ALGONQUIN GAS TRANSMISSION, LLC
5400 Westheimer Court
Houston, TX 77056-5310
713.627.5400 main

Mailing Address:
P.O. Box 1642
Houston, TX 77251-1642

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Alexander Speidel
Staff Attorney/Hearings Examiner
New Hampshire Public Utilities Commission
21 S. Fruit St., Suite 10
Concord, N.H. 03301-2429

Re: Responses to July 15, 2015 Initial Staff Questions to Spectra Energy in Investigation into Potential Approaches to Mitigate Wholesale Electricity Prices

Staff of the New Hampshire Public Utilities Commission ("Commission") issued follow-up questions regarding Spectra's comments submitted on June 2, 2015 in the Commission's Investigation into Potential Approaches to Mitigate Wholesale Electricity Prices ("Investigation"). To the extent the questions were directed to Access Northeast, Algonquin Gas Transmission, LLC ("Algonquin") and Spectra Energy Partners, LP ("Spectra Energy") are responding to the following questions on behalf of Access Northeast.[1]

1. **Page 2. Spectra states that while pending pipeline projects to serve gas utility and industrial customers could alleviate some of the existing system constraints, those projects are unlikely to have a significant impact on electric power pricing. Please identify the projects and explain why they are unlikely to have a significant effect on electricity prices.**

    a. Algonquin is an interstate pipeline that transports natural gas to a variety of LDCs and electric power generators connected to its approximately 1,120-mile pipeline system. The system originates in Lambertville, New Jersey and extends through New York, Connecticut, Rhode Island and Massachusetts where it connects to the Maritimes & Northeast Pipeline. Algonquin's major firm customers include LDCs in the Boston, Providence, Hartford and New Haven markets. In addition, Algonquin is connected to numerous natural gas fired electric generators, the vast majority of which is served by Algonquin on an interruptible basis under either capacity release or interruptible contracts.

[1] "Eversource Energy Service Company", a subsidiary of Eversource Energy, National Grid Transmission Service Corporation, an unregulated wholly owned subsidiary of National Grid USA, Spectra Energy Corp., and Spectra Energy Partners, LP are working to develop the Access Northeast Project.

b. In addition to an interconnection with Texas Eastern Transmission, LP, shippers on Algonquin can source gas from pipelines operated by Columbia Gas Transmission Corporation, Iroquois Gas Transmission System, Maritimes & Northeast Pipeline, LLC, Millennium Pipeline Company, LLC, Portland Natural Gas Transmission System, Tennessee Gas Pipeline, and Transcontinental Gas Pipe Line Corporation. Each of these pipelines has either recently expanded its delivery capability into the region or is currently developing expansion projects to increase capacity in the near future. These expansions have already resulted in a current level of supply that exceeds pipeline takeaway capacity by 1 billion cubic feet per day. Additional sources of gas include LNG import and storage facilities operated by Distrigas of Massachusetts Corporation and Excelerate Energy Limited Partnership. Natural gas from offshore Nova Scotia and the Canaport LNG facility can also be transported to Algonquin customers by way of the Maritimes pipeline system interconnection near Beverly, Massachusetts.

c. This investment in upstream pipeline capacity has been supported and financed by other entities and provides New England with an excellent opportunity to obtain supply security for the region. These upstream pipeline expansions leveraged existing infrastructure to get supply to market quickly. Additionally, among these different interconnects, there is a diverse array of different sources of supply including Northeast Marcellus, Southwest Marcellus, Utica, Rockies, Western Canada and other supplies as far upstream as the U.S. Gulf Coast.

d. The gas-fired electric generators on Algonquin's system are located primarily downstream of the Southeast and Cromwell compressor stations. As market demand for access to the lower-cost domestic natural gas from points west of New England has grown, Algonquin has operated at essentially 100% load factor through those compressor station locations for four to five years. In fact, as reflected in Slides 1, 2 and 3 in the Attachments hereto, requests for transportation pursuant to interruptible contracts has been consistently rejected, i.e. only firm contracts have been able to be scheduled for delivery. We consistently have winter season timely cycle (NAESB) nominations for West to East transportation that are 400 to 500 Mdth/d higher than our current capacity.

