REDACTED

STATE OF NEW HAMPSHIRE
SITE EVALUATION COMMITTEE

DOCKET NO. 2015-06

JOINT APPLICATION OF NORTHERN PASS TRANSMISSION, LLC AND PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE D/B/A EVERSOURCE ENERGY FOR A CERTIFICATE OF SITE AND FACILITY

PREFILED DIRECT TESTIMONY OF

JAMES A. GINNETTI

ON BEHALF OF THE NEW ENGLAND POWER GENERATORS ASSOCIATION, INC.

December 30, 2016

Q. **Please state your name and address.**

A. My name is James A. Ginnetti. My business address is 269 Ethan Drive, Windsor, CT 06095.

Q. **What is your occupation?**

A. I am the Principal of Jim Ginnetti Consulting, LLC. In that capacity, I provide consulting services primarily to electric generation owners who operate in New England, New York and the 13 states served by the Pennsylvania, New Jersey and Maryland (PJM) Interconnection, which stretch from the Mid-Atlantic states to those that border the Mississippi River.

Q. **Please describe your experience in working in the electric power industry.**

A. I have been in the electric power industry in New England for 40 years. Prior to starting my own consulting firm in April 2015, I was employed at EquiPower Resources Corp., an owner of nearly 5,700 megawatts[1] (MWs) of generation, as Senior Vice President of External Affairs and Markets since March 2011. In that capacity I was responsible for the company's interaction with Independent System Operators (ISOs), state legislatures, regulatory bodies, and other stakeholders in New England, New York, PJM, South Carolina, and the Electric Reliability Council of Texas (ERCOT). During my career I have held executive positions in power plant operations, external affairs, and power marketing at GDF SUEZ Energy North America, FirstLight Power, and Northeast Utilities, respectively. The early part of my career was spent at

[1] One megawatt is 1,000 kilowatts.

the predecessor to the Independent System Operator of New England (ISO-NE) where, at different times, I was responsible for long term supply planning for New England and Operations Engineering with responsibility for the computer hardware, software, and power system studies used in system operations. I also managed the System Operations Department where I was responsible for the minute-to-minute operation of New England's electric power system.

Q. **Please describe your academic background.**

A. I hold a Bachelor of Science degree in Electrical Engineering from Northeastern University, a Masters Degree in Electrical Engineering from Iowa State University, and a Masters Degree in Business Administration from Western New England College.

Q. Have you ever appeared as a witness before the New Hampshire Site Evaluation Committee?

A. No, but I have appeared as a witness before a Federal Energy Commission Administrative Law Judge and in court cases involving contract disputes during the early 2000s.

Q. Why is your testimony regarding the PPA relevant to the Site Evaluation Committee Proceeding?

A. First, in the ForwardNH Plan, Eversource has claimed that the PPA will provide special benefits to the ratepayers of PSNH that justify the construction of the NPT line. My testimony will cast doubt as to whether the PPA will bring any benefits to PSNH ratepayers, especially

considering the significant risk those ratepayers will be taking under the PPA. In addition, because the PPA was not the result of competitive bidding, this transaction adversely affects the wholesale market because it deprived existing generators operating in New Hampshire and throughout the rest of New England of the opportunity to provide the power.

SUMMARY OF TESTIMONY

Q. **Please summarize your testimony.**

A. In my testimony I will summarize how electricity is priced, bought, and sold in New England, the key elements of the Power Purchase Agreement (PPA), and point out the significant risks that New Hampshire consumers will face if this PPA is put into place.

