

IR 15-124 Second Set of Staff Questions for TGP

August 14, 2015

Instructions for responses: Please e-mail responses in PDF format by **August 12, 2015** to alexander.speidel@puc.nh.gov; responses will be promptly posted to the NHPUC website here: [http://puc.nh.gov/Electric/Investigation into Potential Approaches to Mitigate Wholesale Electricity Prices.html](http://puc.nh.gov/Electric/Investigation%20into%20Potential%20Approaches%20to%20Mitigate%20Wholesale%20Electricity%20Prices.html)

- 1. Exhibit A to TGP's responses to Staff's Initial Questions states that the Kinder-Morgan Board Approved a \$3.3 billion investment in the Northeast Energy Direct (NED) project's "market path" segment from Wright, New York, to Dracut, Massachusetts. Please provide the levelized annual cost associated with the \$3.3 billion investment and specify the carrying charge rate used to calculate that annual cost.**

Response:

It appears that Staff is requesting TGP's capital cost information in order to estimate an approximate rate for transportation service on the NED Project. TGP respectfully declines to answer at this time because it does not believe that this information will provide useful information to evaluate the actual costs that an EDC would incur in a transportation agreement with TGP.

Under existing FERC policy, pipelines and its shippers have the ability to negotiate the rates that a shipper will pay for the pipelines services, subject to the caveat that the pipeline also must make available a FERC-approved cost-based recourse rate that can be used by a shipper for transportation service should negotiations prove unsuccessful. As a general matter, on most pipeline expansion projects such as NED, transportation service is most commonly provided under negotiated rates. TGP is offering negotiated rates for the services on the NED Project and these rates are not developed on a cost-of-service model, such as one that might be used to calculate a rate based on capital cost and carrying charges. In addition, TGP is developing enhanced firm transportation services that may require additional facilities. TGP is in the process of estimating these costs and developing a negotiated rate at which these services will be marketed. TGP respectfully submits that the levelized annual cost associated with its proposed NED investment and the carrying charge used to calculate that annual cost that is being requested in this question is not relevant in the existing proceeding considering that TGP anticipates that all NED shippers will elect to take service at negotiated rates, not the cost-based recourse rates that will be developed for the Project. TGP will file recourse rates for the NED Project with its FERC Certificate Application, which it expects to file in late October 2015.

- 2. The London Economics June 20, 2015 report on ECRC cost/benefit analysis filed in Maine Docket No. 2014-00071 makes reference to "Wright to Dracut" and "Wright to downstream of Dracut" firm transportation rates for the NED project. Is the "Wright to downstream of**

Dracut” rate the rate for firm transportation service on both the NED Market Path and TGP’s existing 200 line in New England? If no, please distinguish between the “Wright to Dracut” and “Wright to downstream of Dracut” firm transportation services and rates. Also, please identify the primary delivery point(s) for the “Wright to downstream of Dracut” transportation route and clarify whether each gas generator directly served by TGP’s existing system must pay the “Wright to downstream of Dracut” rate to gain firm access to low cost Marcellus supplies.

Response:

As a threshold matter, TGP wants to be clear that it fundamentally disagrees with the findings in the London Economics International (LEI) Report issued on July 14, 2015 in the Maine PUC proceeding No. 2014-00071. At a case conference held on July 21 to discuss the LEI Report, other parties, including the Office of the Public Advocate, raised issues with the facts and assumptions that are in the LEI Report and questioned whether these flaws skewed the results in the LEI Report. Further, TGP and others in the proceeding have, as of this writing, submitted 65 data requests to better understand the analysis that LEI performed and whether the results are reliable.

