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GreeneHurlocker
Attorneys at Law

Brian R. Greene
BGreene@GreeneHurlocker.com
Direct Dial: 804.672.4542

December 8, 2022

VIA E-FILING

The Honorable Bernard Logan, Clerk
Virginia State Corporation Commission
Document Control Center
Tyler Building, First Floor
1300 East Main Street
Richmond, Virginia 23219

**Re: Application of Roanoke Gas Company for approval of a certificate of public convenience and necessity to construct, own, and operate a digester gas conditioning system and for a rate adjustment clause designated Rider RNG and related tariff provisions pursuant to Chapters 10.1 and 30 of Title 56 of the Code of Virginia
Case No. PUR-2022-00125**

Dear Mr. Logan:

On behalf of Roanoke Gas Company, attached is the Post Hearing Brief to be filed in this matter.

Please do not hesitate to contact me if you have any questions about this filing.

Sincerely,

/s/ Brian R. Greene

Brian R. Greene

Enclosures

cc: Wendy Starkey (Wendy.Starkey@scc.virginia.gov)
Lea Ann Robertson (LeaAnn.Robertson@scc.virginia.gov)
Kaitlyn McClure (Kaitlyn.Mcclure@scc.virginia.gov)
William H. Harrison, IV (William.Harrison@scc.virginia.gov)
Raymond L. Doggett, Jr. (Raymond.Doggett@scc.virginia.gov)
Sean Barrick (Sean.Barrick@scc.virginia.gov)
C. Meade Browder, Jr. (mbrowder@oag.state.va.us)
Gregory D. Buppert (gbuppert@selcva.org)
Claire Horan (choran@selcva.org)
Deirdre Dlugoleski (ddlugoleski@selcva.org)

COMMONWEALTH OF VIRGINIA
STATE CORPORATION COMMISSION

APPLICATION OF

ROANOKE GAS COMPANY

For approval of a certificate of public
convenience and necessity to construct, own, and
operate a digester gas conditioning system and for
a rate adjustment clause designated Rider RNG
and related tariff provisions pursuant to Chapters
10.1 and 30 of Title 56 of the Code of Virginia

PUR-2022-00125

POST HEARING BRIEF OF ROANOKE GAS COMPANY

Brian R. Greene
Victoria L. Howell
GreeneHurlocker, PLC
4908 Monument Avenue, Suite 200
Richmond, VA 23232
(804) 672-4542 (BRG)
(804) 672-4546 (VLH)
BGreene@GreeneHurlocker.com
VHowell@GreeneHurlocker.com

Counsel for Roanoke Gas Company

December 8, 2022

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POST HEARING BRIEF OF ROANOKE GAS COMPANY

Pursuant to Rule 200 of the State Corporation Commission's ("Commission") Rules of Practice and Procedure, along with the Hearing Examiner's directive at the conclusion of the November 22, 2022, evidentiary hearing in this matter, Roanoke Gas Company ("Roanoke Gas" or "Company"), by counsel, submits its post-hearing brief in the above-captioned proceeding. In this proceeding, Roanoke Gas seeks: (1) approval of a certificate of public convenience and necessity ("CPCN") to construct, own, operate, and maintain a renewable natural gas ("RNG") facility (the "RNG Facility") pursuant to the Utility Facilities Act, Va. Code §§ 56-265.1 *et seq.*; (2) a rate adjustment clause, designated Rider RNG, for the recovery of projected costs associated with the RNG Facility as permitted under the new Va. Code § 56-625; and (3) new tariff provisions pursuant to Va. Code §§ 56-248.1 and 56-234 related to the RNG Facility, the Company's procurement of "supplemental and substitute forms of gas" under the Code, and the interconnection of renewable gas facilities owned and operated by third parties with the Company's distribution system.

I. Introduction and Overview of the Project and Tariff Changes

This is the first case filed with the Commission pursuant to the Virginia Energy Innovation Act ("VEIA"), which the General Assembly passed in its 2022 session and became law on July 1, 2022.¹ As relevant to this proceeding, the VEIA added Chapter 30 of Title 56 to the Code of Virginia – specifically, Va. Code § 56-625 – and amended Va. Code §§ 56-248.1 and 56-265.1. The VEIA, in sum, permits natural gas utilities such as the Company to include in their fuel portfolios "supplemental or substitute forms of gas sources," which includes "biogas," that meet certain standards and that reduce methane or carbon dioxide equivalent emissions, commonly

¹ 2022 Va. Acts Chs. 728, 759.

referred to as “greenhouse gas” or “GHG.”² The new law also allows utilities to submit a “biogas supply investment plan” that identifies and seeks cost recovery for proposed “biogas supply infrastructure projects.”

A. The RNG Facility and Rehabilitation of the Digesters

The Company’s application in this proceeding included its “biogas supply investment plan” which identified the proposed anaerobic digester gas conditioning system (“DGCS”) and associated facilities (collectively, the “RNG Facility”), in combination with the rehabilitation of the current digesters by the Western Virginia Water Authority (“WVWA”) as explained below, as a “biogas supply infrastructure project” under the new law. The RNG Facility will convert wastewater digester gas (“digester gas”) into pipeline quality RNG that will be injected into the Company’s distribution system and blended with the Company’s existing natural gas supply.

The Company proposes to construct the RNG Facility on property owned by the WVWA and in conjunction with the WVWA’s rehabilitation of its digesters. As the record reflects, the WVWA owns seven primary digesters and three secondary digesters, all of which need repair and some of which are no longer online because of disrepair. *See* Exh. 2. The WVWA has completed the rehabilitation of two digesters, and more are to come. Tr. 114:4-6. The WVWA currently uses a portion of its biogas from the digesters in its operations, with the remainder flared in a waste gas burner. Exh. 15 at Exh. 1, p.1, attached thereto.

The RNG Facility will be located adjacent to the digesters, near the Company’s existing eight-inch steel main, all on WVWA property. With the Company’s construction and operation of the RNG Facility, the WVWA will sell the digester gas to the Company, and the parties have entered into a Digester Gas Purchase Agreement (“DGP Agreement”) to that effect. *See* Exh. 9 at

² VA. Code § 56-248.1 B.

6:29-31; Exh. 10 at 2:11-18; Exh. 10 at Attachment 4. The Company and WVWA have also entered into a lease agreement for the land on which the RNG Facility will be located (“Lease Agreement”). See Exh. 10 at 2:7-10 and Attachment 3.

The rehabilitation of the WVWA’s digesters will reduce the amount of fugitive methane and other particulates (i.e. digester gas) that are released or leaked from the digesters. As Company witness Ms. Becky Luna stated, the rehabilitation will “increase biogas capture and protect against fugitive emissions from biogas leaks.” Exh. 15 at Exh. 1, p. 1, attached thereto. More specifically, the WVWA performed site-specific testing on the two digesters that have completed rehabilitation, and which resulted in a biogas capture rate of approximately 98.6%. This is a dramatic increase in capture rate over the non-rehabilitated digesters, which was 78% based on process modelling that uses industry standard methods for calculating capture rates for older digesters. Exh. 28 at 13-14 and Exh 1 attached thereto. The RNG Facility is complementary to the digester rehabilitation and will create a beneficial use of the gas while eliminating the flaring of digester gas as much as possible.

The Company and the WVWA began discussing this project in late 2019, and the Company assisted the WVWA in selecting an engineering firm for the rehabilitation of the digesters and the design and construction of the RNG Facility. Exh. 10 at 3. In 2021, after performing due diligence on RNG and the benefits it could provide to customers, the Company began negotiating terms with the WVWA and the Company also began the process of identifying and negotiating with vendors needed to complete the project. *Id.* at 3-4. Ultimately, Rummel, Klepper & Khal LLC (“RK&K”) was selected as the engineering firm, which has a contract with Carollo Engineers, Inc. (“Carollo”) to provide additional design assistance. The Company also selected Unison Solutions, Inc. as the manufacturer of the DGCS. *Id.* at 4.

RK&K estimates that the digesters initially will produce between 206 and 220 standard cubic feet ("scf") per minute of digester gas or 296,640 to 316,800 scf/day, which the Company will purchase under the DGP Agreement. The initial configuration of the DGCS can handle up to 280 scf, and the Company could install additional membranes to the DGCS to increase the volume to 400 scf. Exh. 10 at 10. It is estimated that 60% of the digester gas will be usable RNG. This means that the 296,640 to 316,800 scf/day of digester gas will yield approximately 1,880 to 2,010 therms or 188 to 201 Dths of RNG on a daily basis. RK&K and Carollo also estimate that the RNG Facility will have a capacity factor of 95%, which is "industry standard" and consistent with the uptime experienced by three other similar systems (two in Colorado and one in Nebraska) that Unison has manufactured. Exh. 28 at 15. Company witness Oliver summarized the above digester and RNG amounts in the following chart on page 11 of his direct testimony:

Annual RNG Production				
Digester Gas			RNG Yield*	
Limits	CCF/Day	DTH/Day	DTH/Day	Annual Annual DTH
Lower	296,640	297	188	65,172
Medium	316,800	317	201	69,601
Upper	403,200	403	255	88,583
**	576,000	576	365	130,544

*Assumes a capacity factor of 95%, methane percentage of 64%, and methane capture of 99%

**Additional capital investment necessary to increase production to 400 scfm

B. The Sale of RINs

The production of RNG from digester gas will result in environmental attributes that the Company will be able to sell. *See* Exh. 9 at 8:7-8. As discussed by Company witness Paul Nester, "the environmental attributes, or renewable identification numbers ('RINs') have a monetary value in the Environmental Protection Agency's renewable fuel standards market," and the Company will work with a RIN broker to monetize the RINs. *See* Exh. 9 at 8:11-14. The Company received

bids from four RIN brokers and selected Innova Energy Services, LP (“Innova”) as its RIN broker and finalized all substantive terms of the contract, including the brokerage fee. *See* Exh. 30 at 2:11-13; 10:16-17.

The Company anticipates selling the RINs into the Renewable Fuel Standards (“RFS”) program. Company witness Oliver provided initial testimony explaining the RFS program, which: (1) was created by the Energy Policy Act of 2005 which amended the Clean Air Act; and (2) was expanded by the Energy Independence and Security Act of 2007. The U.S. Environmental Protection Agency (“EPA”) implements the RFS program in consultation with the U.S. Department of Agriculture and the Department of Energy. Exh. 10 at 11-13.

The EPA has explained that “[t]he RFS program is a national policy that requires a certain volume of renewable fuel to replace or reduce the quantity of petroleum based transportation fuel, heating oil or jet fuel.” There was extensive testimony from Company witness David Cox regarding the maturity and regulatory structure of the RIN market, this project’s ability to generate RINs, and for the Company to sell the RINs under the EPA program. As is more fully explained below, the Company expects to sell D-3 category RINs which, as of January 1, 2022, were selling between \$2.78 and \$3.40.

