

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

New York Independent System Operator, Inc.

Docket No. ER21-502-000

SUPPLEMENTAL AFFIDAVIT OF PALLAS LEEVANSCHAICK, PH.D.

I. Background

1. My name is Pallas LeeVanSchaick. I am an economist and vice president at Potomac Economics Ltd. (“Potomac Economics”). Potomac Economics is the Market Monitoring Unit (“MMU”) for the New York Independent System Operator, Inc. (“NYISO”), and I currently serve as Director of the MMU for NYISO.¹ My credentials and those of the MMU can be found in my previous Affidavit in this proceeding.²
2. I provided an Affidavit accompanying NYISO’s filing on November 30, 2020 in the above-captioned proceeding (the “LeeVanSchaick Affidavit”), in which I described analysis performed by the MMU which supports the NYISO’s proposed use of TETCO M3 as the proxy gas hub for Load Zone G (Rockland County).
3. The purpose of this Supplemental Affidavit is to clarify aspects of the MMU’s analysis in response to criticisms raised in the affidavit of Mr. Anthony Scott of BTU Analytics, LLC (the “Scott Affidavit”), which was included as Attachment 1 to the limited protest filed by GenOn Bowline, LLC and GenOn Energy Management, LLC (“GenOn”) on December 21, 2020 in this proceeding.³

¹ Capitalized terms that are not specifically defined in this Supplemental Affidavit shall have the meaning set forth in the filing to which it is attached or, if not defined therein, the meaning set forth in the NYISO Market Administration and Control Area Services Tariff.

² Docket No. ER21-502-000, *New York Independent System Operator, Inc., 2021-2025 ICAP Demand Curve Reset Proposal* at Attachment VI (*Affidavit of Pallas LeeVanSchaick, Ph.D.*) (November 30, 2020).

³ Docket No. ER21-502-000, *supra*, Limited Protest of GenOn Bowline, LLC and GenOn Energy Management, LLC (December 21, 2020) (“GenOn Protest”).

II. Summary of the MMU's Analysis Supporting the Use of TETCO M3 as the Gas Hub for Load Zone G (Rockland County)

4. Potomac Economics provided comments and analysis related to the selection of proxy gas hubs at various points throughout the 2021-2025 ICAP Demand Curve reset ("DCR"), in our capacity as MMU for the NYISO. My analysis and its conclusions are further described in the LeeVanSchaick Affidavit. Several key points are summarized below.
5. The DCR requires the NYISO to use a method for estimating the net energy and ancillary services revenues for each peaking plant that is simple, transparent, and based on information that is readily accessible to market participants. Consequently, there may be individual days when an analysis of pipeline data suggests the net energy and ancillary services revenues could potentially be over-estimated, but these should be reasonably balanced against circumstances when the same data suggests they could potentially be under-estimated on other occasions. This seeks to ensure that over the course of the three-year period used in developing estimates of net energy and ancillary services revenues for each Capability Year, such estimates produce a reasonable approximation of potential revenue earnings for each peaking plant. The NYISO's proposal to use the TETCO M3 hub price plus a \$0.27/MMBtu transportation cost adder for the proposed dual fuel peaking plant in Load Zone G (Rockland County) strikes a reasonable balance between periods when the actual cost would potentially be lower versus periods when such costs would potentially be higher.
6. Gas from the TETCO M3 hub is transported to Rockland County via the Algonquin pipeline. Pipeline data, including critical notices and daily operationally available capacity data, indicate that while bottlenecks on Algonquin can occur in Rockland County, they are far more prevalent downstream of Rockland County. Hence, it is reasonable to assume a different gas price in Rockland County than at locations further downstream, such as in Connecticut where the Iroquois pipeline interconnects with the Algonquin pipeline. Use of a downstream pricing hub, such as Iroquois Zone 2 (as recommended by Mr. Scott), for the peaking plant in Load Zone G (Rockland County) would be inappropriate because it would ignore: (a) the effects of constraints between Rockland County and the Iroquois pipeline at

the Stony Point and Southeast compressor stations, and (b) that Iroquois Zone 2 often exhibits a substantial premium over prices anywhere along the Algonquin pipeline.⁴

