

**THE STATE OF NEW HAMPSHIRE  
SITE EVALUATION COMMITTEE**

**Docket No. 2015-06**

**Joint Application of Northern Pass Transmission, LLC & Public Service Company of New  
Hampshire d/b/a/ Eversource Energy for a Certificate of Site and Facility**

**POST-HEARING BRIEF OF THE DEERFIELD ABUTTERS**

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**I. Summary of Argument**

Deerfield - Abutting Property Owners hereby file their **Post-Hearing Brief** and state that:

The Deerfield - Abutting Property Owners (“DA”) ask the Site Evaluation Committee (“SEC”) to deny the Applicant the certificate because the Applicant has failed to meet its burden of proof that the Northern Pass Transmission Project (“NPT” or “Project”): will not have an unreasonable adverse effects; will not unduly interfere with the orderly development of the region; and will not serve the public interest. The Project fails to meet an appropriate standard of acceptability given its nature as an elective not a reliability project. Far less adverse options and design choices are available to provide new energy resources to New Hampshire and New England.

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## II. Effects on the Natural Environment

**The SEC should deny the certificate because the Applicant failed to meet its burden of proof that the Project would not have unreasonable adverse effects on the natural environment.**

The Project should be denied because, if approved, the construction and operation of the Project would have an unreasonable adverse effect on the natural environment, including wildlife species, rare plants, rare natural communities, and other exemplary natural communities. SEC Site 301.14(e). If the Project were to be approved, construction sites and access roads would be built in and through sensitive wetlands, existing lines would be removed and replaced, new industrial sized towers would be built and new high voltage transmission lines would be strung the length of the State of New Hampshire. Multiple layers of timber matting would be placed, and heavy construction vehicles would run through vernal pool basins and other wetlands. (DA Ex. 71,72, 171). This activity would destroy many of New Hampshire's most imperiled species. (DA Ex. 44, 52, 54, 55, 56, 57, 63, 64, 66).

### A. Blanding's Turtles

**The construction and operation of NPT would have an unreasonable adverse effect on wildlife, including the endangered and highly vulnerable Blanding's turtles.**

The State has recognized that certain species require protection and conservation efforts; these species include the endangered Blanding's turtles and associated species of greatest conservation need. (DA Ex.168(c), p 2-3). Associated species include an assortment of wetland creatures, including ribbon snakes, American black ducks, Jefferson salamanders, wood turtles,

spotted turtles, box turtles and many more, all of them highly vulnerable to loss of habitat caused by development and construction. (Id.)

The core of the northeast Blanding's turtle population (approximately 40%) is southeastern and south-central New Hampshire (New Hampshire Wildlife Action Plan Appendix A Reptile-44). (DA Ex. 66, p. 1, DA Ex. 104, p. 2). Most of Deerfield has priority sites for Blanding's turtles. Tr. 66 pm, p. 8. All of the Deerfield Abutters have identified Blanding's turtles on or near their land near the right of way (ROW) where the Applicant proposes to build the Project. (Tr. 65 pm, p. 167-171. DA Ex. 44, p. 3.) (emphasis added).

The scientific literature confirms "small increases in annual adult turtle mortality (as little as 2-3%, Congdon et al. 1993; Gibbs and Shriver 2002), especially among females, can have *catastrophic* effects on populations." (emphasis added). (DA Ex. 66, p. 1). "Scientific models have predicted that the yearly loss of just a couple of adult Blanding's turtles will eventually lead to that population disappearing altogether." (DA Ex. 104, p. 2). The same is true for wood turtles. (DA Ex. 103, p. 1).

The cold-blooded Blanding's turtles hibernate in cold, muddy bottoms of wetlands, typically vernal pools, to stay warm. Their metabolism slows so that little oxygen is needed, and they do not search for food. (DA Ex. 52, p. 1). They may hibernate under vegetation, rather than the substrate, and on occasion they have been seen slowly swimming underneath the ice in areas where they overwinter. These hibernation habits make the Blanding's turtles as well as state-threatened spotted turtles vulnerable to crushing by construction during winter. (DA Ex. 44, p. 4. DA Ex. 52, p. 1-2. DA Ex. 63, p. 3).

"The primary threat to Blanding's Turtles is habitat loss and degradation. (Van Dam 1993; Harding 1997)". (DA Ex. 55, p. 1). "Blanding's turtles use a variety of wetland types throughout the year (Todd Sajwaj et al., unpubl. report), making the conservation of wetland

complexes critical for this species (Joyal et al. 2001). Blanding's turtles also commonly use the terrestrial matrix encompassing wetland complexes. Both sexes make overland journeys among wetlands throughout the active season (Rowe and Moll 1991; Herman et al. 1995) and long periods of terrestrial aestivation are common in some populations (Joyal et al. 2000) In addition, female Blanding's turtles make particularly long overland journeys during the nesting season (Piepgras and Lang 2000). These nesting forays can last 17 days (Rowe and Moll 1991; Innes et al. 2008), and turtles may travel > 1 kilometer during forays (Congdon et al 1983; Piepgras and Lang 2000). Because Blanding's turtles may use a combination of different wetland types annually, as well as upland nesting habitat and suitable habitat for traveling among these land cover types, they are vulnerable to threats that affect any (emphasis added) of these individual components of the landscape." (DA Ex. 57, p. 2). "The use of both aquatic and upland habitat by freshwater turtles demonstrates that protection of wetland habitat alone is insufficient to conserve many populations of freshwater turtles." (DA Ex 57, p. 1. DA Ex. 106).

### **B. Wetlands Impacts**

**Applicant failed to meet its burden of proof that the NPT will not have an unreasonable adverse effect on New Hampshire's wildlife habitat including its wetlands.**

Site 301.14 (e) requires the SEC to determine whether the construction and operation of a proposed energy facility will have an unreasonable adverse effect on the natural environment, including wildlife species, rare plants, rare natural communities, and other exemplary natural communities. Wetlands are complex water based systems that provide critical and important support to all members of the natural environment and are often interconnected with other wetlands

Normandeau Associates, Inc conducted research for the Applicant and analyzed wetlands in the path of the Project. Evidence has been presented that the magnitude of impacts that would

be created in these wetlands if the Project were constructed is significantly underestimated, that the number of high value wetlands is understated and that the methodology used to evaluate the quality of wetlands was flawed. If built, the Project would impact a significant number of wetlands along its 192 mile length. We do not know the number of wetlands impacted by the Project if constructed, nor do we know the quality of these wetlands.

### **Project Wetland Impacts Underestimated**

Normandeau restricted its wetland impact analysis to the area of the ROW in each wetland it evaluated. The Normandeau impact analysis did not consider wetland impacts outside of the Project ROW because it was assumed that such impacts would all be temporary. Mr Ray Lobdell, a wetland scientist, testified that the proper assessment of wetland impacts for transmission line construction requires an impact analysis of the entire wetland and not just the wetland area within the ROW. (Tr. 70 am, p. 78-79). Dr Rick Van de Poll, soils and wetland scientist, engaged by the City of Concord, reviewed the Concord wetlands impacted by the Project, and discovered 38 wetlands that Normandeau missed in their delineation efforts. (Tr. 70 am, p. 16–18).

### **Project Wetlands Evaluation Flawed**

Normandeau used the Army Corps of Engineers (ACoE) methodology to evaluate the wetlands along the course of the Project. They modified the methodology by assigning point values to each wetland function. The points were totaled to arrive at an overall point total for each wetland. If a wetland had 14 or more points it was given a rating of “high quality”. Mr Ray Lobdell testified that the Army Corps states the point system is not allowed under its methodology. (Tr 70 am, p. 84-91). The Normandeau wetland evaluation using their modified ACoE methodology concluded that there were 2 % “high quality” wetlands for the Project. When Mr Ray Lobdell was asked if based on his experience he had any estimate or order of

magnitude of the amount of high quality wetlands that might be present as opposed to the 2 %, he testified as follows: “Well, I’ve done a number of town-wide wetland assessments, and I think the number will be substantially higher. And if we look at the Fish & Game Wildlife Action Plan and the wetlands shown in that, about 50% of the wetlands ranked as having “high” value habitat. (Tr. 70 am, p. 90–91).

NH wetlands are a critical and important NH natural resource. At this point in time the number of NH wetlands that would be impacted by the Project is unknown. Furthermore, because of the flawed methodology used to delineate the impacted wetlands and the discovery of inaccuracies in the count of wetlands, there is no precise knowledge of the number and location of NH high quality wetlands.

The Applicant proposes to build a 1000 ft timber mat “road” across the Berglund hayfield (500 ft) in Deerfield and then across a high quality wetland (500 ft) of which the Berglunds are part owners. (APP EX 003 pg 261, sht 669) The purpose would be to facilitate the construction of two monopoles in the hay field and the erection of four lattice towers in the wetland. The Applicant said that the construction will require at least two seasons or about 18 months. When asked about alternative routes or methods to accomplish this work the Berglunds were told there are no other options. The impact of the proposed timber mat road, the heavy construction vehicle traffic and the significant weight moving on this road over the 18 months will have an unreasonable adverse impact on the hayfield and wetland. The timber mat road across the wetland is not a “floating bridge” we were told but stacks of timber mats extending from the base of the wetland below the water line to above the water surface. The timber mat road crossing will fragment the wetland, severing the north arm of the wetland from the major part of the wetland. Common sense says this permanent separation of this wetland system will lead to the death or stagnation of the north arm. Impacts to the wetland are assumed to be temporary. There

is significant disagreement on this. Depending on the types of impacts to wetlands and the duration of the impacts there is evidence that impacts may change from temporary to permanent. Dr Rick Van de Poll, soils and wetland scientist and Mr Ray Lobdell, individually testified to this recently. (Tr. 70 am, p. 52-55) (Tr. 70 am p. 73-74). This wetland today is a system that is in motion at all times. It supports a wide variety of wildlife within it and throughout the surrounding uplands and forests. Wetland species include: Blanding's turtles (Endangered), eastern painted turtles, beaver, northern water snakes, many varieties of frogs and many other species. Upland species that depend on the wetland include: deer, many varieties of birds, weasel, coyote, red fox, wild turkey and many others. Wildlife live there, depend on the wetland for their survival and travel throughout the water and surrounding upland. It is a wetland of the highest quality according to Normandeau Associates, Inc. This wetland is classified under the NH Fish and Game Wildlife Action Plan as being in the category of "Highest Ranked Wildlife Habitat in NH" (Normandeau Associates, Inc. "Wetlands, Rivers, Streams, and Vernal Pools Resource Report and Impact Analysis", Northern Pass Transmission Project).

The hayfield that would be crossed by the timber mat bridge is managed for wildlife and for the protection and encouragement of wildlife habitat. The timber mat road would significantly impact the use of the hayfield. Delayed haying of the field occurs after July to accommodate ground nesting birds would be curtailed. Over the estimated 18 months while the road is in place and under heavy use, wildlife will be displaced due to the traffic and noise and personal use of the entire hayfield will be unavailable for the same reasons.



### **C. Effect of BMPs on Wildlife and Habitat**

#### **The use of best management practices (“BMPs”) during construction and operation of the NPT would not avoid an unreasonable adverse effect to wildlife and habitat**

The massive and invasive footprint of the Project will result in permanent and severe damage to New Hampshire natural environment. In Deerfield alone, the NPT will result in a 7.2-mile access road, placement of almost 90 new poles, removal and replacement of the existing line, and an 8-acre expansion of the substation. Review of the NPT maps reveals that the access road, crane pads and towers would be placed in or next to critical habitat including vernal pools and wetlands if the Project were to be approved.

1. As to wildlife, evidence has been presented that even a single adult turtle mortality can have a significant long-term impact on the survival of that population. (DA Ex. 52, 54, 55, 56, 57, 103, 104). The Applicant’s wildlife expert, Ms. Barnum, acknowledged that turtle mortality could occur because “There’s no practical means of locating overwintering turtles in the muck or relocating them, if you could locate them.” (Tr. 19 pm, p. 81).

In addition to the inability of BMPs to offer adequate protection to imperiled species such as the Blanding’s turtle, the Applicant’s construction panel acknowledged under oath that Eversource contractors in Deerfield have failed to follow BMPs in the field. (Tr. 11 pm p. 118. DA Ex. 26, 105). Deerfield Abutters and others testified that even on small projects, Eversource contractors’ failed to follow BMPs and, as a result, damaged wetlands and property. (Tr. 66 pm, p. 15-18; CFP Ex. 642, A&B; CFP Ex. 647 & 648). (Tr. 48, pm p. 24-25).

Since there is no means of minimizing or mitigating these adverse effects, avoidance is the only remaining option. Site 301.14(e)(1-7). This is particularly true given the unprecedented size and scope of the 192-mile length of the NPT with numerous construction crews and heavy equipment in this fragile habitat over an extended period of time. In Deerfield, construction

estimates are 12 hours a day, 6 days a week over a 24-month construction period. (Tr. 3, pm, page 186).

Applicant has stated that “If construction occurs during the Blanding’s turtle active season, the environmental monitor(s) will search active construction areas for turtles prior to commencing construction activities, and all turtles found will be removed and placed in the nearest suitable, safe location.” (DA Ex. 53). The assumptions are many: (1) a sufficient number of qualified environmental monitors; (2) available qualified monitors at each site over 192 miles; and (3) a qualified monitor locating the elusive turtle while a construction team with heavy equipment stands by waiting for his or her go-ahead!

If an environmental monitor finds a turtle, they will remove it, but it is highly unlikely that all turtles will be found. The Fish and Game website includes photographs of Blanding’s turtles that are virtually undetectable, even when the photograph is enlarged. New Hampshire Wildlife Action Plan, App. A, Reptile-44. (DA Ex. 64 (NH Fish and Game website); Tr. 65 pm, p. 171). Moreover, the impact of climate change and extreme weather events on the construction calendar points to changing conditions as the months go by – for example, on December 4, 2017 a painted turtle hatchling was observed moving from its nest to water, and a painted turtle was observed swimming in a beaver pond in on November 26, 2017. (DA Ex. 27, p 2-3. Tr. 66 pm, p. 188).