In response to Staff’s question, the “Wright to downstream of Dracut” rate is a rate for transportation service from a primary delivery point at Wright, New York to a primary receipt point at any delivery meter located beyond Dracut throughout TGP’s Zone 6 rate zone, *i.e.*, New England. In other words, the “Wright to downstream of Dracut” rate is for service on the NED Market Path and TGP’s existing 200 Line in New England. Based on such a Capacity Path (*i.e.*, the path from the primary receipt point to the primary delivery point), a shipper would have the right to access all other delivery points in that Capacity Path on a secondary in-the-path (SIP) basis. A shipper taking service on a “Wright to Dracut” contract with a primary delivery point at Dracut would have access to delivery points downstream of Dracut on a secondary out-of-path (SOP) basis. Per TGP’s Tariff and FERC policy, Shippers with the “Wright to Dracut” or the “Wright to downstream of Dracut” primary Capacity Path also have secondary access on either an SIP or SOP basis to all receipt meters and related markets within TGP’s Zone 5 (*i.e.*, New York and New Jersey) and Zone 6 (*i.e.*, New England).

Shippers on either a “Wright to Dracut” contract or a “Wright to downstream of Dracut” contract will have access to low cost Marcellus gas supplies at the Wright receipt point.

- 3. Ref. Initial Comments of TGP, June 2, 2015, Figure 5. To the extent TGP directly serves generators located in Connecticut and Rhode Island, please clarify whether the “Wright to downstream of Dracut” rate applies to such generators. If not, please provide the applicable firm transportation rate for generators in Connecticut and Rhode Island.**

Response:

Yes, the "Wright to downstream of Dracut" rate would apply to generators located in Connecticut and Rhode Island. Please see TGP's response to Question 2 above.

- 4. Ref. Initial Comments of TGP, June 2, 2015, Figure 5. Please clarify whether the "Wright to downstream of Dracut" rate will apply to generators served by the NED project and located in the Mass Hub area. If not, please provide the applicable firm transportation rate for generators in Mass Hub area.**

Response:

Please see TGP's response to Question 2 above. The transportation rate that would be applicable to a generator located in the Mass Hub area will depend on whether that generator is located directly on TGP's NED Market Path between Wright, New York and Dracut, Massachusetts, or is located downstream of Dracut on the existing TGP system in New England, and whether such generator contracts for primary capacity to its delivery point downstream of Dracut or contracts for primary capacity to Dracut and, subject to availability, seeks secondary firm access to its delivery meter downstream of Dracut.

- 5. Regarding Figure 39-Project reservation (FT) costs - in the London Economics June 20, 2015 report on ECRC cost/benefit analysis, please provide the unredacted "Wright to Dracut" and "Wright to downstream of Dracut" reservation charges in Dth/day for the NED project. Please also provide the associated contract terms.**

Response:

The precedent agreements filed in the Maine PUC proceeding that reflect the "Wright to Dracut" and "Wright to downstream of Dracut" reservation charges applicable in that proceeding are subject to Protective Orders issued by the Maine PUC and available to parties that have executed a non-disclosure agreement. In addition, the precedent agreements filed in the Maine PUC proceeding, going back to September 2014, contain terms that are unique to the Maine proceeding given the statutory context under which the Maine PUC was evaluating contract proposals from pipelines. Furthermore, TGP's Maine precedent agreements do not contemplate the enhanced firm services that TGP will offer to EDC shippers. For these reasons, the Maine precedent agreements are not a useful guide for evaluation of potential contract terms with EDC counterparties.

TGP notes that Liberty Utilities has filed with the Commission in Docket No. DG 14-380 the precedent agreement between TGP and Liberty for the NED Project. Liberty Utilities has requested confidential treatment of this precedent agreement. Although the Liberty precedent agreement, like the Maine PUC precedent agreements, does not contemplate the enhanced firm services that would be offered to EDCs, it is more representative of the terms that will be

offered by TGP to EDCs.

