

STATE OF VERMONT
PUBLIC UTILITY COMMISSION

Case No. 22A-4238

Vermont Gas Systems, Inc Rutland Regional Medical Center Geothermal Project	
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MOTION TO RECONSIDER

THE COMMISSION’S OBJECTION TO VERMONT GAS’S PILOT

Vermont Gas Systems, Inc. (“VGS”) respectfully moves the Public Utility Commission (“PUC”) to reconsider its decision in the above-captioned matter denying VGS permission to proceed with the Rutland Regional Medical Center (“RRMC”) Geothermal Project (the “RRMC Project”) under VGS’s Alternative Regulation Plan (“ARP”).

1. **The Project is consistent with VGS’s Alternative Regulation Plan because it will provide significant research and development value that will advance VGS’s geothermal offerings to customers.**

This Project is an important first step in expanding VGS’s capability to provide geothermal services to customers and is consistent with VGS’s ARP, which provides:

VGS shall pursue and consider projects, programs, and services that support Vermont’s statewide energy goals by advancing promising technologies to facilitate efficient, lower carbon energy choices for its customers (e.g., researching and seeking to pursue district energy, RNG, uses of waste heat to lower usage of natural gas, power-to-gas projects, more efficient or less carbon-intensive equipment for heating and industrial processes, etc.).¹

Geothermal heating systems provide an opportunity to reduce Vermont customers’ carbon emissions by replacing fossil fuel-burning heating systems with modern and efficient geothermal systems that rely on water and electricity. Accordingly, the promotion and development of such systems is consistent with statewide energy goals.

¹ Exhibit VGS-JMP-5 filed May 21, 2021, in Case No. 19-3529-PET at 5.

The RRMC Project is also consistent with VGS’s mandate under the ARP to pursue projects that advance promising technologies that provide “lower carbon energy choices for its customers.” As discussed in VGS’s prior filings and the Department of Public Service’s (“Department’s”) comments, the RRMC Project “will provide significant research and development value in a nascent market for the benefit of VGS customers.”² The RRMC Project aims to provide demonstration, deployment, and validation of VGS’s pursuit of commercial scale or group-geothermal systems that can displace reliance on fossil-fuel based heating systems.³

Accordingly, VGS respectfully requests that the Commission reconsider its conclusion that “there is not a nexus between [the RRMC Project’s] service or technology and ratepayer benefits.”⁴ In this case, there is a direct nexus to two prospective geothermal projects that involve affordable housing proposed in VGS’s current service territory. VGS’s successful deployment of a commercial scale geothermal project for RRMC will directly promote the success of these projects, where developers are considering partnering with VGS to provide thermal heating services based on large-scale geothermal rather than traditional natural gas service. Accordingly, VGS respectfully submits there is a direct nexus between this Project and VGS’s mandate under the ARP to promote development of technologies that can “lower carbon energy choices for its customers.”

Finally, the RRMC Project is consistent with VGS’s responsibility as a regulated natural gas provider to ensure that money collected from ratepayers is used responsibly to advance ratepayer benefits. In this case, the outlay of ratepayer funds is limited; RRMC will receive only a modest financial incentive and RRMC will repay the majority of the funds over the life of the

² Vermont Department of Public Service Comments (11/9/22) at 1.

³ This is consistent with priorities of Energy Action Network, which is actively building a coalition to co-create networked geothermal in Vermont. See <https://www.eanvt.org/networked-geothermal/>.

⁴ Commission Objection to Vermont Gas’s Pilot (11/15/2022) (“PUC Objection”) at 3.

Project. The small ratepayer investment in the Project is outweighed substantially by the research and validation the Project will provide to promote lower carbon energy choices for all customers.⁵

2. The RRMC Project is consistent with the Commission's allowance of innovative pilots that advance state energy policy in circumstances where markets are immature.

The Vermont market for development and maintenance of geothermal heating systems is nascent and undeveloped. As VGS stated in its July 29, 2022 filing, Vermont's deployment of geothermal heating systems is significantly behind the national curve. U.S. Geothermal, a national geothermal trade association, has reported that approximately 30,000 ground source heat pumps were sold in the U.S. in 2020. While Vermont has been a national leader in energy efficiency, it has significantly underperformed in this area, deploying only 10 such geothermal systems in 2020.⁶

Other efforts to promote the geothermal market in Vermont have stalled. In 2021, Efficiency Vermont and nearly all the electric utilities collaborated to offer healthy incentives for geothermal systems. Only a few such geothermal projects materialized. Based on the current market for such installations and service, other market barriers put geothermal out of reach for most Vermont customers. The primary barriers include cost, workforce, design complexity, and quality assurance. Installation of a geothermal loop can add 30-40% when compared to a fossil-fuel or other traditional heating/cooling system. Moreover, even if a customer can overcome cost

⁵ As the Commission recognized in the Jay Peak Electric Boiler Project, contributing funds in exchange for the knowledge gained by participating in promising projects provides ratepayer benefits, even where current customers are not participating. PUC Objection at FN5. VGS disagrees that ratepayer benefits are not tethered to its customer base in this case.

