^5^6\) The Commission specifically noted “the merit in trying to . . . promote development of renewable resources in Northern Maine.”\(^5^7\) The new connection provided by the Northern Maine Reliability Tie could help to remove this impediment and finally facilitate development of additional wind generating projects, thereby diversifying the generation mix in Maine. The six New England governors memorialized their common interest in the development of renewable resources and transmission to facilitate it in a joint letter on December 2013. The governors stated: “To ensure a reliable, affordable and diverse energy system, we need investments in additional energy efficiency, renewable generation, natural gas pipelines, and electric transmission.”\(^5^8\)

### 3.1.3 Resource Diversity and Risk Mitigation

NHT’s proposed Northern Maine Reliability Tie will provide Northern Maine market participants with direct access to ISO-NE, reducing the risk to Northern Maine consumers and suppliers of over-dependence on New Brunswick energy supplies and transmission access charges through New Brunswick. In addition, the new direct connection to ISO-NE will ensure discipline on the part of NB Power when offering to sell capacity and energy to Northern Maine. Currently, NB Power has the ability to exercise market power and extract above-market revenues from Northern Maine due to the lack of competition.\(^5^9\) NB Power has limited competition in the region by maintaining priority rights to its transmission system and interconnections with Northern Maine, thereby preventing firm transactions from other suppliers desiring to compete to serve Northern Maine load.\(^6^0\) The Northern Maine Reliability Tie would provide Northern Maine with new supply alternatives and mitigate the risk of relying on one source for importing power to the region.

Finally, NHT’s proposed Northern Maine Reliability Tie eliminates the risk resulting from Northern Maine’s sole connection being to a transmission system that is not subject to Commission or FERC

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60 Id.
jurisdiction. In order to improve reliability to Northern Maine using another connection to New Brunswick, not only is a new connection required, but other upgrades are also required to strengthen the New Brunswick transmission system. Today, neither FERC nor the Commission has jurisdiction over NB Power to order these upgrades and to prevent New Brunswick from deeming Northern Maine load as interruptible in its planning assumptions. In addition, cost recovery issues previously thwarted the Tinker Upgrade in New Brunswick, and are likely to continue to present challenges for implementing upgrades in New Brunswick to support the NMTS.

3.1.4 Promoting Retail Competition
The Project will also allow opportunities for more retail competition in Northern Maine. This will give Northern Maine ratepayers more competition and more options if retailers in Southern Maine can access the market. As discussed above, the Commission found that it was unlikely that competition could be brought into Northern Maine without a transmission connection between Northern Maine and ISO-NE due to the lack of potential providers of long-term standard offer contracts. The Northern Maine Reliability Tie can therefore facilitate retail marketers’ entry into the Northern Maine market, bringing retail competition to the approximately 42,000 customers in Northern Maine. Greater competition typically leads to reduced costs for consumers, another significant advantage of the Northern Maine Reliability Tie.

3.1.5 Local Investment and Economic Benefits
The Northern Maine Reliability Tie will result in tens of millions of dollars of investment in the Northern Maine economy and create hundreds of construction jobs during development of the line. As is evident in Figure 9, the Northern Maine Reliability Tie would make all of its investment in the state of Maine, while the majority of the MPS Draft Plan would result in investment in New Brunswick. The Northern Maine Reliability Tie would create permanent maintenance and operations facilities in Maine. With a connection to ISO-NE, biomass facilities in preserved states could market and sell Renewable Energy Credits to New England customers, a practice that is currently uneconomic with a transmission connection limited to New Brunswick. If biomass facilities can operate with better access to ISO-NE, more jobs and revenues will be created in Northern Maine that would be lost by adding another connection to New Brunswick instead.

3.2 Economic Justification
When evaluating the possibility of connecting Northern Maine to ISO-NE in the past, the Commission questioned whether the cost of the line would be worth the benefits and expressed concerns that Northern Maine customers could experience price increases. NHT’s analysis, however, shows that the Northern Maine Reliability Tie is cost effective. There is no “zero cost” option available in Northern Maine. The RMR contracts currently in place make that quite clear. The reliability and competition

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problems need to be addressed, at some cost. In addition to its substantial reliability benefits, the Northern Maine Reliability Tie offers other benefits, as well as cost-sharing opportunities that may significantly offset the project’s costs. The supply benefits resulting from connecting the NMTS to ISO-NE and providing access to a more competitive market would provide significant benefits to customers. In addition, if the Commission believes that it would be most advantageous to Northern Maine to join ISO-NE, as NHT proposes, a negotiated arrangement in joining ISO-NE, as outlined below, could allow Northern Maine customers to avoid bearing the full burden of the RNS rate. The Northern Maine Reliability Tie is not only the best operational solution to the issues before the Commission, it is a cost-effective solution.

3.2.1 Transmission Costs

NHT estimates the costs of the Northern Maine Reliability Tie to be $59.4 million, with an estimated first-year annual revenue requirement of $9.34 million. NHT then considered three regulatory scenarios for cost allocation. Under the first scenario, MPS would remain independent from ISO-NE and pay 100% of the Northern Maine Reliability Tie revenue requirements. Under the second scenario, MPS would also remain independent from ISO-NE and the Northern Maine Reliability Tie revenue requirements would be paid through ISO-NE’s RNS rates, similar to the treatment for two existing lines described below. The operation and scheduling of the line would be under ISO-NE authority. Under the third scenario, MPS would join ISO-NE, the revenue requirements of the Northern Maine Reliability Tie would be recovered through RNS rates of all ISO-NE customers, and MPS would pay its load ratio share of the Project. In addition, this scenario would require MPS to pay a portion of the existing ISO-NE Pool Transmission Facilities (“PTF”) costs. NHT proposes that the amount and phase-in period for MPS’s ISO-NE rates be subject to negotiation, as discussed below.

In conjunction with scenarios 1 and 2, in which MPS does not join ISO-NE, MPS and ISO-NE could enter into a reciprocity agreement under which the parties would waive their respective transmission wheeling charges associated with transactions between these two regions. Figure 10 provides a summary of the three scenarios.

![Figure 10 - Cost Allocation Scenarios for Northern Maine Reliability Tie](image)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>MPS joins ISO-NE?</th>
<th>NMRT paid by</th>
<th>Reciprocity agreement possible?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - MPS independent</td>
<td>No</td>
<td>MPS</td>
<td>Yes</td>
</tr>
<tr>
<td>2 - MEPCO framework</td>
<td>No</td>
<td>RNS customers</td>
<td>Yes</td>
</tr>
<tr>
<td>3 - MPS joins ISO-NE</td>
<td>Yes</td>
<td>ISO-NE</td>
<td>N/A</td>
</tr>
</tbody>
</table>

63 For determining the annual cost associated with constructing, owning, operating and maintaining this Project, NHT has used an annual transmission carrying charge rate of 15.73%. This is the same annual carrying charge used in the MPC 2012 Study as representing MPS’s annual transmission carrying charge. MPC 2012 Study at 29.
Under scenario 2, the Northern Maine Reliability Tie would be designated as pool-supported PTF—just like the MEPCO line and the Northeast Reliability Interconnect (“NRI”) transmission facilities which were designated as PTF. Both of these facilities serve to connect regions outside of ISO-NE to the ISO-NE transmission system and both have been provided cost recovery under the RNS Rate. NHT proposes that an agreement could be reached between the parties in New England for cost recovery of the Northern Maine Reliability Tie through ISO-NE and that approval by FERC is achievable based on past precedent and comparability. The significant benefits to New England from accessing renewable resources in Northern Maine could make this scenario compelling.