C. Recovery of Costs Related to the RNG Facility

The Company’s plan includes only those cost elements identified in the statute. The cost to construct the RNG Facility is \$7,735,198 and there is a revenue requirement for the RNG Facility of \$951,176 for the period January 1, 2023, through September 30, 2023. The Company proposes to true up the costs annually by October 1. Exh. 13 at 3, 6; Exh. 25 at 3-4.

It is anticipated, however, that customers will not pay these costs in their monthly bills. First, customers will benefit from the RNG additional supply source, meaning that the Company will purchase less gas – approximately 65,000 Dth per year – on the wholesale market. Producing

gas interior to its system will reduce the Company's purchased gas charge that is paid by customers through the Company's PGA.

Second, as explained above, the Company intends to sell the environmental attributes associated with the production of digester gas. The sale of RINs is an important feature of the Company's proposal. The revenues generated by the sale of RINs will be applied first to customers, to make them whole in relation to the annual revenue requirement less the savings realized through a lower PGA cost. *See* Exh. 30 at 2:14-16. Therefore, customers are projected to be revenue neutral after the first tranche. At the RIN prices identified above, the Company anticipates there will be excess revenues after customers are made whole. In addition to the Lease Agreement and the DGP Agreement, the Company and the WVWA are finalizing an agreement whereby once Roanoke Gas' customers are made whole, the Company and the WVWA will evenly share the excess RIN proceeds. *See* Exh. 30 at 2:17-20. The Company will then allocate 75% of its share of the excess proceeds to customers and 25% to its shareholders. *See* Exh 30 at 2:20-22.

When all is said and done, the Company estimates that the allocation of the RIN revenues as explained above will result in each customer class receiving a credit through the proposed Rider RNG. *See* Exh. 25 at 4. The record supports the Company's position that the Company will be able to monetize the RINs and, therefore, this credit will continue into future years of the program.

D. The Tariff Changes

Company witness Nik Banka identified certain tariff changes that will allow it to implement its biogas plan by creating a tariff under which it will recover the costs associated with Rider RNG. In addition, the tariff revisions will allow the Company to purchase and recover the costs associated supplemental or substitute forms of gas as permitted under the VEIA. Lastly, the

proposed tariff revisions will allow for future interconnections by third party RNG facilities. Exh. 13 at 22-25 and Attachment 1.

II. Applicable Statutes and Standard of Review

A. Va. Code § 56-265.1 *et seq.* – the Utility Facilities Act

Section 56-265.2 of the Code provides that “it shall be unlawful for any public utility to construct, enlarge or acquire, by lease or otherwise, any facilities for use in public utility service, except ordinary extensions or improvements in the usual course of business, without first having obtained a certificate from the Commission that the public convenience and necessity require the exercise of such right or privilege.” In the VEIA, the General Assembly amended the definition of “public utility” in § 56-265.1 to include a natural gas utility (as defined in § 56-265.4:6) that “owns or operates facilities . . . for the production, storage, transmission, or distribution, . . . of . . . supplemental or substitute forms of gas sources as defined in § 56-248.1 . . . for sale for heat, light or power.”

In § 56-248.1, the General Assembly provided a means to allow natural gas utilities to include in their fuel portfolios “supplemental or substitute forms of gas sources that meet the natural gas utility's pipeline quality gas standards and that reduce the emissions intensity of its fuel portfolio.” Va. Code § 56-248.1 A. The term “supplemental or substitute forms of gas” includes “biogas,” which is defined as: “a mixture of hydrocarbons that is a gas at 60 degrees Fahrenheit and one atmosphere of pressure that is produced through the anaerobic digestion or thermal conversion of organic matter.” Va. Code § 56-248.1 B. The gas ultimately injected into the

Company's system will be biogas. Finally, the facilities necessary to produce and deliver the gas satisfy the definition of "biogas facilities" in § 56-625 A.³

The Company believes that the new statutory language in Va. Code §§ 56-248.1 and 56-65.1 includes the Company's proposed RNG Facility and associated tariff changes and, therefore, a CPCN is required under § 56-265.2.

B. Va. Code § 56-625

The new § 56-625 allows utilities to file a "biogas supply investment plan" that identifies the proposed "biogas supply infrastructure projects" and allows for cost recovery for "eligible biogas supply infrastructure costs." Section 56-625 A defines these and other terms, and § 56-265 B sets forth the plan's required contents. These definitions and requirements are discussed below.

Section 56-625 B further provides that the Commission "shall approve such a plan upon a finding that it (i) is in the public interest, (ii) will result in a decrease of methane or carbon dioxide equivalent emissions, and (iii) will result in rates that are just and reasonable, after notice and an opportunity for a hearing in accordance with the provisions of this chapter." The Company's Project, plan, and proposed cost recovery, as described below, satisfy all requirements of § 56-625 and should be approved.

C. Tariff Changes Under Va. Code §§ 56-248.1 and 56-234

The Company's proposed tariff changes are governed by Va. Code §§ 56-248.1 and 56-234. Section 56-248.1 provides, in pertinent part, "[s]ubject to the provisions of § 56-234, the Commission shall allow natural gas utilities to include in their fuel portfolios supplemental or

³ Va. Code § 56-625 A defines "biogas facilities" as: "biogas reserves; production facilities, including equipment required to prepare the biogas for use; gathering of, transmission of, and, within the natural gas utility's certificated service territory, any distribution pipelines necessary to deliver the reserves; and aboveground and underground storage used in the delivery of gas to existing natural gas transmission pipelines or distribution systems."

substitute forms of gas sources that meet the natural gas utility's pipeline quality gas standards and that reduce the emissions intensity of its fuel portfolio.” For its part, Va. Code § 56-234 obligates utilities “to furnish reasonably adequate service and facilities at reasonable and just rates....” As explained below, there does not appear to be any dispute that the Company’s proposed tariff changes are just and reasonable.

III. The Company has satisfied the criteria for a CPCN under Va. Code 56-265.1 *et seq.* and for approval of the Project and cost recovery under Va. Code § 56-625.

As explained below, the Company has satisfied all elements of § 56-625 A, including that: (1) the RNG Facility is an “eligible biogas supply infrastructure project” in combination with the rehabilitation of the digesters; (2) the RNG Facility offers “reasonably anticipated benefits to customers and markets;” and (3) the Company’s “biogas supply investment plan” includes all required elements of a proper plan. Thus, the evidence in the record supports Commission approval of the application.

A. The Company’s proposed RNG Facility, in combination with the rehabilitation of the digesters, is one “eligible biogas supply infrastructure project” under § 56-625 A.

Va. Code § 56-625 grants the Company the right to recover costs associated with an “eligible biogas supply infrastructure project” or “project,” which § 56-625 A defines as “capital investments in biogas facilities that, *alone or in combination with other projects or strategies, ...*” (Emphasis added). As explained below, the RNG Facility is an investment “in combination with” the rehabilitation of the digesters, and its purpose is to produce biogas and to facilitate the sale of the renewable attributes in the form of RINs with a strategic use of the RIN sales proceeds. Thus, the RNG Facility satisfies the definition of “eligible biogas supply infrastructure project” or “project,” under § 56-625 A because it is an investment in a biogas facility with another project

(i.e. digester rehabilitation) as well as a “strategy” to accommodate the sale of RINs and a sharing of the RIN proceeds.

Staff and the Environmental Respondent incorrectly question whether the RNG Facility and rehabilitation of the digesters are one project or two. As an example, Staff contends that the two are “complementary but independent.” Tr. 259. Their position misinterprets the definition of an “eligible biogas supply infrastructure project” or “project,” under § 56-625 A, which expressly allows for capital investments in biogas facilities that “*alone or in combination with other projects or strategies, offer reasonably anticipated benefits to customers and markets.*” (Emphasis added). Also, the definition of “biogas supply investment plan” includes identified projects “and the development of those projects *with or without a third party.*” Va. Code § 56-625 A (emphasis added). Thus, the statutes expressly contemplate, and treat as one “project,” an RNG Facility constructed *in combination with* rehabilitated digesters. To treat the RNG Facility and the rehabilitation of the digesters as two separate projects ignores the plain, unambiguous language of the statutes and would re-write the statutory text, which the Commission cannot do. *Virginia Elec. & Power Co. v. State Corp. Comm’n*, 300 Va. 153, 161, 163 (2021).

A “project” under § 56-625 A also includes a biogas facility “in combination with other . . . *strategies* . . .” (Emphasis added). Here, the Company’s “strategy” consists of: (1) purchasing the digester gas; (2) cleaning the digester gas to pipeline quality gas (RNG) and injecting the RNG into its system; and (3) selling the RINs to reduce transportation emissions consistent with Virginia and federal policy goals. Revenues from the RINs will first be used to offset the project’s costs to the Company’s customers, and then, as explained above, excess proceeds will be split evenly between the Company and the WVWA. For its part, the WVWA will use its revenues to assist its

low-income customers in addition to the other benefits such as reducing emissions. Tr. 113-115.⁴ The Company proposed that 75% of its allocated excess RIN proceeds flow to its customers. *See* Exh. 30 at 2:20-21. While the WVWA intends to rehabilitate the digesters regardless of whether the RNG Facility is constructed, there can be no sale of RINs absent the RNG Facility and without the RNG Facility the digester gas will continue to be flared and that energy will be lost. Tr. 341. All of the pieces of the project must be viewed collectively to ascertain the strategic value and important benefits provided, which was the express intent of the VEIA. As testified to by Company witness Lawrence Oliver, “the Company’s proposed RNG Facility has no useful purpose without the WVWA digesters.” *See* Exh. 30 at 9:26 – 10:1.

Furthermore, Environmental Respondent witness Dr. Clarens testified that, “from an engineering perspective, there’s no reason for the digester rehabilitation and the RNG facility project need to be constructed together.” Tr. 16. His testimony ignores the value received from the sale of RINs and the economic and societal benefit they provide, which does not materialize but for the RNG Facility. Tr. 297:15-23. For his part, Dr. Clarens admitted that he is not an expert in RINs or RINs classifications. Tr. 37, 45. Also, it does not require an analysis from an engineering standpoint to interpret the plain meaning of the phrase “in combination with other projects or strategies.” A layperson can identify the plain meaning of a facility that is constructed “in combination with” other projects or strategies. *See, e.g., BASF Corp. v. State Corp. Comm’n.*, 289 Va. 375, 403-404 (2015).

⁴ WVWA’s Executive Director, Michael T. McEvoy, testified during the public witness portion of the hearing. He stated that the WVWA has created a new fund called Authority Cares to assist low-income customers. However, the WVWA’s bond covenants prohibit the WVWA from using revenues from rates to assist low-income customers, so the WVWA must look for non-operating revenues. The WVWA will allocate revenues it receives from the sale of RINs to the Authority Cares fund for low-income assistance. T. 114-115.