⁶ See correspondence of Jill Pfenning, Esq. dated 7/29/22 in Case No. 22A-3045 at 4.

barriers, there are currently only a few contractors serving Vermont with sufficient experience to design and construct such systems.

For these reasons, VGS respectfully requests that the Commission reconsider its conclusion that the RRMC Project could represent a case where VGS's participation "can stifle competition."⁷ On the contrary, VGS's promotion of this project, as well as the Company's broader support for geothermal inside and outside of its natural gas service territory, will foster the development of a market that is currently immature. Similarly, this is not an instance of "robust and mature market conditions" where monopoly utilities should be expected to move competitive services "below-the-line." Indeed, as mentioned above, monopoly utilities in Vermont are already directly subsidizing geothermal systems through ratepayer-funded incentives.

Additionally, even if Vermont had a mature geothermal market that was competitive, VGS's geothermal pilots aim to develop a market that does not exist at all in Vermont—utility-scale geothermal systems where the developer of the system owns and operates the system and provides heating service that is akin to a cost-of-service model. The RRMC Project draws upon VGS's ability to own and operate the system and VGS's long history of excellent customer service to realize a Project that may not advance at all without these innovative and scalable approaches to thermal energy services.

Finally, VGS respectfully requests that the Commission reconsider the suggestion that regulators in Vermont should apply traditional concerns about monopoly services to this kind of innovative pilot in order to "ensure that utilities and private entities can compete toe-to-toe in a fair market for non-monopoly services and products."⁸ In the context of promoting low carbon

⁷ PUC Objection at 2.

⁸ *Id.*

energy choices for Vermont customers, the regulatory tradition of maintaining a “toe-to-toe” market status for non-monopoly services must be balanced with Vermont’s aggressive policy to reduce carbon emissions and promote energy efficiency. This means that in the market for home energy products like weatherization, electricity, propane, natural gas, and other energy options available to Vermonters, policymakers should continue to favor supporting carbon-reducing options for Vermont customers like the RRMC Project, just as we have done with other ratepayer-funded initiatives like weatherization efforts, heat pump water heater installation, and other electrification subsidies that directly compete with demand for fossil fuels.

3. The RRMC Project is consistent with other VGS innovations under the VGS ARP.

The RRMC Project represents a modest ratepayer investment to advance significant innovative potential—utility-scale geothermal projects that could change the way we think about capital investment in group-residential or commercial-scale thermal heating. VGS expects to leverage the knowledge and experience developed on this Project in the same manner that it is using research and development funds to support the Jay Peak Electric Boiler project. In that case, VGS leveraged innovation funding to not only promote a carbon reduction technology at Jay Peak, but also to “provide[] ratepayer benefits by integrating electricity in a cost-effective way to reduce natural gas peak demand.”⁹ The RRMC Project provides this same benefit to VGS customers, as discussed above. This Project will directly inform geothermal initiatives that VGS expects to benefit customers that have direct access to VGS’s pipeline service as an alternative.

⁹ PUC Objection at FN5.

4. The Commission should construe the scope of VGS's climate action initiatives broadly, including the potential customers who can benefit.

When VGS initially filed its ARP in November 2020, VGS CEO Neale Lunderville testified that, “To best support both our customers and the State’s energy goals, we need a comprehensive approach that brings the Company’s vision and strategy together with a regulatory framework that gives VGS the flexibility to transform and thrive.” In order to both transform and thrive, it is not enough for VGS to simply reduce overall natural gas use through efficiency efforts and transitioning to renewable alternative fuels like RNG. To support transition, the Company must also find innovative ways to support Vermont customers’ demand for thermal energy in a competitive manner that will continue to promote investment in thermal infrastructure and other emerging opportunities. Not only does the RRMC Project fit this bill, it is also consistent with other such efforts VGS has endorsed and pursued under the Climate Action and Innovation Budget.

These projects have nearly all been related to displacing fossil fuels through hybrid heating or alternative fuels similar to the RRMC Project. This includes installing heat pump water heaters for gas and non-gas customers, studying in-state RNG potential, furthering the GlobalFoundries green hydrogen project, installing a large-scale electric boiler with smart technology to inform industrial-scale hybrid heating, developing a cost vs. carbon calculator to empower customers to manage their residential and small business dual-fuel set points, and pre-development geothermal exploration.