Under scenario 3, MPS would join ISO-NE and pay its load ratio share (roughly 0.5% in the case of MPS) of the Northern Maine Reliability Tie. In addition, MPS would pay a negotiated rate that would reflect an appropriate cost allocation of existing PTF. Without the benefits of a negotiated rate, MPS would pay the full RNS rate, which would result in a total annual charge of $12.1 million based on current forecasts for 2017.

NHT believes that a $12.1 million annual charge represents the highest end of the range of potential options. More likely, NHT would expect a regulatory framework that would allow a gradual transition to a rate more commensurate with one that recognizes that the existing ISO-NE transmission system and all transmission projects currently identified in the ISO-NE Regional System Plan have not been planned to address any of the Northern Maine reliability needs. To implement this transition period, NHT would propose that Northern Maine customers would pay a transitional RNS Rate that initially might only allocate to Northern Maine its load-ratio share of the Northern Maine Reliability Tie and not allocate the full RNS Rate in the first year. In this case, Northern Maine would only be assessed approximately $47,000 in the first year following implementation of the new interconnection. The precise RNS Rate that should apply to Northern Maine and the time period over which Northern Maine should migrate to that rate would be a matter of negotiations with ISO-NE, New England Power Pool (“NEPOOL”) participants, and ultimately a FERC-approved agreement.

ISO-NE (at the time, “NEPOOL”) adopted a similar, FERC-approved methodology in 1997 that allowed for an 11-year transition to the NEPOOL OATT formula transmission rate when it initially established transmission rates. That transition began with a hybrid transmission rate designed based on existing facilities being recovered under utility-specific rates (zonal rate) and only new PTF being recovered on a pool-wide socialized rate basis (postage-stamp rate). The transition resulted in a gradual socialization of existing PTF costs over an 11-year time period before all pool-supported PTF were completely socialized and included in the postage-stamp RNS Rate.

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64 MEPCO and NRI are both 345-kV lines that comprise the only two existing connections between NBP and ISO-NE. Prior to construction of the NRI facility, MEPCO was the only connection between NBP and ISO-NE. At that time, MEPCO was not a PTO and the MEPCO line was not designated PTF. After construction of the NRI, MEPCO, in 2008, became a PTO and the MEPCO line was designated PTF and has recovered its costs under the RNS Rate since. See FERC Docket No. ER07-1289.

65 Pool Transmission Facilities are defined as “the transmission facilities owned by PTOs, over which the ISO shall exercise Operating Authority in accordance with the terms set forth in the TOA, rated 69 kV or above required to allow energy from significant power sources to move freely on the New England Transmission System,” ISO-NE OATT Section II.49.
In addition, ISO-NE’s tariff contains a provision, Section 49.3, which has enabled similarly-situated entities to join NEPOOL in past years. This provision was first used to accommodate BHE joining NEPOOL in 1971 and more recently by Fitchburg Gas & Electric Company and Braintree Electric Light Department. Because the circumstances for each entity were different and ISO-NE’s tariff has been modified over the years, these cases are not a perfect fit to the situation in Northern Maine. However, the principles around integration of load into NEPOOL do exist and can be used as a starting framework with the parties.

Figure 11 provides a summary of the three cost allocation scenarios that NHT believes the Commission should consider in evaluating this proposal.

![Figure 11 - Cost Allocation Scenarios Impact](image)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Description</th>
<th>Annual charge, Northern Maine customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - MPS independent</td>
<td>MPS pays entirety of NMRT line revenue requirements</td>
<td>$9.34 million</td>
</tr>
<tr>
<td>2 - MEPCO framework</td>
<td>Allocation of NMRT costs between MPS and RNS customers negotiated</td>
<td>Negotiated rate ($0 - $9.34 million)</td>
</tr>
<tr>
<td>3 - MPS joins ISO-NE</td>
<td>MPS customers pay portion of RNS rate (which may include a portion of MPS’s existing transmission costs) phased in over time</td>
<td>Negotiated rate, phased in ($0.05 - $12.1 million)</td>
</tr>
</tbody>
</table>

3.2.2 Economic Benefits from Competitive Supply
The Northern Maine market today has limited internal generation and three primary interconnections at Iroquois, Tinker, and Beechwood as shown in Figure 12 below. This dynamic results in an energy supply that is heavily reliant on New Brunswick power.

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66 A description of the Bucksport Rule can be found in the Answer of the NEPOOL Executive Committee dated September 10, 1998 in FERC Docket No. ER98-3853 beginning at p. 70. This docket dealt with the restructuring of NEPOOL to what ultimately led to the initial regional OATT for New England. Part of the original proposal was to eliminate the Bucksport Rule from the definition of PTF. However, FERC did not accept this part of the proposed restructuring arrangements and the Bucksport Rule has been maintained.
By establishing a direct connection to the larger competitive ISO-NE market, the Northern Maine Reliability Tie will open a significant new market for Northern Maine customers. Access to another major market has the potential to reduce the cost of electric supply to Northern Maine. As shown in Figure 13 below, the difference in price between the ISO-NE and NBSO markets has varied significantly since 2010. By allowing access to the ISO-NE market, the Northern Maine Reliability Tie will allow Northern Maine to take advantage of lower prices depending on which market is lower at a given period.
The most recent standard offer rates for retail customers in the three different areas of Maine emphasizes the point that a connection to ISO-NE is likely to drive down prices in Northern Maine. In its most recent standard offering announced in December, the MPUC stated that the standard offer price for MPS customers was set to increase by 16% as compared to current pricing and would be locked in until October 2016. MPS’s standard offer price was already $.006/kWh more expensive than the adjacent Bangor Hydro area even before the new rate hike. CMP’s and BHE’s new standard offer price will be set in March of 2014.

Assuming that the Standard Offer Price in MPS would equal the Bangor Hydro Standard Offer once Northern Maine is connected to ISO-NE, Northern Maine customers could save $6/MWh, or $4.5 million per year, even before taking into account the other benefits the Northern Maine Reliability Tie could provide. For example, offers from New Brunswick providers may become more competitive given the connection to ISO-NE. In addition, the development of the new Oakfield and Number Nine wind projects—350 MW in total—could help to drive ISO-NE prices even lower by early 2016 when both projects are expected to be online.

### Figure 14 - Standard Offer Prices - Small and Commercial Segments

<table>
<thead>
<tr>
<th>Area</th>
<th>Market</th>
<th>Current Standard Offer Price</th>
<th>Future Standard Offer Price</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Maine Power</td>
<td>ISO-NE</td>
<td>$0.068/kWh</td>
<td>TBD - Mar. 14</td>
<td>N/A</td>
</tr>
<tr>
<td>Bangor Hydro</td>
<td>ISO-NE</td>
<td>$0.067/kWh</td>
<td>TBD - Mar. 14</td>
<td>N/A</td>
</tr>
<tr>
<td>Maine Public Service</td>
<td>New Brunswick</td>
<td>$0.073/kWh</td>
<td>$0.085/kWh</td>
<td>16%</td>
</tr>
</tbody>
</table>

Source: MPUC website

3.2.3 Previous NMTS Market Studies

NHT is aware of the challenges presented by prior proposals to interconnect the NMTS with ISO-NE in order to provide greater market opportunities for load serving entities and conceptual wind projects via access to the ISO-NE wholesale electricity markets. In 2012, the NMISA commissioned a Reliability Assessment Power Market Cost/Benefit Assessment study (“MPC 2012 Study”) to evaluate the economic impact of the Maine Power Connection (“MPC”) project on Northern Maine. The MPC was a much larger project than the Northern Maine Reliability Tie (estimated capital costs of $348 million for purposes of the MPC 2012 Study) and would have connected the NMTS to ISO-NE.