e. The constrained infrastructure has a direct effect on power costs. Natural gas-fired generators historically have relied on interruptible and released capacity to supply their facilities. When generators are unable to acquire capacity on the secondary market or schedule interruptible transportation, they are forced to acquire supply on the spot market. The same competition for the scarce interruptible pipeline capacity places upward pressure on spot prices for natural gas. As reflected in the ICF Study, there is a close correlation between natural gas spot prices and power prices. The higher natural gas spot market prices result in higher power costs, especially on pipeline peak days.

f. While pending pipeline projects by Algonquin or other interstate pipelines to serve gas utility and industrial customers could alleviate some of the existing system constraints, these projects likely will not have a significant impact on electric power pricing and reliability absent generator participation. Accordingly, an innovative solution is needed to address the lack of pipeline infrastructure supplying electric generators and related natural gas price volatility. The supply diversity and access offered by Access Northeast provides the region with the certainty it needs to help ensure electric reliability for the long term.

2. Page 10. Please describe in greater detail the no notice transportation service that Spectra proposes to offer gas generators (with and without the hourly supply option) including whether such service requires additional investments.

a. As envisioned by Access Northeast, no-notice service allows a pipeline to reserve transportation capacity on the pipeline at the timely scheduling cycle for subsequent scheduling by the shipper on a 24/7 basis. No-notice service is the highest priority of service on the pipeline. This service ensures that the shipper is able to come online if dispatched by the ISO as long as the shipper has nominated the transportation, and it has been confirmed by both the upstream and downstream parties. The quick start function of the service which is premised on LNG storage, will allow a shipper to start taking delivery of gas as soon as the delivery has been nominated without the commensurate upstream supply. The quick start function will access the LNG if necessary to cover the shipper if supply from other sources cannot be confirmed within a two hour window. Without the LNG, the ERS rate schedule can still function for the No-notice reservation of capacity. The "quick start" functionality would need to have LNG available to work effectively so as not to have to rely on pipeline linepack. The character of service provides for EDCs, ISO/RTOs, and electric generators the most reliable of natural gas transportation service.

3. Page 18. ICF states that "a project like Access Northeast could have eliminated gas and electric price spikes on 49 days during this past winter and saved $2.5 billion in wholesale energy costs for New England's electric consumers." For each of the 49 days, please provide in Excel format the following information from ICF's modeling: (i) the date; (ii) the daily gas prices ($/MMBtu)before and after the hypothetical capacity addition; (iii) the daily average LMPs before and after the hypothetical capacity addition; (iv) the daily wholesale load; and (v) the daily energy cost saving. In addition, please reproduce for each day the information shown in Exhibit 8 and explain how the quantity 2761 MMcf/day was calculated.

a. Please refer to the attached Excel file that ICF has provided as backup for the daily calculations. **ICF has asked us to request these data be held confidential and not be released to the public. Therefore, these data have been filed with the Commission pursuant to a Motion for Protective Order.** We understand

that, in the data, 2761 MMcf/d is the combined capacity into New England on Tennessee Gas Pipeline and Algonquin Pipeline.

4. **Page 18. Regarding the phrase "a project like Access Northeast", please identify the key differences between the Access Northeast project and the project that ICF analyzed.**

    a. In the report provided by ICF, the phrase "a project like Access Northeast**"** is used to refer to the Access Northeast project as we defined it for ICF at the onset of the analysis. On page 5 of its report, ICF stated that "For its analysis, ICF has assumed that the project will add 500 MMcf/d pipeline capacity and 6 Bcf of peak supply through storage facilities with a maximum deliverability of 400 MMcf/d, starting in November 2018."

