

**STATE OF VERMONT
PUBLIC UTILITY COMMISSION**

Case No. 22-2230-PET

Petition of Vermont Gas Systems, Inc., for approval of an out-of-state renewable gas purchase contract with a term exceeding 5 years pursuant to 30 V.S.A. § 248(i)	
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**VERMONT GAS SYSTEMS, INC.'S RESPONSES
TO THE DEPARTMENT OF PUBLIC SERVICE'S
SECOND SET OF DISCOVERY REQUESTS**

This is the response of Vermont Gas Systems, Inc. (“Vermont Gas”, “Company”, or “VGS”) to the Second Set of Discovery Requests (“Discovery Requests”) of the Department of Public Service (the “Department” or “DPS”), which were served via email on August 11, 2022.

General Objections:

1. VGS objects to the “Instructions” contained in the Discovery Requests to the extent such instructions purport to place greater requirements on VGS, or reserve greater rights to the Department than are permitted by the Vermont Rules of Civil Procedure as made applicable to the Public Utility Commission proceedings through Commission Rule 2.214 (A).
2. VGS objects to any request for information or production of documents that is or are subject to the attorney-client privilege, that constitute work product, that are protected under state or federal law, or that are proprietary, competitively sensitive, or confidential.
3. VGS objects to requests to the extent that they (a) are overbroad or unduly burdensome; (b) are cumulative; (c) call for the production of documents not in the possession, custody, or control of VGS; (d) call for the review, compilation, or production of publicly available documents that could be obtained by the requesting party in a less burdensome manner; (e) are vague and/or ambiguous; (f) seek information not reasonably calculated to lead to the discovery of admissible evidence; (g) are not proportional to the needs of the cases and/or (h) call for the review, compilation, and/or production of a voluminous number of documents at great expense to VGS.
4. VGS does not hereby waive any objections, and reserves the right to later raise any additional, available objection.

VERMONT GAS SYSTEMS, INC.'S RESPONSES
TO THE DEPARTMENT OF PUBLIC SERVICE'S
SECOND SET OF DISCOVERY REQUESTS

Q.DPS.VGS.2-1: Re: CONFIDENTIAL Attachment DPS.VGS.1-9.1, the costs of carbon for various resources are assumed to be cost-effective energy supply resources. What value of carbon are you using to determine cost-effectiveness? Do you use the same cost of carbon valuation for all resources?

A.DPS.VGS.2-1:

We determine the cost-effectiveness of an alternative supply contract based on a variety of factors, including the cost of avoided carbon when compared to the value of avoided carbon associated with other supply resources. There are several factors that make this Contract cost-effective from a cost of avoided carbon perspective both on its own and as part of our overall long-term RNG supply portfolio, even as the facility's native cost of avoided carbon for this Contract is higher than other potential supply sources. Specifically, both the option to resell volumes into the renewable transportation fuel ("RTF") markets and the expected adoption of a carbon capture system reduce the cost of avoided carbon during the life of the Contract. This is illustrated in **Confidential Attachment DPS.VGS.2-1**, which is an updated version of Confidential Attachment DPS.VGS.1-14. We updated the rate impact model previously provided to show the effective cost of avoided carbon in each year of the Contract under all three scenarios.

Under the Contract, VGS has the option to resell contracted volumes into the RTF markets and share in the net proceeds of those sales. As discussed in prior responses and our prefiled testimony, revenue from these sales will be used to reduce the overall cost of RNG for customers. As a result, this option will effectively reduce the cost of avoided carbon under the Contract—at times even to a negative dollar value. VGS will have the ability to modulate this effect by determining, in consultation with the Department, what volumes to sell into the RTF markets in any given year. Additionally, the Contract offers substantial flexibility around the overall volumes VGS is obligated to take. VGS can ramp volumes up or not based on—among a variety of considerations—whether we are achieving an efficient cost of carbon, impact on rates, the performance of wholesale RTF markets, and the emergence of other alternative supply opportunities.