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67 For residential and small/medium business customers, the new price is 8.493 cents/kWh, which is an increase of 16% compared to the current standard offer service price. The new price is fixed through October 2016. The bids accepted today do not apply to customers that purchase their own electricity supply in the market. Currently, about half of the load of medium and only about 5% of the load of large business customers receives standard offer service. Virtually all residential and small business customers receive standard offer service. MPUC press release, December 18, 2013.


69 MPS 2012 Study assumed a scaled down version of the original MPC, which was estimated to cost $625 million.
Study concluded that the cost of the MPC project, along with the cost associated with the Northern Maine entities joining ISO-NE and incurring ISO-NE tariff-related charges, was too high to justify making the connection to ISO-NE.\textsuperscript{70}

NHT does not believe that the MPC 2012 Study’s conclusion is accurate. One central conclusion of the study was that a connection to ISO-NE would result in an \textit{increase} in supply costs to MPS. This conclusion is flawed because it relied on two inaccurate assumptions. First, the study assumed that the fifteen-year average electric supply cost basis between the ISO-NE and NBSO market would continue into the future. The most recent average electric supply cost (since 2010) is more relevant given the changing dynamics between the markets and the fundamental changes that lower natural gas prices have had on energy markets. Second, the study assumed that MPS would have to choose to purchase all of its supply exclusively from either the ISO-NE or NBSO markets. However, having the option to solicit power on a competitive basis from either market should result in supply pricing that, at worst, is similar to that of today. Having access to another market should offer opportunities to improve upon existing supply costs.

The MPC 2012 Study also projected that Northern Maine customers would experience higher transmission costs if the MPC project was built to interconnect Northern Maine to ISO-NE. Transmission cost impacts were based primarily on a so-called “Socialized Transmission Model” where the cost of the MPC project, as well as the cost of 77 percent of MPS existing and all future transmission investments, were assumed to qualify as PTF. The model also assumed that Northern Maine entities would immediately start paying their load-ratio share of all PTF pursuant to the terms of the ISO-NE OATT. The MPC 2012 Study concluded that the shift in transmission costs would increase the annual average cost of transmission to Northern Maine entities in the range of $9.2 million - $34.8 million per year over the 20-year study horizon. However, the assumption that Northern Maine would immediately be required to pay the full RNS Rate presumes that Northern Maine should be required to assume the full obligation to pay for a regional system that was largely designed without a corresponding benefit to Northern Maine customers. While the existing ISO-NE customers have benefited from this regional network, it would not have the same benefit for the Northern Maine customers as these projects were designed without Northern Maine taken into account during planning studies. Requiring Northern Maine to immediately begin paying for a full share of the existing New England PTF and for the cost associated with projects already planned and identified in the ISO-NE 2012 RSP would result in Northern Maine paying for regional transmission facilities that were never designed for the reliability benefit of Northern Maine.

Moreover, the MPC 2012 Study concluded that:

\textit{In the event that MPC 2012 does not proceed with an interconnection with ISO-NE, the NMTS still maintains an option to interconnect with a much more modest transmission}

\textsuperscript{70} Including but not limited to paying the RNS Rate to support the cost associated with all pool-supported transmission facilities, or constructing the project as a merchant line.
project, which very likely could qualify for inclusion in the regional ISO-NE transmission tariff.\textsuperscript{71}

The Northern Maine Reliability Tie is exactly the sort of project to which the NMISA was referring. The Commission has previously identified the value of connecting Northern Maine with ISO-NE. As explained above, the Northern Maine Reliability Tie can make this connection, which will provide immediate reliability benefits to the region and benefits from competition, in a cost-effective manner. A phased approach to transitioning to ISO-NE RNS rates would provide these benefits while protecting Northern Maine customers from significant rate increases. If the Commission determines that the Northern Maine Reliability Tie is the best approach for solving the reliability problems in Northern Maine, but that joining ISO-NE is not the preferred path, NHT has outlined how the Northern Maine Reliability Tie remains a cost-effective choice for customers.

\textsuperscript{71} MPC 2012 Study at 28.
Section 4 - Comparison of Alternative Projects

NHT understands that the Commission will be evaluating the Northern Maine Reliability Tie together with at least two other proposals—MPS’s Draft Plan and Maine GenLead’s project. The Northern Maine Reliability Tie will provide Northern Maine with reliability and competition benefits and a project developer with proven expertise in delivering similar transmission projects on time and within budget. In contrast, the MPS proposal is a minimalist approach that would maintain the NMTS’s isolation from the rest of Maine and New England, making it far less likely that new generation will be developed in Maine. The Commission should also consider that MPS has known this problem existed for years and has failed to address it.

Maine GenLead likewise does not propose an unfettered connection to ISO-NE and suggests that the Commission direct another entity to develop that project. Reserving part of the line for use by a Maine GenLead wind project reduces available transmission for other projects and may reduce the likelihood of the development of competitive generation in the area. In addition, as set out above, NHT has designed the Northern Maine Reliability Tie and would develop and operate the proposed transmission line. Having one entity responsible for all facets of the project—from design to development to operation—is another significant advantage of the Northern Maine Reliability Tie, allowing the Commission to look to one entity and reducing the regulatory complexities that often accompany multi-party development projects.

4.1 MPS’s Alternative

As described above, the Northern Maine Reliability Tie linking Northern Maine to ISO-NE provides benefits that MPS’s New Brunswick option cannot provide. First, as explained above, the Northern Maine Reliability Tie would provide better reliability performance than the MPS proposal by reducing the instances of potential load shedding and avoiding the less-reliable Radial Mode configuration.

Second, MPS’s Draft Plan carries another layer of risk because it depends on NB Power to develop, permit, construct, and finance a 138-kV line from NB Power’s 138-kV Woodstock Substation to the U.S.-Canadian border. As discussed above, although MPS committed to pay for the incremental upgrade costs for the Tinker Upgrade, the project was still delayed because of cost allocation issues through the New Brunswick transmission system. Although the Tinker Upgrade is not the subject for cost recovery in MPS’s Mullen to Woodstock Upgrade, there is still the risk that costs cannot be properly recovered on the Canadian side of the border. By contrast, the Northern Maine Reliability Tie contemplates a single developer (NHT) through all phases of the project and operation.

Third, the Northern Maine Reliability Tie provides risk mitigation and diversity benefits that MPS’s proposed solution does not provide. MPS’s proposal continues to cause Northern Maine to be reliant solely on New Brunswick for its energy imports.

Fourth, adding another connection to New Brunswick will not facilitate development of generation, specifically renewables, in the way that a connection to ISO-NE will. Northern Maine, particularly
Aroostook County, is known to have some of the best wind resource in New England. When the Maine Power Connection was being studied in 2008, MPS reported it had 1,250 MW of wind interconnection requests in Aroostook County. At the end of the second quarter of 2013, all of New England combined had only 833 MW of wind capacity.\(^2\) Providing ISO-NE transmission access to renewable developers should encourage development of renewable energy. A single wind farm can bring millions of dollars of investment into a community, providing hundreds of temporary construction jobs, and permanent jobs as well.