Q. Please explain how electricity is priced, bought, and sold in New England.

A. Every day all generators in New England submit offers to generate electricity on the following day. Those offers are based on the cost of their fuel, their efficiency in converting fuel to electricity, and other variable costs to produce electricity including maintenance of the generator, fuel additives, etc. Their offers can vary from hour to hour. Entities that serve customer load, including competitive retail sellers and electric distribution companies, like PSNH, submit bids to buy electricity through the wholesale electricity market run by ISO-NE. This Day Ahead Market matches up buyers and sellers and develops an hourly price of electricity at most transmission substations throughout New England. On most days, the prices in a given hour throughout New England are close to parity but can, at times, be substantially

different due to limitations on the transmission system that prevent the free flow of electricity to some locations. Prices usually vary throughout the day with higher prices during the daytime hours during times of peak demand and lower prices during the night when the electric loads are lower. On most days approximately 90% of the demand in New England buys the electricity that it estimates that it will need in the Day Ahead Market and generators receive those same prices for producing the needed electricity. During each day ISO-NE also runs a Real Time Market based on the prices that generators had offered for that day and the actual demand, which may be higher or lower than what had been predicted and purchased in the Day Ahead Market. Deviations in load and generation from the quantities that cleared in the Day Ahead Market are settled at the Real Time Market prices. For example, if the actual load is higher than what was purchased in the Day Ahead Market, the incremental load pays the Real Time Market price. Similarly, if generators do not produce the quantity that they committed to produce in the Day Ahead Market, the generator must buy the supply that it did not produce at the Real Time Market price.

For many reasons, including good business planning, many generators and load serving entities (LSE) prefer to have some level of certainty with respect to their revenues and costs months or even years into the future. As distinguished from the Day Ahead Market and the Real Time Market, a forward market exists where generators can offer to sell their electricity at a set price during certain hours in a future month and LSEs can buy that electricity locking in a price for some of the supply that they will need to serve their customers. Forward sales of electricity in

New England fall primarily into two categories, On-Peak, which are the hours ending at 8:00 AM through 11:00 PM, Monday through Friday, other than holidays and Off-Peak, which are all hours of the week that are not On-Peak.

The other key factor in forward market sales is the location of the delivery point of the transaction. In New England, a trading hub, known as the MASS Hub has been defined. It consists of a number of transmission substations located in the central part of Massachusetts. The Day Ahead and Real Time prices at the substations that make up the MASS Hub are blended together to produce a MASS Hub price in both the Day Ahead Market and Real Time Market for each hour. Most wholesale electricity transactions have a delivery point at the MASS Hub, which is the most liquid point for transactions in New England.

Since Day Ahead Market and Real Time Market prices can vary throughout New England, location is key to both generators and load servers. Generators receive the Day Ahead or Real Time price at the location that they deliver into New England's electric grid. LSEs pay a blended rate based on the Day Ahead Market or Real Time Market prices in the zone in which it is located. There are eight load zones in New England: Maine, New Hampshire, Vermont, West/Central Massachusetts, Northeastern Massachusetts/Boston, Southeastern Massachusetts, Rhode Island, and Connecticut. For example, all electric demand in New Hampshire is priced at the New Hampshire zone price in each hour.

I provide this high level overview of how electricity is price, bought, and sold in order to explain the PPA and the risks PSNH's ratepayers would face if it was implemented.

Q. Please provide an overview of the PPA.

A. The PPA is between Hydro-Quebec's Hydro Renewable Energy Inc. (HRE) subsidiary and Public Service Company of New Hampshire d/b/a Eversource Energy. It is for a term of 20 years and for a quantity equal to the lesser of 100 megawatts (MWs) or 10% of the Contract Capacity of the Northern Pass Transmission line (NPT), which is expected to be rated at 1,090 MWs. All energy is to be delivered during On-Peak hours (hours ending 8:00 AM through 11:00 PM, Monday through Friday, excluding holidays[2]). Importantly, the delivery point for these deliveries will be "the southern terminus of the NPT line, which is expected to be PSNH's Deerfield substation."[3] [redacted]

Q. How will consumers realize benefit from the PPA?

A. According to Mr. Daly's testimony, "PSNH's entitlement to the energy and environmental attributes will be sold bilaterally or into the wholesale market, with the net

[2] PPA definition of On-Peak Hours, page 8
[3] Daly testimony page 5, lines 2-3.