2. As to habitat, the Applicant’s project maps show huge swaths of additional wetlands where they propose to place multiple layers of timber mats so that extremely heavy construction equipment, some weighing in excess of 200,000 pounds, can run through wetlands during construction of the project. (DA Ex. 26, 105). Applicant indicates that NH DES would have the responsibility for oversight and restoration of the wetlands but wetland experts questioned whether it would have the capabilities to do so. (Tr. 70 am, p. 35-37 & 119-120). Issues that

accompany this type of construction include invasive species, pollution, and herbicide use. Given the massive footprint of the Project across the State, there is significant and unreasonable risk of permanent harm.

**D. Conservation of NH Wildlife and Habitats.**

**NPT would damage the long term and ongoing efforts of the State and NH Residents to conserve and protect NH wildlife and habitats.**

For years now, NH residents and State agencies, including both the Fish and Game Department, and the Department formerly known as the Department of Resources and Economic Development (DRED), have taken a leading role in efforts to protect New Hampshire's wetlands and wildlife. For example, both of these State agencies recommend protecting vernal pools and vernal pool basins. (DA Ex. 63, 64, 66).

The DRED publication entitled Good Forestry in the Granite State clearly recommends keeping heavy equipment at least 200 feet away from vernal pools, and out of the vernal pool basin entirely. (DA Ex. 63, p. 5). It is clear from a careful reading of DRED's recommendations that placing layers of mats and running heavy equipment through a vernal pool basin will not be sufficient to protect the reptiles and amphibians that are dependent on vernal pools for their survival. In fact, DRED specifically recommends against running machinery through vernal pool basins, even during dry periods, to avoid changing the pool's ability to hold water. *Id.* DRED also recommends locating truck roads (such as the access roads proposed by the Applicant) outside a 200 foot buffer around vernal pools. *Id.* Vehicle ruts can reduce the length of time a pool holds water by directing water away from the pool. Ruts at any distance from a pool can create breeding "traps" for amphibians, since wood frogs and salamanders will often deposit eggs in ruts, which will dry up before the eggs hatch. (DA Ex. 63, p. 4). Many scientists recommend a much greater buffer zone around vernal pools. (DA Ex. 54, p. 1. Tr. 66 pm, p

143). After reviewing many scientific publications and after years of following the recommendations of DRED and the Fish and Game Department, the Deerfield Abutters understand that the best BMP is to stay out of wetlands if at all possible. (DA Exs. 44, 52, 54, 55, 56, 57, 63, 64, 66, 103, 104).

The Fish and Game Department does not have independent permitting or regulatory authority for the Northern Pass project; however, as guardians of the State's fish, wildlife and marine resources, it is the Department's responsibility to work in partnership with the public to conserve, manage and protect these resources. (Letter dated 13 May 2016 from Glenn Normandeau, Executive Director of NH Fish and Game Department to Pamela Monroe, SEC Administrator.) Fish and Game would have no choice but to do their best to cope with the effects of the Project on the State's fish, wildlife and marine resources if the project were to be approved.

New Hampshire Fish and Game is continuing its extraordinary efforts to protect these imperiled species, including the endangered Blanding's turtles, having recently received a grant from the U.S. Fish and Wildlife Service. (DA Ex. 168(c)). "The goal of this new grant is to implement conservation actions for Blanding's turtles and associated species of greatest conservation need says Nongame Biologist Mike Marchand. *Id.* All of these species are highly vulnerable to loss of habitat caused by development and construction.

For the above reasons, the Deerfield Abutters ask the SEC to find that NPT will have an unreasonable adverse effect on the natural environment and deny the issuance of the certificate.

### **III. Historic sites**

#### **Applicant failed to meet its burden of proof that the NPT would not have an unreasonable adverse effect on historic sites, including those in Deerfield.**

One of the most egregious effects of the massive footprint of the NPT is the harm it would inflict on the historic sites throughout the State of New Hampshire. Our forbears have taken care to preserve the lands, burial sites, stonewalls and buildings for future generations. The NPT would have an unreasonable adverse effect on this gift, our history, and these historic sites along the 192 miles.

In Deerfield, the damaging scale of the NPT is clear when considering it bisects the entire Town of Deerfield from west to east, visually and physically separating the Town's two historic districts from one another. Numerous historic sites would be adversely impacted including the Deerfield Center and Nottingham Road Rural Historic Districts, the Lindsay Menard Cabin, and 47 Candia Road as well as many others such as Thurston Pond Dam, cemeteries, and historic map sites. (DA Ex. 46, 47, CFP Ex. 464).

#### **A. Determination of Impacted Historic Sites**

##### **1. Adverse Effect Determinations by NH-DHR and Deerfield Abutters' Historic Expert.**

Both the Deerfield Center and 740-acre Nottingham Road Rural Historic Districts would be adversely affected by the proposed project, contrary to the assertion of the Applicant's historic preservation expert. Specifically, the proposed industrial infrastructure would loom above a National Register Historic District, or physically bisect one in the case of the Nottingham Road Rural Historic District. The Deerfield Abutters' historic expert, D. Scott Newman of 106 Associates, ("hereinafter DA historic expert"), determined that the Project would have an "adverse effect" on these Historic Districts. The New Hampshire Division of

Historical Resources (“NH-DHR”) concurred that the NPT would have an “adverse effect” on these sites as well as the Lindsay Menard Cabin, and 47 Candia Road. NH-DHR letter dated December 21, 2017, p. 3 (“NH-DHR 12/21/17 letter”). The impacts would be severe, permanent, and impose a highly visible and out-of-scale industrial infrastructure on a substantial number of fragile, National Register historic properties in Deerfield. (DA Ex. 46, 47, CFP Ex. 464).

## **2. The Section 106 Findings and Determinations are Not Complete.**

The Section 106 review process is ongoing and is not complete.

The above statement is based on the following excerpted references from Mr.

Boisvert’s NH-DHR 12/21/17 Letter to Ms. Pamela Monroe, SEC Administrator:

### Page 1:

“Further, the various consulting parties have not had the opportunity to offer their comments on these steps in the process. Consequently, the findings and determinations offered here must be considered preliminary and subject to revision as the Section 106 process moves forward”.

Thus the Deerfield Abutters conclude: (1) that the Section 106 process is not complete; (2) that the consulting parties have not been afforded the required opportunity to comment, and (3) that under the 106 Regulations, NH-DHR’s Findings and Determinations may change as the 106 process is implemented, resulting in alterations of the Project design.

## **3. Applicant’s Faulty Methodology Assessing Historic Sites Led to Errors.**

Deerfield Abutters’ historic expert submitted pre-filed testimony and supplemental testimony outlining the Applicant’s missteps and faulty methodology in failing to properly assess the NPT’s effects on historic resources; the Applicant concluded that the effect of NPT is not unreasonably adverse, without referencing any benchmarks. (DA Ex. 46, 47). The DA historic

expert noted that the Applicant used visualizations that purposefully minimized the appearance of the proposed infrastructure. Id. The NH-DHR concurred with this assessment and stated:

*“The DHR disagrees with a number of the applicant’s effect assessments for historic districts. This disagreement is primarily due to the applicant using limited directional views versus the DHR using a holistic visual analysis of the district”.* NH-DHR 12/21/17 letter, p. 3 (emphasis added).

A second misstep was asserting that important views within the Deerfield Historic Assessment were not significant. (DA Ex. 46, 47; Tr. 68 pm, pp. 141-142). A third misstep was equating the effects of typical, village-scaled wooden power poles in the 25-foot range with industrial-sized towers and poles ranging up to 140-foot and higher. (Tr. 68 pm, 150-151). A fourth misstep was not performing a bare-earth analysis as required by SEC rules and counting on ephemeral vegetation to screen infrastructure that far exceeded the height of mature trees. Id. A fifth misstep was to argue that historic and cultural resources are not subject to the Effect on Aesthetics as they are clearly required to be in SEC Site 301.05(b)(3). Id. The aggregate effect of the faulty methodology described above led to incorrect findings by the Applicant as to adverse effects and to an incorrect finding on Unreasonable Adverse Effect according to SITE 301.14.

In the 12/21/17 letter, NH-DHR states the following with regard to the Applicant’s methods:

Page 2:

“Although the information provided was helpful in describing the project’s potential impacts the DHR did not consistently agree with the applicant’s recommendations of effect or the reasons provided to support effect recommendations”

Page 3:

“Historic Districts....Many of these districts will be adversely affected by the project due to the introduction of modern visual elements out of keeping with the historic setting of the districts. The DHR disagrees with a number of the applicant's effect assessments for historic districts. This disagreement is primarily due to the applicant using limited directional views versus the DHR using a holistic visual analysis of the district.”

“In other cases, the DHR disagrees with the applicant's recommendations due to heightened public concerns and sensitivity of a particular resource.”

Page 4:

“Historic Agricultural Properties ... The applicant has indicated in several effect assessments that farm fields and woodlots are not character defining, and therefore the project will result in a No Adverse Effect to that farm. However, the OHR assumes that all fields, woodlots and other agricultural landscapes contribute to a historic farm's significance, unless otherwise indicated that a loss of integrity has occurred at that location. Therefore, the DHR cannot agree with the applicant's methodology and in many cases the DHR made a finding of Adverse Effect.”

“Resolution of adverse effects will be considered in the preferred order of **avoidance**, minimization and mitigation. Treatments, methodologies and mitigation measures will address the project's direct, indirect, cumulative, and reasonably foreseeable adverse effects, including reasonably foreseeable effects arising from ongoing operation and maintenance of the project.”  
(emphasis added)

The table below is excerpted from Mr. Boisvert’s 12/21/17 letter, Table 1, where NH-DHR concludes, contrary to the applicant’s conclusions, that the project would adversely affect both National Register Historic Districts (Lines 4 and 6). The proposed project would also adversely affect the Lindsay Menard Cabin and 47 Candia Road.

Deerfield	170 Nottingham Road	NAE
Deerfield	47 Candia Road	AE
Deerfield	Deerfield Town Hall	NHPA
Deerfield	Deerfield Center Historic District	AE
Deerfield	Lindsay-Menard Cabin	AE
Deerfield	Nottingham Road Historic District	AE

Accordingly the Deerfield Abutters conclude that:

1. Findings and determinations made by NH-DHR are to be considered preliminary, and may change as the Section 106 process is advanced affecting project design.
2. NH-DHR disagrees with the how historic agricultural property boundaries were generated by the Applicant
3. NH-DHR disagrees with how visual simulations were generated by the Applicant
4. NH-DHR disagrees with how heightened public interest was considered by the Applicant



5. NH-DHR disagrees with numerous effect determinations by the Applicant – including most of the effect determinations in Deerfield
6. The Applicant has incorrectly not considered avoidance measures (e.g. undergrounding) in Deerfield. Under Section 106, the first order of adverse effect resolution is “avoidance”.

## **B. Findings of Unreasonable Adverse Effects on Historic Sites**

### **1. NPT would have an unreasonable adverse effect on Deerfield Center National Register Historic District.**

As to SITE 301.14 (b)(1), based on site evaluations of the Historic District and NPT plans, Deerfield Abutters’ historic expert opined the project would have an “Adverse Effect” on the Deerfield Center Historic District. (DA Ex. 46, 47). The NH-DHR confirmed, similarly finding it would have an “Adverse Effect.” NH-DHR 12/21/17 letter. p. 3. The proposed industrial infrastructure would be entirely out of scale with the compact New England historic district, and prominently visible as a backdrop to historic buildings. The Deerfield Abutters’ historic expert offered photographs of the sites that illustrate the height of the proposed towers/lines with horizontal lines; these are accurately drawn using pole and tower data provided by the Applicant. (DA Ex. 46, Figures 5, 6). As the photos demonstrate, the proposed industrial infrastructure extends well above the tree canopy and would be prominently visible in the Historic District. Although the Applicant attempted to discredit the photographs because they claimed they did not meet the technical specifications for “Photo Simulations”, the photographs are an accurate demonstration of the height of the proposed infrastructure.

Deerfield Abutters’ historic expert opined that Applicant’s conclusion that views within the Historic District are not significant was not credible and was inconsistent with professional historic preservation practice. The Applicant’s historic preservation expert concluded that the project would not adversely affect the Deerfield Center Historic District, even though the

proposed transmission infrastructure (new industrial power poles and wires) would closely backdrop the District's historic buildings. (Tr. 66 pm p. 141-42).

As to SITE 301.14 (b)(2), the Deerfield Center National Register Historic District comprises approximately 11 buildings and 10 acres of land, a substantial area listed in the National Register of Historic Places. (CFP Ex. 438)

With respect to SITE 301.14 (b)(3), the Deerfield Abutters' historic expert opined the adverse effects would be severe, pervasive, and permanent. (DA Ex. 46, 47).

As to SITE 301.14 (b)(4), the NH-DHR determinations of adverse effects in Deerfield contradict those of the Applicant's expert, and note faulty methodologies in the Applicant's effect assessment methods. NH-DHR 12/21/17 letter, p. 3. (See Sec. II. A. 3).

Finally, as to SITE 301.14 (b)(5), the measures proposed by the Applicant (i.e. monopoles) are ineffective, and would have no impact on the intrusive, sagging power lines that would rise above the tree canopy and scar the horizon. The Applicant has failed to even study the feasibility of mitigating the adverse effects by undergrounding the wires in Deerfield, as it has elsewhere in the project, instead electing to state incorrectly there aren't any adverse effects to the historic districts. (See Sec. II. C). (DA Ex. 46, 47). The Applicant had suggested plantings at the back of individual properties as a mitigation measure to block views of the proposed transmission line. The Deerfield Abutters find this suggestion that would block property owner's views of the surrounding scenic landscape to be highly inappropriate.

## **2. NPT would have an unreasonable adverse effect on Nottingham Road Rural Historic District.**

As to SITE 301.14 (b)(1), the DA historical expert concluded that the project would have an Adverse Effect on the Nottingham Road Rural Historic District based on site evaluations of the historic district and Applicant's plans. (DA Ex. 46, 47). The NH-DHR has also stated the

Nottingham Road Rural Historic District would adversely affected by the proposed project. NH-DHR 12/21/17 letter, p. 3.

The proposed industrial infrastructure would be entirely out of scale with the rural characteristics of the historic district, and constitute an unacceptable and jarring intrusion of prominently visible industrial infrastructure well over the tree canopy. (Tr. 68 pm, p.144-45). Again the photos in DA Ex. 46, demonstrate the extent to which the proposed industrial infrastructure towers above the tree canopy and would be prominently visible in the Historic District.