Fifth, MPS notes that it rejected the link between Northern Maine and ISO-NE on the basis that the cost of the connection would not be offset by supply-side savings. However, MPS is quick to note that “the historical relationship of Maine Public’s prices from NBP to prices available in ISO-NE is not necessarily a predictor of what will happen in the future, particularly given the relative illiquidity of the northern Maine supply market.”\(^3\) MPS’s proposal to lock in energy prices for 10 years under a contract also ignores this fact. In addition, it is unclear whether MPS’s analysis reflects that fact that NB Power will need to recover its transmission costs through the proposed long-term contract with MPS. Given that MPS’s Draft Plan was initially filed without cost or analytical support, it is impossible at this point to determine whether MPS’s analysis appropriately considered all relevant cost elements.

Finally, the Commission should consider MPS’s track record of failing to address Northern Maine’s reliability problems. It is noteworthy that MPS fought Algonquin’s proposal that would have addressed the problem, in part arguing that MPS had plans for use of the Bridal Path corridor. Now in 2014 the Bridal Path remains dormant, reliability issues in Northern Maine are reaching a state of urgency, and there is no relief for customers through connection to competitive markets. The Commission has done its part to encourage action, but the Commission should be wary of any proposal from an entity with demonstrated reluctance to propose or develop a solution. In contrast, as set forth in Appendix A, NHT has a track record of successfully developing transmission projects just like the one it proposes here. Since 2003, NextEra’s engineering and construction team has completed 90 major capital projects, reflecting an aggregate investment of $23 billion in generation and transmission assets. If approved, the Commission can have great confidence that NHT will build the Northern Maine Reliability Tie on time and on budget.

In November of 2013, NMISA suggested as an alternative to MPS’s Draft Plan an option for MPS to become a long-term network service customer of NB Power under NB Power’s tariff as opposed to using a 10-year supply contract.\(^4\) While this proposal addresses several concerns with the MPS Draft Plan, it has two primary weaknesses that render it inferior to the Northern Maine Reliability Tie project. Namely:

\(^3\) Draft Plan at 3.
\(^4\) NMISA Presentation to MPS PAG (Nov. 21, 2013). Available at http://www.mainepublicservice.com/media/55381/network%20service%20overview.pdf
The proposal requires MPS to become a network service customer under the NB Power OATT, the terms of which are not subject to Commission or FERC jurisdiction; and Delivering network service to Northern Maine may require further upgrades, beyond those identified in MPS’s Draft Plan, to facilitate network service that MPS may be required to fund and therefore include in its proposed contract with NB Power.

Furthermore, the NMISA proposal assumes a reciprocity agreement between MPS and ISO-NE could be reached that would waive their respective wheeling charges related to transactions between the two regions. If this reciprocity agreement is not executed, the economics of NMISA’s proposal are significantly worse than presented. Moreover, executing a reciprocity agreement could also be available in conjunction with the Northern Maine Reliability Tie option (as discussed in Section 3.2.1) as an alternative to MPS joining ISO-NE. In NHT’s proposal, unlike under NMISA’s proposal, the wheeling charges across NB Power’s system would not apply because the Northern Maine Reliability Tie would directly connect to ISO-NE.

4.2 Maine GenLead’s Alternative

Although Maine GenLead’s proposal would connect Northern Maine with ISO-NE and thereby provide many of the same benefits as the Northern Maine Reliability Tie, MaineGen Lead will not develop its proposal, nor will its proposal provide as much benefit to Northern Maine in-region generation. NHT will develop, build, and operate the Northern Maine Reliability Tie, offering the Commission a single, tested entity for this project; a significant benefit if the ultimate goal is to ensure the project reaches operation timely and on budget. Moreover, while connecting to ISO-NE, much of the Maine GenLead’s 115-kV line will be reserved with FirstWind’s Oakfield Wind’s capacity, and when Oakfield Wind is operating at full capacity, there is less capacity for other Northern Maine generation to get to the ISO-NE market. This may well reduce developers’ appetite to expend the resources to develop new generation in that area. In contrast, the Northern Maine Reliability Tie provides an unreserved path to the ISO-NE market. This unreserved path promises to enhance competition and reduce prices for consumers.

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75 The wheeling charges for NMISA and ISO-NE would be waived in this proposal, however, wheeling charges for use of NB Power’s system would still apply.
76 Wheeling charges for transactions between Northern Maine and NB Power would still apply.
Section 5 – Legal and Regulatory Approvals

As proposed by NHT, implementing the Northern Maine Reliability Tie requires approvals from the Commission, ISO-NE, NMISA, and FERC. For purposes of this proposal, the most relevant approvals are obtaining a CPCN from the Commission and obtaining regional cost recovery through the ISO-NE tariff. Successfully navigating these approvals will enable the region to finally implement a solution that provides benefits with respect to reliability, competition, and risk mitigation that are not available through other proposals that will be before the Commission.

5.1 Commission Approval

The central Commission approval needed for the Project is approval of a CPCN pursuant to 35-A M.R.S.A. § 3132. NHT, or an affiliate that is a Maine corporation, plans to file an application for a CPCN in the timeline set forth in Figure 5 above. NHT understands that it is not currently a T&D utility under Maine law, but that “any person” may file a request for a CPCN. NHT understands a successful applicant for a CPCN will become a T&D utility, and thereby obtain the right of eminent domain. As such, NHT would request confirmation from the Commission that NHT would become a T&D utility with rights of eminent domain, should the Commission approve a CPCN for the project NHT proposes.

The other potentially relevant Commission action is for approval to furnish service in MPS’s service territory. Based on NHT’s analysis of the relevant law and Commission orders, NHT believes that as a T&D utility providing transmission service only, not retail service, it would not be required to seek such authority. Nonetheless, if NHT is required to seek such approval, Commission precedent indicates that NHT would not need to seek separate approval to provide transmission service in MPS’s territory because the standard needed to obtain such approval would necessarily be met if the Commission awards NHT a CPCN.

Because NHT’s proposal is predicated on these understandings, NHT requests that the Commission’s order in this proceeding indicate whether the following assumptions are correct: (1) a successful applicant for a CPCN will become a T&D utility upon receiving the CPCN and thereby obtain the right of eminent domain; and (2) a T&D utility providing only FERC-jurisdictional transmission service in another T&D’s retail service territory does not need to seek authorization under 35-A M.R.S.A. § 2102 to do so.

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77 If NHT files an application for a CPCN, it will first seek approval to conduct business in Maine from the Secretary of State.
78 Although NHT’s affiliates own generation facilities, NHT does not, and any corporation formed to construct and own the Project would not. NHT does not have control over or financial interest in affiliates that own generation, so 35-A § M.R.S.A. § 3204(6), prohibiting T&D utilities from owning or controlling generation assets, is inapplicable.
79 See 35-A M.R.S.A. § 102(20-A) and (20-B).
80 35-A M.R.S.A. § 3132.
81 A CPCN constitutes “personal property owned . . . to facilitate the transmission . . . of electricity.” 35-A M.R.S.A. § 102(20-A).
82 35-A M.R.S.A. § 3136.
83 35-A M.R.S.A. § 2012.
5.2 ISO-NE Interconnection Approval and Cost Recovery

The Northern Maine Reliability Tie will require ISO-NE interconnection approval to ensure that the interconnection does not cause reliability problems on the ISO-NE system. Specifically, NHT would be required to apply to ISO-NE for a new interconnection approval pursuant to the ISO-NE OATT, including Section I.3.9. Section I.3.9 of the ISO-NE OATT provides for ISO-NE to make a determination as to whether proposed changes to the transmission system will have an adverse impact to the reliability or operability of the transmission system or the system of another market participant, prior to implementing such changes to the system.