proceeds credited to the Stranded Cost Recovery Charge."[4] This means that ratepayers, not PSNH, will be bearing the risks of the purchases under the PPA. For ratepayers to benefit by having the Stranded Cost Recovery Charge decrease and, therefore, reduce the amount of money that ratepayers must pay to PSNH for Stranded Costs, PSNH will need to be able to sell the energy that it bought to others under bilateral contracts at a price that is higher than what they paid for it or to reflect it in the ISO-NE's market system and hope that the Day Ahead Market prices at the Deerfield substation are higher than the price they paid for the energy. The PPA also provides that ratepayers will receive "all of the environmental attributes associated with the Hydro-Quebec renewable resources for the delivered energy"[5] I will discuss the likelihood of ratepayers benefitting from both the energy purchases and potential environmental attributes below.

Q. Mr. Daly states on page 6 of his testimony that "PSNH distribution customers will receive the value of the below-market savings created by the PPA, as well as the value of all environmental attributes that may materialize in the future, in the form of a credit to the Stranded Cost Recovery Charge."[6] Do you agree that the PPA will be "below-market"?

A. Mr. Daly's testimony is misleading because it focuses only on one side of the equation, without any recognition of the downside risks also posed by the PPA's terms. [redacted]

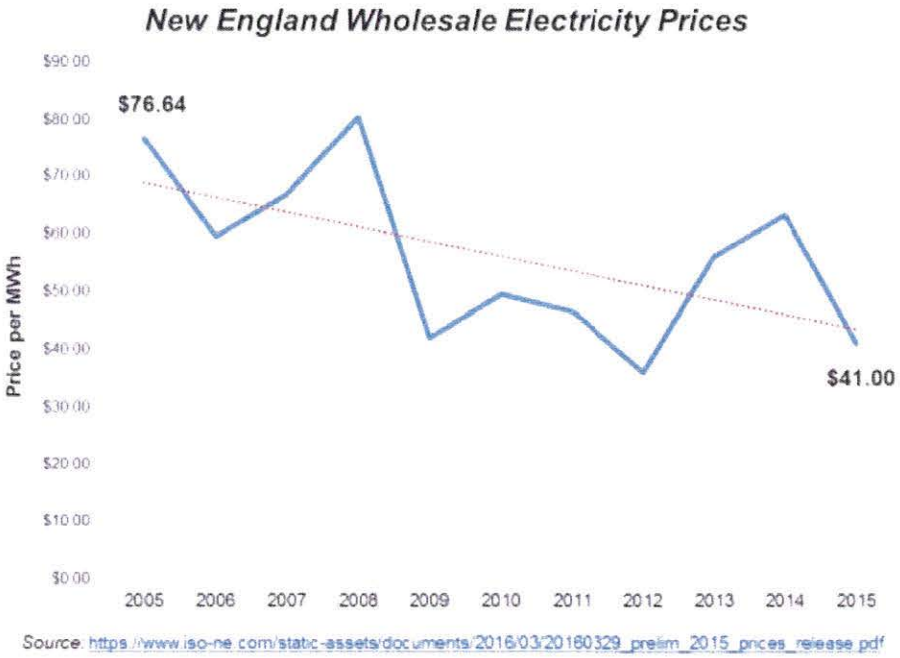
[redacted]

[redacted]

[4] Daly testimony page 9, lines 18-20.
[5] Daly testimony pages 4, line 22 to page 5, line 1.
[6] Daly testimony page 6, lines 22-23, page 7, lines 1 and 2.

[redacted]

While it might be tempting to think that the cost of energy will not decrease from year to year, in the New England market, we have experienced several years in the recent past when the price of energy dropped from one year to the next as shown in the following chart.