6. **Figure 33-Type of product offered - in the London Economics June 20, 2015 report on ECRC cost/benefit analysis indicates that FT for the NED project will be provided on a rateable basis. However, in response to Initial Question 12, TGP states that the NED project will offer a no-notice transportation service. Please provide the corresponding no-notice "Wright to Dracut" and "Wright to downstream of Dracut" reservation charges in Dth/day and explain how TGP expects to provide that service including the facilities it intends to use.**

Response:

TGP expects to start an open season for transportation service to EDCs in the next few weeks and is in the process of finalizing the details of the enhanced firm transportation service that will be offered to EDCs. The enhanced firm transportation service will include a no-notice transportation service, enhanced hourly entitlement (non-ratable service), and other enhanced opportunities for gas-fired generators to manage their load profile. This open season will include more details on the enhanced firm services that TGP will offer to NED Project shippers.

7. **TGP claimed in in Maine Docket No. 2014-00071 that because Spectra and PNGTS projects do not offer direct access to the Marcellus and Utica regions, both will incur 3rd party transmission charges to reach a New England delivery point. Please provide all support for that claim.**

Response:

Neither the PNGTS nor the Algonquin pipeline systems attach directly to Marcellus or Utica physical gas production. In order for Algonquin's and PNGTS' directly-served markets to utilize such gas sources, transportation on one or more other third-party pipeline systems must be negotiated, contracted, paid for, and occur. For example, PNGTS can receive – indirectly – indigenous Marcellus-based gas from a pipeline route that could include, but not necessarily be limited to, one or more of the following additional pipelines: Iroquois Gas Transmission, Constitution Pipeline, TGP and TransCanada Pipeline. Similarly, Algonquin markets could receive Marcellus-sourced gas indirectly from other third-party pipeline systems such as TGP, Millennium Pipeline, Iroquois, Constitution Pipeline, Texas Eastern or perhaps others. The contractual terms, rates, and costs associated with those upstream pipeline transportation arrangements are not fully known to TGP, but nevertheless must occur, because of the lack of direct physical connection by PNGTS and Algonquin to Marcellus production. TGP is the only pipeline system serving New England that provides New England markets, such as natural gas-fired generation facilities, direct access to physical Marcellus production through its NED expansion, plus the specific ability to supply PNGTS, Algonquin and Maritimes & Northeast Pipeline with such gas.

8. **TGP's response to Initial Question 27 states that it regularly delivers significant volumes into the Algonquin system at the Mahwah, New Jersey and Mendon, Massachusetts interconnects. Please provide the total volume of gas delivered by TGP to Algonquin in 2014 and the volume that was delivered to gas generators directly served by Algonquin in 2014. Also, provide the number of gas generators directly served by Algonquin in 2014 that received gas supplies from TGP.**

Response:

During 2014, TGP delivered on behalf of its customers an average of 996,306 Dth/d to Algonquin at TGP's interconnects at Mahwah, NJ and Mendon, MA. Winter period deliveries to Algonquin averaged 1,043,932 Dth/d during the months of January through March 2014 and November and December 2014. Non-winter deliveries averaged 962,701 Dth/d during the months of April through October 2014. These gas supplies delivered to Algonquin of approximately 1 Bcf/d year-round represent a substantial portion of gas available to various users and markets ultimately served by Algonquin's system, including gas-fired generation facilities. It is not possible for TGP to track, on its own, the exact amount of the supply that is provided from TGP to Algonquin that is in turn used to serve specific gas-fired generation facilities directly served by Algonquin.

9. **TGP's response to Initial Question 25 states that it directly serves 18 gas-fired generating facilities including Ocean State Power and Milford Power. Those two facilities also appear on Algonquin's list of generators directly connected to its system. Please address this apparent discrepancy.**

Response:

Ocean State Power is dually-connected to TGP and Algonquin, so there is no discrepancy when both TGP and Algonquin list this facility as being directly connected to its system. There are two power plants in ISO-NE named "Milford Power" - the one listed by TGP is located in Milford, CT (southwest CT), the one listed by Algonquin is in Milford, MA (southeast MA), so again there is no discrepancy.