As NHT discussed in Section 3.2.1, there exist several options for cost recovery of the Northern Maine Reliability Tie. Under NHT’s preferred regulatory path, cost recovery of the Northern Maine Reliability Tie through ISO-NE will entail negotiations among ISO-NE, the PTOs, and NEPOOL stakeholders, as well as approval by FERC.
Section 6 - NHT is Prepared to Implement a Long-Term Solution

There is little doubt that there are urgent reliability issues in Northern Maine that must be addressed. Study after study has reiterated this fact. Since NMISA originally highlighted the concern in 2009, the issue has only gotten worse.\(^8^5\) Inaction, which has characterized the past several years, is no longer an option. While NHT recognizes the regulatory and cost allocation challenges that accompany a proposal to link Northern Maine and ISO-NE, those challenges are surmountable and the resulting system promises to solve all of Northern Maine’s problems while also finally delivering energy competition to an area in desperate need.

NHT also recognizes the difficulties of addressing the unique reliability issues of Northern Maine in a cost-effective manner. In this proposal, NHT outlines a path towards developing a project that will provide Northern Maine customers with reliability benefits, open the Northern Maine market to competition, and provide for development of new renewable energy in Northern Maine, all at reasonable cost. Given the imminent reliability need facing the region, the time is right to resolve the hurdles of cost recovery and ROW development that have thwarted similar projects in the past. As a PTO in New England and an affiliate of a major North American utility with vast experience developing projects just like this successfully, on time and within budget, NHT is well positioned to work with the Commission, NMISA, ISO-NE, and other stakeholders to develop this exciting solution for Northern Maine.

\(^8^5\) As the Commission has noted, the last few Outlooks have indicated the same impending reliability concerns in the Northern Maine area. Public Utilities Commission Investigation into Reliability of Electric Service in Northern Maine, Docket No. 2012-589, Notice of Investigation (Dec. 18, 2012).
Appendix A – NHT Technical and Financial Qualifications and Experience

Organizational Structure

NHT is a public utility in New Hampshire for the purpose of owning and operating the transmission substation at the Seabrook nuclear power plant in Seabrook, New Hampshire (“Seabrook Station”). The Seabrook Transmission Substation is a 345-kV Pool Transmission Facility operated as part of the transmission network of ISO New England Inc. (“ISO-NE”). It interconnects the Seabrook Nuclear Generating Station, one of the largest electric generation resources in New England, with three major 345-kV transmission lines that are key elements of the backbone ISO-NE network. Even when Seabrook Station is not operating, the transformer and interconnection facilities associated with the Seabrook Transmission Substation are essential to the reliable operation of the ISO-NE transmission network.

NHT is a subsidiary of NextEra Energy Transmission, LLC (“NEET”), and NEET’s parent company is NextEra, who has a strong history of investing in, owning, and managing large infrastructure assets, including generation assets in Maine. NextEra comprises some 15,000 employees with North American and global experience in designing, building, financing, and operating large-scale infrastructure assets (over $64 billion in aggregate), including high voltage transmission lines. NHT benefits from NextEra’s extensive, enterprise-wide resources. Based on these resources and NHT’s existing transmission activities in New Hampshire, NHT is well-positioned and committed to becoming a long-term and significant participant in Maine’s transmission infrastructure. Below is an overview of NHT’s parent, NextEra:

- NextEra is a leading clean-energy company with 2012 revenues of $14 billion, more than 42,000 MW of generating capacity, and nearly 15,000 employees in 26 states and 4 Canadian provinces as of year-end 2012;
- NextEra’s principal subsidiaries are Florida Power & Light Company (“FPL”), which serves approximately 4.6 million customer accounts in Florida and is one of the largest rate-regulated utilities in the United States, and NextEra Energy Resources, LLC (“NEER”), which, together with its affiliated entities is the largest generator in North America of renewable energy from the wind and sun;
- Since 2003, NextEra’s engineering and construction team has completed 90 major capital projects, reflecting an aggregate investment of $23 billion in generation and transmission assets, overall on time and on budget;
- Recent Awards: #1 overall among electric and gas utilities on Fortune magazine’s 2013 list of the World’s Most Admired Companies for an unprecedented seventh straight year; named to the 2012 Dow Jones Sustainability Index of the leading companies in North America for corporate sustainability; named as the Global 100 most sustainable large corporations in the world; and a TreeLine USA utility;
- In the Community: At NextEra we strongly believe in the importance of being a good corporate citizen, and during 2012 we broke volunteerism records, with our employees logging 38,470
also in 2012, NextEra and its employees contributed more than $8 million to support initiatives that contribute to the well-being of the communities we serve;

- NextEra’s technical, managerial and financial qualifications include:
  - Extensive high-voltage transmission development experience throughout North America;
  - Superior technical and project management capabilities in development, design and construction, and operations & maintenance in various physical geographies and challenging environments;
  - Long-standing experience in operating transmission infrastructure while delivering the highest levels of reliability;
  - Committed to a culture of safety and environmental compliance;
  - Wide-ranging experience consulting with landowners, and affected communities; and
  - Demonstrated ability to finance and effectively manage major projects.

Technical and Operational Expertise

NEET and its affiliates have unparalleled experience in developing, designing, constructing, financing and operating transmission lines in North America. In 2013 alone, NEET has placed over $700 million worth of transmission infrastructure into service. NextEra’s transmission lines and other infrastructure assets have been built in a wide range of geographies, from warmer southern Florida to colder mid-Alberta and their construction entailed working with a variety of stakeholders—from governments, community groups and other landowners, to strategic and equity partners. Collectively, these projects have given NextEra a wealth of experience in designing for and building in challenging environments, as well as in managing complex stakeholder relationships and governance of partnership agreements.

NextEra’s success with past projects has helped to amass a significant body of knowledge in many relevant areas, including project management, environmental, and cultural resource protection, community outreach, landowner relations, engineering, construction and operations. That knowledge, in turn, provides a foundation for developing innovative solutions, including: route optimization, use of new construction materials and technologies and flexible designs, which will increase project value for customers.

Drawing on NextEra’s knowledge and experience, NEET has energized or is actively developing transmission projects in many areas in addition to Maine, including in Texas, Massachusetts, New Hampshire, New York, Hawaii, and Ontario, among other locations. The Texas and Ontario projects were won pursuant to competitive processes and were the first competitive transmission project tenders in these jurisdictions. Further, NextEra’s team has a proven history of meeting budgets and schedules, and demonstrating superior capabilities in designing, building, commissioning, and operating large, complex infrastructure projects.

Beyond NextEra’s overall history and depth in developing, permitting, constructing, and operating transmission projects, NextEra’s team has proven capabilities in constructing and managing transmission
line projects. Completed projects across North America comply with the design, reliability, and operational standards of a number of different authorities across the region.

