

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Case No. _____

Petition of Vermont Gas Systems, Inc. for a change in rates and for use of the System Expansion and Reliability Fund in connection therewith	
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**DIRECT TESTIMONY OF
TODD LAWLISS
ON BEHALF OF VERMONT GAS SYSTEMS, INC.**

February 16, 2021

SUMMARY OF TESTIMONY

Mr. Lawliss describes projected gas costs for the Rate Year and successive years under the proposed Alternative Regulation Plan and sponsors the following Exhibits:

EXHIBITS

Exhibit VGS-TL-1	Determination of Revenue and Gas Costs
Exhibit VGS-TL-2	Determination of Natural Gas Charge

**DIRECT TESTIMONY OF
TODD LAWLISS
ON BEHALF OF VERMONT GAS SYSTEMS, INC.**

1 **Q1. Please state your name, occupation, and business affiliation.**

2 **A1.** My name is Todd Lawliss. I am the Manager of Gas Supply at Vermont Gas Systems,
3 Inc. (“VGS” or the “Company”).

4

5 **Q2. Please describe your educational background and pertinent professional experience.**

6 **A2.** I have a B.S. in Engineering Management from the University of Vermont (1988) and an
7 Associate in Science Degree in Computer Programming from Champlain College (2000). I have
8 been at VGS since 1988 in positions of increasing authority. I took the role of Manager, Gas
9 Supply and Gas Control in January 2015, and in January 2021, I was promoted to my current
10 position.

11

12 **Q3. Have you previously testified before the Vermont Public Utility Commission**
13 **(“Commission”)?**

14 **A3.** Yes. I testified in VGS’s prior rate cases in Case Nos. 17-1238-INV, 18-0409-TF,
15 19-0513-TF, and 20-0431-TF.

16

17 **Q4. What is the purpose of your testimony?**

18 **A4.** I describe projected customer sales revenue and gas costs for the Rate Year (October 1,
19 2021 – September 30, 2022). The projected customer sales numbers are needed to develop the
20 billing determinants and associated cost of gas supply, which is used in the Cost of Service

1 (“COS”) presented by Mr. Mitchell. Since this COS is also the starting point for the Alternative
2 Regulation Plan (“ARP”) under consideration in Case No. 19-3529-PET, I also discuss how
3 these values were determined for the years ending September 30, 2023, and September 30, 2024.
4 Finally, I also discuss the impact of VGS’s Climate Action Plan on revenue and gas costs.

5 As with the last several COS filings VGS has made, it should be noted that the actual
6 changes in gas costs reflected on customers’ bills will be based on quarterly gas cost adjustments
7 in accordance with the Purchased Gas Adjustment (“PGA”) component of VGS’s ARP currently
8 in effect, which was approved in Case No. 19-2932-PET and extended to September 30, 2021.
9 The same PGA mechanism is included in VGS’s proposed ARP under consideration in Case No.
10 19-3529-PET. However, for purposes of developing a complete COS, and to explain the overall
11 impact of this rate filing for customers and stakeholders, gas costs projected for the Rate Year
12 are compared to the gas cost in effect as of the date of this rate filing. Based on this analysis, the
13 overall natural gas charge is increasing approximately 4.1% for the upcoming Rate Year. For
14 reference, the natural gas charge component makes up just over one quarter of an average
15 residential customer’s annual bill. The drivers of this change are primarily the strengthening of
16 the Canadian Dollar, the increase in weather normalization collections from the warmer-than-
17 normal winter to date, modest increases in commodity costs, and the continued implementation
18 of the VGS Climate Action Plan, which is described later in my testimony. The projected
19 revenue developed in my analysis is used to determine the change in rates needed to meet the
20 proposed COS, which is then reflected in the proposed tariffs.

1 **Q5. Please explain how you developed customer sales and revenue projections.**

2 **A5.** We calculate projected customer sales and revenues using essentially the same methods
3 VGS has historically used when developing the PGA, Integrated Resource Plan, or prior COS
4 filings:

Firm Sales and Revenue

5 For context, a projection of the number of customers, associated sales volume, and
6 revenue is needed to determine the amount of sales revenue we expect to be available in the Rate
7 Year to cover operating costs. We determine firm sales by projecting the number of customers,
8 including new customer growth, who will be using natural gas during the Rate Year and how
9 much natural gas customers in each rate class will use. The number of customers is determined
10 by using the actual number of customers at the end of December 2020 and adding customers that
11 will begin utilizing service between January 2021 through September 2022, plus normalizing for
12 customers who came online during 2020 but did not have a full year of sales in the historic test
13 year (“HTY”)—the twelve months ending December 31, 2020. These new service turn-ons are
14 primarily based on customers VGS is planning to add throughout its existing distribution
15 networks. This is referred to as “in-filling.” Our customer projections from one year to the next
16 are primarily based on VGS’s substantial prior experience with customer additions along existing
17 distribution network mains.