With respect to SITE 301.14 (b)(2), the Nottingham Road Rural Historic District comprises approximately 740 acres of land including 54 parcels with two village centers, a grouping of historically associated houses, farms, stone walls, a substantial area eligible for listing in the National Register of Historic Places. (DA Ex. 47).

As to SITE 301.14 (b)(3), the adverse effects would be severe, pervasive, and permanent. The NPT physically cuts through the District within its National Register boundaries - directly and adversely impacting the integrity of the rural, agricultural setting. (DA Ex. 46, 47).

With respect to SITE 301.14 (b)(4), the determinations by NH-DHR of adverse effects in Deerfield contradict those of the applicant's expert, and note faulty methodologies in the Applicant's effect assessment methods. NH-DHR 12/21/17 letter, p. 3. See Sec. II. A. 3.

Finally, as to SITE 301.14 (b)(5), the same measures set forth in Sec II. B. 1., proposed by the Applicant (i.e. monopoles) are ineffective, and would have no impact on the intrusive, sagging power lines that would rise above the tree canopy and scar the horizon.

### **3. NPT would have an unreasonable adverse effect on 47 Candia Road.**

As to SITE 301.14 (b)(1), the NH-DHR has stated the 47 Candia Road would adversely affected by the proposed project. NH-DHR 12/21/17 letter, p. 3. The proposed industrial

infrastructure would be entirely out of scale with the rural characteristics of the historic site and constitute an unacceptable and jarring intrusion of prominently visible industrial infrastructure well over the tree canopy.

With respect to SITE 301.14 (b)(2), 47 Candia Road is an antique colonial farmhouse with a historic 100-foot barn. The property is comprised of three contiguous parcels totaling seventy-five acres with seven acres in fields and sixty-eight acres in managed forestland. (JTMUNI 266).

As to SITE 301.14 (b)(3), the Deerfield Abutters contend the adverse effects would be severe, pervasive, and permanent, impacting the integrity of the rural, agricultural setting. With respect to SITE 301.14 (b)(4), the determinations by NH-DHR of adverse effects in Deerfield contradict those of the applicant's expert, and note faulty methodologies in the Applicant's effect assessment methods. NH-DHR 12/21/17 letter, p. 3. See Sec. II. A. 3.

Finally, as to SITE 301.14 (b)(5), for the same reasons set forth above in Sec. II. B. 1, the measures proposed by the Applicant are ineffective, and would have no impact on the intrusive, sagging towers and power lines that would rise above the tree canopy and scar the horizon.

#### **4. NPT would have an unreasonable adverse effect on the Lindsay Menard Cabin.**

As to SITE 301.14 (b)(1), the NH-DHR has stated the **Lindsay Menard Cabin** would adversely affected by the proposed project. NH-DHR 12/21/17 letter, p. 3. The proposed industrial infrastructure would be entirely out of scale with the rural characteristics of the historic site.

With respect to SITE 301.14 (b)(2), the Lindsay Menard Cabin is a Cabin built circa 1955 with approximately 13 acres of property. The project would introduce visual elements that diminish the isolated, wooded setting that is a character defining feature of the property. The project will

be visible from the buildings and land to a greater degree than the existing transmission line structures. The project would change the character of the physical features within the property's setting that contribute to its historic features. Vegetation clearing will reduce the density of the woods within the view of the cabin

As to SITE 301.14 (b)(3), the Deerfield abutters contend the adverse effects would be severe, pervasive, and permanent, impacting the integrity of the rural wooded setting. With respect to SITE 301.14 (b)(4), the determinations by NH-DHR of adverse effects in Deerfield contradict those of the applicant's expert, and note faulty methodologies in the Applicant's effect assessment methods. NH-DHR 12/21/17 letter, p. 3. See Sec. II. A. 3.

Finally, as to SITE 301.14 (b)(5), for the same reasons set forth above Sec. II. B. 1.

**5. Applicant failed to meet its burden of proof that the NPT will not have an unreasonable adverse effect on hundreds of historic sites throughout the State of New Hampshire, including a large number of historic sites in Deerfield.**

Deerfield was incorporated in 1766, and it is home to a large number of historic sites possessing a scenic quality. Many of these historic sites are identified on a historic map developed as part of Deerfield's 250<sup>th</sup> anniversary celebration in 2016. (CFP Ex. 464. Tr. 31 am p. 5-9). "In the beginning the town, like most of New Hampshire, was devoted to agriculture and those shops and stores which supplied farmers with tools and goods. There were several inns and taverns built in those early days to accommodate travelers between Manchester, Exeter and Portsmouth as well as mills along the rivers and ponds which produced lumber, leather, iron goods, brick and potash, and many other vital products. Not only were there great farms, businesses and professional people, but vacationers flocked to the town to enjoy its pond, lakes and streams and the ideal location in southeast NH, not far from major cities. Deerfield's 250<sup>th</sup> anniversary historic map "is intended to provide glimpses of the rich, vibrant, hardworking ethos of the Town of Deerfield. The Town is made up of several villages such as: Old Deerfield

Centre, The Parade, Deerfield Center, South Deerfield, Leavitts Hill, Rand's Corner and Coffeetown. It is hoped that you will look at the present homes and businesses and be able to envision what came before. Our story of the land, its people, and their endeavors will, we hope, encourage a deeper interest in and a search for more history.” (CFP Ex. 464).

**6. The project should be rejected because it will have an unreasonable adverse effect on many of the historic sites in Deerfield, including the historic Thurston Pond Road, dam, mill site and cemetery.**

Thurston Pond Road leads from Mt. Delight Road to the Thurston Pond dam and mill site, which is but one example in Deerfield of a historic site possessing scenic qualities that are highly valued by residents and tourists alike. (DA Ex. 76, 77, 79). It's a road visitors can enjoy walking, running or riding bikes, horses, dirt bikes, all terrain vehicles, or snowmobiles.

Thurston Pond Road is an important and fascinating part of Deerfield's history. It was laid out in 1772 as the “Deerfield-Allenstown/Pembroke Highway”. (CFP Ex. 464. DA Ex. 2, 70). Cotton Haynes, one of Deerfield's first settlers and a school-teacher in 1766-67, appears to have first settled on Thurston Pond Road. A crude foundation is located just west of the Bradbury/Greig homestead driveway. (DA Ex. 2., DA Ex. 78). Haynes cleared portions of the 30-acre “Merrill Lot” across Thurston Pond Road and, in 1776, constructed a sawmill just south of Thurston Pond, which was converted to a shingle mill and later a grist mill. (DA Ex. 77, 79. CFP Ex. 464). Though the building disappeared long ago, foundation stones are still visible along the stream banks. DA Ex. 77. A grist stone was discovered by Kate Hartnett adjacent to the mill site. DA Ex. 2, 79.

In 1779, Haynes sold 55 acres to Robert Merrill, which began nearly a century and a half tenure for the Merrill family. They cleared and pastured the land, as present day stonewalls and wire fencing attest, and built a large house in the late 18th century. Stella Merrill, a local teacher, was the last to inhabit the homestead; the house's large L-shaped cellar hole and well remain.

Other settlers include the French, Philbrick and Rollins families. DA Ex. 2. A small cemetery nearby includes headstones for the Philbrick, Rollins, Merrill, Cram and French families. DA Ex. 2, 73, 74, 75. A Deerfield map of 1857 shows the Merrill homestead and S. French in the Rollins homestead as well as a shingle mill below Thurston Pond. DA Ex. 77, CFP Ex. 464, map site 69.

Today, standing on the Thurston Pond dam, the existing towers are barely visible, with the tops ending just slightly above the tree line. DA Ex. 76. The Project would be obtrusive and highly visible, running across the entire vista from west to east less than half a mile away from the dam. Id. Nearly doubling the height of the towers, as proposed by the Applicant, will cause permanent and irreparable damage to the view from this historic and scenic site. The SEC examines the effectiveness of the Applicant's measures to avoid, minimize or mitigate unreasonable adverse effects on historic sites and archeological resources (Site 301.14(b)). If the Northern Pass towers are built, it will be impossible to salvage the view from the Thurston Pond dam and its surroundings. Avoidance is the only option that would protect and maintain the scenic view from historic Thurston Pond dam for future generations.

### **C. Deerfield Inconsistently and Unfairly Treated in Review Process**

When there are adverse effects to historic properties, the section 106 regulations require that the lead Federal Agencies evaluate measures that would avoid the adverse effect, then minimize the effect, and finally to mitigate the effect if it is unavoidable, in that order. However, no consideration has been given to avoiding the substantial and pervasive adverse effects in Deerfield. Why not? Why were other sections of the project afforded the opportunity of avoidance measures (e.g. undergrounding wires) while Deerfield was not?

The primary reason is the Applicant's expert incorrectly concluded that the Deerfield historic districts would not be adversely affected when there was ample evidence that they would

be, consistent with standard norms of assessment, a conclusion reached by Deerfield's historic expert and confirmed by the NH-DHR. The Deerfield Abutters strongly believe that the SEC should address this record of inconsistency, and require the Applicant to evaluate avoidance measures in Deerfield as it has done for segments of the project in the White Mountains. Anything short of this would be to apply an inconsistent standard across the project to the detriment of National Register properties and the Town of Deerfield.

It is not reasonable, in the views of the Deerfield Abutters, for the SEC to ignore this inconsistency and suggest that the Section 106 process will deal with it, for two reasons: First, when the Section 106 process requires that the Applicant evaluate avoidance measures in Deerfield after the SEC neglected to acknowledge and confront the inconsistency, this will more or less vitiate the SEC's effectiveness in addressing the historic resource concerns codified in its own rules. Second, is an understanding that the reason that Section 106 Finding and Determinations are required in the SEC's deliberations on Unreasonable Adverse Effect, is precisely to avoid the specter of NH-DHR making decisions that would upend SEC's decisions and force the project into another SEC review.

#### **IV. Aesthetics**

**The certificate for the Northern Pass Project should be denied because the massive footprint of the overhead HVTL and industrial towers of NPT will have an unreasonable adverse effect on aesthetics.**

Under SITE 301.14 (a), the SEC shall consider numerous factors in determining whether the Applicant has met its burden to show that the Project will not have an unreasonable adverse effect on aesthetics. The existing character of the area along the miles of the overhead NPT is predominantly rural and scenic beauty – the character that New Hampshire is known for around the world. (DA Ex. 147). At the risk of stating the obvious, this incredible scenic rugged beauty makes New Hampshire a wonderful place to live and work as well as a wonderful place to visit.



The Applicant failed to depict Project views along the I-93 travel routes into NH tourist destinations. One can only conclude that the reason for this failure to show these views is because of the devastating effect of industrial towers and lines on the beautiful scenic views presently enjoyed by residents and tourists alike.

The preponderance of expert testimony regarding aesthetics deems the project unreasonably adverse:

Patricia O'Donnell, Heritage Landscapes, LLC – “The Project would, in my opinion, permanently and significantly diminish the integrity of historic sites and cultural landscapes and the aesthetic quality and character of communities, rendering unreasonable adverse effects”. (CFP Ex. 141, p. 5)

T.J Boyle Associates – “Failure to adequately consider best practical mitigation measures results in the Project as proposed having an unreasonable adverse impact.” (CFP Ex. 138, p. 15)

Harry Dodson, Dodson & Flinker – “The project’s scope and scale are so extensive that available mitigation measures will be ineffective in achieving a significant reduction in aesthetic impacts. Burial of the project offers the only means of significantly reducing the project’s unreasonable adverse aesthetic impacts.” (SPNHF Ex. 62, p. 10)

Carl Martland, North Country Scenic Byways Council – “. . .the proposed Northern Pass project would have an unreasonably adverse impact on the scenic and cultural byways of Coos and northern Grafton Counties. Views of the towers where they cross the scenic byways and local roads would all be unreasonably adverse. . .extensive views of towers while driving along the byways, and intensive views of towers from vantage points along and nearby the byways would all detract from the experience of those using these roads to enjoy the scenic and cultural resources of northern New Hampshire. The unreasonably adverse aesthetic impacts would

persist for the life of the project, thereby disrupting the tourism economy and the orderly development of the North Country for decades to come.” (HIST 12, pp. 19-20)

In its consideration, the SEC examines SITE 301.14 (a) (5), “An identification of all scenic resources within the area of potential visual impact and a description of those scenic resources from which the proposed facility would be visible”.

Following the definition of scenic resources in SITE 102.45, the Deerfield Abutters and others have identified the many scenic resources impacted by the Project including three village centers (DA Ex. 46, 47), two historic districts (Id), many historic sites (CFP Ex. 464), scenic recreational trails (DA Ex. 69), scenic conservation lands (CFP Ex. 640 map of conservation efforts), and scenic roads.

One example of unreasonable adverse effect along the overhead corridor is Deerfield’s Town Center, a classic compact New England center. The Historic Town Center includes two beautiful churches with white steeples, the Town Hall and surrounding park and Town Gazebo, the Library, houses, community center and the Fire Station. All of these buildings and the park are home to civic events all year long including Old Home Day, Winter Carnival, Election Day, Santa Parade, etc. The NPT with its industrial towers and HVTL will be the backdrop for the public’s view of Town Center, indeed it borders the back of the Deerfield Community Church. The HVTL and towers will be a dominant feature of the landscape and dramatically alter the scenic beauty of Historic Town Center. DA Ex. 46,47.)

A second example of unreasonable adverse effect is the Nottingham Road Rural Historic District. The Deerfield historic expert described the impact: “The views of this infrastructure bisecting this historic district would, in my opinion, alter the fundamental rural, scenic and historic characteristics of the Nottingham Historic District. The proposed project is not an off-in-the-distance view. It would physically bisect the historic district, introducing prominent views of

industrial-scale infrastructure and scarring the skyline from views within the district.” (Tr. 68 pm p. 145). Other historic sites with scenic quality that will be adversely affected include: 47 Candia Road, the Lindsay Menard Cabin, Thurston Pond dam and those listed on the historic map (CFP 464; DA Ex. 47, 76).

Mitigation efforts such as rust colored monopoles instead of lattice towers will not reduce the visibility of the towers or HVTL in the Town Center as they tower over the tree canopy and backdrop beautiful white steeples and buildings. (Tr. 68 pm p. 145. DA Ex. 46, 47). The most effective and obvious method of mitigation is to simply eliminate the transmission lines and towers.