Source: https://www.iso-ne.com/static-assets/documents/2016/03/20160329_prelim_2015_prices_release.pdf

In fact, wholesale energy prices in 2016, when adjusted for inflation are the lowest that have been since the markets were restructured in 2003. Moreover, with the large quantity of on-shore and off-shore wind and both rooftop and large solar installations expected to be added to the grid during the next 20 years, wholesale prices in the Day Ahead and Real Time energy markets could decrease even more in years to come, even if natural gas prices reverse their current trends and start to rise. It is not a foregone conclusion that over the 20 years of the contract that ratepayers will benefit overall from "below-market" prices under the PPA. In my view, it makes little sense to lock ratepayers into a contract for 20 years that offers no guaranteed savings and exposes them to the very risks from which restructuring sought to insulate them.

Q. Please comment on Mr. Daly's testimony on the likelihood that "environmental attributes that may materialize in the future."[7]

A. I believe that it is purely speculative that purchases under the PPA will ever receive subsidies in the form of environmental attributes. Legislators in various states have established Renewable Energy Credit (REC) programs under which consumers pay additional costs on their electric bills that subsidize the developers of fledging renewable projects, such as solar and wind, in an effort to allow development of those technologies to a point where they can compete in the marketplace. Because large-scale hydropower is not a new technology, it does not qualify as a Class I renewable resource under New Hampshire's and many other state's REC programs. Large scale hydropower being generated by Hydro-Quebec, a Provincially owned utility and one of the largest utilities in the world, hardly needs a subsidy from consumers in New Hampshire or other New England states in order to develop a technology that has existed for decades. Even Mr. Daly admits that "The decision to exclude large hydro from Class I eligibility was based on the desire not to subsidize large hydro with Class I compliance costs."[8] Just last year, the New Hampshire legislature rejected an attempt to allow large-scale hydro to qualify as a Class I resource. Although recent regulatory and legislative initiatives in New York and Illinois have seen subsidies given to carbon free nuclear units that are financially challenged, no such case can be made for large scale hydro resources which clearly are not financially challenged. In fact, large-scale hydro has been specifically excluded from New York's program.

[7] Daly testimony page 6, line 23 and page 7, line1.
[8] Daly testimony page 9, lines 9 and 10.

[redacted] Based on this projection, I think it is highly unlikely that legislators and other policy makers will impose significant additional costs on consumers by allowing large-scale hydro to receive a RPS subsidy.

Q. Do New Hampshire consumers take any risks under the PPA?

A. New Hampshire ratepayers take very significant risks under the PPA. If the energy purchases that PSNH makes under the PPA lose money, the Stranded Cost Recovery Fund, which is money that ratepayers must eventually pay to PSNH, will increase. Ratepayers, not PSNH, are effectively taking the risks of the PPA, even though PSNH will be buying the energy from the Seller, HRE. Each year ratepayers will essentially be buying 100 megawatthours[10] (MWh) of energy in all On-Peak hours on non-holiday weekdays throughout the year. This will total approximately 400,000 MWhs of energy for the year, which is enough to serve approximately 44,000 homes that use 750 kilowatthours (kWh) per month.[11] (To put that amount into context, the city of Nashua had a population of approximately 87,551 people in

[9] In the Clean Energy RFP, NPT's bid states that the cost of the transmission on the Canadian side was estimated to be over Canadian $600 million. "The Contracting EDCs also will have no financial contribution for the construction of Canadian transmission facilities (projected to cost over CA$600 million). HQ will be fully responsible for those costs."

[10] One megawatthour is 1,000 kilowatthours.

[11] 400,000 MWhs equals 400,000,000 kWhs. Divide 400,000,000 kWhs by (750 kWhs times 12 months) to get approximately 44,000 homes. 750 kWh per month is often stated as a typical usage by homeowners.

2015,[12] which would represent approximately 44,000 two person homes.) A purchase of 100 MWs in all On-Peak hours of non-holiday weekdays of the year is not an insignificant amount of electricity.