7. Since pipeline constraints can occur upstream of Rockland County, I quantified the possible impact of such constraints in a “restricted by availability” scenario, which used the Iroquois Zone 2 hub price in net Energy and Ancillary Services model proposed by the NYISO for the 2021-2025 DCR (“E&AS Model”) on days when pipeline constraints might have occurred upstream of Rockland County.⁵ Under this scenario, the annual net cost of new entry (“Net CONE”) would have increased by just 1.4 percent compared to an impact of 6.1 percent from using Iroquois Zone 2 as the gas hub for Load Zone G (Rockland County) for all periods. Thus, most of the impact of using the Iroquois Zone 2 gas hub, as Mr. Scott recommends, would be from periods when there were no constraints upstream of Rockland County. Furthermore, the results of the “restricted by availability” scenario should be weighed against the large number of days when the \$0.27/MMBtu transportation adder cost assumption would clearly over-estimate the actual cost of transportation service.⁶ Based on this analysis, I consider NYISO’s use of the TETCO M3 hub price plus \$0.27/MMBtu in Rockland County to be reasonable, while the use of the Iroquois Zone 2 hub would significantly understate revenues on the majority of days when transport is available.
8. The remainder of this supplemental affidavit discusses criticisms raised in the Scott Affidavit and clarifies how they were accounted for in the MMU’s analysis.

⁴ For example, the Iroquois Zone 2 hub price exceeded the Algonquin Citygates hub price on 172 days during 2020 by an average of \$0.33/MMBtu according to data published by S&P Global Market Intelligence (“SPGMI”). Since the Algonquin Citygates hub price is the most constrained portion of the Algonquin pipeline, the Algonquin Citygates price should be regarded as a theoretical upper bound for the appropriate gas price in Rockland County.

⁵ LeeVanSchaick Affidavit at ¶ 35-37.

⁶ LeeVanSchaick Affidavit at ¶ 29. For the three year period used in estimating net energy and ancillary services revenues for the 2021/2022 Capability Year ICAP Demand Curves (*i.e.*, September 2017 through August 2020), the average spread in gas prices between the Algonquin Citygates hub and the TETCO M3 hub was \$0.15/MMBtu during unconstrained periods, which reflect days when the utilization of all Algonquin pipeline segments between Rockland County and Massachusetts were below 95% of the total available pipeline capacity.

III. Responses to Criticisms Raised in the Scott Affidavit

A. The MMU's Analysis Accounts for Daily Gas Price Variation

9. The Scott Affidavit mischaracterizes my analysis as relying on monthly average data and failing to account for daily variations in pipeline availability.⁷ In fact, I presented analysis derived from the E&AS Model that specifically accounts for daily transport availability:

- I compared the Load Zone G (Rockland County) peaking plant's daily fuel usage, as determined by the E&AS Model, with available pipeline capacity in Rockland County on the same days. There was sufficient available capacity on the Millennium Mainline segment of the Algonquin pipeline (*i.e.*, the segment that facilitates deliveries from the TETCO M3 hub to Rockland County) to meet 89 percent of the peaking plant's expected operation, compared to 41 percent if the limiting constraint was the Stony Point segment downstream of Rockland County.⁸
- In the "restricted by availability" scenario, I calculated a blended gas price for each day which weighted the TETCO M3 hub proportionately to available capacity on the Millennium Mainline segment of the Algonquin pipeline. I then re-ran the E&AS Model using the blended prices as alternative fuel cost inputs. This resulted in a reduction of the estimated net revenues equivalent to just 1.4 percent of annual Net CONE value for Load Zone G (Rockland County) for the 2021/2022 Capability Year.⁹

10. The E&AS Model simulates hourly dispatch of the peaking plant and captures the effects of the relationship between power and gas prices each day. As such, my analysis already accounts for the impacts of daily variations in gas prices and pipeline capacity.

B. The "IT Flag" Is Not Sufficient to Demonstrate Whether Transport is Available

11. The Scott Affidavit presents data showing that the "IT Flag" on Algonquin's Electronic Bulletin Board is frequently set to "N" in Rockland County, and claims that, as a result,

⁷ Scott Affidavit at ¶ 61.

⁸ LeeVanSchaick Affidavit at ¶ 34.

⁹ LeeVanSchaick Affidavit at ¶ 35-37.

transportation service to Rockland County is unavailable on such days.¹⁰ However, the purpose of the IT flag is to indicate whether interruptible service was utilized as a portion of scheduled capacity.¹¹ A “N” value may simply indicate that no party scheduled interruptible transport on that day.¹² Since Rockland County currently constitutes a small portion of demand on Algonquin, it is unsurprising that IT deliveries are not consistently scheduled there. Hence, the historical IT flag data presented in the Scott Affidavit does not demonstrate that transport to Rockland County was necessarily unavailable, it only shows that interruptible service was not frequently used.