Moreover, Staff's concern as to whether the RNG Facility qualifies as a "project" under § 56-625 A seems to be rooted in the Staff's emissions analysis. More specifically, Staff questions whether the RINs produced by the project can be used to offset diesel emissions. The overwhelming evidence in the record is that yes, the RINs will be used by a renewable volume obligor to offset diesel emissions. *See e.g.*, Exh. 28 at 3:14-16. Staff concedes that when viewed in combination, the RNG Facility and rehabilitated digesters will reduce emissions. Exh. 23 at 8; Exh. 30 at 7. At the hearing, Staff conceded that the RNG Facility as a stand-alone project would result in reduced emissions assuming the sale of RINs as proposed. Tr. 278-279.

On this point, Staff's testimony is consistent with Company witness Luna's testimony. Ms. Luna analyzed the RNG Facility and rehabilitated digesters and found that "both projects independently reduce greenhouse gas emissions. The digester rehabilitation reduces greenhouse gas emissions to a greater extent than the RNG project alone. But they both do." Tr. 202. Thus, whether the project is a combination or a standalone is immaterial because either will reduce emissions consistent with § 56-625.

B. The Company's proposed RNG Facility offers "reasonably anticipated benefits" as defined in § 56-625 A.

A "project" under § 56-625 A must offer "reasonably anticipated benefits to customers and markets, which benefits mean (i) a reduction in methane or carbon dioxide equivalent emissions from the biogas facility, (ii) an additional source of supply for the natural gas utility, and (iii) a beneficial use for the biogas, and which benefits do not result in the gas delivered to customers failing to meet the natural gas utility's pipeline quality standards." As explained below, the project satisfies these criteria because it will reduce GHG emissions, add a supply source for the Company, and the Company will use the biogas beneficially since it will be injected into the Company's system for use by the Company's customers.

1. The project will reduce GHG emissions.

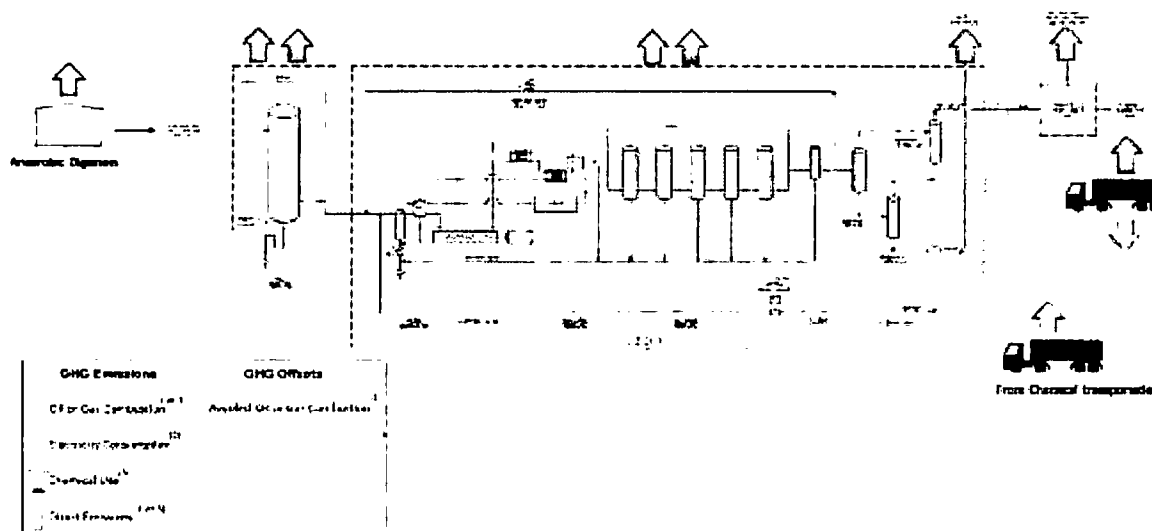
The record overwhelmingly demonstrates that the project will reduce GHG emissions. Company witness Becky Luna, a Senior Vice President and Project Engineer for Carollo, has worked on this project for over two years, beginning when RK&K hired Carollo to help engineer and design the rehabilitation of the digesters and the RNG Facility to optimally work together. Exh. 15 at 1-2; Exh. 28 at 5.

Ms. Luna evaluated and compared the GHG emissions and offsets under two operating conditions: first, for the 2021 baseline emissions, and second, for the emissions that result when the DCGS is completed with RNG being injected into the Company's distribution system (the "future condition"). Carollo has developed a spreadsheet titled "GHG inventory tool" to quantify the estimated reductions in GHG emissions as a result of the biogas upgrade to RNG. The GHG inventory tool includes all EPA and other emissions factors, and all assumptions, used to calculate the results. Tr. 217-219. Carollo has used this tool to perform over two dozen GHG inventories for wastewater treatment plants. Tr. 323.

a. System Boundary.

The initial step in building a GHG inventory is to define the system boundary. The selection of a system boundary can be subjective, but it is one of the most important things when beginning a GHG inventory, so it is important to "always [be] careful to try to understand what in the system is being affected by the project," and to pick a system boundary and stick with it. Tr. 64, 314. The Company did just that; Ms. Luna's system boundary is comprised mainly of the DGCS and interconnect facility, beginning with the hydrogen sulfide treatment system and ending with injection into the Company's distribution system. Tr. 314-315. Upstream of the DGCS, the anaerobic digestion system is also included in the system boundary to track the changes in the

GHG emissions resulting from the rehabilitation of the digesters. *See* Exh. 15 at Exh. 1, p. 2, attached thereto.. She presented the system boundary in Exhibit 1, p. 2 attached to her direct testimony:



See also Exh. 16.

There was discussion about the selection of the system boundary at the hearing. Ms. Luna agreed with counsel for Environmental Responded that “[i]t’s important to include all sources of fugitive biogas emissions within the system boundary.” Tr. 198. She testified that, other than the anaerobic digesters, there are no significant sources of emissions to include in a greenhouse gas inventory. *Id.* The prior leakage reported by the WVWA, which led to the rehabilitation project, is mainly from those digesters and not from the gas piping that goes into underground pipes and an equipment tunnel that is in an enclosed space. Tr. 199-200. She concluded that, “the most significant source and the source that I would include in a greenhouse gas inventory is from the digesters, not from the piping and equipment that is in the rest of the diagram.”

Ms. Luna also testified that there were other sources of emissions, outside of her system boundary, that would have resulted in a reduction in her emissions analysis. As discussed later in

this brief, producing gas within the Company's system will eliminate emissions associated with the production, gathering and transmission of gas to the Company's system. In addition, as Dr. Clarens testified "The WVWA facility uses open lagoons to manage their biosolids after they are removed from the digesters. Upgrading of these facilities could provide a separate and appreciable opportunity for methane emissions reductions. At present, the facility uses an uncovered lagoon to store digestate. Storage of this digestate in these lagoons under anaerobic conditions can produce significant additional methane emissions as the residual organic matter is decomposed." Exh. 1, AFC-2 at 7-8. Ms. Luna testified on this point, stating:

...the lagoons are not part of this project and thus are outside the system boundary of the GHG inventory. Also, as I discuss in the prior Q&A, increasing digestion efficiency and biogas production in the existing digesters will reduce emissions in downstream processes. Stated differently, the more methane that is captured in the rehabilitated digester, the less methane that will be emitted from the lagoon. Dr. Clarens concedes this point on 13 page 15 of his testimony where he states:

A separate Technical Memorandum 3 describes efforts to add a secondary digester cover, but effectively sealing such old units is challenging, as described above. The activities likely will increase biogas generation. But this would effectively represent a shift of biogas from the storage lagoons to the biogas stream, which would represent a climate benefit, but not one that is considered in the calculations reported in the GHG Inventory.

While the manner in which the WVWA manages its biosolids is beyond the scope of this project and therefore my analysis, if it were to be included, as Dr. Clarens notes, the estimated emissions reductions would be greater since one of the purposes of the digester upgrade was to increase the efficiency of the digesters, leading to a higher extraction of methane within the digesters.

Exh. 28 at 9. These statements were unchallenged in the hearing.

Staff does not seem to challenge the selection of the system boundary. For his part, Environmental Respondent Dr. Clarens stated he had no opinion on system boundaries, nor did he believe that the Company alters its system boundary in different parts of its analysis. Tr. 64.

b. Methods.

Ms. Luna identified six greenhouse gases for GHG inventory purposes. Exh. 15 at Exh.1, pp. 2-3, attached thereto. She explained that emissions factors have been established for each emission source. There was no dispute as to the methods utilized in the GHG inventory tool as Dr. Clarens used Carollo's model in his own analysis.

c. Scopes.

Consistent with industry standard practice the GHG inventory tool categorizes emissions as Scope 1, Scope 2, or Scope 3. According to Ms. Luna:

- Scope 1 includes direct anthropogenic (fossil fuel based) and biogenic GHG emissions related to on-site combustion.
- Scope 2 encompasses indirect anthropogenic emissions related to the consumption of purchased electricity, steam, heating, or cooling. These emissions are a result of the treatment plant operations but occur at a source that is not owned or operated by WVWA.
- All other (non-Scope 2) indirect anthropogenic GHG emissions that result from treatment plant operations are considered Scope 3 emissions. Offsets are also identified within Scope 3. Scope 3 emissions include emissions associated with diesel combustion in third-party vehicles, as administered by the EPA.

Exh. 15 at Exh.1, p. 3, attached thereto. The GHG inventory tool compares the GHG emissions and offsets by scope and category for the baseline 2021 scenario and the future condition.

d. Capture Rates.

Digester gas leaked from the digesters forms an especially potent Scope 1 emissions source, accounting for the majority of the Scope 1 emissions. Under the baseline conditions, Ms. Luna calculated a biogas capture rate of 78% and a future condition capture rate of 98.6%. The Environmental Respondent challenged both of these assumptions at the hearing, but those challenges lack merit.

Ms. Luna testified that she used the BioWin software model to calculate the 78% baseline capture rate of the non-rehabilitated digesters. Tr. 221. The model compares biogas flow measurement to theoretical gas production. Tr. 202. She agreed that there was no way for the WVWA to have measured the leakage rate. Tr. 221. Dr. Clarens also recognizes the difficulty in measuring digester gas flow rates. *See* Exh. 1 at AFC-2, p. 7. That does not mean, however, that the calculation of a 22% leakage rate for the baseline condition is “completely unsubstantiated,” as Environmental Respondent witness Dr. Clarens opined. Tr. 48. On the contrary, the BioWin model is “a very standard process model to use in wastewater design.” Tr. 221. Carollo has done that same analysis on a number of different projects, leading Ms. Luna to conclude that, “for my projects, I consider it to be an industry standard of care to check biogas flow measurements against this theoretical production based on process modeling to confirm that flow measurement is accurate.” Tr. 221.