This approach has been used in project renderings on the DeWan website, when power lines were not depicted, even though clearly present as seen on Google street views of the actual sites Tr. 33 am, p. 109-111. The misleading renderings on the DeWan website infer that Mr. DeWan, the Applicant’s aesthetics expert, believes that imposing industrial scale transmission lines and towers would have an unreasonable adverse effect on aesthetics.

The Deerfield Abutters note that, at several points in Town, a string of the NPT industrial towers and HVTL would be visible in the ROW, creating an unreasonable adverse effect. (Tr. 63 am p. 91-93. Hist. Ex. 13, p. 39). For the above reasons, the Deerfield Abutters ask the SEC to find the NPT will have an unreasonable adverse effect on aesthetics and deny the issuance of the certificate.

## **V. Impacts to Water Quality**

### **Significant required information remains unavailable regarding impacts to water quality effects during construction of the project**

Site 301.07 (b) requires “information including the applications and permits filed pursuant to Site 301.03(d) regarding issues of water quality.” Site 301.03(d) specifically requires

“a copy of the completed application form for each such agency.” Submittal of EPA’s Construction General Permit for Stormwater Discharge Associated with Industrial Activity (CGP) application requires certification that a Stormwater Pollution Prevention Plan (SWPPP) has been developed. The CGP is a significant regulatory obligation (DA Ex. 33, pp. 34-92). Mr. Tinus noted during his testimony (Tr. 19, pm, pp 67-68) that the contractor would address these obligations at least 90 days prior to construction. Accordingly, the requirements of Site 301.03(d) have not been met with regard to this major obligation.

**The Track Record with Respect to Implementation of Best Management Practices for Project Work Near Wetlands Indicates Inconsistent Compliance**

The evidence presented both in Exhibits and during the adjudicatory hearing raises several concerns in this regard. Both Mr./Ms. Berglund (Tr. 66, pm, pp. 92-94) and Mr. Cote (Tr. 66, pm, p. 91; DA Ex. 43, pp. 5-7) presented examples of unacceptable work practices in and near wetlands. Managing compliance along a 192-mile project is a task that current regulatory agencies are unlikely to be able to staff. As noted during Mr. Cote’s testimony (Tr. 66, pm, p. 106), EPA Region 1 has one person identified as being tasked with the CGP.

Additionally, Rene Pelletier of NHDES has acknowledged (DA Ex. 35, p. 7) “that the CGP is a federally managed program that DES does not administer.” With limited federal staff, and no DES CGP oversight, reliance on the NP contractors becomes the primary compliance mechanism, along with its associated risks.

## VI. Public Health and Safety

**The certificate for the Northern Pass Project should be denied because the massive footprint of the overhead HVTL and industrial towers of NPT and the expanded substation would have an unreasonable adverse effect on public health and safety.**

Under SITE 301.14 (f) the SEC consider the potential adverse effects of construction and operation of the proposed facility on public health and safety as well as additional considerations for electric transmission lines. SITE 301.14 (f) (4)

The Deerfield Abutters established that Sherburne Woods, a senior residential center with 20 units is located within a few feet of the ROW where significant construction would be undertaken. (DA Ex. 23, 24). The proposed HVTL would be within a very short distance from the residences for the elderly, a population in need of implantable medical devices such as pacemakers or defibrillators. There is no barrier and residents are present 24/7/365.

Moreover the Sherburne Woods residents face additional safety concerns given the physical proximity of their homes to the industrial sized towers and HVTL. Evidence has been presented demonstrating that HVTL are vulnerable to certain weather events, including wind, ice and snow. Scientists agree that more extreme weather events in New Hampshire can be expected in the future. DA Ex. 27, p. 2. Tower collapse is an all too real possibility in these situations. In February 2017, near Jackson Hole, Wyoming, 8-10 transmission poles snapped, some of them in half, during a windy snowstorm. DA Ex. 17. In December 2014, heavy ice loading damaged steel towers in Canada, requiring emergency repairs and multiple wing replacements. DA Ex. 20. In April 2015, a tower on the same circuit fell over when the tower footings collapsed. DA Ex. 20. South Australians were left without power after a storm wreaked havoc on major transmission lines. DA Ex. 19.

Extreme weather events are not the only culprits causing tower collapse. In March 2017, faulty construction on a transmission line tower caused a tower collapse. DA Ex. 18. Given the massive footprint of this Project the safety risks increase. The DA provided ample evidence of failures to follow BMP in the field. (DA Ex. 26). The proximity of the construction site to Sherburne Woods as well as other structures presents an unreasonable risk given the potential harm of injury or death.

The Town of Deerfield faces additional risk given that the NPT would double the size of the substation, increasing the safety concerns for emergency responders. Deerfield, a town of 54 square miles, has roughly 80 miles of roads. It is staffed by dedicated responders including a nine-member police force and a volunteer fire and rescue department. (DA Ex. 2) Mutual aid and haz mat teams are approximately 30 minutes away. Id.

Fifteen acres of substation raises the risk of public health and safety for these responders as well as residents in the nearby vicinity. Substation fires also pose a significant risk to homes and businesses located in the vicinity of substations. Fire crews are instructed not to fight a fire until Eversource gives the go-ahead. On February 5, 2017, transformers caught fire at a substation in Centerville, Massachusetts, triggering 25-foot flame and thick black smoke. DA Ex. 15. In June 2015 firefighters in Cos Cob, Connecticut extinguished a transformer fire after having to wait for an electrician dispatched by Eversource to arrive. Although Mr. Bowes testified that he is not specifically concerned about the effects of smoke on nearby residents if there is a fire or explosion at a substation, the citizens of Deerfield living near the substation are very concerned about that possibility. (Tr. 3 pm, p. 59. Tr. 48 pm, p. 26-27). With the limited emergency response capabilities and the increased safety risks of construction and operation of NPT, the Deerfield Abutters ask the SEC to deny the certificate because it would have an unreasonable adverse effect on public health and safety.

## VII. Orderly Development

### **The Applicant has not met its burden of proof that the NPT would not unduly interfere with the orderly development of the region.**

Under Site 301.15 and 301.09, the SEC shall consider land use, employment and the economy of the region in its determination of whether the siting, construction, and operation of NPT would unduly interfere with the orderly development of the region. Each of these factors demonstrates that the Applicant cannot meet its burden of proof on orderly development and for these reason the SEC should deny the certificate.

#### **A. Economy of the Region**

##### **The Experts Disagree on the Wholesale Energy Market Benefits**

Ms. Julia Frayer of London Economics International (LEI) presented testimony at the adjudicative hearings on four days in support of the project's economic benefits. Yet LEI's President in a June 2017 press release (DA Ex. 93) stated "significant new investment in wires has an increasing risk of being stranded as customers become more comfortable with Distributed Energy Resources."

Counsel for the Public's Brattle Group Testimony (CFP Ex. 144, p. 3) indicates per household annual savings of \$0-\$21 of energy market savings over a 12-year period (\$0-\$8 million/year statewide – CFP Ex. 144, p. 40). Capacity market annual savings range from \$0-\$26 million/year statewide over 13 years (CFP Ex. 144, p. 33). These ranges realistically depict the uncertainty in energy market predictions.

LEI's analysis (APP Ex. 81, p. 7) indicates that nearly 90% of the market benefits derive from the capacity market, with annual NH energy market savings of \$8.6

million/year and capacity market savings of \$58.3 million/year. These benefits are greater than the most optimistic scenarios presented by the Brattle Group.

Given the above analyses and the role of the capacity market in the savings, properly estimating the capacity market is critical to any conclusions. Mr. Quinlan testified (Tr. 1, am, p. 155) regarding the markets “I would say it’s highly volatile. So, any time you run one of these analyses, you’re likely to get a different outcome.” Mr. Fowler, representing NEPGA, testified on predicting the FCM market “that is actually very difficult.” (Tr. 61, pm, p. 45)

Indeed, LEI’s December 2016 modeling for FCA 11 predicted a clearing price for the FCA 11 FEB 2017 auction that was nearly \$1 (about 20%) greater than actually occurred (Tr. 15, am, p. 5). According to Mr. Fowler, the one-year magnitude of this error is approximately \$370 million. (Tr. 61, pm, p. 46)

Finally, all the expert testimony agrees that any capacity market benefits, accounting for about 90% of the LEI predicted wholesale market savings over the first 10-12 years, will peak approximately mid-way through this period and decrease to zero at 10-12 years (APP Ex. 91, p.24). Mr. Newell supports that NP “would hold them (FCM prices) down for approximately three to four years.” (Tr. 52, pm, p. 58). It is unclear from other testimony, whether another similar entrant to the New England market before, or in the same time frame, such as the New England Clean Power Link, currently in its final permitting stages, with almost no public opposition (10 individuals commented at the February 24, 2015 public hearing, the majority in favor of the project), would negate this benefit.



## **B. Views of Local Governing Bodies**

The preponderance of evidence regarding the views of local governing bodies is overwhelming opposition to the proposed project. The following is a sampling of these views, to which due consideration must be given (Site 301.15 (c)):

- Pittsburg, Clarksville, Stewartstown: Joint prefiled testimony (MUNI1North#1, p. 2) – “Over the past five years, the voters in each of our towns have overwhelmingly made it known to us in person and in voting on town warrant articles, that they oppose the Northern Pass project”
- Northumberland: Edwin Mellett, Chairman of the Northumberland Conservation Commission – “...it ought to be buried the whole distance. This was what the town has said to begin with. That if it gets approved it should be buried in state-owned right-of-ways.” (Tr. 55, am, p. 7)
- Whitefield: Wendy Hersom (Selectboard)/ Frank Lombardi (Planning Board) – “you're just surrounded by just beautiful mountain vistas and coming into the village, and it's just not going to have the same dramatic impact once there's giant power lines in the way...The code...we've had for 25 years flatly prohibits this Project coming through, and our goal in our town is to develop and do it properly.” (Tr. 69, am, pp. 79, 81) “Is the property tax revenue that the Northern Pass Project would bring in enough to change the Board's concerns about the Project? A (Hersom) No.” (Tr. 69, am, p. 131)
- Bethlehem: Cross examination of Cassandra Laleme (Bethlehem Selectboard Member)/Cheryl Jensen (Co-Chair Bethlehem Conservation Commission) in response to a question why NP tax receipts are insufficient to create support for the proposed project – “Bethlehem is willing to absorb the higher taxes... We

want our town to be consistent with what our master plan and the town wants.

Which is a rural, quiet, orderly developed community that doesn't have 105-foot towers and thousand-volt lines going across it. So we don't just sell out...It

really is not just about money.” (Tr. 58, pm, p. 26 - Laleme)

- Franconia: Eric Meth, Selectboard Chairman Town of Franconia, in response to Mr. Needleman question regarding Town willingness to engage in an MOU – “We passed a warrant article regarding donations...we have raised \$22,000 (for legal expenses) in the last two months. I think that's an indication of where we – what are the feelings of Franconia and where we stand on Northern Pass.” (Tr. 68, am, p. 82)
- Sugar Hill: Cross examination of Margaret Connors, Selectboard, Conservation Commission, Health Officer – In response to Mr. Needleman inquiry regarding tax benefits – “And it's not worth it to us. We're against the project.” (Tr. 69, pm, p. 48)
- Easton: Re-direct testimony of Robert Thibault (Board of Selectmen) – “the Town has repeatedly voted ‘Yes, let's put money in. Let's pay lawyers to fight this.’ And for a town of 250 feet people to put in \$50,000 says something about the commitment of the community, that they don't feel like their miles of scenic road, the water quality, the water availability, the amount of wells along the road, the buildings so close to the road, they don't feel like those ought to be sacrificed at any price, especially a temporary price. And especially from a company who we know has a history of going back and doing everything they can to reduce their tax payments.” (Tr. 65, am, pp. 151-152)

- Woodstock: Prefiled Testimony of Judy Welch, Executive Assistant to the Woodstock Selectboard – “The residents of town unanimously voiced their opposition to the Northern Pass Project. The Board of Selectmen are also in opposition to the project for the reasons stated in the Board's Motion to Intervene.” (JTMUNI 109, p. 2)  
  
“The Board remains opposed to the Project despite no longer participating in the SEC review process. The Board withdrew for financial reasons and not due to any acquiescence to the Project...The Town opposed (sic) this Project and asks the SEC to deny the application.” (Public Comment, Board of Selectmen, AUG 17, 2017)
- Plymouth: Testimony presented during direct examination of Brian Murphy, Town of Plymouth Land Use and Planning Coordinator – “The Board of Selectmen in no way supports Northern Pass” (Tr. 70, pm, p. 13)
- Grafton County: Prefiled Testimony of Grafton County Commissioner Linda Lauer – “The jobs are all temporary, and there are insufficient guarantees that local individuals will receive the positions. The impact on property values permanent. Moreover, the structures – the stations and the above ground lines – do interfere with the orderly development of the region, and the underground lines do as well, as the character of the towns are so dramatically impacted.” (Grafton County Exhibit 1, p. 8)
- New Hampton: Testimony presented during the re-direct of the Town of Hampton panel – Neil Irvine, New Hampton Selectboard Chairman and Planning Board Vice-Chair, regarding whether more tax monies would change

their opposition to the proposed project – “No. It would not change the Board's position...Because the character of our community is not for sale. So regardless of the dollar amount of benefit, the visual scar to our community and wider field isn't worth it.” (Tr. 64, pm, p. 91)

- Bristol: Cross examination of Nicholas Coates, Bristol Town Administrator – In a response to Ms. Walkley regarding tax benefits to the Town from the proposed project: “...we feel that the costs outweigh the benefits.” (Tr. 68, am, p. 149)
- Concord: Testimony presented during redirect examination of Gail Matson (Concord Ward 8 City Councilor) – “does the fact that this would be potentially the third highest paying property owner in the City make any difference to you, in terms of whether you would want to support this type of project? A (Matson) No, it does not.”
- Pembroke: Testimony presented during the cross-examination of the Town of Pembroke panel – Stephanie Verdile, Pembroke Town Planner, – “The majority of this line is going through the most rural area of town. And, so, the residents of Pembroke have maintained that maintaining their rural character and aesthetics is extremely important to them. They have gone to great lengths to keep Pembroke Street looking the way Pembroke Street looks. That's their choice. So, I would say the meat-and-potatoes of the residents of Pembroke, when it comes to their Master Plan, is that the number one priority for them is to maintain the rural characteristics and the aesthetic qualities of their zones and of their landscapes.” (Tr. 59, am, pp. 52-53) Verdile prefiled testimony – “As currently proposed, the project will have an undue interference with orderly

development... and any public benefits are outweighed by the negative impacts.” (JT MUNI 146, p. 2)

- Deerfield: Testimony presented during cross-examination of Kate Hartnett, Conservation Commission and Planning Board member, Town of Deerfield – “other projects...have a different concept, whether it's Clean Power Link or others...those are 21<sup>st</sup> century solutions to the need of transmission...These towers are firmly in the 20th century and that New Hampshire may be one of the last places where this kind of thing is going to happen...It just doesn't fit the character of either Deerfield or this state to have what I consider an old-fashioned solution to a new problem.” (Tr. 66, pm, p. 231)
- Carl Martland, Director - North Country Scenic Byway Council, – “...why should New Hampshire be the last place to have gigantic transmission lines built for power that may or may not be needed for decades when people understand that there are other sources of energy, people understand there are other ways to transmit that energy, and I'll leave it there.” [Tr. 63, Morning , pp. 149-150]

### C. Land Use

#### **The construction and operation of the Project would undermine the efforts of municipalities to plan for and control land use, unduly interfering with the orderly development of the region.**

The Town of Deerfield has placed “rural character” as the defining feature of its Master Plan, Open Space Plan and zoning ordinances and NPT is not consistent with “rural character”

The proposed introduction of industrial towers and HVTL is not at all consistent with the land use prescribed by Deerfield’s residents, governing bodies, plans and ordinances. Deerfield’s Master Plan focus on rural character is implemented by its zoning -- it has agricultural-residential

zone over its 52 square miles. Deerfield has mandatory open space, subdivision requirements for anything over four acres, which is a major subdivision. (Tr. 66 pm, pg 180-81). Anything big that's built has to be built in a much smaller area and connect the open space around it. The larger town-wide vision is an open space network that connects those three state parks east, west and north of us. Id.