5. **Page 20. Please provide the carrying cost rate used to calculate the $400 million levelized annual cost and specify the assumed contract term.**

    a. We understand that, for the purpose of this analysis, ICF utilized an 11.50% weighted average cost of capital (WACC) and averaged the annual cost of service over a 20-year period.

6. **Page 20. Please explain how the "full cost of the electric portion of the project" differs from the $2.4 billion investment cost or the $400 million levelized annual cost.**

    a. Respectfully decline to answer at this time.

7. **Pages 28-29. ICF states at page 28 that that the proposed Access Northeast project can potentially serve 6,900 MW of natural gas fired generation. At page 29, ICF states that the Access Northeast project is capable of providing fuel for up to 5,000 MW of gas fired generation. Please explain this apparent discrepancy.**

    a. Reference to the 6,900 MW was to the generation capability of the plants attached to Algonquin. Access Northeast will provide fuel sufficient to run up to 5,000 MW of generation. That fuel will be capable of being delivered on a firm basis to all the generation currently attached to Algonquin and Maritimes system, whose maximum aggregate MW generation capability is approximately 9,200 MW (6,900 MW on Algonquin and 2,300 MW on Maritimes). Which plants of that aggregate number take the 5,000 depend on market conditions at the time and the capacity release mechanism developed by the EDC at the state level.

8. **Page 32. Regarding Exhibit 18, please respond to the following questions:**

    i. **Are the natural gas prices plotted in the exhibit monthly simple averages?**

a. Yes, that is our understanding.

ii. Are the historical prices weather normalized? If no, why does ICF expect 2016 peak winter prices under normal weather conditions to be higher than the corresponding 2014 prices under abnormal weather conditions?

b. No. It is our understanding that from 2015 to 2016, ICF projects that gas prices will increase across the US due in part to demand growth from LNG exports, Mexican exports and power generation. In addition, pipeline capacity expansion into New England is not expected before 2016, and pipeline flows along Maritimes & Northeast continue to decline due to decreasing gas production from SOEP and Deep Panuke. Collectively, these factors contribute to higher gas prices in New England in 2016, versus 2014, even under normal weather conditions.

iii. What accounts for the price reduction in January 2015 compared to January 2014?

c. In ICF's report, which was completed in late 2014, weather was assumed to be normal beginning in 2015. If anything, the ICF study understates the benefit of Access Northeast because the report did not recognize the severe winter weather conditions of 2015.

iv. Regarding the peak winter prices from 2019 through 2028 without Access Northeast, why does ICF expect them to: (i) be significantly higher than during the period 2010-2012; and (ii) increase?

d. In ICF's report, "prices steadily increase over time and exceed $20/MMBtu by January 2026 when more gas needed for generation and supply from East Canada is no longer available."

v. The exhibit shows the January price with Access Northeast rising from about $12/MMBtu in 2019 to about $20/MMBtu in 2028. Explain the rising peak winter prices. Also, explain why ICF's model continues to predict high average peak winter prices in New England after the Access Northeast project is in service.

e. As noted in the response to (iv) above, the ICF report contemplates increasing demand for gas for generation and a decrease in supply from eastern Canada. As a result, the ICF report projects an increase in prices. This increase in prices is particularly relevant to the winter period when demand is at its highest.

vi. Will the Algonquin pipeline continue to be burdened with significant capacity constraints after the AIM, Atlantic Bridge and Access Northeast projects are in service?

f. While ICF was not asked to investigate the utilization of Algonquin, AIM, Atlantic Bridge, and Access Northeast in its report, Algonquin believes that on non-peak days, AIM and Atlantic Bridge will make additional capacity available to non-firm customers. Importantly, no project can commit to making gas available for anyone who wants it on a non-firm basis – that right is reserved to firm contract holders. The addition of significant pipeline capacity through those two projects, however, will make gas capacity available on non-peak days, and thus available to more interruptible and secondary customers than is currently available, i.e. those projects will reduce some constraints on the system with respect to non-peak days. Access Northeast, on the other hand, is designed to specifically reach those electric generators (whether they be interruptible or secondary customers) that aren't currently contracting for firm capacity and thus will further reduce constraints, even on peak days, from today's market reality.