The future condition 98.6% capture rate is derived from site-specific tests performed by the WVWA on the two rehabilitated digesters. Exh. 28 at 13-14 and Exh. 1 attached thereto. Company witness Schneider explained the WVWA’s testing process as being “analogous to the way we are required to test our new pipeline facilities by the Commission and the federal code.” Tr. 283. The WVWA “pressurized the vessels following construction and rehabilitation and measured the pressure before and after over a period of four hours.” Tr. 283. Ms. Luna agreed with this description and stated that “that is industry standard testing method for understanding leakage rates.” Tr. 321-322.

There were at least three studies introduced or referenced during the hearing that are in line with the capture rate the two rehabilitated digesters experienced. First, Dr. Clarens cites in his testimony to a “United Nations Framework Convention on Climate Change,” which is a study

regarding project and leakage emissions from anaerobic digesters. *See* Exh. 4. This study provides default values for use when actual data does not exist. *Id.* and Tr. 51. The default value for digester leaks would be 2.8%, but in this case actual data from two rehabilitated digesters exists. Dr. Clarens agreed that it is always better to have actual data than proxy data. Tr. 51-52. Ms. Luna concluded that “not only is the 98.6% achievable, but it is being achieved at the two digesters.” Exh. 28 at 5.

Second, Dr. Clarens relied on a study titled, “Quantifying methane emissions from anaerobic digesters.” Exh. 5 and Tr. 54. This article quantifies methane loss from two digesters at an Austrian municipal wastewater treatment plant. *Id.* The total methane loss was approximately 0.4% of the produced biogas. Exh. 5 and Tr. 57. The results of this study are consistent with field data from the WVWA and which was attached to Ms. Luna’s rebuttal testimony. The WVWA results are also consistent with other studies referenced in Exh. 5.

Third, Ms. Luna referenced a 2016 EPA study titled, “Evaluating the Air Quality, Climate, and Economic Impacts of Biogas Management Technologies” that provided a range of expected methane slippage from digesters specifically. Tr. 322. The study found leaks ranging from less than 1% to 2% of the incoming biogas. Ms. Luna concluded that, “[t]his article would support the pressure testing findings from the [WVWA].” Tr. 322.

In sum, the baseline and future condition capture rates utilized by Ms. Luna are well-supported and reasonable estimates for inclusion in the GHG inventory tool.

e. GHG Emissions Reductions.

Ms. Luna presented three separate GHG inventory tools based on three different biogas throughput scenarios. All three showed emissions reductions, indicating that “no matter what throughput is used in the greenhouse gas inventory, this project results in a greenhouse gas emissions reduction.” Tr. 316.

The initial inventory tool was based on a total biogas production rate of 341 scfm which was derived from the 2021 combusted biogas flow rate of 266 scfm.⁵ As she explained at the hearing, this initial inventory tool showed a reduction in GHG emissions from a baseline of 21,900 metric tons of carbon dioxide equivalent annually to 8,100, a reduction of 13,700 metric tons of carbon dioxide equivalent.⁶ Exh. 15 at Exh. 1, p. 6; attached thereto; Exh. 1 at AFC-2, pp. 23-33; Exh. 18c.; Tr. 317.

Second, Ms. Luna ran the GHG inventory tool at a throughput of 206 scfm, which is the lower end of the digester gas production estimated by RK&K.⁷ Exh. 10 at 10-11; Exh. 29c. Production of 206 scfm reduced the baseline from 21,900 to 12,800 and the future condition from 8,100 to 6,100, resulting in a reduction of 6,700 metric tons of carbon dioxide equivalent. Exh. 29c; Tr. 317, 318.

Third, Ms. Luna ran the GHG inventory tool at a throughput of 175 scfm, which is the value assigned by Dr. Clarens in his direct testimony. Exh. 1, AFC-2 at pp. 11-12. Ms. Luna testified that 175 scfm is “extremely low and unlikely that the value is that low.” Tr. 317. Nonetheless, the inventory tool found that production of 175 scfm reduced the baseline to 10,900 and the future condition to 5,700, resulting in a reduction of 5,200 metric tons of carbon dioxide equivalent. Exh. 29c; Tr. 317-318. Even a reduction of 5,200 metric tons of carbon dioxide is a

⁵ 266 scfm represents a combination of biogas used in the hot water boilers and biogas combusted in the waste gas burner under the baseline condition in 2021 and was adjusted to account for losses due to leaked biogas from the digesters. Exh. 15 at Exh. 1, p. 7, attached thereto.

⁶ As Ms. Luna explained in her rebuttal testimony, the Company agrees with Staff that “the 1,700 metric ton reduction in CO₂e related to the avoidance of natural gas purchases by the WVWA is double counting emissions reductions in the baseline condition.” See Exh. 28 at 2:3-7. However, for consistency with the Company’s initial application, Roanoke Gas has not corrected the double counting of 1,700 metric tons of CO₂e related to natural gas purchases in this post hearing brief. Row 45 of the “Summary” tab in Exhibits 18c and 29c reflect the GHG emissions without the offsets (i.e. the 1,700 value) included.

⁷ RK&K estimates that, an initial startup, the digesters will product between 206 and 220 scfm of digester gas. Exh. 10 at 10-11.

material reduction in emissions when compared to the Company's combined fugitive emissions of 15,286 MtCO₂e. *See* Exh. 24 at 4:1-8. For each of these modeled scenarios, the actual emissions reduction is increased by 1,700 metric tons of carbon dioxide equivalent when the double counting of the Avoided Purchased Natural Gas is removed from the baseline scenario. Exh. 29c; Tr. 317-318.

The fact that there is not a firm estimate for digester gas throughput is not uncommon. The reason is that raw biogas produced at a wastewater facility can be difficult to measure. *See* Exh. 1 at Attachment AFC-2, p. 7. It is at low pressure, fully saturated with moisture, and contains significant impurities that can influence the measurement. Tr. 332. Ms. Luna explained that raw biogas flow measurement has historically been done with a thermal mass flow meter, which is a probe inserted into the pipe. Condensate can drip down to the tip of the probe and affect the reading. Ultimately, the WVWA is replacing the thermal mass flow meters with ultrasonic meters that should have a higher level of accuracy. Ms. Luna concluded that it is always difficult to measure raw biogas flow rate and that is why she always runs a mass balance across a digester to make sure the digester gas flow rate makes sense. Tr. 333-334. At the end of the day, however, the level of throughput does not matter, as Ms. Luna testified and as her GHG inventory tools demonstrate. Tr. at 316:17-25. Regardless of the level of digester gas production, the project will reduce GHG emissions. *Id.*

f. Addressing the Environmental Respondent's Other Concerns.

Environmental Respondent Dr. Clarens used Ms. Luna's GHG inventory tool, recasting her analysis by lowering the Company's capture rate and the digester gas product. While the capture rate and digester gas production are discussed above, Dr. Clarens nonetheless concluded that the project will reduce emissions by 3,744 MT CO₂e/year. Exh. 1 at 3. From there, however,

Dr. Clarens attempts to cast doubt on the Company's analysis, contending that the Company did not account for potential leakage from the equipment itself or from anomalous events. Exh. 1 at 17-33; Tr. 151. Dr. Clarens' concerns, addressed below, are misplaced.

The threshold issue regarding these concerns appears to be related to the Company's estimated 95% run time for the RNG Facility. Put differently, the Environmental Respondent seems to believe that unplanned maintenance caused by equipment leakage and anomalous events will certainly exceed 5%. Tr. 152:2-8; 186:21-24. However, a 95% run time is industry standard for biogas upgrading equipment. Exh. 28 at 15. In fact, Company witness Luna testified that the 5% downtime encompasses both maintenance of the biogas facility and any event where the gas does not meet pipeline quality standards and is required to be flared. Tr. 204:10-15. Regarding the biogas facility, there are "two different media filled tanks that remove hydrogen sulfate, hydrogen sulfide, and siloxanes and volatile organic compounds." Tr. 223:8-11. The media in these tanks have a particular lifespan and so they need to be taken out of service two or three times per year to be replaced and the replacement of this media takes about half a day. Tr. 223:11-15. There could be additional downtime for other equipment maintenance on the biogas facility, but this "would be expected to be far less than 5 percent of the year, which translates to 18 days of a given calendar year." Tr. 223:17-23. Regarding the potential issue of gas not meeting pipeline quality standards, this falls within the 95 percent uptime. Tr. 223:24-25 – 224:1-2.

Moreover, Unison Solutions indicated a 95% run time should be planned for its equipment. Tr. 204:19-21. Finally, Ms. Luna contacted three biogas upgrading facilities – two in Colorado and one in Nebraska – to ascertain actual uptime percentages. The two in Colorado reported 95% uptime, and Nebraska reported 96%. *See* Exh. 28 at 15:14-20; Tr. 204:21-25. Therefore, as testified to by Ms. Luna, "wastewater utilities have been able to do both the preventative maintenance,

handle unexpected failures of equipment and gas quality issues, and still maintain 95 percent uptime.” Tr. 224:2-6. Based on this information from the manufacturer and real-world operating data, 95% is a “very good assumption for this analysis” and it should be that way for the entire 20-year life of the project. Tr. 204-205.

Dr. Clarens also suggests that the Company should include emissions from transmission, storage, and distribution operations in its analysis. *See* Exh. 1 at Attachment AFC-2, p. 20. Any upstream or scope 2 emissions from transmission and storage would exist in both the baseline and future state. *See* Exh. 24 at 4:11-12 However, it is important to note that including these emissions would result in a reduction of emissions attributed to the Company due to the 65,000 Dekatherms (Dth) of local production. *See* Exh. 24 at 4:12-17; Tr. 283:3-6. Said differently, since the Company will be producing 65,000 Dths of gas internal to its system means that the Company will not have to buy 65,000 Dths of geologically produced natural gas that would otherwise have to be produced, gathered, and transported over long distances. *See* Exh. 24 at 4:17-21.

Dr. Clarens took issue with the Company’s position that a corresponding decrease in emissions would be included in the analysis, noting that “[the] country’s gas transmission infrastructure is very leaky and it can be difficult to predict which parts of the supply chain are the most leaky.” Tr. 17:17-20. However, what Dr. Clarens fails to consider is that this leakage is occurring in the baseline state and “if a change in this leakage were to occur in the future state it would need to be reduced” by the corresponding amount of natural gas the Company is producing. Tr. 282:17-21. Furthermore, potential leakage in the country’s gas transmission infrastructure is not relevant in developing a greenhouse gas inventory because they are not different from the baseline to the future condition. Tr. 314:21-25 – 315:1.