10. **TGP's response to Initial Question 25 identified the gas generators that TGP directly serves. Two generators, Windsor Locks and Capital District, are not listed in ISO-NE's CELT report. Are these generators listed in the report under different names? Also, please clarify whether Rhode Island State Energy goes by the acronym RISEP.**

Response:

Yes, the ISO-NE CELT report lists these plants under different names, as shown in the following table:

TGP Initial Question 25	ISO-NE CELT Report
Windsor Locks	Dexter 1 & 2
Capital District	CDECCA (Capitol District Energy Center Cogeneration Associates)
Rhode Island State Energy	RISEP

11. TGP's response to Initial Question 1 states that based on the 30-inch design, TGP could make approximately 750,000 Dth/day of pipeline capacity available to EDCs. What is the equivalent generation capacity in MW that could receive firm transportation service from such pipeline capacity? Also, please provide the underlying calculation and assumptions.

Response:

The amount of gas-fired generating capacity that could be supported by 750,000 Dth/day of pipeline capacity depends on the heat rate of the power plants and the number of hours during the day they use the pipeline capacity. Assuming gas-fired combined cycle plants have a heat rate in the range of 7,000-8,000 Btu/kWh, then 750,000 Dth/day of pipeline capacity could serve approximately 3,906 MW to 4,464 MW of generation, assuming equal deliveries throughout the day (*i.e.*, 1/24th of the maximum daily contract amount in each hour). Calculations are shown below:

$$750,000 / 24 * 1,000 / 8,000 = 3,906$$

$$750,000 / 24 * 1,000 / 7,000 = 4,464$$

It is important to note, however, that the above example is for illustrative purposes in order to address the specific question asked of TGP above. Such supplies of generation capacity can significantly change due to a number of factors such as, among other things, pipeline line pack characteristics, specific types of compression utilized, existence of peaking facilities, generation plant capacity factors, and daily / hourly load curves of the plants. The underlying point is that as a result of TGP's NED expansion, significant volumes of competitively priced incremental natural gas will be made available to a substantial portion of New England's natural gas fired generation fleet, whether existing currently or that will be built in the future, and can also be used to help supply the needs of gas-fired generation facilities ultimately attached to other pipelines within New England.

12. TGP has stated that the primary receipt point for the NED project is Wright, NY. Please provide an estimate of the average spot market price of natural gas (\$/MMBtu) at that receipt point (or the nearest representative liquid trading point if data for the receipt is not available) for the period from April 1, 2014 through March 31, 2015. Please identify the data source and provide the daily data used to calculate the average.

Response:

For purposes of clarification, prospective shippers on TGP's NED Project can contractually elect Wright, NY as a primary receipt point, but may also contractually elect to receive gas in northeastern Pennsylvania as well, thus Wright, NY is not the sole available primary receipt point. The specific contractual primary receipt point(s) for an individual shipper will be based upon that shipper's specific election of the contract path and Tariff provided rights that it desires.

Natural gas pricing information is not currently published for Wright, NY. However, in TGP's response to Question 8 in the first set of questions posed in this proceeding, TGP discusses the difference in the historical prices associated with the Tennessee Zone 4 and TETCO M3 trading points that are in the vicinity of Wright, but do not currently cover transactions at Wright. TGP does not believe that there is a specific meaningful substitute for Wright, NY that is currently published. Furthermore, considering the number of changes that are anticipated to occur that could affect future natural gas pricing at Wright, NY, TGP respectively submits that estimated historical prices for Wright, NY are not relevant in evaluating various pipeline options in this proceeding; rather, it is the projected prices at Wright, NY versus other natural gas trading points that would be most relevant. As TGP stated in its response to Question 7 in the first set of questions posed by Staff in this proceeding, TGP has not conducted any conclusive studies of the projected difference in gas prices in the Marcellus shale production region versus the price at Wright, New York. The prices at each of those locations will be a function of a number of market demand and supply dynamics over time, and generally, parties acquiring pipeline capacity, including LDCs, acquire pipeline capacity back to a sufficiently liquid purchasing point so that there are a number of counter-parties from which to purchase the gas commodity at any particular time and in line with those parties' specific needs