9. Page 34. ICF states that in addition to reducing monthly average prices, the volatility of prices, i.e., the frequency and magnitude of price spikes, *may* be reduced. What is the fundamental driver of reduced price volatility and why is this reduction simply possible rather than certain?

a. Spectra Energy believes the fundamental driver of reduced price volatility is robustness and liquidity of supply to meet demand and the breadth and depth of the market. Robustness and liquidity of supply, in our opinion, are driven by the number of suppliers, the potential volumes available versus actual demand. As demand fluctuates and supply remains constant, market volatility occurs. Accordingly, as each generator comes online, demand increases significantly, because all buyers are chasing the same static volume of gas and price spikes occur. Reducing pipeline constraints will tend to decrease the volatility by increasing the amount of supply available, but it is difficult to say with the certainty requested by the question that such price spikes *will* be reduced because of the multiple variables in play, such as daily weather patterns in New England and elsewhere or temporary supply disruptions.

10. Page 35. ICF states that the low volatility assumption produces an additional eight percent reduction in natural gas prices for December and March and a 20 percent further price reduction using the high volatility assumption, which translate into an additional $330 million and $750 million a year of cost savings to electric consumers. Please respond to the following:

(i) Did ICF mean to say December through March? If no, please explain the reference to December and March.

a. Yes, ICF meant to say December through March.

(ii) Do the $330 million and $750 million annual cost savings estimates represent 10-year annual averages and do these savings relate largely (or solely) to the winter period?

b. Yes, and they apply solely to the winter period.

(iii) Is the corresponding 10-year annual average cost saving (excluding volatility) $450 million?

c. Yes, approximately; the annual average cost saving (excluding volatility) has been calculated as $447 million by ICF.

(iv) Regarding Exhibit 21, provide for each year the annual cost saving (excluding volatility) under the low and high volatility assumptions.

d. Please refer to the Excel file that has been provided by ICF as backup to the study. **ICF has asked us to request these data be held confidential and not be released to the public. Therefore, these data have been filed with the Commission pursuant to a Motion for Protective Order.**

11. Page 35. ICF states that the annual average cost savings to consumers for the 10-year period is $780 million to $1.2 billion for the low and high volatility assumption scenarios, respectively. Are these savings estimates based on present values of 10-year cost reductions or nominal cost reductions?

a. They represent nominal cost reductions.

Spectra Energy and Algonquin appreciate the opportunity to provide these responses on behalf of the Access Northeast project developers. Please direct any questions to Richard J. Kruse (713-627-5368) or Janice K. Devers (713-627-6170).