18 Once we understand how many customers we expect in the Rate Year, we forecast how
19 much natural gas those customers will use based on historical usage data by rate class. Because
20 customer usage is driven both by weather and how energy efficient customers’ homes are, we
21 forecast usage based on “normal” weather (calculated based on the 10-year average heating

1 degree days¹ as of December 31, 2020) and reduce that amount to reflect investments in energy
2 efficiency, including VGS's recent commitment to more aggressive energy efficiency targets as
3 part of its Climate Action Plan. Using this methodology, projected firm sales for the Rate Year
4 are approximately 6.1% higher than the HTY, primarily because the HTY had a lower number of
5 heating degree days (6,481) than the 10-year average (6,805). The increased firm sales are shown
6 on Schedule 13 to Exhibit VGS-MM-1 accompanying Mr. Mitchell's testimony.

7 The firm revenues reflect these Rate Year firm customer sales at VGS's current rates as
8 of February 1, 2021.

9 For Rate Years 2023 and 2024, I used a similar approach to forecast the increase in
10 number of customers over those years, as well as a modest increase in firm load. The tables
11 below show the number of customers and sales for each year of the ARP.

Number of Firm Customers

Customer Class	2022	2023	2024
Rate R	48,502	49,097	49,664
Rate G1	4,002	3,996	3,974
Rate G2	1,068	1,108	1,145
Rate G3	519	517	512
Rate G4	564	576	586
Total	54,654	55,294	55,882

¹ A degree day is defined as the difference between the actual daily average temperature and 65 degrees Fahrenheit. For example, a day where the average temperature was 55 degrees would be a 10-degree day.

Mcf Sales

Customer Class	2022	2023	2024
Rate R	4,031,586	4,041,816	4,061,865
Rate G1	625,976	620,866	613,946
Rate G2	193,085	199,894	206,756
Rate G3	765,947	757,827	745,541
Rate G4	1,547,889	1,573,522	1,593,720
Total	7,164,483	7,193,925	7,221,828

Interruptible Sales and Revenue

1 Projections for interruptible sales and revenues are based on a similar methodology. With
2 a few exceptions, the sales per customer are based on HTY sales and are adjusted for the same
3 10-year normal weather. Because the HTY was impacted by the Covid-19 pandemic, VGS also
4 did a customer-by-customer interruptible customer review. Where the HTY was abnormally low,
5 VGS used calendar year 2019 load, adjusted for 10-year normal weather, to estimate the
6 expected load in the Rate Year. Interruptible requirements are also adjusted for projected
7 curtailments based on normal weather, firm customer growth, and availability of supply. Based
8 on the above methodology, the projected Rate Year interruptible sales are approximately 5.4%
9 above the HTY level due to colder weather in the Rate Year and Covid-19-related adjustments.
10 This is shown on Schedule 14 to Exhibit VGS-MM-1 accompanying Mr. Mitchell's testimony.

11 Interruptible revenue is based on tariff formulas and the forecasted wholesale gas market
12 prices since the tariff formulas contain a market-based provision.

13 The same methodology was used to forecast interruptible customer sales for the years of
14 2023 and 2024.

1 **Q6. Please describe the change in projected Rate Year gas costs from the HTY.**

2 **A6.** Gas costs are calculated using the methodology contained in the current PGA and
3 consisting of several components, including demand-related costs (costs associated with delivery
4 of natural gas to the U.S. border, the point of interconnection between the VGS pipeline system
5 and TC Energy)² and costs associated with the natural gas itself—the physical supply necessary
6 to serve VGS’s firm and interruptible customers. Each of these components is discussed below.

Demand Costs

7 Demand costs generally reflect costs associated with moving natural gas from supply
8 hubs to the market areas and are usually incurred on a fixed basis, regardless of the volume of
9 gas moved. For VGS, they include the fixed tolls for firm transportation and storage services on
10 the Enbridge Gas Inc.³ (“Enbridge”) and TC Energy pipeline systems. VGS’s TC Energy
11 transportation contracts have a receipt point of Parkway, Ontario, and a delivery point at VGS’s
12 point of interconnection at Philipsburg, Quebec, and Highgate, Vermont. VGS’s Enbridge
13 contracts have a receipt point of Dawn (where VGS’s storage services are located) and a delivery
14 point of Parkway. Both Dawn and Parkway are liquid points on the Enbridge system, and nearly
15 100% of VGS’s supply is purchased at one of these two market supply points.