As an example, NextEra’s Florida rate-regulated utility, FPL, designed, constructed and currently operates and maintains approximately 6,500 miles of transmission lines rated at 115-kV and above and 178 miles of 69-kV transmission, including 591 substations rated at 69-kV and above. This system traverses the state of Florida, from the Florida/Georgia state border to the Miami area in the southernmost part of the state, a distance of over 370 miles. Therefore, the system is of vital importance to the state, providing bulk power transfers and ensuring reliability. Given the vast geographical span, FPL had to work with diverse terrain and soil conditions including significant areas with wetlands, waterways, forest areas, and a variety of soil conditions. FPL employed a variety of innovative construction techniques, structures and technologies to successfully accomplish the build out of this high voltage transmission system much of which has been completed in the recent past. This technical expertise is available to all NextEra subsidiaries, including NHT.

Other NextEra companies have exhibited the ability to design, construct and energize high voltage lines on accelerated time frames. As discussed below, Lone Star Transmission, LLC (“Lone Star”), a NEET subsidiary like NHT and a rate-regulated public utility in Texas, recently completed construction and energized its Competitive Renewable Energy Zones (CREZ) Project on schedule and for tens of millions of dollars less than the original budget. In addition, the Texas Clean Energy Express Project, a separate NEET affiliate, built a 200 mile, 345-kV transmission line project on a very aggressive schedule—only 16 months from project conception to commercial operation.

Successful construction of a project is largely the result of proper planning, scheduling, experience, and good utility practices in the areas of preliminary engineering, permitting, procurement, project management, cost and schedule control, and safety. By successfully planning, scheduling, and executing in each of these areas in a comprehensive and coordinated manner according to the plan described above, NEET is well-positioned to deliver projects in a safe and successful manner.

**Past Transmission Experience**

Below is a sampling of various past projects that showcase NextEra’s relevant experience. These projects demonstrate the breadth of experience, including experience with high voltage transmission lines. They also illustrate how NEET has successfully managed various kinds of challenges in different geographic regions. These projects are summarized below:

1. **FPL 500-kV System**: FPL is one of the largest in the U.S., serving 4.6 million customer accounts, owning 6,600 circuit miles of transmission, over 24,000 MW of generation and over 68,000 circuit miles of distribution. A vital part of FPL’s transmission systems is its approximately 1,100 mile network of 500-kV lines and ten 500-kV substations. FPL designed, constructed, operates, and maintains this system.
2. **Lone Star Transmission**: Lone Star, was awarded a Certificate of Convenience and Necessity from the State of Texas to become a new-entrant regulated public utility to develop, construct, and operate 290 miles of double circuit 345-kV transmission and 34 miles of single circuit 345-kV line, three large switching stations, and two series compensation stations. In early 2013, Lone Star completed construction, and energized the project on time, for tens of millions of dollars less than its initial cost estimate, for this $700+ million project.

3. **Texas Clean Energy Express**: NextEra’s affiliate constructed the Texas Clean Energy Express as a generation tie-line. The project includes a 210-mile, 345-kV transmission line with two 345-kV and six 138-kV substations. From conception to commercial operation, this project took only 16 months to complete. Work included permitting, land acquisition, design, engineering, procurement, and construction. NextEra's affiliate negotiated 270 landowner and 504 crossing agreements without access to eminent domain. The project is an example of excellent project execution under a tight delivery schedule.

4. **Ontario East-West Tie Line**: On August 7, 2013, the Ontario Energy Board (“OEB”) issued a decision selecting Upper Canada Transmission (“UCT”) as the designated developer for the East-West Tie (“EWT”) line. It involves development of a new, approximately 240 mile long double-circuit 230-kV electrical transmission line, adjacent to an existing transmission line running between Thunder Bay and Wawa, Ontario. Together the new and existing lines will increase capacity and reliability of electrical transmission between northeast and northwest Ontario. UCT is a partnership of NextEra Energy Canada, Enbridge Inc., and an Ontario-based pension fund. UCT was selected as the best choice among six developers that competed for this project, including incumbent applicants. The decision criteria considered by the OEB included: organization structure and strengths; Aboriginal (First Nations and Métis) participation; technical capability; financial capability; proposed design; schedule for development and construction phases; cost of development, construction, operation and maintenance phases; landowner, municipal, community, as well as First Nations and Métis consultation. According to the OEB, “UCT either ranked first or was tied for first in seven of the nine decision criteria.”

5. **Blythe Transmission Line**: NextEra’s affiliate developed and constructed a 67-mile, 230-kV transmission line to connect Blythe Energy, a 520 MW natural gas power plant, to a new interconnection point. The original cost estimate was $85 million with an 18 month construction schedule. It was completed 15% under budget and six weeks early.

6. **New Hampshire Transmission Seabrook 345-kV GIS Upgrade**: New Hampshire Transmission (NHT) initiated a high priority major project to upgrade the 1,244 MW Seabrook Station 345-kV gas-insulated substation, a crucial component of the New England bulk electrical system. Following 14 months of preparation, two months of construction began in proximity of energized systems, significantly increasing the complexity of the project. The final changeover was completed during a nuclear refueling outage, which imposed a strict, non-negotiable 30-day schedule for completion.
7. **Ontario Feed-in-Tariff Wind Projects**: NextEra’s affiliate is constructing six wind farms in Ontario totaling over 600 MW of generation and 62 miles of associated transmission between 115-kV and 500-kV and a total investment of over $1.5 billion (in addition to two Ontario wind projects that are currently in operation). This project utilizes NextEra’s capabilities in Aboriginal relations, land acquisition, permitting, regulatory processes, and technical capabilities.

**Assets Owned in the State of Maine**

NextEra owns and operates considerable generation investment in that State of Maine. Below are the assets owned by NEER in the State of Maine, located in Yarmouth, Maine:

1. **W.F. Wyman 1-3 and Cape Station**: Operated by a subsidiary of NEER, W.F. Wyman units 1-3 and Cape Station are a combined 273 MW of oil-burning units. These units were acquired by NEER in 1999.
2. **W.F. Wyman 4**: Operated by a subsidiary of NEER, W.F. Wyman unit 4 is a 608.5 MW oil burning plant. In 1999, a subsidiary of NEER acquired an ownership interest in Unit 4 and currently owns 513.2 MW.

**Financial Qualifications**

NHT benefits from the extensive, enterprise-wide financial resources of NextEra. A Fortune 200 company, NextEra’s year-end 2012 balance sheet included over $64 billion of assets and $16 billion of shareholder equity, with more than 70% of NextEra’s $14 billion in 2012 revenues derived from regulated utility sources. NextEra maintains strong credit ratings of “A-” from both Standard & Poor’s Financial Services and Fitch Ratings, and “Baa1” from Moody’s Investor Services. NextEra Energy Capital Holdings, Inc. (“NEECH”), a subsidiary of NextEra, provides the funding for NextEra’s non-FPL companies, which include NEET, of which NHT is a subsidiary. As of June 30, 2013, NEECH had over $3.8 billion of net available liquidity, primarily consisting of bank revolving line of credit facilities and cash equivalents, less letters of credit issued under the credit facilities, and commercial paper outstanding.

NextEra’s credit ratings place NextEra in the top tier of companies within the industry. Through the diligent efforts of its experienced financing team and established relationships with several domestic and international financial institutions, NEECH successfully executed well over $6 billion of project financings in the last five.

**Managerial Qualifications**

NEET draws from its affiliate organizations to establish a project organization composed of a Management Team and a dedicated Technical Team with relevant subject matter experts. For any given transmission project, the Project Director, who is a member of the Management Team, oversees the Technical Team consisting of work streams with engineers, technicians, and other professional staff members to form the project organization. Technical team members are drawn from the deep and
experienced talent pools of each affiliate organization, based on particular strengths. Ultimate responsibility for managing projects rests with the Project Director.