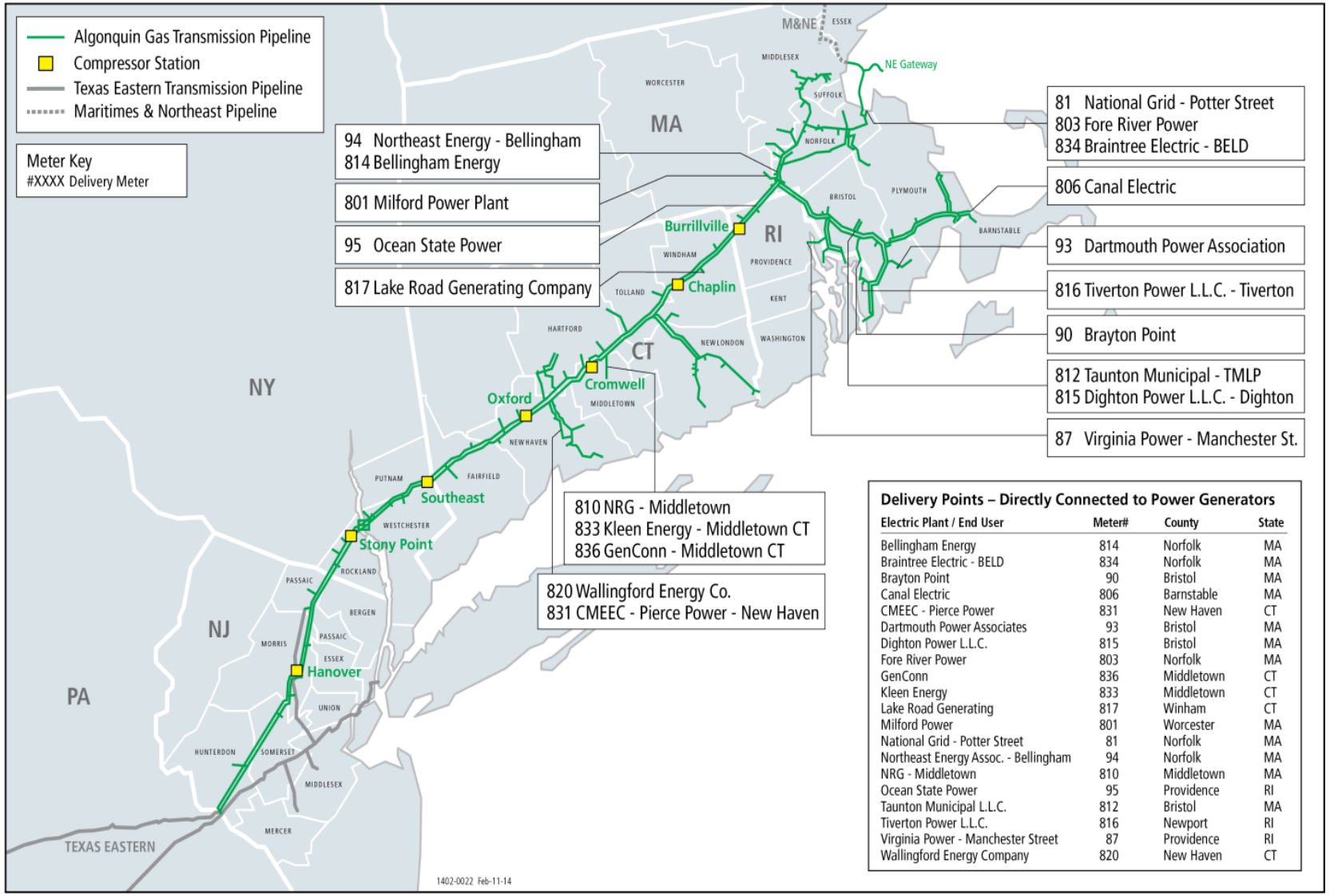
Sincerely,

/s/ Richard J. Kruse

Richard J. Kruse
Vice President, Regulatory & FERC
Compliance Officer
Algonquin Gas Transmission, L.L.C.
Spectra Energy Partners, LP
P.O. Box 1642
Houston, Texas 77251-1642
Phone: (713) 627-5368
Email: rjkruse@spectraenergy.com

(Attachments)

