UG-220131

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April 28, 2023

SENT VIA WEB PORTAL
Amanda Maxwell
Executive Director and Secretary
Washington Utilities and Transportation Commission
P. O. Box 47250
Olympia, WA 98504-7250

Re: *Cascade Natural Gas Company 2023 Integrated Resource Plan*,
Docket UG-220131

Dear Director Maxwell:

The Public Counsel Unit of the Washington State Attorney General's Office (Public Counsel) respectfully submits these comments in response to the Notice for Comment and Recessed Open Meeting (Notice) dated March 24, 2023. Public Counsel appreciates the opportunity to engage on Cascade Natural Gas Company's (Cascade or Company) 2023 Integrated Resource Plan (IRP).

Public Counsel, along with numerous other stakeholders, participated in Cascade's process to develop and review the 2023 IRP. In addition to attending Technical Advisory Committee meetings, Public Counsel submitted informal comments and questions to the Company in response to the draft IRP provided to stakeholders. Public Counsel appreciates the time Cascade offered to explain their plan and answer questions.

Public Counsel's comments address a narrow set of issues for the Commission's consideration, including the customer demand forecast and Cascade's claimed need for capacity on the GTN Xpress Pipeline.

Public Counsel's Recommendation

The Company should reevaluate the effects of public policy and market dynamics on the customer demand forecast.

The Company forecasts average annual customer load growth of 1.56 percent over the 20-year planning period.[1] Furthermore, the Company forecasts 1.1 percent average annual system-wide load growth and 0.98 percent Washington load growth over a 28-year planning horizon.[2] Among several considerations and assumptions made to develop long-term load growth forecasts, Cascade indicates that public policy impacts were considered.

Cascade points to RCW 19.27A.020(2)(a)[3] which instructs the Washington State Building Code Council to "[c]onstruct increasingly energy efficient homes and buildings that help achieve the broader goal of building zero fossil-fuel greenhouse gas (GHG) emission homes and buildings by the year 2031" [4] through development of the Washington State Energy Code. The IRP also refers to RCW 19.27A.160, which is a clear directive to the Washington State Building Code Council to adopt rules to achieve a 70 percent reduction in annual net energy consumption in buildings by 2031.[5] Cascade also points to the Building Code Council's plan to achieve the 70 percent net energy reduction.[6] Missing from this analysis, however, are the effects of attrition that occurs over the planning horizon as older, less efficient building and housing stock is replaced with structures built under higher GHG emission standards.

The Washington Climate Commitment Act (CCA) will also likely impact customer bills and, as a result, customer demand. Under the CCA, natural gas utilities are permitted a certain level of no-cost allowances for GHG emissions and the availability of no-cost emission allowances decrease over time through 2050.[7] In other words, the cost of emissions will increase over time and will be passed along to customers. As the cost of GHG emissions increases, it is likely that Cascade customers will reduce consumption or exit the natural gas system entirely if gas service is no longer cost competitive with electric service. Furthermore, as customers leave the gas system, fewer customers will be responsible for the fixed costs necessary to operate Cascade's natural gas system, further compounding the bill impacts. This is a major equity consideration, since low-income or vulnerable customers may not have the financial flexibility to move to electric service. Under such a scenario, Cascade and other gas utilities should consider developing assistance programs or enact other measures to help customers electrify. These are all considerations that Cascade must make.

Cascade indicates that they are using price "as a new regressor for this IRP" and that "price has not seen much significance in these models."[8] Yet the effects of the CCA on natural gas prices seemingly would impact customer behavior and, thus, customer demand. The Company should more closely evaluate how CCA-related price effects will impact customer demand.

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[1] Final Integrated Resource Plan at 1-2, Docket UG-220131 (filed Feb. 24, 2023).
[2] *Id.* at 3-2.
[3] *Id.* at 3-12.
[4] RCW 19.27A.020(2)/
[5] Final Integrated Resource Plan at 3-12, Docket UG-220131. This is a 70 percent reduction in building net energy consumption compared to a 2006 baseline.
[6] *Id.* at 3-13.
[7] *Id.* at 6-12, Figure 6-1.
[8] *Id.* at 3-12.

Cascade acknowledges the aforementioned environmental statutes and goals, but still forecasts increasing annual customer demand well past 2031. The effects of housing and building emission standards, building stock attrition, and increased prices due to the CCA are likely to shift customer demand over time, and the Company does not appropriately account for these factors in its demand forecast. Cascade acknowledges that only "one year's worth" of data was available to measure the effects of the "most impactful" building code changes.[9] Even so, the Commission should direct the Company to conduct a more robust analysis and forecast to more accurately reflect the environmental policies in the next iteration of Cascade's IRP.