- 13. In discussions with Staff, Spectra said that the combination of the AIM, Atlantic Bridge and Access Northeast projects will significantly reduce, if not eliminate, the constraints on the Algonquin system. Assuming the NED project does not go ahead, does TGP believe such pipeline expansions will reduce the constraints on TGP's existing system? Similarly, assuming Access Northeast project does not go ahead, does TGP believe the NED project will reduce the constraints on the Algonquin system? Please explain your answers and quantify the bottleneck reductions.**

Response:

First, as announced, TGP has obtained management approval to formally proceed with the NED Market Path expansion as currently contracted, subject to various regulatory approvals. However, assuming purely for the illustrative purposes of this question that the NED Project did not go forward, TGP is not aware of any expansions on other pipeline systems specifically designed to reduce, or eliminate, constraints experienced on TGP's existing system affecting New England. Constraints on TGP's system are a function of the shortage of capacity and

physical facilities to meet all the requests for transportation service on the TGP system. These constraints cannot be relieved by the expansion of capacity and physical facilities on any other pipeline system. TGP receives requests nearly every day of the year for transportation service to or within New England that greatly exceed Tennessee's operating capacity. In the winter (*i.e.*, November through March), Tennessee is required every day to restrict shippers' requested volumes for non-firm service, with the extent of these restrictions averaging between 0.7 Bcf/d and 1.4 Bcf/d over the past three winters, and reaching up to a high of 2.6 Bcf/d of restricting shipper requests. These required restrictions on requested service that are affecting New England occur at multiple locations along Tennessee's system, and regardless of whether the restriction is made at a point in New England or upstream of New England, these restrictions limit the ability to deliver gas in New England. Therefore, without an expansion of TGP's system, such as that accomplished by TGP's NED Project, constraints on TGP are expected to continue. However, TGP's NED Project is designed to alleviate, and in some instances eliminate, currently existing bottlenecks preventing low cost gas supplies from reaching various New England markets as evidenced by the amount and frequency of requested transportation to New England TGP is currently forced to restrict.

In addition, TGP's NED Project has the potential, assuming parties contract accordingly, to help alleviate constraints on other pipeline systems in New England. As discussed in TGP's initial comments, to maximize savings to electric consumers, it is necessary to provide increased access to low-cost natural gas supplies to as many New England gas-fired generators as possible. Once TGP's NED expansion Project is in service, TGP's system will be operationally and contractually enhanced to allow significant additional supplies, sourced directly from the prolific and economic Marcellus shale basin, to reach existing and future natural gas-fired generation resources in a number of ways as contracted.

- NED will allow Tennessee to significantly increase deliveries to other pipeline systems in New England (including Algonquin, M&NP, PNGTS, and Iroquois), providing increased supplies that can be delivered to natural gas-fired generators directly attached to those systems.
- NED provides unique access to the ISO New England-defined Massachusetts Hub area, which has been determined to be critical for future generation development to allow the retirement of older, less efficient, more costly and higher emitting generation.
- NED will increase the ability to deliver natural gas to generation resources currently attached to Tennessee and its LDCs, as shippers on NED will be able to obtain firm contractual rights on the NED expansion to its interconnection with the existing Tennessee system at Dracut, Massachusetts, as well as to delivery locations beyond Dracut along Tennessee's existing system.

Thus, although TGP does not have the specific operating information on other pipelines necessary to determine the bottlenecks that could be relieved by the NED Project, because of the NED Project's being operationally a new path for natural gas into New England, it will create

a large bi-directional pipeline loop that will fundamentally change and improve natural gas flows resulting in increased reliability as well as additional gas supplies being available for LDCs, gas-fired generators and industrial end-users throughout New England.

14. What was the average daily demand for gas in MMBtus on TGP's system during the 2014/15 winter?

Response:

For the period November, 2014 through March, 2015 the average volume of gas delivered off of TGP's system to delivery meters in Zone 6 (*i.e.*, to various locations in New England) was approximately 1.45 Bcf/d.