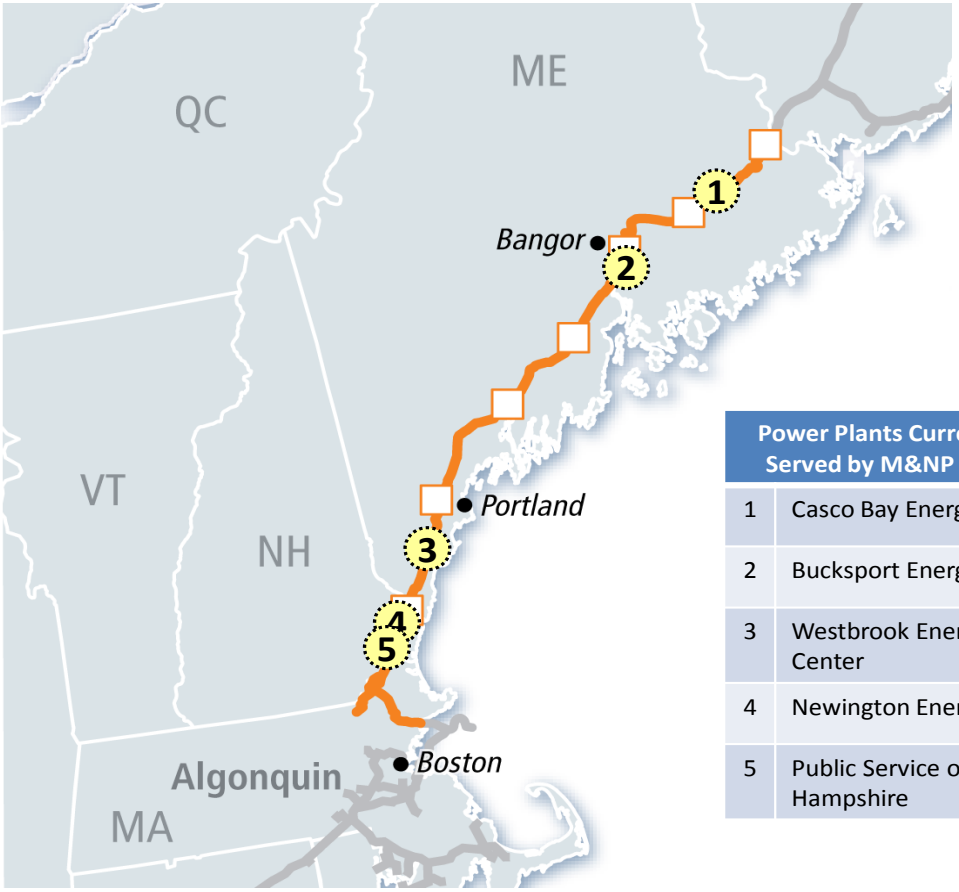
ATTACHMENTS



Delivery Points – Directly Connected to Power Generators

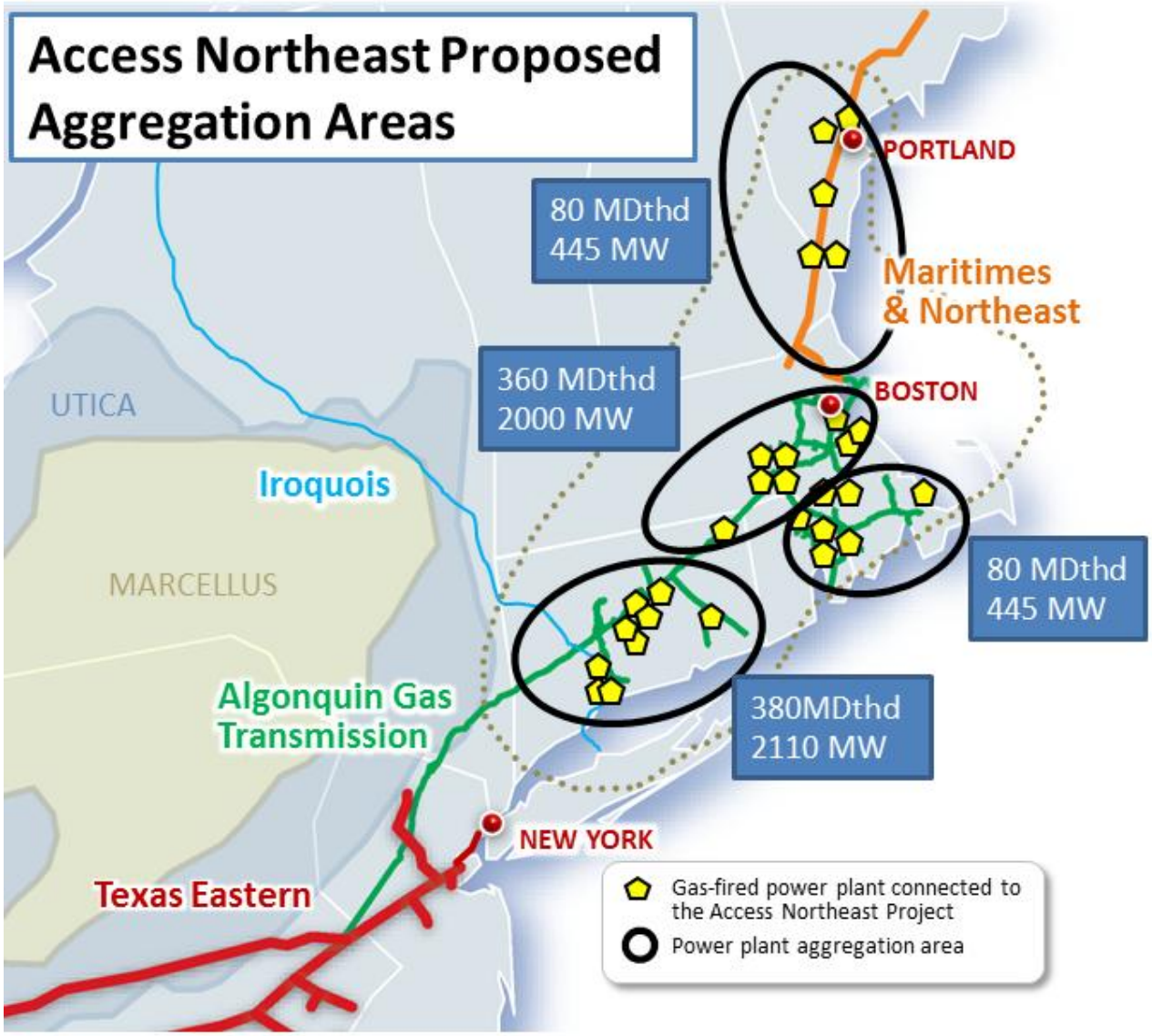
Electric Plant / End User	Meter#	County	State
Bellingham Energy	814	Norfolk	MA
Braintree Electric - BELD	834	Norfolk	MA
Brayton Point	90	Bristol	MA
Canal Electric	806	Barnstable	MA
CMEEC - Pierce Power	831	New Haven	CT
Dartmouth Power Associates	93	Bristol	MA
Dighton Power L.L.C.	815	Bristol	MA
Fore River Power	803	Norfolk	MA
GenConn	836	Middletown	CT
Kleen Energy	833	Middletown	CT
Lake Road Generating	817	Winham	CT
Milford Power	801	Worcester	MA
National Grid - Potter Street	81	Norfolk	MA
Northeast Energy Assoc. - Bellingham	94	Norfolk	MA
NRG - Middletown	810	Middletown	MA
Ocean State Power	95	Providence	RI
Taunton Municipal L.L.C.	812	Bristol	MA
Tiverton Power L.L.C.	816	Newport	RI
Virginia Power - Manchester Street	87	Providence	RI
Wallingford Energy Company	820	New Haven	CT

Map 1: Names and Locations of Natural Gas-Fired Generators on Algonquin



Power Plants Currently Served by M&NP U.S.		Generating Capacity (MW)	State
1	Casco Bay Energy	540	ME
2	Bucksport Energy	174	ME
3	Westbrook Energy Center	543	ME
4	Newington Energy	525	NH
5	Public Service of New Hampshire	400	NH

Map 2: Names and Locations of Natural Gas-Fired Generators on Maritimes



Map 3: Access Northeast Proposed Aggregation Areas.