12. My analysis did not focus on whether interruptible service was historically utilized in Rockland County. Instead, I focused on the daily availability of unutilized pipeline capacity, which would more appropriately evaluate whether transport of gas using either secondary or interruptible service is feasible. The IT flag on its own does not address this – as GenOn notes, it has little or no relationship to available pipeline capacity.¹³ It is unreasonable to conclude from the lack of a positive IT indicator (*i.e.*, IT flag indicator of “Y”) that transport on the Algonquin pipeline is impossible even on days when pipeline utilization is far below capacity.¹⁴

¹⁰ Scott Affidavit at ¶ 51-53 and 81-85.

¹¹ As required by 18 C.F.R. §284.12(a), Algonquin’s tariff states that it has adopted the North American Energy Standards Board (NAESB) Business Practices and Electronic Communication Standards, NAESB WGQ Version 3.1. The NAESB WGQ Additional Standards Version 3.1 defines the IT Indicator as “An indicator which signifies whether or not interruptible transportation service is being utilized at this location.” Further description in WGQ Additional Standards states that “When the operationally available capacity at the location is zero (*i.e.*, no capacity is available), the IT indicator is required to be sent to tell the receiver of the dataset whether some portion of the capacity being utilized at the specified location is interruptible, or conversely, that no portion of the capacity being utilized at the specified location is interruptible. The IT indicator may be sent at the discretion of the [Transportation Service Provider] when the operationally available capacity at the location is not zero.” Algonquin’s Electronic Bulletin Board posts a value for the IT Indicator at each location every day, including days when available capacity is above zero. (Language cited above from the NAESB WGQ Standards is reproduced subject to limited copyright waiver (© 2017 NAESB, all rights reserved)).

¹² For example, in Algonquin’s Operationally Available Capacity posting for the last intraday cycle on December 29, 2020, the “IT” flag was set to “Y” at three downstream locations in Massachusetts and “N” at all other 186 locations, including at unconstrained upstream locations in New Jersey. This is consistent with the “IT” flag indicating only the locations where interruptible transport was actually scheduled, even if it could possibly have been scheduled at other locations.

¹³ See GenOn Protest at Attachment 2, p. 9.

¹⁴ The IT Flag is frequently set to “N” even on days of low demand when the Algonquin pipeline operates far below its maximum capacity. For example, on June 8, 2020, the IT flag was set to “N” at Ramapo, NY and nearly all other locations in both the timely and last intraday cycles, despite the fact that the maximum

C. Algonquin Pipeline Remains Bottlenecked Downstream of Rockland County

13. The Scott Affidavit alleges that secondary transport service to Rockland County would be priced based on the opportunity cost of selling gas further downstream in New England (e.g., at the Algonquin Citygates hub price).¹⁵ The Scott Affidavit notes that the Algonquin pipeline has undertaken “debottlenecking” projects to increase capacity at the Stony Point and Southeast compressor stations downstream of Rockland County, particularly the Algonquin Incremental Market (“AIM”) project completed in early 2017.¹⁶
14. Pipeline data does not support the notion that there are no bottlenecks between Rockland County and the Algonquin pipeline’s primary demand centers in New England. While the AIM project did expand capacity, the Stony Point segment continues to be constrained far more frequently than the Millennium Mainline segment.¹⁷ As noted above, only 41 percent of the Load Zone G (Rockland County) peaking plant’s expected operation would have been feasible if it were restricted by available pipeline capacity at Stony Point, compared to 89 percent if restricted by the pipeline capacity available on the Millennium Mainline segment. Additionally, pipeline critical notices regularly restrict both interruptible and secondary transport through the Stony Point compressor station and several other downstream constraints.¹⁸

D. Use of Firm No-Notice Capacity Data Would Not Change MMU’s Conclusions

15. The Scott Affidavit notes that my analysis did not include data on firm no-notice capacity reserved by pipeline customers, which Mr. Scott contends could impose further restrictions

utilization on the Millennium Mainline segment was just 71 percent and did not exceed 76 percent on any Algonquin pipeline segment.