**Project Director:** The Project Director is the spokesperson for a project and interfaces directly with key external and internal stakeholders. The Project Director has authority to oversee all technical team leads and project resources.

**Technical Team:** The Technical Team reports to the Project Director and comprises five key subject matter experts who are Technical Team Leads for the following key project activities:

1. Route Development, Environment, Consultation and Relationship Management;
2. Financing;
3. Design;
4. Construction; and
5. Operations and Maintenance.

The Technical Team has the capability to call upon other key management personnel and support staff from across the NextEra organizations on a full or part-time basis, as needed.

NHT’s decade of experience in New England as a transmission owner, the resources of NextEra, and the support of a New-England based team of external experts provide NHT with the expertise to own and operate the Project.
Appendix B – Detailed Routing Information

Corridor Overview
Beginning at the existing Mullen substation and proceeding southwest, the 2-mile-wide study of the corridor includes a small portion of low-density development in the town of Houlton and mostly scarcely developed open space. In the immediate vicinity of the Mullen Substation, there is a large, partially flooded forested wetland on the eastern side of the substation, and an undeveloped upland field to the west. The first 4 miles of this corridor are comprised largely of cultivated crop land with areas of mixed forest and woody wetlands. Continuing south the amount of mixed forest and woody wetlands increases, evergreen forests are introduced and cultivated lands decrease as the corridor approaches Haynesville.

In this Project corridor there are four organized towns: Houlton, Hodgdon, Linneus, and Haynesville. The Project would span approximately 3.98 miles in Houlton, 0.73 miles in Hodgdon, 7.98 miles in Linneus, and 4.35 miles in Haynesville. The Project corridor also spans three unorganized towns: Forkstown Township, Glenwood Plantation, and TA R2 WELS. The Project spans, 5.67 miles in Forkstown, 0.02 miles in length in Glenwood Plantation, and 3.36 miles in TA R2 WELS.

Figure 15 - Municipalities Crossed by Centerline of Corridor Study Area

<table>
<thead>
<tr>
<th>Name</th>
<th>County</th>
<th>Town</th>
<th>Status</th>
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<tbody>
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<td>Forkstown Twp.</td>
<td>Unorganized Township</td>
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<tr>
<td></td>
<td></td>
<td>Glenwood Plantation</td>
<td>Unorganized Township</td>
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<td></td>
<td></td>
<td>Haynesville</td>
<td>Town</td>
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<tr>
<td></td>
<td></td>
<td>Hodgdon</td>
<td>Town</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Houlton</td>
<td>Town</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Linneus</td>
<td>Town</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TA R2 WELS</td>
<td>Unorganized Township</td>
</tr>
</tbody>
</table>
Figure 16 - Mullen Substation to Haynesville Interconnection Corridor Study Area
Primary roads along this corridor are I-95, which passes east to west, north of Houlton, and U.S. Route 2A which traverses this segment from north to south west. The Bangor and Aroostook railroad, operated by Maine Northern Railway, passes from Houlton south and west across the corridor. No airports were identified in this corridor segment. In total, there are only 10 road crossings and 1 railroad crossing.

As shown in Figure 2 above, there is one state park, located approximately ¼ mile northwest of the Bridal Path centerline in Linneus. This park is known as Nickerson Lake State Park. The park is owned and managed by the Maine Department of Agriculture, Conservation and Forestry. No federal lands were identified in the corridor.

Environmental Permitting: Schedule and Permitting Agencies
A listing of the main regulatory agencies and permits that will review the Project, along with a sub-listing of other permitting and commenting agencies, includes:

- U.S. Army Corps of Engineers (Maine General Permit – CWA Section 404)
  - U.S. Fish and Wildlife Agency
  - Environmental Protection Agency
  - Native American Tribes
  - U.S. Department of Agriculture/Natural Resource Conservation Service
- Maine Department of Environmental Protection (NRPA, SLODA, WQC)
  - Maine Department of Inland Fisheries and Wildlife
  - Maine Department of Agriculture, Conservation and Forestry
  - Maine Department of Transportation
  - Maine Natural Areas Program
  - Maine Historic Preservation Commission
  - Maine Forest Service
- Town Approvals (Houlton, Hodgdon, Linneus, and Haynesville)

Environmental Setting and Biological Resources
NHT administered a Critical Issues Analysis to provide the context for potential environmental constraints resulting from protected species and habitats and other environmentally sensitive areas. In this initial assessment, NHT focused on a 2-mile wide corridor that is centered on the Bridal Path. Although NHT would prefer to use as much of the existing Bridal Path corridor as possible to limit impacts to the area from new clearing, this 2-mile wide study allowed the analysis to include any potential significant features should the Project need to vary from the Bridal Path.

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86 For biological resources, the following data sources were reviewed: USGS 7.5 minute quadrangle maps; U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) data; USGS Digital Elevation Models; National Hydrologic Dataset, including streams and lakes; State Fish and Wildlife Agency GIS Data.
Protected Natural Resources

Biologists familiar with Maine’s environment and protected natural resources performed a desktop-level review of the Project corridor to assess resources. The most prevalent type of protected natural resource present in this corridor is wetlands. Other protected natural resources that will be encountered include freshwater streams, vernal pools and other Significant Wildlife Habitats (NRPA Chapter 335) and rare plants. Additionally, the proposed corridor will cross over two streams that provide habitat for federally-listed Atlantic salmon-listed (the West and East Branches of the Mattawamkeag River) – (additional rare animal notes are discussed in the section below.) Based on the desktop analysis, Figure 17 provides a quantitative listing of some of the protected natural features located along the proposed corridor.

Figure 17 – Desktop Findings – Sample of Types of Protected Natural Resources along Corridor

<table>
<thead>
<tr>
<th>Protected Feature</th>
<th>Natural Resource</th>
<th>Data Source(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protected Species Habitat</td>
<td>Deer Wintering Area</td>
<td>(State of Maine)</td>
</tr>
<tr>
<td></td>
<td>Inland Waterfowl/Wading Bird Habitat</td>
<td>(State of Maine)</td>
</tr>
<tr>
<td></td>
<td>Significant Vernal Pool</td>
<td>(State of Maine)</td>
</tr>
<tr>
<td></td>
<td>Atlantic Salmon Rivers</td>
<td>(State of Maine and USFWS)</td>
</tr>
<tr>
<td>Wetlands</td>
<td>NWI Wetlands</td>
<td>Freshwater Emergent Wetland</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Freshwater Forested/Shrub Wetland</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Riverine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Streams/Rivers</td>
</tr>
</tbody>
</table>

Protected Species

At the federal review level, the USFWS lists nine species of threatened or endangered species in Maine. The Maine Department of Inland Fisheries and Wildlife (“MDIFW”) lists 45 endangered or threatened inland fish and wildlife species under Maine’s Endangered Species Act (“MESA”), some of which are also listed under the federal Endangered Species Act (“ESA”) (MDIFW 2009). In addition, Maine has also identified species of special concern including 10 mammal species, 53 bird species, and 95 other species (MDIFW 2011).