Furthermore, Dr. Clarens expressed concern about anomalous events. *See* Exh. 1 at AFC-2, p. 18; Tr. 18-19. It is important to note that such events are equally likely in both the baseline and future state so they are traditionally excluded from GHG inventories. As testified to by Ms. Luna, greenhouse gas inventories utilize standard operating procedures and it is the "industry standard for greenhouse gas inventories not to include anomalous conditions." Tr. 323:5-13.

One anomalous event Dr. Clarens specifically mentions is the possibility of someone leaving a valve open. However, such an event would have been more likely to occur in the existing system due to the aging equipment operated by the WVWA, rather than the new system which will monitor for leaks. *See* Exh. 28 at 11:16-22. The Company has decided to install an enhanced leak detection device which will alert the Company and thus prevent such anomalous conditions from existing for an extended period of time. *See* Exh. 24 at 5:2-5; Tr. 281:18-25 – 282:1-3; 323:14-20. Furthermore, even without the enhanced leak detection device, emissions associated with an open valve would produce a noise loud enough to require hearing protection. Tr. 282:4-11.

2. The project will add a source of supply for Roanoke Gas.

There is no dispute that the RNG will add a supply source for the Company. Company witness Schneider explained the RNG Facility will interconnect to the fastest growing segment of the Company's distribution system which includes a hospital, a medical school, and other large users. Exh. 12 at 9-10. He also explained the importance of an additional supply source and that the proposed influx of RNG will assist the Company in addressing its concerns regarding the reliability of its existing gas supply portfolio. Exh. 12 at 10-11.

3. The RNG will be injected into the Company's system for the benefit of the Company's customers.

The RNG will be pipeline quality and injected into the Company's distribution system, blended with the Company's current natural gas supply. This beneficial use of the biogas will not only further Virginia's clean energy policies, but also it comes at a time when the Company is concerned about meeting its customers' future natural gas needs. Specifically, the Company maintains a diverse supply portfolio, but the additional RNG supply source helps alleviate concerns about: (1) the Company's increase in customers since 2006; (2) upstream equipment failures such as those incurred by East Tennessee Natural Gas Pipeline in 2018, 2019, and 2020 that could have had severe consequences on the Company's customers had the weather been colder; and (3) the Company's ability to serve prospective customers that are considering locating in the Roanoke area. Exh. 12 at 10-12. The additional source of RNG supply will heat up to 200 homes per day on cold winter days. *Id.* at 12.

C. The Company's "biogas supply investment plan" complies with § 56-625.

As stated above, § 56-625 A defines a "Biogas supply investment plan" or "plan" as a:

plan filed by a natural gas utility that identifies proposed eligible biogas supply infrastructure projects and its development of those projects with or without a third party.

Section 56-625 B sets forth required elements of a plan, while § 56-625 C affords some optionality to the Company regarding what to do with the biogas that is produced. The Company's plan satisfies these requirements and addresses the optionality in § 56-625 C.

1. The Company's plan includes all required elements.

Under § 56-625 B, the plan must:

include a timeline for the investment and completion of the proposed eligible biogas supply infrastructure projects; provide for an estimated schedule for recovery of the related eligible biogas supply infrastructure

costs through the gas cost component of the natural gas utility's rate structure or other mechanism, including proposed depreciation rates for investments in non-distribution asset classes and how any revenue gains from the use of the pipelines by third parties will be used to offset eligible biogas supply infrastructure costs; and demonstrate that the plan is in the public interest with due consideration to the reduction in methane or carbon dioxide equivalent emissions and the addition of a supply source for the natural gas utility or a combination thereof.

The Company's plan addresses each of the elements in § 56-625.

First, Company witness Mr. Oliver presented the timeline for the Company's investment in the RNG Facility as well as a timeline for the completion of the construction of the RNG Facility. *See* Exh. 10 at 3 and Confidential Schedules 1-2. There was no dispute concerning the reasonableness of the Company's investment schedule or construction timeline.

Second, Company witnesses Mr. Banka presented an estimated schedule for "recovery of the related eligible biogas supply infrastructure costs through the gas cost component of the [Company's] rate structure or other mechanism." As discussed in Section III.C below, the structure includes a revenue requirement for the facility that is offset by a reduction in the volume of purchased gas⁸ and the proceeds realized from the sale of RINs. Staff recommended specific adjustments to the Company's revenue requirement and rate related proposals, and the Company accepted those recommendations. *See* Exh. 25 at 1-2. Mr. Banka included proposed depreciation rates for investments in non-distribution asset classes. Exh. 13 at Schedule 6, attached thereto. Also, no third parties will be using the Company's pipelines, so there are no offsets resulting from third parties other than the RIN proceeds.

⁸ Company witness Banka testified that the "Avoided Cost of Market Purchased Gas" would be \$291,399 for the nine-month period. Exh. 13 at 12. Staff did not adjust that amount.

Third, multiple Company witnesses demonstrated that the plan is in the public interest. As discussed above, the project will reduce GHG emissions and is anticipated to add at least 65,000 Dth of supply annually for the Company.

2. The proposed annual volume of biogas does not exceed the volumetric limits set forth in § 56-625 B.

Section 56-625 B sets volumetric limits on the amount of biogas that may flow from an eligible project:

No project shall provide an annual volume of biogas that exceeds three percent of the natural gas utility's annual firm sales demand, and no combination of projects shall provide an annual volume of biogas that exceeds 15 percent of the natural gas utility's annual firm sales demand. The natural gas utility's weather-normalized firm sales demand for the calendar year preceding the application shall be deemed to establish the annual firm sales demand for the purposes of calculating the volume and volumetric limits of projects.

Company witness Mr. Schneider explained that the Company estimates that the DGCS will produce 62,000 to 66,000 MCF per year of pipeline quality RNG which will be injected into the Company's distribution system. *See* Exh. 12 at 8:22 – 9:1-2 In addition, the RNG Facility is designed to produce up to approximately 126,000 MCF/year. *See id.* at 9:2-3. During calendar year 2021, on a weather normalized basis, the Company sold 7,151,162 MCF to customers in the firm rate classes. *Id.* at 3-5. Therefore, this project is estimated to produce 0.9% of the Company's firm sales demand and production is limited to 1.7% of the Company's firm sales demand. *Id.* at 5-7. Thus, this project complies with the 3% statutory cap.

3. The Company's plan includes additional elements allowed by § 56-625 C, including the sale of RINs and allocation of RINs proceeds.

In addition to the required contents of the plan, § 56-625 C affords the utility latitude to receive or sell the biogas:

In addition to the items included in the plan as specified in subsection B, the plan may provide the natural gas utility with an option to receive the biogas or sell the biogas at market prices. A natural gas utility proposing this option as part of its plan shall propose how any revenue gains from the sale of the biogas will be used to reduce the cost of gas to its customers.

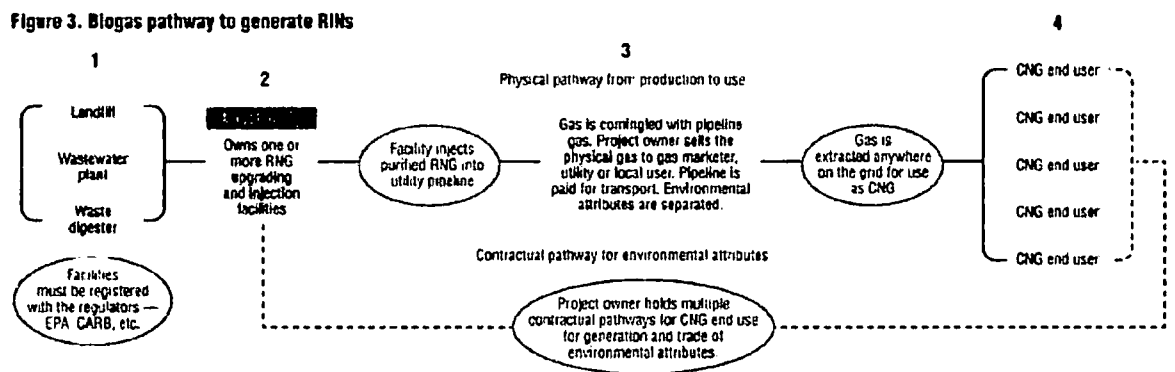
As testified to by Company witness Oliver, Va. Code § 56-625 allows the Company to either receive the biogas or sell the biogas at market prices. *See* Exh. 30 at 3:22-24. If the Company decides to sell the biogas, the Code permits the utility to propose how the sales proceeds will be used to reduce the cost of gas to its customers. Instead of retaining the biogas and environmental attributes, which would result in no RIN proceeds, the Company is proposing to monetize the RINs associated with the production of RNG through the RFS program. *See* Exh. 30 at 2:13; 4:6-8. As discussed in more detail below, while Va. Code § 56-625 does not specifically provide for the sharing of RIN sales proceeds, it does not prohibit the sharing of RIN sales proceeds with shareholders.

The Energy Policy Act of 2005 amended the Clean Air Act and created the RFS program, and the program was expanded by the Energy Independence and Security Act of 2007. *See* Exh. 10 at 12:5-8; Exh. 27 at 3; Tr. 294:11-12. Obligated parties under the RFS program must meet annual Renewable Volume Obligation (“RVO”) mandates. *See* Exh. 10 at 14:2-6. RINs are used by obligated parties to meet the annual RVO mandate. *See* Exh. 27 at 5.

As discussed above, the Company anticipates selling RINs into the RFS program, which is “a national policy that requires a certain volume of renewable fuel to replace or reduce the quantity of petroleum-based transportation fuel.” *See* Exh. 10 at 11:14-15; 12:11-13. The conversion of digester gas to RNG will create RINs that the Company’s RIN broker Innova can sell to companies in the transportation sector to offset their emissions. *See* Exh. 23 at Attachment KK-2, attached thereto. The Company plans to inject the RNG into its distribution system. *See* Exh. 23 at

Attachment KK-1, p. 1, attached thereto. As testified to by Company witness Cox, “this method of supplying RNG to transportation customers is well-established under the RFS program and RINs are generated under this process.” *See* Exh. 26 at 6:5-6.⁹ The RFS program uses mass-balance accounting which “allows an end-user ... to purchase RNG from a producer so long as the producer and end-user are connected to a common pipeline system. *See* Exh. 26 at 5:23-6:1-2; Tr. 293:10-25. At the hearing, Mr. Cox testified that the diagram below is consistent with his experience on how RINs are generated when RNG is injected into a distribution system:

Figure 3. Biogas pathway to generate RINs



See Tr. 292:11-14, referring to Figure 3 of Exh. 27.