Although Applicant's expert viewed Deerfield's Master Plan as consistent with the NPT, longtime Planning Board member Katherine Hartnett rejected the position, stating "the view of the planning board is that, just because there's no HVTL explicitly addressed, all the other elements that we talked about in the vision and the goals and the guiding principles depict a rural community character. Certainly we did not mention HVTLs, primarily because we never imagined such a dominant use and industrial character." Tr. 66 pm, pg 130.

Deerfield has planned to sustain its rural character where homes, businesses, services and recreation are set within a functioning network of wildland, managed forests and working farms. Open space is a significant component. Development fits into a larger natural environment, and that is its 50-year vision in its open space plan. Tr. 66, pm, pg 182.

Protection and conservation of the land would be threatened by the Project, undermining the efforts of local Boards, non-profits and concerned citizens. This landowner participation in conservation progress is outlined in the Deerfield Master Plan and Open Space Plan and its cultivation would be undermined by the Project. (JTMUNI 6702).

At least six landowners have sent written concerns that the character of the open space network would be severely compromised. (Tr. 66 pm p. 194-95. JTMUNI 266).

Deerfield Abutter and longtime realtor Ms. Menard testified that conservation has played a significant role in the development of Deerfield over the last 20, 30 years. (Tr. 66 pm p. 31-32). (CFP Ex. 640 map of conservation efforts). By design Deerfield is creating greenway or open

space is between several parks - Pawtuckaway State Park, Bear Brook State Park and North Meadows. Id. From a marketing standpoint, interested buyers want to buy land abutting conservation land because they would get the benefit of being near a park or near a piece of conserved land – it adds value. (Tr. 66 pm p. 34). In her opinion, the Northern Pass Project would unravel a lot of wonderful initiatives and investments in conservation and interfere with the orderly development of the region. (Tr. 66 pm p. 36).

#### **D. Economy of the Town**

##### **Deerfield citizens overwhelmingly rejected the NPT in 2013 and again in 2017 despite the offering of potential tax revenues for the Town.**

Long-time Board of Selectman Andrew Robertson summarized it best:

“And I will say, speaking as a selectman, the board of selectmen take their marching orders from the 2013 warrant articles that were passed in Deerfield, and another warrant article again in 2017. The community has made it very clear that they are opposed to the Project as it's presented now. And there has been little discussion of increased tax revenue offsetting their concern. We've had a number of public meetings in Deerfield. We've had literally hundreds of people show up at these meetings to voice their opposition, irregardless of tax revenue. To my mind, we have had three individuals speak favorably of the Project at a meeting or public session.

I would note that Deerfield's tax rate in the last 25 or 30 years fluctuated from a low of \$17.51 to a high of \$38.14. When you look at these revenues, certainly as a selectman, it's always nice to consider the ability to lower a tax rate by two or three dollars. But given the history up and down, and some of those ups have certainly been as a result of valuation challenges to the town by utility companies, in the long run I would say that increased tax

revenue does not offset the concern that the community has represented to the board of selectmen.” (Tr. 66, pm, pg 137-38) [emphasis added].

Selectmen Robertson also voiced the municipal concerns that the long-term construction project would have on the local roads and traffic. He noted the roads are small and that the construction would impact the main commuting roads in Town. Tr. 66 pm P. 173-74. Residents would be forced to travel long distances out of their way because simple detours are not readily available. Again the Project crosses the primary routes in and out town – these also service the school and emergency response facilities. The small roads are designed for light traffic and would be subject to **two years** of constant heavy construction equipment – the wear and tear will shorten their life span, increasing the town’s financial burden. Safety concerns for the locations of driveways was also raised. Id. at 227. The Town of Deerfield has spoken – the costs and heavy impacts of the NPT far outweigh the limited benefits of the Project.

#### **E. Tourism**

##### **The construction and operation of NPT would have a unreasonable adverse impact on the economy of the region given its negative impact on tourism.**

Residents, businesses and the State of New Hampshire have marketed this State as a tourist destination for recreational activities. State agencies including DRED, Department of Environmental Services (“This is NH”, DA Ex. 168a)), NH Fish & Game promote the State as a uniquely scenic state with rugged, pristine landscapes. (DA Ex. 145, 146). State websites and social media accounts encourage residents and visitors to share their photos of the New Hampshire experience – enjoying the outdoors! Id.

This is especially true of the State Park system which is operated on a self-funding system. It uses an "all-funds" approach where the income of the best performing parks support the entire Park System. (Tr. 21 am p. 44). So if income falls in a high-usage park, the loss of



funding impacts the entire Park System. Pawtuckaway State Park is a high-use park, one of the primary moneymakers for the State Park System. (Id. at 45. NH DRED, 2015 Fiscal Year Report of Division of Parks and Recreation. DA Ex. 170). A key access to Pawtuckaway State Park cuts through Deerfield – down Nottingham Road and past Cate Road, the road entrance to the Deerfield substation. (DA Ex. 69, 80). This area will see construction 12 hours a day, six days a week for two years! Traffic and construction delays will be ongoing. Applicant's expert acknowledged that traffic delays are the number one critical destination barrier. (Tr. 21 am p. 14). Disturbed views, dust and noise will mar the experience of climbing the North Mountain for its quiet beauty! (DA Ex. 80). The loss of revenue to this Park would not only impact this region but would cause economic harm across the State. (DA Ex. 170).

Traffic and construction delays are part of the harmful effects of the NPT as is the loss of scenic rural character. The Annual Deerfield Fair, with crowds over 100,000, is an agricultural celebration for the New England region. (DA Ex. 149). The NPT construction and operation would force visitors to contend with views of industrial towers and HVTL as well as added construction and traffic delays as they approach the Fair from the east, west and north. The Fairgrounds hosts events from April through October so the impact is not limited a four day span. (DA. Ex. 2). The Town of Deerfield attracts visitors because of its scenic rural beauty – recreational trails, parks, lakes and historic sites are the appeal. (DA Ex. 2, 69, 148, CFP 464). The dominant industrial face of NPT is not compatible with our State's rural character.

Further impacts on the Deerfield community infrastructure are set forth in Public Health and Safety as well as in the Historic Sites and Aesthetic portions of this Memorandum

#### **D. Employment**

**The limited options and limited time undercut the potential employment benefits of the Project.**

The State of New Hampshire and Rockingham County are enjoying full employment. The promise of 2600 positions – actually 866 positions – must be considered but limited weight should be given in that (1) it is for a limited time period; (2) most higher pay positions will not be available to New Hampshire workers; and (3) these are across 192 miles.

## **VIII. Public Interest**

The Subcommittee may issue a certificate only if it finds that issuance of a certificate will serve the public interest. RSA 162-H, IV(e). Elements in Site 301.16(a) – (j) are further identified, many of which are addressed elsewhere in this memorandum. The remaining topics include welfare of the population, private property, the overall economy of the state and the use of natural resources.

### **A. Economy of the State**

Northern Pass would result in payments for energy production to non-locally produced suppliers. While it is important to reduce dependence on carbon-based energy sources, the growth of renewables, including “behind the meter” photovoltaics in New England is consistently exceeding ISO-NE forecasts (DA Ex. 94 and 95) and requiring significant upward estimates. For the year 2022, the 2015 CELT report value of 2,305 MW installed capacity was revised upward to 3,720 MW in the 2017 CELT report. The Solar Energy Industry Association (DA Ex. 98) is forecasting at least 6,032 MW for 2022. These resources mostly do not participate in the forward capacity market (Tr. 15, am, p. 7), but they do reduce the installed capacity requirement (ICR) upon which the FCM auctions are based.

This evidence indicates that it is in the public interest to prioritize and encourage local energy resources over facilitating foreign competition through an indirect subsidy in the form of damages to the character of New Hampshire. New Hampshire has a thriving clean energy

economy with over 12,000 jobs and opportunity for growth (DA Ex. 33, pp. 22-27) and there is not a demonstrated need for the proposed NP Elective Transmission Upgrade, with its many demonstrated negative benefits.

Finally, there is a lack of adequate economic information to determine Public Interest because not even simple alternatives appear to have been evaluated by London Economics, such as the effect on construction and indirect jobs of additional or complete burial of the line, or whether the New England energy market would still recognize significant benefits if full burial costs were incorporated. A discussion between Chairman Honigberg, Atty. Needleman, and Deerfield Intervenor Mr. Cote took place regarding this concern (Tr. 3, pm, pp. 87-89). In questioning, it was impossible to determine who directed the scope of the LEI work and how the scope of the LEI analysis was determined. During the course of the hearings, this shortcoming made it impossible to evaluate the reasonableness of this proposal, which is a factor in determining whether this proposal serves the Public Interest. Accordingly, we make the argument that the level of analysis performed was inadequate.

### **B. Private Property and Values**

**The Applicant failed to meet its burden to demonstrate that the Northern Pass Project (Project) will not have an undue interference with orderly development as a result of impacts to real estate values in the affected communities. The Applicant also failed to meet its burden to show that this project is in the public interest as a result of impacts to private properties.**

The analysis of private property is an important consideration for the Site Evaluation Committee. Under the Committee's rules, it is required to consider whether a proposed energy facility will have an undue interference with the orderly development of the region as a result of economic impacts, which includes an assessment of the effect of the proposed facility on real

estate values in the affected communities. N.H. Admin. Rules, Site 301.105 and 301.09(b)(4).

The Committee's rules also state that private property shall be considered in determining whether a proposed energy facility will serve the public interest. N.H. Admin. Rules, Site 301.16.

With respect to real estate values, the Applicant presented a report authored by Dr. James Chalmers entitled **High Voltage Transmission Lines and Real Estate Markets in New Hampshire (Report)**. (App. Ex. 1, Appx. 46) Dr. Chalmers explained that the "Report was the research base, it was the foundation on which I subsequently developed my opinions with respect to the effects of the Project." (Tr. Day 24 AM, pg.14:16-19). As discussed in more detail below, intervenor Jeanne Menard, a broker/owner of a New Hampshire real estate company demonstrates Dr. Chalmers' research has flawed methodology and analysis, as well as inaccurate source data, in the Report.

### **The Subdivision Studies**

The methodology of Dr. Chalmers' Subdivision Studies was to compare the original sale of lots with some of the parcels crossed or bordered by an HVTL and some lots not. The purpose of the study was to demonstrate whether the HVTL impacted the marketability of the lots. The date and sale price for the original lot sale was the basis for analyzing differences between the two groups. (App Ex 30, pg.7:1-12.)

#### A. The Allenstown Subdivision Study

Dr. Chalmers improperly considered sales that are not arms-length transactions. For example, with respect to the Allenstown subdivision study, Dr. Chalmers tabled Lots 30, 50, and 33 unaware of the fact that these lots were "Unqualified" sales as evidenced by the property tax cards with family to family member notations. (Tr. 24, PM, pp 115-116; DA Ex. 112 & 113, App. Ex. 1, Appx. 46, Appendix G at 56-57). When asked about the use of family-to-family

transactions in the Allenstown subdivision study during cross-examination, Dr. Chalmers acknowledged that it is “not standard methodology to compare qualified sales to discounted sale prices.” (Id. at pg. 116:23- pg. 117:2) He testified that “we wouldn’t typically refer to an unqualified sale as a “fair market” sale.” (Id. at pg. 111:1-3) What resulted was a pricing analysis using some lots with a 25% reduction in value. (Id. at pg. 117:3-6.) Dr. Chalmers “no price impact conclusion” (App Ex 1, Appx 46, Table 5.4.1.1 pg.79) is not credible as the source data he used is unreliable.

Dr. Chalmers also acknowledged that he “did not screen by name” in order to identify transactions that occurred between family members. (Id. at pg. 118:8-11.) When Dr. Chalmers was cross examined about the lots price fluctuations going from \$75K to \$105K, back down to \$80K etc., he responds “There was some randomness in there that I don’t have any explanation for.” (Tr. Day 24, pm, pg. 25:7-21) The Applicant’s expert did not research or address a blatantly obvious and significant price effect in this subdivision, thereby providing little confidence in his ability to recognize price effects from an HVTL. The flaw in methodology of not screening sales by name opens the door of uncertainty for other non-arm’s length sales to be included in the pricing analysis in the Report’s additional 9 subdivision studies along this corridor.