Limiting VGS’s investment in carbon reduction initiatives to those that represent direct investments in VGS’s current customer base limits VGS’s climate action initiatives in many ways. First, if VGS is unable to leverage small investments in research and development like the RRMC and Jay Peak Electric Boiler projects into a springboard of similar carbon reductions for

current VGS customers, VGS will be disincentivized to pursue such ambitious carbon reductions. Second, such a limitation constrains VGS's revenue model to that of a traditional natural gas utility. In order to transform an energy services company like VGS and reduce both natural gas usage and natural gas emissions, VGS's climate action plan and ARP have to promote the development of alternative revenue models. This will necessarily involve adaptations from traditional monopoly regulation models. Third, it means that many projects that have the potential to reduce carbon will not be realized. Without VGS's participation, investment, and support, projects like the Jay Peak Electric Boiler and RRMC will not be pursued. This demonstrates that VGS's role in these kinds of projects has no adverse impact on market competition. Without VGS's participation, substantial carbon reductions are missed, and potential solutions taken off the table.

For the above reasons, VGS not only asks that the Commission reconsider its conclusion that the RRMC Project has no direct nexus for current and future VGS customers that could benefit from the expansion of a geothermal energy services offering, but that it also reconsider the extent to which VGS's ARP is intended to promote and encourage a far broader energy transformation at VGS.

5. Additional Commission feedback about future pilot filing.

VGS appreciates the Commission's additional feedback about (1) the completeness of VGS's innovation filings, (2) compliance with requisite laws about lending, and (3) documentation of financial information, and provides the following response.

First, the process regarding the Commission requests in this case has been very helpful and will inform future innovation filings. VGS appreciates that the Commission ultimately had

additional questions about our initial filing and will ensure that future filings are filed in accordance with the list enumerated under Paragraph 5(e) of VGS's ARP.

Second, VGS generally evaluates legal requirements when negotiating potential contracts such as the RRMC agreement. It is also familiar with requirements under the Vermont Retail Installment Sales Act and Truth in Lending Act cited by the Commission's Objection Order. In the case of the RRMC contract, however, those requirements are not applicable. The RRMC contract is a commercial arrangement. While it could be construed as a deferred payment arrangement, it is not an installment contract under the Vermont statute, which expressly limits the types of goods and services subject to the statute to those that are "for personal, family, or household use, and not for commercial, industrial, or agricultural use." See 9 V.S.A. § 2401. Similarly, the Truth in Lending Act ("TILA") does not apply here because, even if the contract were construed as a credit transaction, RRMC is not a consumer as contemplated by TILA. TILA addresses consumer credit transactions "primarily for personal, family, or household purposes" and expressly exempts "[c]redit transactions involving extensions of credit primarily for business, commercial, or agricultural purposes ..." 15 U.S.C. § 1603; *Altmann v. Homestead Mortg. Income Fund*, 887 F. Supp. 2d 939, 947, 2012 WL 1940684 (E.D. Cal. 2012).

Third, VGS appreciates the Commission's guidance regarding additional information documenting the financials for a transaction like the RRMC Project and provides the following responsive information.

- Property taxes are the Rutland Town rate for non-residential properties multiplied by the net investment on an annual basis. Net investment is original gross investment minus accumulated depreciation.¹⁰

¹⁰ Note that the Rutland Town tax rate changed by a small amount since the Project's initial modeling.

- This Project does not trigger a tax credit.
- Regarding comparison to market options, VGS's contractor, LN Consulting, performed extensive building modelling to provide RRMC a comparison between replacing their existing system with the same system versus a geothermal system. This included comparing both capital costs and energy and maintenance costs. The capital costs were based on estimations procured from contractors by LN Consulting and the energy costs were based on applying the current electrical rate and the historic propane cost to the building modeling comparisons. Annual maintenance costs for external components were estimated by LN Consulting. RRMC would continue to pay its electric bill directly and cover internal O&M. Based on the modelling, the geothermal system compared financially favorably to replacing the existing system with the same technology regardless of whether VGS or RRMC owned, operated, and maintained the geothermal system.
- The effective interest rate of the lending arrangement is in line with, or lower than, current lending rates such as 15- and 30-year mortgage rates.
- Overhead is calculated as 15% of the full capital expense, prior to incentives. This is an incentive rate for pilot projects, approximating incremental overhead costs, not the greater overhead rate typically applied to standard projects. For this pilot project, VGS expects to incur administrative costs associated with periodic maintenance performed by a third-party contractor and typical administrative costs consistent with its usual course of business.

6. Conclusion

For the foregoing reasons, VGS respectfully moves the Commission to reconsider its Objection to Vermont Gas's Pilot and allow the RRMC Geothermal Project to move forward with VGS involvement.

DATED at Burlington, Vermont, on this 22nd day of November 2022.

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