It is the Company's expectation that the RINs associated with the RNG Facility will “qualify as cellulosic biofuel” and will be classified as D-3 RINs. *See* Exh. 10 at 14:32-34. When asked whether he had any doubt if the Company's project would generate D-3 RINs, as someone who has extensive knowledge of RINs, Mr. Cox testified that “there is no doubt in my mind that [the Company's] application to the EPA will be successful for RIN generation. This is not

⁹ *See also* 40 CFR 80.1426(f)(11)(ii) which outlines criteria under which RINs may be generated when biogas is introduced into a commercial distribution system. As testified to by Mr. Cox, there's nothing that he has observed that would prevent the Company's project from complying with these criteria. Tr. 299:15-25 – 300:1-22.

something on the experimental side. So yes, you'll generate RINs and you'll generate D-3 RINs." *See* Tr. 309: 3-7. Since January 1, 2022, the price for a D-3 RIN has ranged between \$2.78 and \$3.40. *See* Exh. 10 at 15:3-4.

To monetize the RINs in the RFS market, the Company issued an RFP for a RIN broker and received four bids. *See* Exh. 30 at 10:16-17. As discussed above, Roanoke Gas selected Innova as its RIN broker and finalized all substantive terms of the contract, including the brokerage fee. *See* Exh. 30 at 2:11-13. The broker "will be compensated based on a commission from RIN sales" and this commission percentage came in lower than what was estimated in the Company's initial application. *See* Tr. 146:1-9. Innova is well-known and well respected in the industry and is very knowledgeable regarding the sale of RINs. *See* Tr. 290:19-24. Innova has clients it will sell the RINs to, and the Company does not need to know who the end user will be in order to have a successful sale. *See* Tr. 177:8-16.¹⁰ The Company's will be able to monetize RINs generated by the project.

In its rebuttal testimony, Staff doubted that the Company will be able to monetize the RINs associated with the production of RNG, citing concerns with the Company's plan to directly inject the RNG into its distribution system rather than making RNG that will be further compressed into transportation fuels such as CNG or LNG. *See* Exh. 23 at 12:11-16. This concern is unfounded. As testified to by Company witness Cox, while "[t]he RFS does require the use of RNG as a transportation fuel (or heating oil or jet fuel) ... injection into the gas system is commonplace and does not create a problem with generating RINs." *See* Exh. 26 at 5:19-21.

At the hearing, Staff appeared persuaded that the Company could inject RNG into its distribution system and generate RINs, but Staff raised additional concerns whether "the RFS

¹⁰ *See also* 40 CFR 80.1454(k)(1) which identifies recordkeeping requirements for renewable fuel producers who generate RINs. Innova will be responsible for ensuring compliance with these requirements.

program would continue during the 20-year lifetime of the project” and that “the renewable volume obligations under the RFS program expire at the end of 2022.” Tr. 261:17-21; 262:2-11; 274:16-17.

At the outset, the RFS program does not expire and it is not dependent on the RVO. *See* Tr. 295:5-7. Company witness Cox, who has extensive experience with the RFS market, testified that “it is well established that [the RFS program] is a program without sunset” and explained that for the RFS program to be discontinued during the 20-year lifetime of the project would require an amendment to the Clean Air Act and a “momentous change in modern politics.” *See* Tr. 295:21-23; 296:1-18. Company witness Luna also confirmed that it would take an act of Congress to discontinue the RFS program. Tr. 217:6-7.

Regarding Staff’s concerns about the expiration of the RVO, Mr. Cox testified that the RIN market has previously functioned during periods where the RVO has expired because regardless of whether the EPA has set the RVO, the obligation under the RFS program remains. *See* Tr. 294:17-25 – 295:1-3. Additionally, Mr. Cox did not have any concerns with the RVO being decreased in coming years, noting that especially with the Inflation Reduction Act recently passed by Congress, renewable natural gas is being incentivized and that “this is where gas is headed.” *See* Tr. 296:19-25 – 297:1-14. Ms. Luna added that the 2023 RVO, which has not yet been set by the EPA, “must be at or above previous levels” so the 2023 levels cannot be lower than prior years. Tr. 215; 216:18-217:1.

4. The Company’s proposed arrangement for the sharing of RINs proceeds is reasonable.

The Company has proposed a reasonable methodology for applying the proceeds generated by the sale of RINs. First and foremost, initial revenues will be used to make customers whole. Excess amounts would then be split evenly between the Company and the WWA. Company

witness Mr. Oliver explained that this 50%-50% split “is the manner in which the WVWA will be fully compensated for the use of its land while providing both parties with an incentive to maximize the sales proceeds associated with the environmental attributes.” Exh. 10 at 8-9. The WVWA will use its portion of the RINs proceeds to assist its low-income customers pay their wastewater bills. Tr. 114:10-115:16.

The Company proposes to allocate 75% of its 50% RIN allotment to customers via a credit to Rider RNG. The Company proposes to retain 25% of its allotment for its shareholders.

Company witness Oliver testified as to the reasonableness of the 75%-25% sharing arrangement. As a threshold legal issue, however, as noted above, § 56-625 specifically allows the Company the option to receive the biogas or sell it at market prices. There is no explicit or implicit language that states that all biogas sales must be used to reduce costs to customers, or that 100% of revenues must be credited to customers after customers are made whole. Nor does the statute address what to do with proceeds generated by the sale of RINs. In such a situation, the reasonableness of the proposed sharing arrangement is within the Commission’s discretion. *Virginia Elec. and Power Co. v. State Corp. Comm’n.*, 300 Va. 153, 168-69 (2021) (holding that “in the absence of an express direction as to how amendments to the chapter definitions should be applied, it is reasonable to assume that the Commission exercised its discretion in interpreting and applying the amended definition in a manner consistent with both the larger statutory scheme and general principles pertaining to application of new legislation to existing rights”) (citing *Virginia Elec. & Power Co. v. State Corp. Comm’n.*, 284 Va. 726, 741, (2012) (holding that “we presume that where the General Assembly has not placed an express limitation in a statutory grant of authority, it intended for the Commission, as an expert body, to exercise sound discretion.”); *see also* Tr. 229-30.

Mr. Oliver explained that the 75%-25% sharing arrangement is reasonable for at least four reasons:

First, it will apply only after customers are made whole, meaning that customers are monetarily indifferent as to the Company's investment in the RNG Facility. Staff recognizes this in its testimony. Exh. 30 at 4 (citing Exh. 20 at 12); Tr. 337.

Second, under the Company's proposal, after customers are made whole, allocating 75% to customers equates to a \$314,098 benefit even after the statutory 100 basis point adder is applied. The Company could have proposed retaining the biogas and environmental attributes, which would have resulted in no RIN sales proceeds. Exh. 30 at 4; Tr. 338-39. Had the Company done so, and assuming the Commission approved the plan, the Company's customers would be responsible for the revenue requirement without the RIN credits.

Third, from a policy perspective and since this is the first case under the VEIA, the Company's sharing arrangement incentivizes utilities to pursue any and all opportunities to reduce costs to customers, through new and innovative investments. Exh. 30 at 6; Tr. 338-39. Here, the RIN proceeds afford the Company the opportunity to buy down the cost of the project for customers, and then share excess RIN revenues thereafter in a manner that benefits customers primarily but also the Company's shareholders. Tr. 338:10-18. Va. Code § 56-625 provides the vehicle for this innovative proposal, which can serve as an incentive to other utilities to make similar investments under the statute.

Fourth, there is precedent for a 75%-25% sharing arrangement in instances where the Company is using assets that are included in rate base or otherwise paid for by customers to generate revenues that will be used to lower rates to customers. In *Application of Roanoke Gas Company, For approval of a gas supply incentive mechanism*, Case No. PUR-2018-00030, 2018

S.C.C. Ann. Rept. 368, Final Order (June 29, 2018), the Commission approved a 75%-25% sharing arrangement to allocate proceeds generated from off-system sales of excess gas capacity. The sharing arrangement approved in PUR-2018-00030 incentivizes the Company to maximize revenues for both its customers and its shareholders. The same is true in this case, with the embedded protection that the sharing does not begin until customers are made whole.

Staff distinguishes the sharing arrangement approved in PUR-2018-00030 from the arrangement proposed in this case by arguing that, in PUR-2018-00030, customers had already paid for the capacity as part of the approved tariff rates. In contrast, the RNG Facility RIN proceeds “would be used to cover the cost of an infrastructure project that is still resulting in a revenue requirement from captive customers.” Exh. 20 at 8. As discussed in the rebuttal testimony of Company witness Oliver, Staff witness Otwell appears to ignore the fact that sharing will only occur after customers are made whole, meaning there will not be a positive revenue requirement collected from customers. Exh. 30 at 4-5. Moreover, the Company believes that both cases are analogous in the sense that the Company is using assets that are included in rate base or otherwise paid for by customers to generate revenues that will be used to lower rates to customers. *Id.*

Finally, at the hearing, the Hearing Examiner inquired about whether the sharing arrangement could be applied over a period longer than one year. Tr. 347-49. The Company continues to believe sharing RIN proceeds with its shareholders should be measured over a one-year period.

Applying the sharing arrangement for a period longer than one year introduces accounting and other complexities that are largely avoided with a one-year arrangement. As an example, in a multi-year arrangement, the Company must track the funds and carry these proceeds on its books as deferred revenues or as a potential liability since it could possibly be required to refund these

monies. Multi-year arrangements also raise questions regarding how the sharing arrangement co-exists with an annual revenue requirement that is trued up every October, as proposed. In short, an annual sharing arrangement is cleaner and simpler than a longer period.

To avoid having to book potential liabilities or carry deferred revenues on its books for extended period of time and adding to the accounting complexities associated with annual true-ups with the Commission, the Company suggests at most a rolling two year carry forward of the cost/benefits. The Company envisions such carry forward being analogous to a running bank account. If the Net Customer Impact in a given year is negative, meaning customers are receiving a benefit in the form of a negative revenue requirement, this balance will be added to the bank account which will be eligible for sharing. Conversely, if the net customer impact is positive, meaning the revenue requirement is positive, this balance will be subtracted from the balance eligible for sharing. The balance of the bank account at the end of a rolling two-year period will be used to determine if sharing between the customers and shareholders can occur. If the bank account balance is positive, meaning customers have received a benefit above the net customer impact over the two-year period, then RIN sharing can occur as proposed by the Company. If the bank account is negative, then no RIN sharing will occur. While this proposal will create additional complexities for the Company, it is doable although not preferred.

A calculation of the how a two-year sharing arrangement might work is included as **Attachment 1** to this Brief. The Company believes that this method is very complicated and difficult to track and account for. It would also create added complexities in the annual true-up process. A look back period of longer than two years would only further complicate matters. The Company has provided this example at the request of the Hearing Examiner, however, it continues to maintain that a one-year measurement is appropriate and reasonable.