Public Counsel's comments reflect many of the same concerns expressed in Staff's comments on Northwest Natural Gas Company's 2022 IRP as it relates to customer demand and price effects.[10]

Public Counsel's Recommendation

The Company should explain the discrepancy between forecasted capacity needs on the GTN Xpress Pipeline and documented existing capacity.

Cascade describes current and past capacity needs along the GTN Express Pipeline.[11] These needs were identified in both Washington and Oregon IRPs.[12] As such, Cascade explains it was necessary to purchase capacity. The Environmental Protection Division of the Attorney General's Office, along with Attorney General's Offices of Oregon and California, is involved in litigation pertaining to the GTN Xpress Pipeline. In that litigation, expert Greg Lander assessed Cascade's forecasted demand in the 2020 IRP against GTN's "Index of Customers."[13] Lander's assessment of existing contracts does not illustrate a shortage of capacity, despite Cascade's forecasts otherwise.[14] The Company should explain the discrepancy between their continued forecast for need on the pipeline compared to the evidence of available capacity.

[9] *Id.* at 3-13 to 3-14.
[10] Commission Staff Comments Regarding 2022 Natural Gas Integrated Resource Plan, *Northwest Nat. Gas Co.'s 2022 Integrated Res. Plan*, Docket UG-210094 (filed Jan. 19, 2023).
[11] Final Integrated Resource Plan at 4-20 to 4-21, Docket UG-220131.
[12] *Id*.
[13] Motion to Intervene, Exhibit B at pages Exhibits-19 to Exhibits-20, *Gas Trans. Northwest LLC*, FERC Docket No. CP22-2-000 (filed Aug. 22, 2022) (enclosed as 'Appendix A' to these comments).
[14] *Id.*

Public Counsel appreciates the opportunity to submit these comments. If you have any questions about this filing, please contact Lisa Gafken, (206) 464-6595 or Lisa.Gafken@ATG.WA.GOV, or Corey Dahl, (206) 464-6380 or Corey.Dahl@ATG.WA.GOV.

Sincerely,

/s/

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LWG/CJD

Docket UG-220131

Comments of Public Counsel

Appendix A

April 28, 2023

EXHIBIT B

Affidavit of Gregory Lander, President Skipping Stone, LLC

I declare under penalty of perjury that the following is true and correct to the best of my knowledge and belief:

My name is Gregory Lander. I am President of Skipping Stone, LLC an energy-only management and logistics consulting form. My CV is attached as Exhibit GML-1. I have been retained by the State of Washington's Office of Attorney General to review the Application of Gas Transmission Northwest (GTN) for its GTN Express Project CP22-002 filed October 4, 2021 (GTNX Application). This declaration does not address any expected decline in gas usage in the Pacific Northwest or in California as a result of state and national climate policies, or how those trends could impact need for the GTNX project.

Based on my research, there are issues concerning whether existing customers are subsidizing GTN's expansion project and whether there is market need for the GTNX project. Regarding subsidization, GTN replaced the three compressor stations that this project relies on in 2020 using the Commission's Prior Notice procedures for "like for like" replacements that do not expand pipeline capacity. This appears inappropriate since GTN replaced the compressors with substantially larger compressors, while smaller compressors were available. When all or part of the cost of the larger compressors are included in the GTNX project cost, the incremental rate for new customers would be considerably higher than the current recourse rate for both existing customers and the rate used by GTN for the incremental customers.

Regarding market need, GTN relies on Integrated Resource Plans ("IRP") for two utility customers, Cascade and Intermountain. While GTN claims Cascade is faced with "peak day supply shortfalls in central Oregon, expected as early as 2024," Cascade's IRP does not project a Cascade-system-wide capacity shortfall until 2040.[1] Intermountain's IRP states the GTN capacity will replace existing capacity on the Northwest Pipeline. Thus, Intermountain's contract with GTN is not serving a new market need. Intermountain's decision to replace capacity on other pipelines with capacity on GTN may be in part because GTN's existing customers are subsidizing the GTNX expansion.

Review of GTN Prior Notice Filings:

[1] Cascade's projections in its 2020 IRP also does not take into account "carbon legislation [and] building code legislation" that took effect after the 2020 IRP was published. Cascade noted that its future projections were "particularly difficult" because of these uncertainties, among other uncertainties. IRP at 3-21.