16 The Rate Year demand charges for the TC Energy tolls reflect the current TC Energy
17 tolls. Similarly, the Enbridge tolls included in the Rate Year reflect current Enbridge tolls. This is
18 consistent with the methodology contained in the PGA, which does not reflect toll changes until
19 such time as they are approved by the Canadian Energy Regulatory (“CER”), the Canadian

² TC Energy is the new name of TransCanada Pipelines.

³ Union Gas Limited and Enbridge Gas Distribution became Enbridge Gas Inc. on January 1, 2019.

1 regulatory body that regulates TC Energy tolls,⁴ or the Ontario Energy Board, the Canadian
2 regulatory body that oversees Enbridge tolls. VGS is unaware of any pending or planned toll
3 changes for either entity.

4 VGS pays both the TC Energy and Enbridge tolls in Canadian dollars. As such, the cost
5 of gas is impacted by fluctuations in the Canadian-to-U.S. dollar exchange rate. Based on the
6 current exchange rate, the demand costs in the Rate Year are expected to increase.

7 Demand charges also include the fixed costs associated with storage. VGS “stores”
8 natural gas during the spring and summer months and “withdraws” it to meet customer demand
9 during the colder months. VGS’s current storage services are provided through our agreement
10 with Tenaska Marketing Canada, which was renewed in April 2017, and with Enbridge. The
11 storage contracts will expire on March 31, 2022. VGS will be obtaining storage services beyond
12 March 2022 through a competitive bid process, however, the costs associated with storage in the
13 Rate Year are assumed to be stable consistent with PGA methodology.

14 Asset management agreement (“AMA”) revenues serve to offset demand costs. VGS
15 annually negotiates an AMA through a competitive bid process. Under an AMA, a third-party
16 marketer uses a portion of VGS’s TC Energy or Enbridge capacity and VGS receives revenue
17 associated with the transaction. While the AMA for the Rate Year has not yet been executed,
18 VGS expects that there will be AMA revenues, based on experience with historical AMA
19 revenues, and has included these projected revenues in the projected gas costs for this COS.
20 Actual AMA revenues will be reflected in future PGAs. AMA revenues reduce overall gas costs
21 in the PGA and therefore reduce the natural gas charge on VGS’s firm rates.

⁴ The CER was previously called the National Energy Board or NEB.

Commodity Costs

1 Commodity costs reflect the cost of the molecule of natural gas itself and are a function
2 of the wholesale market price of natural gas and the volume of natural gas purchased. The firm
3 market supply requirements transported under the TC Energy contracts are reflected in the Rate
4 Year using the same methodology as VGS's PGA. The commodity costs are set in a manner that
5 replicates how VGS purchases the commodity. Specifically, the commodity is set using a
6 NYMEX-based market price determined as follows: NYMEX Henry Hub, Louisiana prices for
7 each month of the Rate Year adjusted for: (i) location basis differential between either Dawn,
8 Ontario, and Henry Hub, or Parkway, Ontario, and Henry Hub, (ii) applicable TC Energy and
9 Enbridge compressor fuel requirements, and (iii) a heating value adjustment. While VGS
10 purchases its supply based on prices that fluctuate with the wholesale market price of natural gas,
11 VGS systematically hedges its firm commodity supply to reduce the price volatility associated
12 with these market fluctuations. Under VGS's systematic hedging, every two months VGS locks
13 in approximately 1/6 of the annual firm purchases for the year beginning three months ahead.
14 The Rate Year reflects the current value of existing hedge positions that will be in effect during
15 the Rate Year. Additional systematic hedges affecting Rate Year volumes will be executed
16 between now and the Rate Year.

17 The firm commodity unit costs described above are applied to firm market requirements
18 that have been normalized for weather and customer growth through September 30, 2022, as
19 described above, excluding firm market requirements met by storage withdrawals or the
20 propane-air plant discussed below. These costs are grossed up by 1.0% to account for
21 unaccounted-for gas.

1 VGS purchases gas for its interruptible customers from various suppliers on the
2 wholesale spot market. The wholesale spot market is also NYMEX-based and adjusted for the
3 locational basis differential. The Rate Year reflects market-based wholesale pricing for these
4 customers.