D. The project will result in rates that are just and reasonable.

Section 56-625 allows for the recovery of “eligible biogas supply infrastructure costs,” defined to include “the investment in eligible biogas supply infrastructure projects and the following:”

1. Return on investment;
2. Revenue conversion factor;
3. Operating and maintenance expenses;
4. Depreciation;
5. Property tax and other taxes and government fees; and
6. Carrying costs on the over or under recovery of the eligible biogas supply infrastructure costs.

Company witness Mr. Banka testified as to each of the costs identified above. He estimated that constructing the RNG Facility will cost \$7,735,198 and calculated a revenue requirement for the period January 1, 2023, through September 30, 2023, of \$947,232. Exh. 13 at 3, 6. Staff made certain adjustments and calculated a revenue requirement of \$951,176, to which the Company agreed. Exh. 20 at 8-9; Exh. 25 at 1-2. The revenue requirement for the first year is based on a nine-month period to synchronize the RNG Rider with the Company’s fiscal year and SAVE Rider. The RNG Rider will be trued-up every October 1 consistent with the SAVE Rider and other Company regulatory filings. Exh. 13 at 19.

In-between the filing of direct and rebuttal testimony, the Company received responses to its RFP for RINs brokering services. The winning bidder’s commission fee was less than the estimated 20% that the Company included in its application. Tr. 146:7-9. In other words, more revenues will flow to the Company and its customers because the broker’s fee will be less than initially estimated. In his rebuttal testimony, Mr. Banka updated the Company’s initial revenue requirement to conform with Staff’s, and he updated the revenues to be received from the broker’s

sale of RINs. For the nine-month period of January through September 2023, the Company calculates the Rider RNG rates as follows:

Rate Class	2023 Projected Factor		2023 RIN Credit		2023 Rider
RS	\$1.46	+	(\$1.50)	=	(\$0.04)
GS-1	\$1.25	+	(\$1.28)	=	(\$0.03)
GS-2	\$6.35	+	(\$6.50)	=	(\$0.15)
IS	\$83.44	+	(\$85.44)	=	(\$2.00)
IT	\$195.96	+	(\$200.64)	=	(\$4.68)
IFT	\$304.13	+	(\$311.38)	=	(\$7.25)

Exh. 25 at 4. These 2023 RNG Rider credits are based on the Company's rates in effect for June 2022 and average normalized usage for fiscal 2021.¹¹ *Id.*

Utilizing the Company's proposed RIN sharing methodology which would split RIN proceeds 75% to customers and 25% to the Company after customers are made whole, the Company projects that customers would receive a credit of \$314,098. *Id.* at 4-5 and Confidential Attachments 1 and 2. Thus, notwithstanding Staff's misplaced concerns about the potential sale of RINs, the only difference between the Company's and Staff's proposed revenue requirement and rates is dependent upon whether the Commission approves the Company's proposed 75%-25% sharing arrangement.¹²

E. The project is in the public interest.

The project is designed to provide reasonably anticipated benefits under § 56-625 to customers at a net rate impact of zero or a credit. This is accomplished through collaboration with

¹¹ The Company currently has a line item on its bills titled "All Applicable Riders." It currently includes only the Company's SAVE Rider. The Company proposes to include the RNG Rider with its SAVE Rider under that line item. Exh. 13 at 15. Staff believes the Company should create a new line item and present the SAVE Rider and RNG Rider separately. Exh. 23 at 45. The Company agrees that separate line items would be more transparent and is amenable to adding a new line item.

¹² Mr. Banka testified that there would be \$837,594 in RIN proceeds remaining after customers are made whole. The WVWA and the Company would split that amount evenly, and the Company's portion would be subject to the 75%-25% sharing arrangement. At the end of the day, the Company would have \$314,098 going to its customers and \$104,699 going to its shareholders, while Staff would have the full \$418,797 going to customers. Exh. 25c at 4-5 and Confidential Attachment 1.

the WVWA to ensure ample supply of digester gas from the rehabilitated digesters, the construction of the RNG Facility, the reduced volume of purchased geologically produced natural gas, and the sale of RINs. Together, these features provide numerous benefits under § 56-625 that, individually and collectively, provide benefits throughout the Roanoke area and demonstrate that the project is in the public interest.

First, the project will reduce GHG emissions, both within and outside of the system boundary. The majority of the reductions will be in the Roanoke area which will improve the air quality and livability of the Roanoke Valley. Exh. 9 at 9. Dr. Clarens and Ms. Luna agreed that the project will reduce GHG emissions outside of the system boundary by reducing the methane that will be emitted from the WVWA's lagoons.

Second, the reduction in emissions is consistent with federal and Virginia policies to reduce transportation emissions specifically and to reduce emissions generally. On the federal level, the EPA's RFS program aims to reduce transportation emissions and, with the sale of associated RINs, serves as a vehicle for the filing of this project. Additionally on the federal level, as testified to by Company witness Cox, with "the passage of the Inflation Reduction Act, Congress is affirming that they are leaning into and incentivizing renewable natural gas with inclusion of qualified biogas property, including cleaning and conditioning equipment within the investment tax credits." Tr. 297:6-14.

In Virginia, the passage of the VEIA itself is indicative of Virginia's policy to reduce emissions by encouraging utilities to propose projects such as the RNG Facility. Also, the General Assembly in 2021 adopted the Commonwealth Clean Energy Policy ("CCEP") to "provide guidance to the agencies . . . in taking discretionary action with regard to energy issues." Va. Code § 45.2-1706.1. The Virginia Energy Plan ("VEP") is then developed to propose actions, consistent

with the objectives enumerated in the CCEP, to implement the CCEP. Va. Code § 45.2-1710 A. The General Assembly has also determined that “[c]limate change is an urgent and pressing challenge for the Commonwealth. Swift decarbonization and a transition to clean energy are required to meet the urgency of the challenge.” The General Assembly also legislated that, “[t]he Commonwealth will benefit from being a leader in deploying a low-carbon energy economy.” Va. Code § 45.2-1705. The General Assembly has determined that addressing climate change and enhancing resiliency will advance the health, welfare, and safety of Virginians, and that addressing climate change requires reducing GHG emissions. Va. Code § 45.2-1706.1 A.

In adopting legislation regarding these initiatives, the General Assembly legislated specific policies to guide the Commonwealth, including:

Support net-zero emission targets by promoting zero-emission vehicles and infrastructure, including electrified transport, *decreasing the carbon intensity of the transportation sector*, encouraging alternative transportation options, and increasing the efficiency of motor vehicles operating on Virginia's roads. Va. Code § 45.2-1706.1 A(6) (emphasis added).

The Company's proposed project is in line with the CCEP's and VEP's emphasis on clean energy, reducing emissions generally, and reducing emissions specifically from the transportation sector.

Third, the purchase of digester gas to displace geologically produced natural gas will reduce the Company's dependence on upstream suppliers and the facilities they use to transport natural gas. As Company witness Schneider explained, those upstream facilities may leak or have other issues that are out of the Company's control. Exh. 12 at 11.

Fourth, the additional supply source of digester gas is being added at a critical time for the Company and enhances reliability on the system. As Mr. Schneider explained, the main to which the RNG Facility will connect serves approximately 12,000 customers including a hospital, a

medical school, and large companies. *See* Exh. 12 at 9:13-16. This is the fastest growing segment on the Company's system and would benefit from an additional supply source. *Id.* at 9.

Fifth, the Project will bring economic benefits to the Roanoke area. Company witness Oliver testified that construction of the RNG facility will result in some temporary construction jobs. In addition, the Company expects to pay the City of Roanoke property taxes on the RNG Facility, which will increase revenue for the City and, in turn, help City residents. Exh. 10 at 18-19. Also, by sharing the excess RIN revenues with the WVWA after the Company's customers are made whole, the WVWA will be able to implement a program to assist low-income customers to pay their wastewater bills. Tr. 114-115.

Sixth, the project will have a positive impact on environmental justice within the Roanoke area resulting from the reductions in GHG emissions. The Company specifically considered environmental justice concerns, as expressed in Va. Code § 2.2-235, in developing its project. The RNG Facility will be located entirely on WVWA property, so there is no need for additional permanent or temporary rights of way, construction areas or permanent easements on land outside of an existing WVWA facility. Exh. 10 at 17. Based on these facts and the communities adjacent to the WVWA property, the Company does not anticipate disproportionately high or adverse impacts to the surrounding community or the environmental justice communities adjacent to the RNG Facility. *Id.* Finally, the record reflects that the Company utilized the EPA's EJScreen to research the demographics of the area surrounding the RNG Facility. The screening identified low income and people of color residential communities, but they will benefit the most from the lower overall emissions that occur from the RNG Facility's operation. *Id.*

Finally, the Company has received widespread community support for this project. Example of such support are below:

- The WVWA which is the largest public utility west of Richmond, serving 180,000 people in the City of Roanoke; the Counties of Roanoke, Franklin, Botetourt; and the Towns of Benton and Boones Mill. Tr. 110. The WVWA has an eight-member governing board comprised of three members each from the City of Roanoke and Roanoke County, and one member each Franklin County and Botetourt County. The WVWA's board has approved the agreements. Exh. 10 at 18.
- On October 13, 2022, a letter from Dr. Brenda L. Hale, President of the Roanoke Branch NAACP, was filed in this docket expressing her support for the RNG Facility. She stated that her support is rooted in "the benefits associated with this project for the marginalized community that surrounds the Western Virginia Water Authority property where the RNG facility will be located." She specifically referenced that: (1) there would be no need to acquire private property or rights of way from adjacent landowners; (2) the facility will improve the air quality around the project site; and (3) the additional supply of natural gas supply.
- On October 7, 2022, Sen. Scott A. Surovell, the Chief Patron of the VEIA legislation during the 2022 General Assembly session, filed comments in support of the project. He wrote that the project, among other things, is consistent with federal and Virginia initiatives to reduce fugitive emissions and reducing dependence on geologically produced natural gas.
- On November 14, 2022, John Warren, the Director of the Virginia Department of Energy ("Department") filed a letter in the docket expressing the Department's support for the RNG Facility. Mr. Warren noted that "[t]he project reduces methane emissions and improves reliability by creating a fuel source within the company's distribution territory." He also noted that the project "further supports the VEP goals as the facility is located within Virginia, reducing the Commonwealth's dependence on imported energy, and will shield ratepayers from fuel price volatility." It is significant that the state agency responsible for Virginia's energy plan supports the project.¹³

These letters from diverse stakeholders support the Company's position that the project is in the public interest.

¹³ The Department did not take a position on whether the Company can generate revenue from the sale of RINs and stated that "it would be appropriate for the Commission to require further confirmation from the company in this area before granting approval." Since the filing of the Department's letter, the Company explained at the hearing that it will be able to generate RIN revenues, and concerns about that issue have been appropriately addressed.