Figure 18 provides a listing of some of the state and federally-listed species that were determined to have a medium- or high-likelihood of presence within the corridor. Also noted is the likelihood of occurrence for each of the species, though field studies would have to be conducted in order to confirm whether habitat exists or not. Many of the “Highly Likely” species identified are water body species, and these water bodies would typically be spanned by the transmission facilities.
## Figure 17 - Sampling of Maine’s Rare, Threatened, and Endangered Species

<table>
<thead>
<tr>
<th>English Name</th>
<th>Scientific Name</th>
<th>Federal / State Status</th>
<th>Species-Habitat Associations</th>
<th>Likelihood of Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Birds</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black-crowned Night Heron</td>
<td><em>Nycticorax nycticorax</em></td>
<td>ST</td>
<td>Breeds and winters in a wide variety of wetland habitats.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Black Tern</td>
<td><em>Chlidonias niger</em></td>
<td>SE</td>
<td>Nest locations are selected in still water in dense emergent vegetation surrounded by small patches of open water. During spring and fall migration, frequents freshwater lakes, rivers, and other interior wetlands; also forages over plowed fields.</td>
<td>Moderate, project within known range of Maine population (but not near known nesting sites)</td>
</tr>
<tr>
<td>Golden Eagle</td>
<td><em>Aquila chrysaetos</em></td>
<td>SE</td>
<td>In Maine, golden eagles have typically been associated with mountainous areas in the western and northwestern portions of the state.</td>
<td>Unlikely, may occur transiently during migration</td>
</tr>
<tr>
<td>Sedge Wren</td>
<td><em>Cistothorus platensis</em></td>
<td>SE</td>
<td>Sedge wrens breed in freshwater meadows dominated by grasses and sedges, and in grassy, upland borders of freshwater marshes dominated by sedges.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Upland Sandpiper</td>
<td><em>Bartramia longicauda</em></td>
<td>ST</td>
<td>Requires large areas of short grass, interspersed or adjacent taller grasses; in Maine, upland sandpipers breed in large grasslands and barrens along the coast and eastern Aroostook County.</td>
<td>Moderate</td>
</tr>
<tr>
<td><strong>Fish</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atlantic Salmon</td>
<td><em>Salmo salar</em></td>
<td>FE</td>
<td>Spawns in moderately flowing water in deep parts of large rivers.</td>
<td>High</td>
</tr>
<tr>
<td><strong>Invertebrates</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Name</td>
<td>Scientific Name</td>
<td>Federal / State Status</td>
<td>Species-Habitat Associations</td>
<td>Likelihood of Occurrence</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------</td>
<td>------------------------</td>
<td>-----------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Brook Floater</td>
<td><em>Alasmidonta varicosa</em></td>
<td>ST</td>
<td>Located in creeks and small rivers among rocks in gravel substrates and in sandy shoals, inhabits flowing-water habitats only.</td>
<td>High</td>
</tr>
<tr>
<td>Tomah Mayfly</td>
<td><em>Siphlonisca aerodromia</em></td>
<td>ST</td>
<td>Inhabits small rivers and streams bordered by extensive areas of seasonally flooded sedge meadows.</td>
<td>Moderate</td>
</tr>
<tr>
<td>Yellow Lampmussel</td>
<td><em>Lampsilis cariosa</em></td>
<td>ST</td>
<td>This species typically prefers medium to large rivers, but in Maine is often found in lakes and ponds, and will tolerate impounded sections of rivers. It occurs in a variety of bottom types, including silt, sand, gravel, and cobble.</td>
<td>High</td>
</tr>
</tbody>
</table>

**Mammals**

<table>
<thead>
<tr>
<th>English Name</th>
<th>Scientific Name</th>
<th>Federal / State Status</th>
<th>Species-Habitat Associations</th>
<th>Likelihood of Occurrence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern long-eared Myotis</td>
<td><em>Myotis septentrionalis</em></td>
<td>FPE</td>
<td>Found in dense forest areas and forages in a variety of habitats; closely associated with cave structures. Known to forage along forest edges, over forest clearings, at tree-top level, and occasionally over ponds.</td>
<td>High</td>
</tr>
</tbody>
</table>


**Archaeological, Cultural, and Historical Resources**

In Maine the potential impacts of transmission line projects to cultural resources are subject to review under either the SLODA, the Natural Resources Protection Act (“NRPA), or through the Maine Stormwater Program. The Maine Historic Preservation Commission (“MHPC) serves as the SHPO and has the authority to review potential project effects under SLODA, the NRPA, and the Maine Stormwater Program.

A qualified cultural resources specialist conducted a high-level desktop review for the corridor study area to assemble a list of known archaeological, historic, and cultural properties that might be affected...
by the proposed transmission facility. These data provide the basis for a preliminary assessment of the range of cultural resources and issues that may be affected.

The corridor study area for this resource analysis was defined as a 2-mile-wide corridor following the Bridal Path ROW.

The only inventoried NRHP-listed property located within the 2 mile width of the study area was the historic Blackhawk Putnam Tavern listed below: 87

**Figure 18 - Historic Properties Adjacent to ROW**

<table>
<thead>
<tr>
<th>Resource Name</th>
<th>Location</th>
<th>Address</th>
<th>Description</th>
<th>NRHP Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackhawk Putnam Tavern</td>
<td>Bridal Path</td>
<td>22 North St., Town of Houlton, Aroostook</td>
<td>Building</td>
<td>NRHP Listed, 1/30/1976</td>
</tr>
<tr>
<td></td>
<td>Alternative</td>
<td>County</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: NPS (2013a)

**Archaeological Resources**

Archaeological sensitivity of the corridor study area was assessed based on a review of environmental data, historic maps, and previously identified above ground historic properties. Overall the corridor study area exhibits moderate potential for the presence of prehistoric archaeological resources and low-to-moderate potential for the presence of historic archaeological resources.

**Architectural Resources**

Only seven architectural resources have been identified within the 2 mile wide corridor study area. Generally these resources cluster along main roads in populated town centers or adjacent to waterways. The majority of these resources represent residential structures that are 50 years old or older, which are not eligible for listing in the NRHP. As shown below in Figure 19, there are seven such properties in the corridor study area.

**Figure 19 - Architectural Resources Located within the Corridor Study Area**

<table>
<thead>
<tr>
<th>Segment</th>
<th>NRHP Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Corridor (2 miles centered on Bridal Path)</td>
<td>4 Not Eligible, 2 Unknown, 1 Eligible</td>
</tr>
</tbody>
</table>


87 Review of cultural resources information was based exclusively on online databases and related sources. Online sources consulted included the NPS NRHP FOCUS database (NPS 2013a) and Native American Consultation Database (NPS 2013b) and the MHPC’s Cultural & Architectural Resource Management Archive (CARMA) Map Viewer (MHPC 2013).
Historic Trails and Transportation Corridors
No historic trails or transportation corridors were identified during this desktop review.

Traditional Cultural Properties
No documented traditional cultural properties were identified during this desktop review. Based on past experience and the information currently available, NHT’s environmental and permitting consultant assesses the Project as low for the potential that one or more issues associated with cultural resources would constitute a fatal flaw for the proposed Project as presently understood. Tribes with land holdings or interests in the vicinity of the Project include the Passamaquoddy Tribe of Indians, the Aroostook Band of Micmacs, and the Houlton Band of Maliseet Indians. Tribal contacts will be consulted during the federal permitting process of the Project.

Conclusion
Based on our investigation of the study area, the 2 mile corridor considered in this proposal is reasonable and has a low to moderate risk from an environmental and permitting perspective. The use of existing corridors is generally supported by state and federal agencies, which limits environmental and other impacts when constructing and operating necessary infrastructure.

Following project selection, NHT will consult with state, federal, and other agencies, as well as local officials and local citizens/project abutters to discuss the corridor, and identify any additional constraints, concerns, and/or opportunities.