[redacted] There is absolutely no guarantee that the prices that the ratepayers will be paying for this electricity will be worth the price they paid or more during the coming year. The forward market for electricity is quite volatile and is influenced by many factors including forecasts for a very cold or very warm winter or a very warm or cool summer. Also, natural gas price forecasts, planned outages of large generating plants, such as Seabrook or the Millstone nuclear units, outages of gas pipelines, and many other factors can affect the price at which suppliers are willing to sell during the upcoming year. Given the number of factors that can influence this pricing mechanism, I believe that it makes no sense to lock ratepayers into a 20-year contract, particularly where there is no guarantee that the contract will actually produce savings and forces the ratepayers, not Eversource shareholders, to bear the risks. As the Public Utilities Commission noted in a recent order, when the New Hampshire legislature decided to restructure the electricity markets, these were precisely the sort of risk-shifting from which they sought to insulate consumers. See N.H. PUC DE 16-241, Order 25,950 (October 6, 2016) at 8-9.

[12] New Hampshire Office of Energy and Planning, 2015 population estimate.

A strong analogy can be drawn between the PPA and transactions that some homeowners entered into years ago when home heating oil prices were much higher than they are now. When homeowners were fearful that the price of home heating oil would rise to a level during the winter where they would not be able to afford to heat their homes, some home heating oil dealers allowed customers to "pre-buy" their expected quantity of heating oil at a preset price before the heating season. If prices stayed the same or increased during the winter and homeowners needed all the oil that they had purchased, they were happy with the deal. But, if the winter weather was warmer than normal and they needed less oil, and it was available at a lower price than they had locked in, the homeowners were not happy with the losses that they suffered. [redacted]

The other significant risk factor with the PPA is the delivery location of the energy under the PPA. This energy is to be delivered at "the southern terminus of the NPT line, which is expected to be PSNH's Deerfield substation."[13] As mentioned earlier, most forward market transactions in New England have a delivery point of the MASS Hub. Mr. Daly testified that "PSNH's entitlements to the energy and environmental attributes will be sold bilaterally or into the wholesale market." The fact that the delivery point of the energy under the PPA will be the

[13] Daly testimony, page 5, lines 2-3.

Deerfield substation, and not the more liquid MASS Hub, will limit the number of potential buyers. This unusual delivery point will likely lead to less competition from potential buyers of the energy that is bought under the PPA and will likely result in PSNH getting lower prices when it is sold. Although the testimony offered by NEPGA witness, William S. Fowler, focuses, in part, on how transmission constraints between the three northern New England States and the three southern states affect ISO-NE's capacity market, those same transmission constraints also affect the flow of energy. LSEs that must serve the 80% of the New England load that is in the three southern states will likely prefer buying their supply at the MASS Hub in central Massachusetts to make delivery to their customers easier and less costly than buying supply delivered in Deerfield, New Hampshire.

In Attachment B to his testimony, Mr. Daly lays out a number of scenarios that NPT synthesized that show "happy ratepayers" who made financial gains under the terms of the PPA. Because this material has been redacted, and we are unable to verify how the scenarios were developed and the calculations were made, I recommend that they be independently verified or else considered with great skepticism.

Mr. Daly testified that the gains and losses from the PPA will "be credited to the Stranded Cost Recovery Charge."[14] I think it is significant that gains and losses from the PPA will affect the

[14] Daly testimony page 9, lines 18 through 20.

balance of the Stranded Cost Recovery Charge, which ratepayers must pay, and not borne by PSNH or HQ as market participants.[15]

Q. Do you have any other observations of the PPA that you wish to advise the Commission?

A. Yes, there are two other observations. [redacted]

[15] N.H. PUC DE 16-241, Order 25,950 (October 6, 2016) at 8-9.

[16] PPA Section 5.5a

[redacted]

Q. Does this complete your testimony?

A. Yes.

[17] [redacted]

[18] See NPT confidential response to NEPGA 1-4. The PPA uses 100 MWs of the 1,090 MW NPT line, which is 9.1% of the NPT line.