Second, as discussed in response to Q.DPS.VGS.1-9, Archaea Energy Marketing LLC ("Archaea") has confirmed an expected carbon intensity of near zero after the carbon capture and sequestration ("CCS") facility is commissioned. This will reduce the overall cost of avoided carbon substantially at no additional cost to VGS or its customers. Confidential Attachment DPS.VGS.2-1 models an outcome where CCS comes online by 2027. Accordingly, the Contract has the near-term potential to be far more cost-effective from a cost of avoided carbon

perspective even without revenue from the RTF markets. Whether the CCS systems is online may also inform VGS's exercise of the option to increase volumes in subsequent years of the Contract.

We evaluate the cost-effectiveness of any alternative supply contract, including this one, based a long-term approach to developing a balanced portfolio that mitigates rate volatility over time, considers carbon reduction benefits of given contracts, provides flexibility to manage supply alternatives in a changing marketplace, and reduces VGS's reliance on conventional natural gas. This Contract is a cost-effective tool that supports this long-term approach. If it is not upgraded for sale as a thermal or transportation fuel, landfill methane must be flared, and hence wasted as viable heating source; capturing landfill methane to use as pipeline gas is a direct reduction in use of conventional gas, which supports VGS's climate plan and the State's requirements under the GWSA. Additionally, the price of this Contract is aligned with others in our RNG portfolio, which enables us to increase alternative supply without significant rate impacts. This is an important feature of the Contract vis-à-vis the efficiency of our investment in avoided carbon. While some supply alternatives may have a lower overall cost per tonne of avoided carbon (at least in the initial phase of the Contract prior to the commissioning of the CCS), it is expected that such alternatives will also have a higher cost per MMBtu and therefore a more dramatic impact on rates. This Contract provides VGS with an opportunity to take a step-by-step approach to managing rate impacts to smooth our transition away from conventional natural gas sources.

Based on these and other considerations, we have not identified a specific threshold number for delineating a cost-effective value for cost of avoided carbon. That said, in this initial phase of developing an alternative supply portfolio that focuses on carbon reduction benefits—and prior to specific State statute or a policy framework guiding thresholds for the cost of avoided carbon in the thermal sector—we are willing to consider arrangements up to \$350 per tonne (such as this Contract). Although we expect that the cost of avoided carbon will vary over time as the market develops and across different projects and technologies, our aim is to procure a balanced portfolio of alternative supply resources that achieves reasonable and cost-effective investments in carbon reduction. At this time, our goal is to select a mix of resources that drives the average cost of avoided carbon across our portfolio below \$200 per tonne over time. With regard to this Contract, conservative assumptions regarding the value and longevity of RTF markets, and the installation timeline for CCS at Seneca, demonstrate that the average effective cost of avoided carbon across the term is reasonable and will advance our overall supply portfolio objectives.

Person Responsible for Response: Greg Morse
Title: Director of Policy & Planning
Date: August 15, 2022

Q.DPS.VGS.2-2: In A.DPS.VGS.1-1, VGS describes the contract as “affordably priced renewable energy”. Please provide VGS’ working definition of “affordably priced” in this context. How is that measured? In the same response, VGS asserts that this contract is “consistent with what policymakers have charged Vermont utilities to do: find cost-effective pathways to achieve the State’s ambitious climate goals”. Please define VGS’ understanding of cost-effective and how cost-effectiveness is determined by VGS.

A.DPS.VGS.2-2: In response to Q.DPS.VGS.2-1 above, we have discussed some of the principles that we consider relevant in evaluating the cost-effectiveness of alternative supply resources. We measure whether an alternative supply resource is “affordably priced renewable energy” against those factors, including how the contract fits in with our overall supply portfolio both today and in future years as we bring more alternative supply into our portfolio. This includes, as discussed above, the extent to which an alternative supply resource achieves carbon reduction in a cost-competitive manner, how the contract price compares to existing alternative supply resources in our portfolio, and whether there is optionality and flexibility to manage rate pressures in the contract. Central to the affordability question is the manner in which our alternative supply resources will impact rates over time. We consider a resource to be “affordable” if it meaningfully advances our alternative supply portfolio objectives while offering the potential for smooth rates and limited overall upward rate pressure.

Person Responsible for Response: Greg Morse
Title: Director of Policy & Planning
Date: August 15, 2022

As to objections:

DATED at Burlington, VERMONT, this 15th day of August, 2022.

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