Additionally, Dr. Chalmers had an incorrect sale date for 1<sup>st</sup> Lot #30. (DA 112), the property deed, was shown to confirm the year of sale as 2007, not 2001. When questioned about this error he stated, “because that 2001 was an outlier, I ignored it in my summary.” (Tr. 24, pm, 115:3-4). Dr. Chalmers did not verify the source data that he used in his analysis. The use of flawed data undermines the credibility of the Report. It is troublesome if only the author of the report knows what is being “ignored”. (Id. at pg. 124:1-3)

#### B. The Deerfield Subdivision Study

When cross-examining Dr. Chalmers, it was noted that 6 of the lots in the Deerfield subdivision study were purchased on the same day at a possible discounted bulk rate. (Id. at 124:12-125:4, DA Ex 116) These lots come into play in the findings summary of all the Whitefield to Deerfield Subdivision Studies, 4 out of 51 lots had price effects, two were from the Deerfield study at a 14% discount. (App Ex 1, Appx 46, pg. 80) When calculating his % discount, Dr. Chalmers only used the 6 lower priced lots (\$29,000 average) to compare with the 2 encumbered lots (at \$25,000). He achieved a diminished result of 14% discount which he considered “small” for these encumbered lots. (Id. at pg.80) Chalmers admits that Ms. Menard produced a “significant” 29% pricing impact by averaging all 17 study lots, not just the average for the 6 bulk lots rate. (Tr. Day 24, PM pg. 129:4-8.) This represents Report bias, both in the selection of source data used to calculate price effects as well as the methodology, intended on diminishing HVTL impacts on property values.

The Deerfield Subdivision had additional errors, E.g. incorrect first lot 133 sale date, price, and acreage. (Id. at pg. 120:6-112:15, DA Ex 115) Once again, this was explained as an “outlier” and ignored. (Id. at pg. 122: 19-22) Errors can create inconsistencies and lead to faulty conclusions. These errors demonstrate that Dr. Chalmers did not check his source date for his research base, which is what he used to base his opinions on with regards to Project impact. Correct dates and sold prices are a critical element of his research.

### C. Canterbury Subdivision

During direct examination, Ms. Menard discussed her factual investigation of additional errors in Dr. Chalmers Report. In the Canterbury study, the descriptor of the lots studied reads “all 8 sales were arm’s-length” which is not a true statement. (App Ex 1, Appx 46, pg. 60) Ms. Menard produced evidence of a family to family transfer for Lot 20 with a deed reference (DA

Ex 157 (a)&(b) and represented that Lots 32 and 33 were not fair market sales. (Tr. Day 65 PM, pg. 143: 21-23)

In the Conclusions from the Subdivision Studies section, Dr. Chalmers states “it should be reiterated that these conclusions are in some cases based on a small number of sales and there could have been other factors that influenced these transactions that have not been identified here.” (App Ex. 1, appx 46) A factor that Dr. Chalmers should have eliminated by following standard appraisal methodology was to eliminate any sales that were not fair market value, which he did not. This error affects the entire Subdivision Report’s validity.

#### D. Subdivision Summary

##### **Municipal Assessing Value is a Different Concept than Market Value.**

In the Report’s Subdivision summary, Dr. Chalmers concludes a general lack of marketability issues along the Whitefield to Deerfield ROW. To explain this result he offers a comparison study of 2015 municipal assessment data of site front land/ back land values from each of the towns studied (App Ex 1, Appx 46, Table 5.4.2.1 p 84) and produces ratios to demonstrate that house site values are assessed at higher values than rear acreages. (E.g. 2.6% ratio for Deerfield.) (Id. at pg. 84) Ms. Menard produces age appropriate data that corresponds to his subdivision research time period (1985) and reports a 43% ratio for Deerfield. (Tr. 24, pm, p. 136, DA Ex 119) This analysis is an apples to oranges comparison. Dr. Chalmers theory is faulty on 2 counts:

1. The thought that NH back land does not have utility or value is ridiculous. People walk, hunt, cut firewood, just to name a few uses. Dr. Chalmers tries to bolster support by his satellite imagery analysis ”where he did not see paths or roads on

the imagery.” (Id. at pg. 135 4-15) Locating such features would require taking a walk, not derived from a computer inspection.

2. He applies 2015 assessing values to explain why his 1985 research data did not produce market value evidence. Dr. Chalmers agreed that 1985 assessing values were significantly different than current values. (Id. at pg. 137:11-17)

Dr. Chalmers subdivision table for the site value/back acreage analysis, has an error in the Assessor Site Value/Acre column. This creates a misleading impression. For example: Whitefield’s value is listed as \$35,000. and an excess land to site value ratio of .3% (App Ex 1, Appx 46, Table 5.4.2.1 p 84) During Ms. Menard direct examination, she reviewed a tax card from one of the lots in the Whitefield subdivision (DA Ex 163(b)) and the current site value for that lot is \$14,300. Dr. Chalmers should have used a site value that was representative of a lot influenced by an HVTL. Just as demonstrated in Deerfield subdivision above, Whitefield subdivision Lot 414-130, reveals a 1985 site value \$5050 to a backland value of \$3,400 which creates a 40% ratio as compared to a finding of .3% from Chalmers analysis. (DA-Ex 163 (a)) These errors create a misleading impression. Dr. Chalmers work is not rigorous enough to isolate HVTL impacts on either pricing or timing of lot sales.



#### E. Subdivision Studies Additional Shortcomings:

The hearing transcript is rich with the shortcomings of the subdivision methodology. The cross examination of Dr. Chalmers conducted by Attorney Thomas Pappas, Counsel for the Public (CFP), during cross examination, outlines several additional concerns about his work. A few examples from a few towns follow:

Whitefield: Dr. Chalmers testified that “visibility is key, along with proximity” (Tr. 24, pm, pg. 6:20-7:1) yet he personally did not drive in and view the subdivision and failed to produce any evidence as to which lots may have had HVTL visibility when buyers purchased the lots. (Id, pg. 5) This is true of any of the subdivision studies, “you will know proximity but you don’t know the visibility. If there’s a systematic bias against the HVTL, you know, it ought to show up.” (Id. at pg. 13:14-16) Dr. Chalmers analysis of pricing and timing without factoring visibility severely limits the usefulness of the generalizations he draws from these results.

Sugar Hill: Dr. Chalmers was unable to draw conclusions due to small # of sales and long 18-year study period. (Id. at pg.9:2-7) while Woodstock and Holderness had multiple developers which complicates the analysis. (Id. at pg.11:13-12:14 & pg. 16:11-14)

Mr. Thomas Kavet, CFP expert witness on Economic Impacts, testified that in many instances, Dr. Chalmers data was too thin to draw any meaningful conclusions. (Tr. Day 44 PM, pg.101:19-21)

#### **Availability of Substitutes**

Ms. Menard raised the concern with Dr. Chalmers regarding his reliance on “availability of substitutes”, as described in his Summary of Findings to detect marketability effects. (App Ex 1, Appx 46, pg.77) The theory is that a buyer can chose between an undeveloped lot with or without the locational factor of a HVTL. This HVTL locational factor’s effect on site value, if any, should be discernable by comparing lot sale dates and prices. When questioned during cross

examination how he knew buyers had lot choices at the time of purchase, he explained “they were all unsold at the beginning”, “we had a chronological record of the rate at which they sold” and “towards the end, obviously, there wouldn’t be that choice.” (Tr. Day 24 PM, pg.132:1-6)

The Deerfield Subdivision study was made up of 6 different developers with 6 different recorded plan dates. (DA Ex 11) He did not have MLS data to verify when the lots were put on the market. (Id. at pg. 131:12-15). Dr. Chalmers would not be able to determine the effect of the HVTL on a rate of sales comparison if the lots were not all placed on the market at the same time. Pricing and timing may vary due to different developers making independent decisions about when to market their lot and for what price. Dr. Chalmers has no basis for the statement that the availability of substitutes existed for the Buyers in this subdivision. Without MLS data or further research, Dr. Chalmers would not know if 0,1 lot or 10 lots were available to choose from when the buyers in this subdivision were making their lot purchase and even more relevant to this proceeding, how the HVTL influenced their decision.

#### **NPT Impact on Undeveloped Land in NH**

Land listings are a significant component in many NH local and regional real estate markets. For example, in 2013 the town of Thornton, land accounted for 25% of the real estate market share, in Franconia-42%, Bethlehem-33%. (DFLD ABTR-EX 5, att. 11). According to 2011 tax assessing records, along the Deerfield section of the proposed NP ROW, 54% is residential property while 46% are land parcels. (DA Ex 132)

Dr. Chalmers testified that “Land parcels per se are not a subject of our study in the same way that improved residential parcels were in the case studies” (Tr. Day 25 AM, pg. 49:2-5) Dr. Chalmers screened raw land sales from over 2000 sales collected along the NH ROW’s for the case study’s analysis. (App Ex. 1, Appx 46, E: pg.4) It was not for lack of current land sale data that he chose instead to research historical sales from subdivision of in some cases 30 years ago.

Ms. Menard testified that historical data is not relevant to a discussion of current market value during her direct examination with the committee. (Tr. Day 65 pg.126:6-8)

The Applicant did not seek to analyze and produce relevant evidence from current sales available in order to support a position that the Project will not adversely affect the economic value of undeveloped land. Dr. Chalmers historical data does not answer the question at hand, which is, what is the Project effect on market value of NH property?

### **Case Study Methodology**

Dr. Chalmers defends the case study methodology as “the only practical way in which HVTL effects on the value of nearby properties can be studied.” (App Ex 104, pg. 13:4)

Dr. Chalmers testimony and Report state that the methodology requires “using comparable (comp) sales not influenced by an HVTL.” (E.g., App Ex 30: pg. 5:4 & App Ex 1, Appx 46: E, pg. 70.) Dr. Chalmers testified that using a comp with a HVTL influence would deviate from that standard methodology. (Tr. Day 24 PM, pg. 154:12-16) and if the appraisal fails to identify the locational impacts of an existing ROW in a comp sale, the HVTL impact on the case study subject property value would be minimized. (Id. at pg. 154:5-11)

During the hearing, it was determined that there were comps used by Dr. Chalmers that should not have been used because of the presence of a HVTL. When answering Committee questions about whether or not the appraisals of those properties remain valid, Dr. Chalmers response was:

“There are two appraisals that have a bad comp in them, okay. And in both of those cases they happen to have very good comps for both of those. You pull that out, doesn’t change the implication of the appraisal.” (Tr. Day 26 PM, pg. 100:21-pg. 101:1)

Dr. Chalmers suggestion that the appraisal remains valid with only 2 comps should be rejected. Consider the following:

Dr. Chalmers cites the SEC Findings of the NE Hydro Phase 2 project as evidence in support of being a precedent for the acceptance of case study methodology in NH. (App Ex 104, pg. 14:8-23). In the NE Hydro Phase 2 proceeding, PUC Docket DSF-85-155, Stewart Lamprey, expert witness for the applicant, prepared a report on real estate values which he explained was conducted “without any predetermined conclusions relative to the impact of high voltage transmission lines on adjoining property values”. (DA EX 161 cover sheet and pg. 3). Mr. Lamprey stated that: “In only two cases were there less than 3 comps used due to lack of market data”. (Id. at pg. 17). Mr. Lamprey’s justification for using only 2 comps under those circumstances was legitimate because it resulted from a lack of market data.

In contrast, Dr. Chalmers claimed that the appraisals in his case studies that used bad comps could be relied upon, because it would be appropriate to review the remaining two comps. As explained by Ms. Menard during her testimony, given her real estate experience, such a solution does not follow standard appraisal practices, and therefore, those appraisals cannot be relied upon. (Day 65pm, pg. 135:18-20) The Report relied on 3 comps to arrive at the appraised value. The Report would require replacement comps to be found and a reevaluation of all 3 comps to arrive at a reliable value.

Moreover, Mr. Lamprey’s methodology is more reliable than the one used by Dr. Chalmers. For example, in Mr. Lamprey’s methodology section, he states that “Each comparable sale utilized was inspected by the appraiser, and a photograph of each comparable is present in this report.” (Id. at pg. 18). No such information is present in Dr. Chalmers Report because the appraisers did not perform onsite inspections or take photographs of the comparable sales. Dr. Chalmers methodology did not require a thorough “in person” review of the comparable sales locational factors to evaluate whether there was any influence from the

presence of HVTL infrastructure which would render that comp an unsuitable selection for the study.

Ms. Menard testified that the number of comparable sales with an HVTL influence used in Report is unknown due to a flaw in the methodology, that being the appraiser did not personally view the comp sale properties but relied instead on Multiple Listing Service photos. (Tr. Day 65 PM, pg. 135:3-20, Id. at pg. 136:12-13, Tr. Day 24 PM at pg. 152:9-14) During direct examination, she produced 2 additional HVTL influenced comps from Pembroke and Franklin case studies as examples to show that it was not just Deerfield and Campton that had “bad comps”. (App. Ex 1, Appx 46: E. pgs. 1226 & 1045, DA-Ex.’s 156 & 159: a-c) She opined that when comps that have a HVTL influence are used, isolating the effect of the HVTL on the subject property (the stated hypothetical condition of the appraisal) is not achieved. (Tr. Day 24 PM, pg. 154:17-23, Tr. Day 65 PM, pg. 121:21-24 & pg. 124:3).

Dr. Chalmers confirmed during the cross examination by CFP that the appraisers chose 3 comparable properties. “Right. The 3 or 4 or 5 in some cases” (Tr. Day 24 AM, pg. 71:21-24) Three or more, **not 2**. Ms. Menard, a Realtor of 26 years, testified that using 2 comparable sales in an appraisal is not standard in the NH real estate industry. (Day 65pm, pg. 135:18) When Ms. Menard asked witness Mr. Peter Powell, a 43+ year NH Real Estate Broker/Owner about this topic, he stated it was not typical nor an acceptable standard to rely on two comps. (Tr. Day 59 PM, pg. 70:12-20) It is a crippling flaw in the Chalmers Report that would allow HVTL comps into a research report intended on isolating HVTL effects.

Dr. Chalmers solution to pull the bad comps, after the fact, raises questions about the conclusiveness of the appraised market value and by extension the credibility of case study appraisals. Because the appraisers did not do an in-person site visit to look at the house and surroundings before selecting it as a comparable sale property, one cannot rule out the possibility

of additional HVTL “bad comps” in the Report not being accounted for or other site features that should have been addressed in the appraisal.