The GTNX Application involves uprating of three GTN compressor units located at compressor stations denominated as the Athol, Starbuck and Kent stations; each unit was previously installed as "replacement" activities undertaken pursuant to Prior Notice Filings made on March 10, 2020.

In the March 10, 2020 notices, (Kent Replacement (CP20-82), Starbuck Replacement (CP20-86), and Athol Replacement (CP20-82)), GTN proposed to replace, at each location, a Rolls Royce Avon reciprocating 14,300 Horsepower (HP) unit with a Solar Titan 130 23,470 HP unit that would, for each, be programmed to have operational limits of 14,300 HP; the HP rating of the units being "replaced". GTN's notice stated the replacement units were "the nearest reliable size available to the unit being replaced." GTN reported the costs for the Kent, Starbuck and Athol units to be approximately $79 MM, $90 MM, and $82 MM respectively. The total, GTN estimated, cost of these three "replacements" was $251 MM.

Simple research I performed identified the availability of Solar Mars 100 turbines with an HP rating of 15,900[2]; a rating much closer to the 14,300 HP of the Rolls Royce units being "replaced" than the 23,470 HP rating of the GTN-chosen Solar Titan 130 units. I did not research the availability of similarly sized electric compressor units, but these also may be available.

GTN states that it held an "Open Season" for 250,000 Dth per day of capacity from Kingsgate to Malin in the late summer of 2019; approximately nine months prior to the three Prior Notice, "replacement", submissions. Thus, when GTN applied to "replace" the three existing compressor stations in 2020, it already had contracted to expand capacity on its pipeline, which it planned to do by uprating these three compressor stations.

Review and Analysis of GTNX Project's Proposed Recourse Rate:

In the GTNX Application, GTN stated that the "upratings" to be achieved by "reprograming" and other modifications would increase GTN capacity to Malin from Kingsgate by 150,000 Dth per day. GTN also stated that the cost of the GTNX Project would be $75.1 MM. This cost does not include any of the $251 MM of replacing the Athol, Starbuck, and Kent stations in 2020. GTN further stated that the estimated annual cost of service (COS) for the $75.1 MM GTNX Project would be $10.6 MM. An annual COS of

[2] See https://www.solarturbines.com/en_US/products/turbine-ratings.html

$10.6 MM represents 14.12% of the total project cost. I refer to the 14.12% ratio as the "Annual Recovery Factor." See Table 1 below:

Table 1

Attribute	Project Cost	GTN stated GTNX Cost of Service	Annual Recovery Factor
GTN GTNX Application	$75,100,000	$10,604,120	0.1412

Also, in the GTNX Application, GTN requested "rolled-in" treatment of the 150,000 Dth per day capacity addition.[3] Rolled-in treatment of expansion capacity can be appropriate when the expansion Project's revenues, at recourse rates, exceed Project COS. I discuss this issue, in detail, below.

GTN is a path-mileage-rate pipeline. This means that recourse rate shippers with maximum rate contracts pay the sum of a "per Dth per mile" rate for the full path of their capacity rights plus a per Dth non-mileage rate. Based upon GTN's tariff rate for FTS-1 service, the per Dth-Mile rate is $0.000362 per Dth per mile (times the path mileage) and the non-mileage rate is $0.028612 times the Dth per day along the path. For the 612.46-mile path from Kingsgate to Malin, the maximum recourse rate is $0.250323 per Dth per day (i.e., 612.46 times $0.000362 = $0.221711 mileage component plus $0.028612 non-mileage component for a total of $0.250323 per Dth per day).

Based on my review of the above, I calculated the incremental rate for expansion shippers using the same Annual Recovery Factor that GTN uses to determine its COS for the GTNX project (14.12%). These calculations show that, not only is rolled-in treatment inappropriate for the GTNX project facilities and capacity, but using recourse rates for the expansion capacity would result in existing, pre-expansion shippers subsidizing the project.

If the Commission determines that existing shippers should only have cost responsibility for that portion of the three "replacement" projects' HP that corresponds to the "replaced" HP (i.e., the 14,300 HP of the three Rolls Royce units), the balance of the "replacement" projects' costs should be allocated to the expansion project, i.e., to the GTNX Project. That is what Table 2 calculates.