5 For both firm and interruptible commodity costs in the COS, the market-based pricing is
6 based on the average NYMEX strip for the Rate Year as of the five business days ending
7 January 29, 2021. Basis differential and foreign exchange rates are based on the same five-day
8 period.

9 Gas withdrawn from storage for use by VGS's customers is priced at the
10 weighted-average cost of gas in storage inventory. Based on current projections, storage
11 inventory is expected to be \$2.53/MMBtu at the beginning of the Rate Year.

12 VGS also operates a Propane-Air Plant ("PAP") in Colchester, Vermont. The PAP is
13 used to meet peak customer demand in lieu of incurring incremental costs of additional pipeline
14 capacity. This is sometimes referred to as "peak-shaving." VGS annually incurs operation and
15 maintenance expenses and maintains an inventory of propane gas to operate the PAP. Only the
16 cost of propane used in the operation of the PAP is included in the cost of gas calculation. The
17 ongoing maintenance and operation expenses are included in the Company's COS as an
18 operating expense. (See Schedule 2 to Exhibit VGS-MM-1.) The detailed gas cost and revenue
19 determination is provided as **Exhibit VGS-TL-1**.

20

1 **Q7. Once the overall gas costs for the Rate Year have been established, how is the**
2 **natural gas charge component of rates determined?**

3 **A7.** Consistent with the current PGA, total natural gas costs from Exhibit VGS-TL-1 are
4 reduced by total interruptible revenue, the effect of which is to ensure that revenue from
5 interruptible customers fully accrues to the benefit of firm customers. Further, gas costs are
6 adjusted by the projected balance of the gas cost deferral as of January 31, 2021, and the
7 projected weather amortization for the Rate Year based on weather normalization balances as of
8 January 31, 2021, less amounts to be amortized before the Rate Year. The resulting net gas costs
9 are then divided by Rate Year firm sales to determine the average natural gas rate per Mcf. For
10 the Rate Year, this is an average cost of gas of \$3.80/Mcf compared to a current average cost of
11 gas of \$3.65/Mcf, an increase of approximately 4.1%. The existing natural gas charge for each
12 firm rate class is adjusted by the same overall percentage increase. The determination of the
13 resulting natural gas charge is provided as **Exhibit VGS-TL-2**. It should be noted that between
14 now and the beginning of the Rate Year, additional purchased gas adjustments will be filed so
15 that the resulting PGA change in November 2021 will be a different value.

16

17 **Q8. How did you determine gas costs for 2023 and 2024?**

18 **A8.** Gas costs for 2023 and 2024 are indicative only. Assuming an ongoing PGA, the actual
19 gas costs will be determined at the time of the quarterly PGA filings for those rate years. The
20 methodology for gas costs for the 2023 and 2024 rate years is essentially the same as described
21 above. Current market prices for the rate years were used for the commodity pricing and demand
22 tolls were assumed unchanged from 2022 Rate Year levels.

1 **Q9. VGS's Climate Action Plan contains a commitment to more Renewable Natural Gas**
2 **("RNG") to lower carbon impacts for customers. How is that reflected in this filing?**

3 **A9.** VGS will continue to encourage customers to use RNG through its voluntary program so
4 that VGS can continue to make progress toward its Climate Action Plan goals, which are
5 consistent with the state goals. Consistent with PGA protocols, neither the costs nor the revenues
6 associated with the voluntary program are included in the filing. However, to achieve our climate
7 goals, VGS firmly believes that it is appropriate to begin to include increasing amounts of RNG
8 in its overall retail supply portfolio, added to build over time in a measured manner. To achieve
9 VGS's Climate Action Plan goal of 30% reduction in Greenhouse Gas emissions by 2030, we
10 estimate that approximately 20% of our retail supply will need to be RNG through a combination
11 of our voluntary program and inclusion in our supply purchases.

12 In this case, natural gas costs have been forecasted based on approximately 78,900 Mcf
13 of RNG compared to the 37,700 Mcf currently reflected in rates. When combined with the RNG
14 utilized in the voluntary RNG program and VGS's internal use, we expect to achieve 2.2.% of
15 our retail sales in 2022 to be met with RNG. Although this reflects a slightly slower initial ramp
16 up of RNG than we could otherwise pursue, the Company concluded that this was the best
17 approach for customers at this time given current economic circumstances and other factors
18 impacting gas costs in the next year. We still expect to meet our near-term goal of 30% by 2030.

19

20 **Q10. Does this conclude your testimony?**

21 **A10.** Yes.