On a separate but related topic, during the Committee cross examination, Dr. Chalmers was asked if there were any appraisals performed of subject properties that had an influence of a transition station, towers and wires. His answer was “I don’t believe so”. (Tr. Day 26 PM, pg. 70:15-20.) Ms. Menard raised in direct examination Case Study #27 which has a PSNH leach field joint use agreement as well as a substation in the viewshed of this case study Subject property. This important site location information was an issue that should have been noted on the appraisal report. The omission of significant locational factors such as utility infrastructure, which can be seen on Applicants project maps, serves as further evidence of the lack of appraiser diligence.

#### **Utility Industry Bias**

Mr. Brian Underwood, Applicant’s appraiser, prior to starting on the case studies for the Chalmers Report had already reached a “No market evidence in either Deerfield or Littleton that would indicate diminution of property value due to high voltage transmission lines” conclusion. (DA Ex. 5 att. 12, & CFP Ex 391) Mr. Underwood was hired by the Applicant to conduct interviews with listing agents for the Case Study appraisals.

Ms. Menard testified that there were misrepresentations of realtor comments made in the appraisal interview, specifically Case Study #50 where she was the listing broker participant. (Tr. Day 65, pg. 151:23-152:3, Tr. Day 24 PM, pg. 158:4-11) The misrepresentations in this appraisal summary brings the reader to a completely different conclusion regarding HVTL impact on Buyer behavior and price impact. Ms. Menard had communication with the listing broker for Case Study #19 whose comments about HVTL visibility were also misrepresented. (DA Ex 122, Tr. Day 24, pg. 163:21-164:23) The interview summary is one of 4 components of the case study

appraisals which was relied upon to inform Dr. Chalmers ultimate NPT impact conclusion.

These summaries must be accurate in order to be reliable.

Mr. Thomas Kavet, CFP expert witness on Economic Impacts, testified that “in order for the interview to be unbiased, it would have to be a disinterested party to be asking the questions”. (Tr. Day 44 PM, pg. 100:22-101:6) Mr. Underwood would hardly be considered unbiased and therefore is not an appropriate candidate to have conducted listing agent interviews for the Case study appraisals.

Mr. Rockler, a CFP expert witness on Economic Impacts during cross examination provided a detailed opinion as to why an appraiser’s failure to identify property and site locational amenities would be considered a case study methodology flaw but also is reflective of utility industry bias. (Id. at pg. 101: 22-103:22)

“The weight given the HVTL effect relative to all the other positive and negative variables that shape a property purchase decision” is a standard for the Reports appraisal methodology as spelled out in Dr. Chalmers concluding page. (App. Ex 1, Appx 46, pg. 95 Report) Ms. Menard asked Dr. Chalmers, who is a licensed appraiser, to review the appraisal sheet for Case Study #50. She first showed him the Case study interview summary found in the Report to acknowledge the upgraded kitchen. Ms. Menard then asked Dr. Chalmers to show her any reference to a property upgrades on this property’s appraisal sheet, which he replied, “Well, there are none noted here”. (App Ex 1, Appx 46 E: pg. 1278, Tr. Day 24 PM, pg. 156:5-15 & pg. 158:5-11)

Ms. Menard’s direct testimony, Case Study #42 was reviewed with the Committee to reveal a significant land value amenity omission from this property’s appraisal report. (Tr. Day 65 PM, pg. 139:7-142:9, DA Ex 162: a,b,d,e) Despite a clear notation on the listing sheet of the subject property that the land was sub-dividable, the Applicants appraiser over ruled the broker’s

opinion and determined it as not sub-dividable. He noted on his report that there was an improvement on the property that would make subdivision not feasible. As a result of Ms. Menard's factual research, and reviewing details with the listing agent and the Town of Northfield assessing department, Ms. Menard determined that at the time of sale, the property improvement that the appraiser noted did not exist. The result of this error is that the appraiser selected a heavily weighted sale from over 20 miles away that was not sub-dividable, making it an inappropriate comp sale. These omissions of property site value bias results.

During cross examination, Mr. Rockler raises an additional point that when you are comparing properties and you don't have a full inventory of a standard set of characteristics is like an apple to oranges comparison. (Tr. Day 44 PM, pg. 6:6-7:5) Dr. Chalmers Report lacks this consistency.

In Ms. Menard's pre-filed testimony, the case study approach is discussed in a Report referred to as the MSTI Review Project, (CFP 380) an independent analysis that addressed potential impact of a new HVTL on private property in Montana and Idaho. A criticism of the case study approach discussed in that Review has to do with the appraiser's expert judgment in locating and refining a set of comparable sales for analytical purposes and that the choice and manipulation of the comparable sales could influence the findings of price impact. (DA Ex 5, pg. 7 &, att. #9) Case Study #42 exemplifies this concern.

The 58 case study appraisal values along with the case study appraisal interview summaries are 2 key components of the Report. Flawed methodology and appraiser bias renders this Report as an unreliable research base from which Dr. Chalmers based his NH HVTL market value impact conclusion.



### **Criticisms of Dr. Chalmers Rebuttal Testimony**

Ms. Menard raises several concerns during direct examination (Tr. Day 65 PM, pg. 125:3- pg. 127:15, 151:8, 155:9- pg.156) regarding “Dr. Chalmers misrepresented Deerfield’s market data in his testimony”. (Id. at pg. 127:12-13) The Rebuttal Supplemental Testimony of the Applicants Real Estate expert to Ms. Menard’s Mt. Delight sub-dividable land sale and his testimony regarding 41 Haynes Road is representative of Dr. Chalmers unreliable research and analysis.

In each of the supplemental responses (App Ex 104: pg.16) he produces inaccurate and irrelevant data to support his opinions about market value for example:

1. Mount Delight Road Lot, Deerfield

Ms. Menard raised concerns about the Mount Delight Road Lot in her pre-filed testimony because that lot, which had subdivision potential, sold for a significantly reduced price due to the Project. (DA Ex 5, pg. 4) As explained by Ms. Menard, prospective purchasers, who knew the lot was on a ROW, were not interested in purchasing the lot once they became aware of the potential of the high voltage transmission line installed by Northern Pass.

Dr. Chalmers attempted to provide a rebuttal to Ms. Menard’s concerns in his supplemental report (App Ex 104, Att. 7.3) by reviewing the sales prices for other comparable lots in Deerfield. In that attempt, however, Dr. Chalmers chart had altered MLS sales dates for two of those other comparable lots. In one instance, Dr. Chalmers reported that a sale from 1998 was sold in 2007, and in another instance, Dr. Chalmers reported that a 2000 sale was sold in 2008. (DA 160(a), DA Ex 124). Dr. Chalmers incorrect sales dates and using sales from approximately twenty years ago, lowered the average price of lots and makes Dr. Chalmers research highly suspect. The incorrect data also gives a misleading impression, appearing as if to support his analysis.

For the Mount Delight Lot, Dr. Chalmers utilized an expired 1/28/2000 listing. A 15-year old listing that never sold is entirely irrelevant to a discussion about current market value. (DA 160(a)).

Lastly, Dr. Chalmers claimed that the lots presented on his list were also capable of being subdivided. (App Ex. 104, pg. 16:21-22) Ms. Menard subsequently established that Dr. Chalmers had no knowledge of the lot size and frontage requirements from Deerfield's zoning which is a critical piece of information needed to support a claim of subdivision potential. (Tr. Day 25 AM, pg. 19:8-17 & Tr. Day 65 PM, pg. 126) Ms. Menard reviewed with the Committee a list of all the MLS lot sales from 2010-2015 that would have been available for Dr. Chalmers to select for comparable sales and she testified that there were no lots that had subdivision potential that in her opinion were appropriate comparisons for the Mt. Delight Road 6.49 ac. lot. (DA Ex 160(b))

Dr. Chalmers opined that the Mt. Delight lot's subdivision potential would have no added market value. (Tr. Day 25 AM, pg. 25:15-19) This opinion is contrary to Ms. Menard's years of professional real estate experience. For this NPT assignment, Dr. Chalmers did not familiarize himself with the local real estate markets that the Project would go through. (Tr. Day 24 AM, pg. 11:24-12:4) Ms. Menard provided data from sales of abutting towns, (as Deerfield had no age appropriate comps available that were sub-dividable) to support her testimony of the value of a sub-dividable lot compared to the value of a single building lot and that the project impact resulted in a significantly reduced sale price. (DA Ex 6)

## 2. 41 Haynes Road, Deerfield

Ms. Menard also raised concerns in her pre-filed testimony about 41 Haynes Road. This property is located adjacent to the proposed Northern Pass corridor, and that the former owners had significant challenges locating a buyer due to the Project. ( DA Ex 127) Moreover, despite

the fact that the house is located within 100 feet of the edge of the right of way, it was not analyzed by Dr. Chalmers on his first list of properties affected by the project.

Dr. Chalmers attempted to rebut Ms. Menard's concerns in his supplemental report by stating that this sale was actively marketed from 2011 until it was sold in 2015 for \$275,000, which he claimed was consistent with market data for similar properties in Deerfield. (App. Ex. 104, att. 7.1).

Dr. Chalmers' rebuttal is concerning because he failed to verify his facts, as well as because the Applicants allowed his rebuttal to be submitted to the Committee even though they were aware that the property was purchased by an agent for Eversource. (Tr. Day 11PM, pg. 71:16-72:6) This property was not actively marketed, but rather, had been taken off the market for four years before it was sold. (Tr. Day 65, pg. 155: 9-17, DA Ex 126 &127). Dr. Chalmers rebuttal treated this sale as a fair market sale, even though it was purchased by the utility, thereby making it clear that the property was not sold in an arms-length transaction.

In the end, Intervenors and New Hampshire property owners are reliant upon the Committee's decision concerning the Projects impact on their property values. All of the examples above make Dr. Chalmers work suspect. Like the Report, Dr. Chalmers source data was not checked and therefore it is unreliable and heavily biased to minimize the potential effects of this Project.

### **Why No Property Value Effects?**

To answer the question of "Why no property value effects", Dr. Chalmers offers the overall conclusion from his NH based case study summary research which is:

"Even though the presence of a HVTL corridor is generally perceived to be a negative attribute of a property, the weight attached to this particular attribute compared to all the other

considerations that go into market decisions is apparently too small to have any consistent measurable effect on the market value of real estate.” (App Ex 30, pg. 11:18-21)

The Applicants NH work product was not rigorous enough to isolate HVTL impact nor properly identify all the positive and negative property attributes for either the subject property or for the comparable sales. Therefore, Dr. Chalmers has no basis to support this claim.

### **Northern Pass Transmission IMPACT Conclusions**

Dr. Chalmers states that “nothing in the Research Report indicates any reason to expect property value effects of the Project to be more common than reported in the published literature or in our NH research”. (App Ex 30: pg. 12:2-4) It requires a “crystal ball” to know what and how Dr. Chalmers drew from his Research Report to reach the conclusions and opinions described in his testimonies. He did not provide a clear road map to the Project effects side of the equation. This may be partly explained by the fact that Dr. Chalmers “has never opined with the respect to the impacts of a project.” And that this is “the first project that we have used the case study approach.” (Tr. Day 26 PM, pg. 10:7-21)

Ms. Menard points to the significantly higher number of “possible” ratings in the Case Study Summary from Corridor #2 (16), the proposed NPT ROW, as compared to Corridor #1 (4) as a finding potentially attributable to NPT effects. (App. Ex 1, Appx 46, pg.27, Tr. Day 65 PM, pg. 153:10.) A possible rating was assigned in “most of the cases where it was concluded that there had been a possible effect reflected a broker opinion that there had been a sales price affect, but the appraisal evidence did not support that opinion”. (App Ex 1, Appx 46: pg. 28)

Before rendering his opinion that there would be no property value impact for the 60 miles of Projects underground route, Dr. Chalmers failed to consider the loss of mature vegetation and stone walls, known in the real estate industry as “curb appeal” which enhances marketability of any property but also has a basis in a market value analysis. This was expressed

repeated by Intervenors in the context of their concerns about property values. The Applicant has failed to demonstrate how these property's site amenities would not be mitigated if the disturbed areas are not restored to the original pre-construction condition. As one example, Intervenor Mr. Grote testified in cross examination, that he is concerned about the cutting of the trees and the roots of the trees that extend well under the proposed route and that trenching and ditching in front of his house only validates his property values concerns. (Tr. Day 68 PM, pg. 74:16-23 & pg. 77: 1-9)

Intervenors along the buried route also expressed concerns about how a high voltage buried line as an encumbrance in their front yards would affect their resale value. One example was given by Mr. Bruce Ahern who was concerned about his water line which goes from his house to the barn across the street. He stated this may also prove difficult to locate a contractor to work on his water line if there is also the buried HVTL easement to deal with. (Tr. Day 64, pg. 71:6-72:11) Mr. Chalmers did not address these types of complications that may arise due to the HVTL encumbrances which are factored into any discussion of resale value.

Dr. Chalmers testifies that there will be no Project effects in the 100 miles of overhead lines because the existing easements won't change. (App Ex 104, pg. 6:4-6). Visibility of infrastructure within the easement will change if this project is approved and this change in visibility will create market value effects. During cross examination, Ms. Menard referred to Deerfield's 2015 Valuation Update manual. View value assessments were discussed, such as for 65 Nottingham Road at \$30,000. and \$65,000 for 49 Meetinghouse Hill Road. (DA EX 10) Dr. Chalmers agreed that views are a characteristic of the property and that views have market value and should be reflected in the assessment." (Tr. Day 25 AM, pg. 34:1-5.) If views are degraded because of the Project, as Ms. Menard believes they will (Tr. Day 66 PM, pg. 26:16-19) the town assessor would adjust the view value accordingly. (DA EX 10 att. pg. 2) There are cases

evidencing property owners' successful appeals on taxes as a result of HVTL impacts in (SAN Ex. 40) for the Committees consideration.

### **Visibility of the Proposed NPT Project**

Dr. Chalmers "is not a visibility expert" (Tr. Day 24 PM, pg. 47:14) nor has he ever rendered an opinion on project effects. (Tr. Day 26, pg. 97:14-19) Dr. Chalmers subjective opinion is reliant upon a methodology best described as "roadside eyeballing". He opines that "the number of properties that are going to experience a change in visibility is pretty small. Dozen or so." (Tr. Day 25 AM, pg. 41:12-14) yet "if you are living right there you will notice the change." (Tr. Day 26 PM, pg. 17:10-13) Intervenor Ms. Kleindienst, manager of McKenna's Purchase, a condominium complex testified during cross examination that this residential development may be the most highly densely populated area along the entire project route having 50 units within 100 ft. of the ROW. (Tr. 70 AM, pg. 145 19-21, 149:21-23) Dr. Chalmers failed to demonstrate with any degree of certainty that changes within the easement are not significant, such as the number and height of towers, and not just the easement itself.