3 The other 100,000 Dth per day initially offered in the "Open Season" was determined to be "existing capacity".

Table 2

Line No.	Attributes	Replacement Project Cost	Replacement Project HP	"Replaced" HP	Expansion HP	% of Project Cost that is Expansion Cost	Expansion $$ (Cost X Expansion %) (b) times (f)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
1	Starbuck	$90,000,000	23,470	14,300	9,170	39.1%	$35,164,039
2	Athol	$82,000,000	23,470	14,300	9,170	39.1%	$32,038,347
3	Kent	$79,000,000	23,470	14,300	9,170	39.1%	$30,866,212
	GTNX Project Cost						
4	GTN Xpress	$75,100,000				100.0%	$75,100,000
5	**Total Capital Cost for GTN Express assuming "replacement" is justified**						**$173,168,598**

Table 3 calculates the indicative incremental rate for the GTNX Project using the simple Annual Recovery Factor from Table 1.

Applying the Table 2 costs and the Table 1 Annual Recovery Factor, the GTNX Project should have an incremental rate of $0.4466 and not the existing GTN recourse rate of $0.250323. This calculation is shown in Table 3, below.

Table 3

	Appropriate GTNX Project Cost	Annual Recovery Factor	NX Cost of Ser	Capacity	Days	Cost of Service Daily Rate (Incremental)
	(a)	(b)	(c)	(d)	(e)	(f)
Alt View Expansion as Incremental Project not rolled-in	**$173,168,598**	0.1412	$24,451,406	150,000	365	**$0.44660**

On the other hand, the Commission may find that the "replacements" were not justified because GTN violated the Commission's "like for like" replacement policy and inappropriately masked its planned expansion as a replacement, to be paid for by captive customers. In that case, the Commission may determine existing shippers should only bear the costs from the remaining undepreciated plant costs[4]

[4] Undepreciated plant costs are the costs associated with installing and purchasing the unit, which the company has not yet recovered through its rates.

from the Rolls Royce units. The expansion shippers would bear all of the costs above the remaining undepreciated plant costs from the "replaced" units.

For purposes of analysis, I assume each Rolls Royce unit had $5 MM of undepreciated plant costs. The two Tables below calculate the revised view of incremental project costs as well as indicative incremental rates based upon such assumptions.

Table 4

Line No.	Attributes	Replacement Project Cost	Undepreciated Rolls Royce Unit Credit	Expansion $	% of Project Cost that is Expansion Cost	Expansion $$ (Cost X Expansion %) (b) times (f)
	(a)	(b)	(c)	(d)	(f)	(g)
1	Starbuck	$90,000,000	$5,000,000	$85,000,000	100.0%	$85,000,000
2	Athol	$82,000,000	$5,000,000	$77,000,000	100.0%	$77,000,000
3	Kent	$79,000,000	$5,000,000	$74,000,000	100.0%	$74,000,000
	GTNX Project Cost					
4	GTN Xpress	$75,100,000	$0	$75,100,000	100.0%	$75,100,000
5	**Total Capital Cost for GTN Express assuming "replacement" is NOT justified**					**$311,100,000**

Table 5

	Project Cost Where Existing Shippers bear Only Remaining Plant Cost of Replaced Units	Annual Recovery Factor	Revised Incremental Cost of Service	Capacity	Days	Cost of Service Daily Rate (Revised Incremental)
	(a)	(b)	(c)	(d)	(e)	(f)
Incremental Project where Replacements not Justified	**$311,100,000**	0.1412	$43,927,320	150,000	365	**$0.80233**

It is important to note that the three shippers on the GTNX Project all have agreements with negotiated rates. This means neither they nor their customers (in the case of the Local Distribution Companies) will pay these incremental rates. Rather, these rates, times the subscription quantities, will be used as

revenues crediting GTN's cost of service in future GTN rate cases. In other words, GTN will bear the costs associated with the difference between its negotiated rates and the correct incremental rates.

Review of Integrated Resources Plans for Cascade Natural Gas and Intermountain Gas in assessing GTNX Project "Need":

Cascade Natural Gas

In the GTNX Application, GTN cites to the Integrated Resource Plans (IRPs) of two of the shippers that subscribed to the GTNX Project. GTN, at page 11 of the GTNX Application specifically cites to the Cascade Natural Gas Corporation 2020 IRP and states "Cascade is faced with peak day supply shortfalls in Oregon, expected as early as 2024, as well as an annual average load growth rate of 2.12% in Zone GTN of Cascade's system, a collection of citygates served by GTN."