¹⁵ Scott Affidavit at ¶ 87-93.

¹⁶ Scott Affidavit at ¶ 49.

¹⁷ The data assessed (*i.e.*, September 2017 through August 2020) is after from after the AIM project was placed in service in early 2017. For this post-AIM period, the average utilization of the Stony Point segment (calculated using the higher of “Timely” or “Intraday 3” nomination cycle schedules) was 96 percent, compared to 81 percent on the Millennium Mainline segment.

¹⁸ For example, see the critical notice “AGT Pipeline Conditions for 12/28/20” posted on Algonquin’s Electronic Bulletin Board on December 27, 2020, available [at: https://infopost.spectraenergy.com/infopost/NoticeListDetail.asp?strKey1=104040&type=CRI&Embed=2&pipe=AG](https://infopost.spectraenergy.com/infopost/NoticeListDetail.asp?strKey1=104040&type=CRI&Embed=2&pipe=AG). This language is typical of daily critical notices.

on the quantity of capacity available for purchase by the peaking plant.¹⁹ Incorporation of firm no-notice reservations would not have changed the conclusions of my analysis. First, firm transport rights are mainly held by shippers in New England, not in Rockland County, and pipeline bottlenecks frequently limit the ability to increase flows through Rockland County to points further downstream, as discussed above. Second, there is no evidence from the pipeline critical notices I reviewed that demand from no-notice customers caused secondary or interruptible service for delivery to Rockland County to be cut on any days. Finally, the “restricted by availability” scenario that I conducted conservatively required 110 percent of the Load Zone G (Rockland County) peaking plant’s desired fuel consumption to be available in order to receive a full TETCO M3 hub price, accounting for the risk that gas would stop being available before the pipeline reaches 100 percent utilization.

E. Critical Notices Provide Further Support that Bottlenecks Occur Downstream of Rockland County

16. I presented evidence that the Algonquin pipeline routinely issues critical notices curtailing interruptible and secondary transport sourced west of Stony Point for delivery east of Stony Point, but not for points further upstream such as the Millennium Mainline segment that facilitates deliveries through Rockland County.²⁰ The Scott Affidavit claims that these notices are not relevant because only a small portion of Algonquin’s demand is upstream of Stony Point, and that the IT flag is a better indicator of availability.²¹ Critical notices, while not the sole focus of my analysis, are valuable data because they indicate curtailment of secondary transport in addition to interruptible transport. The IT flag, which has no relationship to pipeline utilization, does not provide the same information. The persistent issuance of critical notices restricting secondary transport for Stony Point and other downstream locations is consistent with operationally available capacity data, which shows

¹⁹ Scott Affidavit at ¶ 13.

²⁰ In 2019, Algonquin announced restrictions on interruptible and/or secondary nominations sourced from points west of Stony Point for delivery east of Stony Point on 363 days, but did not announce restrictions on west-to-east transport for delivery west of Stony Point on any days. See LeeVanSchaick Affidavit at ¶ 31-34.

²¹ Scott Affidavit at ¶ 71-73.

that sufficient capacity to accommodate the peaking plant is typically available on the Millennium Mainline segment but not on the Stony Pont segment.

F. Restrictions on Oil Firing are Already Included in the Net CONE

17. The Scott Affidavit claims that the peaking plant's ability to run on oil when gas is unavailable is immaterial because environmental permits would limit its ability to do so.²² Environmental restrictions, including limitations on the allowed hours of oil firing annually, are already included in the optimization of the E&AS Model. The peaking plant is not expected to run on oil frequently due to its high cost. However, the capability to burn oil provides insurance that reliability will not be jeopardized in rare circumstances when gas cannot be obtained, and the cost of dual fuel capability is included in the Net CONE.

IV. Conclusion

18. Based on the forgoing, the MMU supports NYISO's use of the TETCO M3 gas hub for Load Zone G (Rockland County) despite the criticisms raised in the Scott Affidavit. TETCO M3 is a reasonable gas hub that seeks to avoid unreasonable over-estimating or under-estimating of the potential net energy and ancillary services revenues for the Load Zone G (Rockland County) peaking plant.
19. This concludes my affidavit.

Respectfully submitted,

/s/ Pallas LeeVanSchaick
Pallas LeeVanSchaick, Ph.D.
Vice President
Potomac Economics Ltd.

²² Scott Affidavit at ¶ 70.