Mr. Neil Irvine, Member of the Board of Selectman from New Hampton testified that using local knowledge they identified several properties, his own being one of them, that would have visibility of the Project from a range of 1000 Ft. or more. (Tr. Day 147:13-149:4) He disagreed that the incremental effect of NPT would not cause any property value impact. (Id. at pg. 149:5-13) The BOS from Mr. Irvine's community undertook an extensive literature review to better understand HVTL impacts on property values. In cross examination, he stated they did not find any studies on incremental impacts. (JMuni 124 pg. 3, Tr. Day 64 PM, pg. 147:1-7).

When questioned by the Committee, Dr. Chalmers was asked if he took into account the height of the structures in evaluating the distance and he replied his measurement was to the base of the structure. (Tr. Day 26 PM at pg. 92:12-94:10) and that it is the structure where the wires

attached that matters. (Id. at pg. 96:7-9) A committee member raised the “sweet spot” effect that more of the structure should be visible if the new structures are taller, what you see of the structure depends on how close or how far away you are and how high the tower is. Mr. Chalmers did not take this visibility perspective into account in his analysis but mentioned that another intervenor raised that same concept regarding views from a second-floor window of a house. (Id. at pg. 96:7-97:14) During cross examination, regarding visibility of the new project, intervenor Ms. Kleindienst put it this way: “Due to the increased height, there will be more vantage points.” (Tr. Day 70 AM, pg. 157:2-6)

Dr. Chalmers concludes that it is not the number nor the height of structures in the ROW that will create a market effect. His basis is the case study conclusions of the 3 vastly different NH ROW corridors from the Report. Dr. Chalmers testimony is not sufficient evidence to support this assertion. In the Allenstown and Deerfield subdivision study, Dr. Chalmers confirmed he had incorrect information on the type of structures that currently existed in the ROW nor had he confirmed what type of structures were present at the time of the lots sales. (Tr. Day 24 PM, pg. 118:20-119-12, pg. 129:10-130-12, DFLD ABTR Ex. 117-2) Ms. Menard testified that Dr. Chalmers conclusion would need a thorough analysis of structure numbers and heights with the various corridors compared specifically with this variable tabulated, source checked, and analyzed in order to draw this conclusion. (DA Ex 5, pg. 6)

Ms. Menards testified the Project announcement effect on the local sales has been evident in Deerfield. (DA 5, pg. 4) Mr. Chalmers did not see a reason to expand the research to include properties that were not abutting or encumbered by the ROW. The Applicant’s expert looked at properties that had visibility but not proximity and “didn’t find a single one that had effects.” (Tr. Day 24 PM: pg. 52: 8-17). Ms. Menard produced comparable sales 2013 sales data from a non-abutting ROW property that was 1000 ft. from the ROW. (DA Ex. 9)

This property, 24 Nottingham Road, Deerfield was the subject of discussion with Ms. Menard during cross examination by the Applicant. Ms. Menard was asked to confirm the long marketing time of this property, including the withdrawn dates, the shift of the market conditions and the view from this property. (Tr. Day 66 PM, pg. 80: 5 - pg. 84:14) Thomas and Madelyn Foulkes who live next door to this property, confirmed that the view from this property was a direct view to the ROW. (Tr. Day 67PM, pg. 186:1-7) Ms. Menard testified to the loss of the morning sunrise view value due to the threat of NPT was the major marketing deterrent which resulted in the seller taking an offer priced well below the surrounding comparable sales values. This is a similar scenario to what Dr. Chalmers described when he testified about the challenges of analyzing withdrawn listings; “The issue of withdrawn listings, if there are serious problems it will show up in the form of a sale price substantially below market.” (Tr. Day 25AM, pg. 37:19-23) Ms. Menard has testified that Northern Pass has been that marketing “problem” for Deerfield which resulted in what Ms. Menard considers a significant price reduction for this property. (DA Ex 5, pg. 4)

When cross examined, Ms. Menard testified that the size of the towers of the proposed project do effect market value (Tr. Day 66 PM, pg.26:13-19) Her opinion is evidenced by her real estate experience in Deerfield transactions.

Deerfield Intervenor Robert Cote testified that his home is an off the grid property and that the Project will reduce buyer interest due to industrial scale transmission lines a short distance away. This scenario would not appeal to someone looking to purchase a high-end home that is in a unique category defined by energy self-sufficiency amenities. (Tr. Day 66PM, pg. 13:7-21, DA Ex.35 pg. 3: 33-35) Mr. Cote produced a Market Appraisal done on the raw land prior to their purchase from Jan. 1991 that described a Buyer for this property as:



“The most likely user of this piece is the person who seeks privacy and protection from development.” (DA Ex. 35, Att. A)

After a substantial investment in this property, Intervenors Robert Cote and Bruce Adami are faced with the threat of development from NPT, which they believe would be a detriment to their property value.

Intervenor Jo Anne Bradbury is an off the grid, custom high-end home owner as well. Her home represents her financial security. Ms. Bradbury has testified that this Project will drive down the resale value of her home. (DA Ex. 2, pg. 2) Passing under the NPT infrastructure does not set the stage for an environmentally conscience buyer and will thin the buyer pool.

Dr. Chalmers did not consider off the grid property types in his property value project impact analysis. He does ascribe NH heterogeneous housing stock as a possible reason for the general absence of market value effects in his research, (App. Ex 1, Appx 46, pg. 95) yet the methodology of his case studies appraisals was not rigorous enough to bring forth the evidence to prove if this theory holds true in NH.

Mr. Chalmers has a very weak link in the chain due to lack of data to support the theory that NH property/market values will not be diminished as a result of the change in visibility. Dr. Chalmers agrees that “property value effects cannot be presumed, they have to be found.” (Tr. Day 25 AM, pg. 76:12) The Applicant failed to produce market sales data relevant to NH to evidence specifically from construction or post construction study periods to demonstrate that the incremental effect of an addition to an existing HVTL corridor does not impact property values. Mr. Quinlan testified that he was not aware of a follow-up study that tests Dr. Chalmers conclusions. (Tr. Day 2 AM, pg. 122:9-21) and given that Dr. Chalmers has not done a case study approach before, there are no follow up studies to review.

Numerous intervenors, such as Mr. Neil Irvine from New Hampton Board of Selectman, have testified that due to visibility of the Project, it is their belief that their own property value or those in their community will be lowered. They do not believe in Dr. Chalmers HVTL research conclusion that property must be within a 100 ft. from the ROW for there to be property value effects. (Tr. Day 147:13-149:4)

Ms. Menard does not consider the 100 ft. from the ROW criteria as believable or a reliable finding for 2 reasons:

1. Ms. Menard was a market participant broker in a transaction which resulted in a price impact to a non-abutting property that was a 1000 ft. from the ROW. (DA Ex 9) One should not assume that this one sale is an “exception to a rule”. Dr. Chalmers elected not to include property’s that were non-abutting to a ROW in his case study analysis.
2. There are properties that will experience visual impact of this project that are farther away than 100ft. as numerous intervenors have attested to, including the following witness panel from Clarksville to Stewartstown. During cross examination, the witness panel spokesperson, Mr. Thompson agreed that NPT (above ground, transition stations, and buried) was going to affect their property values. (Tr. Day 49 AM, pg. 50:7-11) and the panel was asked individually the following question:

“Do you agree with Mr. Chalmers’ NH real estate market research conclusion that if NPT was located beyond 100 feet of your house that there will be no market value impact to your property? Yes or no.”

Brad Thompson- “No.”

Don Bilodeau- “I disagree.”

Dine Bilodeau- "I disagree."

Bette Guerin- "I disagree."

Jason Balint- "I disagree."

John Amey- "I disagree."

Cindy Lou Amey- "I disagree."

Roderick McAllaster- "I definitely disagree."

Dr. Kaufman- "I definitely disagree."

(Id. at pg. 51:5-52:8)

Intervenor Don Bilodeau finds this conclusion "a little ridiculous". (Id. at pg, 51:22)

### **NPT Guarantee Program**

Ms. Menard testified that the Applicant's NPT Guarantee Program as originally proposed has shortcomings, in particular the Right of first refusal clause. (Tr. Day 65 PM, pg. 154:(CFP Ex 40) Mr. Quinlan, President of Eversource, agreed with Ms. Menard that this clause "could complicate a real estate transaction" (Tr. Day 2 AM, pg. 116:12-17, Day 65 PM, pg. 154:10-14). Furthermore, a Buy-out Program will not mitigate property value loss for property owners who cannot sell within a 5-year time period. Property devaluation will occur immediately upon approval of the project, not just at a future sale date. (Id. at pg. 155:3-8). Dr. Chalmers testified that "market value of a property may still be affected five years after the Project is complete." (Tr. Day 26 PM, pg. 59:4-8, Id. at pg. 58:) and that there is not any literature consensus as to the duration of market value effects. This program has 3 unreasonably restrictive qualifying criteria which are based on Dr. Chalmers research results. One criteria is that one must be within 100 ft. of the ROW.

Mr. Quinlan is responding to a question during cross examination involving one of the most highly densely residential areas affected by the Project, a condominium complex and states: “This program does not apply to McKenna’s Purchase. This is targeted towards single family homes based on Mr. Chalmers study”. (Tr. Day 1 PM: pg. 173:15-17) Mr. Quinlan went on to say:

“but we had made significant design enhancements in and around the McKenna’s Purchase area to mitigate impacts” (Id. at pg. 173:20)

During cross examination Ms. Kleindienst, manager of McKenna’s Purchase, was asked if the methods that Mr. Quinlan described to reduce visual impacts around McKenna’s mitigate her concerns about property value and she replied, “No”. (Tr. Day 70AM, pg. 167, 11-15) Ms. Kleindienst had fielded many questions during her cross examination to demonstrate she has been actively involved in the project and able to give such an opinion. For example, she testified to a pole change that had been proposed by the Applicant. It would be McKenna’s burden, however, to obtain permission from the owner of the property that the pole was to be placed, because it was not property McKenna’s owned. (Id. at pg. 139:1-140:13)

The Applicant has failed to demonstrate that the adoption of the NPT Guarantee program or any other measure will mitigate property value losses for NH property owners.

### **Summary**

Mr. Irvine, BOS statement in his supplemental testimony reads:

“The Board took the position that it did not want to see New Hampton become a case study for the impact on the value of residential property from the introduction of a HVTL to an existing distribution ROW” (JMuni 124, pg. 4:63-5:6)

Given the unreliability of Mr. Chalmers research, this leaves NH communities at risk, uncertain about property value impacts should this Project be approved. (DA Ex 5, pg. 10) This is a precarious situation that does not serve the public's best interest.

This sentiment is best summarized by CFP expert witness's Mss. Kavet and Rockler; "Property value loss is not a mere dark imagining of the many potentially affected parties to which this process has given voice. It is a real potential effect that should be studied and estimated, however difficult to quantify." (CFP Ex 146, att. B. pg. 26)

In order to serve NH's public interest, the findings of the High Voltage Transmission Lines and Real Estate Markets in New Hampshire (Report) and subsequent conclusions of Dr. Chalmers must be rejected and therefore the SEC must deny the application.

### **C. Welfare of the Population.**

The Project is not a reliability project, does not serve the citizens of New Hampshire and would inflict. The people of New Hampshire have spoken out at hearings, rallies, board meetings, municipal public hearings, newspapers, social media and with signs – they do not want or need this industrial Project. (Public Comments, SEC website.) The Deerfield Abutters ask the SEC to consider the welfare of New Hampshire residents and reject using our State corridor to service Southern New England as the massive footprint of the NPT would cause short term and long-term damage to our State.

### **D. Environment of the State**

If NPT moves forward the ultimate damage to the environment will be unprecedented in scope, and the Project will not serve the public interest, *inter alia*. SEC Site 301.16. As a result of their decades long commitment to being responsible stewards of their land and the wildlife that live there, the Deerfield Abutters, along with hundreds of other New Hampshire landowners, have embraced the recommendations of NH Fish and Game and other State agencies in an effort

to protect New Hampshire's most imperiled species and habitats. (DA Ex. 2, 44, 52, 64, 66. Tr. 66 pm, p. 39, 47). If approved, Project's impacts inside and outside the ROW would damage wildlife, sensitive wetlands, including vernal pools and vernal pool basins.

#### **E. Historic / Aesthetics**

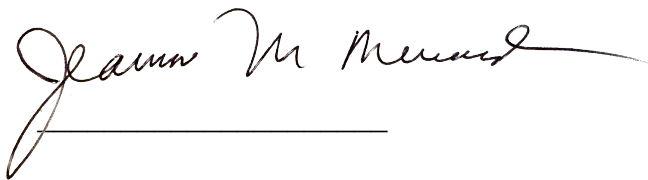
Consider one town, Deerfield, along the 192 mile footprint. The project would run through Deerfield from east to west, in close proximity to many of Deerfield's historic sites and cutting the town in half. (DA Ex. 154. CFP Ex. 464). Many of Deerfield's historic sites are accessed by and visible from the roads crossed by NPT. Deerfield Abutters ask that the SEC deny the certificate given the unreasonable adverse effect of the industrial towers and HVTL on these many historic sites. As evidenced by the public comments and the many scenic photos posted on the State's many social media accounts, the rugged beauty of this State remains the draw for its residents. Each business owner, entrepreneur and employee whose livelihood depends on the aesthetic beauty of New Hampshire would face the prospect of the loss of that livelihood if this Project were to be approved. Such losses would hardly be in the public interest.

#### **F. Remaining Public Interest Factors**

Deerfield Abutters refer the SEC to the previous sections addressing the remaining factors.

**VIII. Conclusion**

The Deerfield Abutters submit that for all of the reasons stated herein, in combination with the reasons presented by the other Intervenors opposed to this project, the Committee should find that the Applicant has not met its burden and deny the certificate.



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Jeanne Menard on behalf of the Deerfield Abutters

I certify that the above Memorandum has been forwarded to the distribution list.



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Jeanne Menard

cc: Distribution List