I reviewed Cascade's GTN Capacity subscription as presented in GTN's Index of Customers (IOC) filing with the FERC for January 2022.[5] The index shows that, for the portion of Cascade's system that it refers to as the "Zone GTN"[6], the firm GTN capacity in the counties that appear to be those comprising the Zone GTN is 42,223 Dth per day. Page 1 of Exhibit GML-3 has the Cascade January 2022 Index of Customers data for GTN which shows this derivation. Then, assuming Cascade's Peak Day in 2023 equals this 42,223 Dth per day capacity, and assuming the 2.12% average annual load growth from 42,223 Dth per day, Page 2 Exhibit GML-3 shows that even extending 2.12% annual growth to 2040, the 2040 Peak day is 60,316 Dth per day, an increase of approximately 18,000 Dth per day over the 17-year period from 2023 to 2040. This compares to the 20,000 Dth per day subscription level of Cascade to the GTNX Project. In other words, Cascade does not project needing the full 20,000 Dth/d it contracted for in the next 17 years.

In another section of the Cascade's IRP, Cascade provides a chart of its projected Peak Day Load Growth. That Chart is below as Table 6. Note that a Dth measure is 1/10th of the Therm measure shown in Cascade's Chart.

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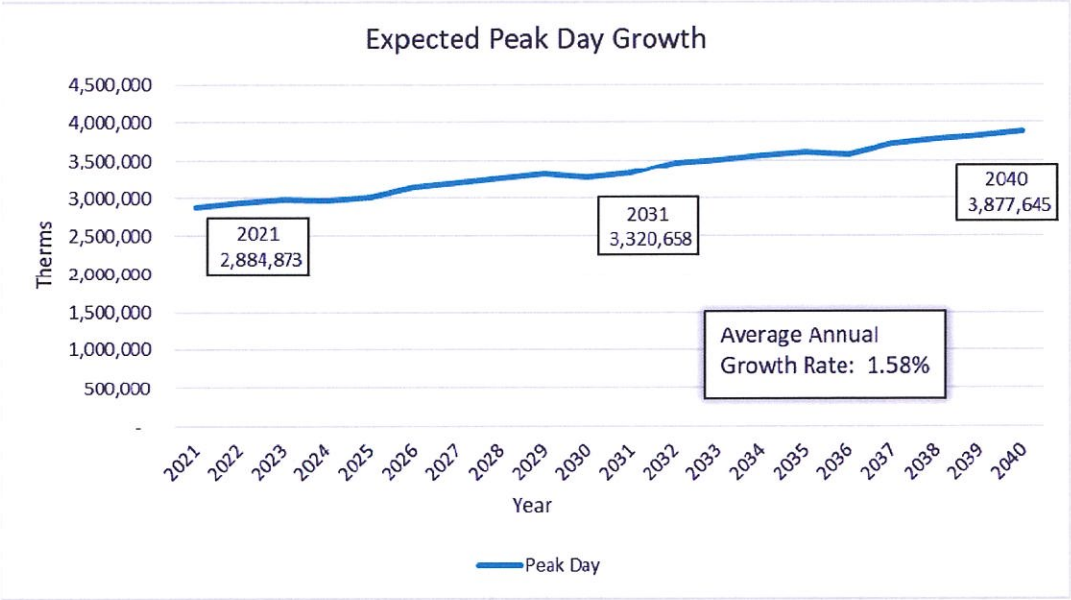
[5] FERC Regulations require every Pipeline and Storage company, that is federally regulated, post a listing of all its firm customers every quarter. Such filings list firm contract quantity and the firm receipt and delivery quantities by location. Capacity Center, a brand of Skipping Stone, has collected and processed IOC data for the past 15 years. Capacity Center cross-references such point level data to the pipelines' point lists posted on their Informational Postings sites, and supplements the IOC data with the state and county of the pipeline location.

[6] See Exhibit GML-2 for two maps; one from Cascade's IRP showing its "GTN Zone"; and, one of Oregon, showing Oregon counties. GML-2 also has Cascade's citygates denominated as being in the GTN Zone.