IV. Staff's proposed performance guarantees are neither reasonable nor necessary.

Staff proposed two possible performance guarantees that should be rejected. The first guarantee would require the Company to reimburse customers for the cost of natural gas procured to replace quantities of RNG below 65,172 Dth per fiscal year during the first two years of the RNG Facility's operations. Exh. 23 at 37. The second option would require the Company to reimburse customers for the cost of natural gas procured to replace quantities below 65,172 Dth per fiscal year during the first 20 years of the RNG Facility's operations. *Id.* at 38. Staff had a third option as well – no performance guarantee. *Id.* It is the Company's view that no performance guarantee is reasonable or necessary in this case.

As explained above, the volume of RNG produced annually reduces customers' purchases of geologically produced natural gas and reduces GHG emissions. Therefore, even a small amount of RNG injected into the Company's system produces benefits. At the same time, the Company has estimated that an annual RNG production of 65,172 Dth will produce 767,041 RINs which not only covers the customers' costs for the first year, but also would give rise to the sharing arrangement between the WVWA and the Company, and then the Company would have funds to share in its 75%-25% proposal. The Company calculates that customers would be made whole even at approximately 30,000 Dth per year of RNG, assuming a \$3 per RIN value. So long as the RIN sales remain active, there is no need for a performance guarantee based on the volume or RNG produced.

Further, § 56-625 B already includes caps on the volume of RNG that can be injected into a system from a project. For example, the proposed project cannot provide an annual volume of biogas that exceeds 3% of the Company's annual firm sales demand, and no combination of projects shall provide an annual volume of biogas that exceeds 15% of the Company's firm sales

demand. The General Assembly legislated a *ceiling* on the volume a project may produce but did not view it necessary to place a *floor* on the volume. The General Assembly could have easily added a floor had that been its intent, but it did not do so. *See, e.g., BASF Corp. v. State Corp. Comm'n.*, 289 Va. 375, 405 (2015). So long as the project reduces emissions, is in the public interest, and will result in rates that are just and reasonable, it must be approved.

V. The Company's proposed tariff revisions are reasonable.

The record reflects that the Company's three proposed tariff revisions are reasonable. First, the Company proposes Rate Schedule RNG related to the billing of the proposed RNG rate. Exh. 13 at 22 and Attachment 1. Second, consistent with Va. Code § 56-248.1, the Company proposes to revise Section 12.1.b of its General Terms and Conditions to include supplemental or substitute forms of gas sources in its fuel portfolio and allow for the recovery of its cost as a gas cost expense. *Id.* at 23. Third, the Company proposes a new Rate Schedule RNG Receipt to allow for the interconnection of renewable natural gas facilities owned and operated by third parties with the Company's distribution system. *Id.* at 22.

Company witness Mr. Banka described these tariff changes. He testified that: (1) the proposed Rate Schedule RNG will contribute to the Company's ability to provide reliable service and will result in rates to customers that are reasonable and just; (2) the revisions to Section 12.1.b to include future supplemental or substitute forms of gas sources in its fuel portfolio will afford the Company with reasonable procurement flexibility and is consistent with the policies and goals in Va. Code § 3 56-248.1 and 56-625; and (3) the proposed Rate Schedule RNG Receipt will enable third-parties to interconnect with the Company to serve their commodity customers, and that the fee for the Receipt service is cost-based and will not be paid by the Company's end-use customers. *Id.* at 24-25; Tr. 192:5-193:8.

Assuming the Commission approves the proposed RNG Facility, neither Staff nor the

Environmental Respondent opposed the Company's tariff provisions. Exh. 23 at 47. There was one issue related to the Rate Schedule RNG Receipt that did not go directly to the tariff itself but instead related to future third-party interconnections. Staff raised the issue of whether the Company would need Commission permission for future interconnections. The Company has proposed to use a "Renewable Gas Service Agreement" on a case-by-case basis for future RNG interconnections, amending the Agreement as needed based on the gas quality parameters of the specific interconnection. Exh. 13 at 23; Exh. 22 at 16. Staff views that amendment as an amendment to the Company's biogas supply plan warranting Commission approval. Exh. 22 at 16-17; Tr. 239:24-242:8.

The Company disagrees with Staff's recommendation. The intent of the Rate Schedule RNG Receipt and required Renewable Gas Service Agreement was to permit the Company to interconnect new RNG facilities without a formal Commission proceeding. *See* Exh. 24 at 3:3-9. The Company committed in testimony to work directly with Staff on gas quality parameters for future RNG projects prior to interconnecting such facilities to its distribution system (*see* Exh. 24 at 3) and reaffirms that commitment here.

VI. Conclusion

For the foregoing reasons, the Company has shown its plan is in the public interest, will result in a decrease of methane or carbon dioxide equivalent emissions, and will result in rates that are just and reasonable, in accordance with Va. Code § 56-625 B. Therefore, Roanoke Gas respectfully requests that the Commission issue an order approving the Application, including approving:

1. A CPCN to construct, own, operate, and maintain a renewable natural gas ("RNG") facility (the "RNG Facility") pursuant to the Utility Facilities Act, Va. Code §§ 56-265.1 *et seq.*;

2. A rate adjustment clause, designated Rider RNG, for the recovery of projected costs associated with the RNG Facility as permitted under the new Va. Code § 56-625; and
3. New tariff provisions pursuant to Va. Code §§ 56-248.1 and 56-234 related to the RNG Facility, the Company's procurement of "supplemental and substitute forms of gas" under the Code, and the interconnection of renewable gas facilities owned and operated by third parties with the Company's distribution system.

Respectfully submitted,

ROANOKE GAS COMPANY

By Counsel

/s/ Brian R. Greene

Brian R. Greene

Victoria L. Howell

GreeneHurlocker, PLC

4908 Monument Avenue, Suite 200

Richmond, VA 23232

(804) 672-4542 (BRG)

(804) 672-4546 (VLH)

BGreene@GreeneHurlocker.com

VHowell@GreeneHurlocker.com

Counsel for Roanoke Gas Company

Dated: December 8, 2022

CERTIFICATE OF SERVICE

I certify that a true copy of the foregoing was emailed on December 8, 2022, to each person listed below:

William H. Harrison, IV Esq.
 Raymond L. Doggett, Jr., Esq.
 Sean Barrick, Esq.
 Office of General Counsel
 State Corporation Commission
 Tyler Building – 10th Floor
 1300 East Main Street
 Richmond, Virginia 23219
William.Harrison@scc.virginia.gov
Raymond.Doggett@scc.virginia.gov
Sean.Barrick@scc.virginia.gov

C. Meade Browder, Jr., Esq.
 Senior Assistant Attorney General
 Division of Consumer Counsel
 Office of the Attorney General
 202 N. Ninth Street – 8th Floor
 Richmond, Virginia 23219
mbrowder@oag.state.va.us

Gregory D. Buppert, Esq.
 Claire Horan, Esq.
 Deirdre Dlugoleski, Esq.
 Southern Environmental Law Center
 120 Garrett Street, Suite 400
 Charlottesville, VA 22902
gbuppert@selcva.org
choran@selcva.org
ddlugoleski@selcva.org

/s/ Brian R. Greene
 Brian R. Greene

Line No.	Description	Source	2023	2024	2025	2026	2027	2028	2029
1	RNG Facility Revenue Requirement	Staff Lifetime Rev Req.	947,232	1,543,582	1,512,733	1,481,451	1,450,000	1,419,460	1,389,555
2	Allocated Cost of Gas	Staff Lifetime Rev Req.	(291,399)	(391,032)	(391,032)	(391,032)	(150,000)	(391,032)	(391,032)
3	Net Customer Impact	Line 1 Plus Line 2	655,833	1,152,550	1,121,701	1,090,419	1,300,000	1,028,428	998,523
4	Total RIN Proceeds After Broker Fee	Estimate using assumptions from filing	(1,501,403)	(2,001,870)	(2,001,870)	(2,001,870)	(923,940)	(2,001,870)	(2,001,870)
5	1st Tranche of RIN Proceeds (100% of Net Customer Impact)	As originally proposed by Company	(655,833)	(1,152,550)	(1,121,701)	(1,090,419)	(923,940)	(1,028,428)	(998,523)
6	2nd Tranche of RIN Proceeds (After WYWA Split)	Line 12	(317,089)	(318,495)	(330,063)	(341,794)	-	(365,041)	(376,255)
7	Total Customer Cost/Benefit	Sum of Current and Prior Year Line 7	(317,089)	(318,495)	(330,063)	(341,794)	376,060	(365,041)	(376,255)
8	Two Year Lookback - Cost/Benefit			(635,584)	(648,558)	(671,858)	34,266	11,019	(741,296)
9	RIN Proceeds Eligible to Share with WYWA	Line 4 Less Line 5	(845,570)	(849,320)	(880,169)	(911,451)	-	(973,442)	(1,003,347)
10	50% to WYWA	50% of Line 9	(422,785)	(424,660)	(440,085)	(455,726)	-	(486,721)	(501,674)
11	50% to Customers/Roanoke Gas	50% of Line 9	(422,785)	(424,660)	(440,085)	(455,726)	-	(486,721)	(501,674)
12	Customers Portion - 75%	75% of Line 11	(317,089)	(318,495)	(330,063)	(341,794)	-	(365,041)	(376,255)
13	Roanoke Gas Portion - 25%	25% of Line 11	(105,696)	(106,165)	(110,021)	(113,931)	-	(121,680)	(125,418)
14	Payout to Roanoke Gas Company	Prior Year Line 13		(105,696)	(105,165)	(110,021)			(121,680)

Narrative

The Company created this Attachment 1 to demonstrate how it believes a two-year rolling lookback would work, if the Commission believed such lookback necessary.

In the table, a rolling two-year lookback (Line 8) would be used to evaluate if sharing of excess proceeds could be shared between customers and Roanoke Gas Company. If the two-year total is negative, meaning RIN proceeds were great enough to create a negative revenue requirement (benefit to customers), then sharing can proceed as the Company has proposed (Line 14).

However, should RIN sale proceeds (Line 4) not exceed the Net Customer Impact (Line 3) as shown in the example of year 2027 and create a cost to customers on a two-year rolling lookback (Line 8), then no sharing will occur with shareholders (Line 14). Similarly, the two-year lookback in year 2028 is still a cost to customers (Line 8), and therefore, no sharing will occur with shareholders (Line 14).

Excess RIN sale proceeds that were marked for shareholders (Line 13) would be used in the following year where the Two Year Rolling Lookback (Line 8) shows a cost to customers. In this scenario, a portion of the \$113,931 in Line 13, year 2026, would be used to offset the \$34,266 cost to customers shown in Line 8 of year 2027.