Table6. Cascade Chart from 2020 IRP

Figure 3-15: Expected System Peak Day Growth (Volumes in Therms)



In researching Cascade's total contracted capacity on Northwest Pipeline (NWPL) and GTN, figures taken from the NWPL and GTN IOCs for January 2022 show that Cascade's total Firm Capacity is 596,181 Dth per Day. This is made up of 512,020 on NWPL and 84,161 on GTN. Measuring this against Cascade's projected Peak Day, Cascade does not forecast getting even close to the current level of subscribed capacity versus its forecasted level of Peak Day prior to 2040. Its 2040 forecasted Peak Day is 387,764.5 Dth per day compared to the 596,181 Dth per day that it currently has under contract. Thus, given that the above calculations of the Oregon portion of Cascade's system show Cascade won't require the full 20,000 of subscribed GTNX capacity prior to 2040; and its entire system looks to be satisfied with existing capacity, there could well be alternative ways of meeting its Oregon-only needs by contracting for delivered gas supplies from shipper(s) holding GTN capacity, which GTN shipper(s) do not have "native load" but are rather merchants holding capacity on GTN which encompasses Cascade's Oregon service territory. Alternatively, electrification combined with Energy Efficiency could reduce, and possibly eliminate, the projected 2.12% annual growth in peak demand.

Intermountain Natural Gas

With respect to the subscription of Intermountain Gas Corporation, GTN at page 12 of the GTNX Application states: "Intermountain has recently restructured its interstate firm transportation capacity portfolio by replacing firm transportation capacity on the Northwest Pipeline from the

Rockies to Idaho with firm transportation capacity from Northwest Pipeline's interconnect with GTN, located in Stanfield, Oregon, to Southern Idaho." In other words, IGC's subscription does not appear to serve growing markets but is a replacement of supply source(s) in the Rockies for supply source(s) in Alberta, Canada.

The Intermountain 2021 IRP forecasts a deficit with its existing resources. As can be seen, from their chart (see below Table 7) IGC projects to have no capacity shortfall prior to winter of 2025/2026. The High case deficit in 2026 appears to be 63,449 Dth. The jump from 0 in 2025 to the 2026 value is not explained in the text accompanying the chart. It may be due to a 2025 expiration of an NWPL contract. All other IGC contracts on GTN and NWPL expire after mid-2035.

Total Company Design Weather - Peak Day SENDOUT (Core+LV-1) Deficit Under Existing Resources (Dth)						
Growth Scenario	2021	2022	2023	2024	2025	2026
Low	0	0	0	0	0	10,828
Base	0	0	0	0	0	42,147
High	0	0	0	0	0	63,449

Table 7. IGC IRP Page 126

It is also noteworthy that IGC's 2021 Base Case Peak day sendout forecast showed less peak day demand than its 2019 Base Case Forecast. See below Table. The abbreviation "TC" stands for "Total Company".

2021 IRP LOAD DEMAND CURVE – TC USAGE DESIGN BASE CASE Over/(Under) 2019 IRP (Dth)			
	Peak Day Sendout		
	Core Market	Firm CD[1]	Total
2021	(8,836)	(6,365)	(15,201)
2022	(8,825)	(6,743)	(15,568)
2023	(11,203)	(7,451)	(18,654)

[1]Existing firm contract demand includes LV-1 and T-4 requirements.

Table 8. IGC IRP Page 127

This change in demand forecast, while instructive, also underlines that IGC is not subscribing to the GTN capacity to meet growing demand, but rather, to replace a supply source to feed its NWPL capacity.

Upstream Need for GTN's Project

GTN has described this project as in part a "supply push" project.[7] Generally, producers will subscribe to expansion projects in order to get their gas out of a production area and "push it" to demand locations where they believe that the net value (price) to them of selling at the demand location (and taking into account the cost of getting to that demand location) will be better than selling to others with pipeline capacity out of the supply area. Once a producer subscribes to such capacity to reach the better-priced demand location, the producer will "drill to fill" such capacity, as well as drill to offset production declines from older wells. Thus, having committed to such capacity, production will increase to fill such capacity. When producers subscribe to expansion project capacity as described immediately above, that sort of subscription is referred to as a "supply-push" project or pipeline.

In its Motion to Intervene, Tourmaline, a natural gas producer, described its capacity purchase on GTN Xpress as a "critical element to its long-term business planning." When a producer describes a project as

[7] *See* TC Pipelines Q3 2019 Earnings Call Transcript (Nov. 7, 2019), available at: TC Pipelines L P (TCP) Q3 2019 Earnings Call Transcript | The Motley Fool

"critical to its long-term business planning," it means that to optimally grow its revenue/profit (i.e., its business plan), it has to drill more wells and sell more gas at the better-priced demand location(s).

This completes my Affidavit.

Executed this 17 day of August, 2022 in Essex County, Massachusetts

Gregory Lander