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July 10, 2020

Mr. Will Seuffert
Executive Secretary
Minnesota Public Utilities Commission
121 East Seventh Place, Suite 350
St. Paul, MN 55101-2147

**RE: Petition by CenterPoint Energy to Introduce a Renewable Natural Gas
Interconnection Tariff
Docket No. G-008/M-20-434**

Reply Comments

Dear Mr. Seuffert:

CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Minnesota Gas, ("CenterPoint Energy" or the "Company") respectfully submits these reply comments in response to the initial comments filed in this docket. As set forth herein, the Company agrees with the modifications and conditions proposed by the Minnesota Department of Commerce, and we thank all of the commenters for their review and analysis of the Petition.

Sincerely,

/s/ Amber Lee

Amber Lee
Director, Regulatory Affairs

C: Service List

STATE OF MINNESOTA
BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

121 Seventh Place East, Suite 350
St. Paul, MN 55101-2147

Katie Sieben
Valerie Means
Matt Schuerger
Joseph Sullivan
John Tuma

Chair
Commissioner
Commissioner
Commissioner
Commissioner

In the Matter of a Petition by CenterPoint Energy
to Introduce a Renewable Natural Gas
Interconnection Tariff

Docket No. G-008/M-20-434

REPLY COMMENTS

I. Introduction

CenterPoint Energy Resources Corp., d/b/a CenterPoint Energy Minnesota Gas, (“CenterPoint Energy” or the “Company”) respectfully submits the following Reply Comments to the Minnesota Public Utilities Commission (“Commission”).

The Company’s Petition in this docket to introduce a renewable natural gas (“RNG”) interconnection service generated a robust response from interested parties.¹ Several commenters propose minor changes to the Company’s proposal, but all but one commenter expressed overall support for the Petition.

In these Reply Comments, CenterPoint Energy will first discuss the Comments submitted by the Minnesota Department of Commerce, Division of Energy Resources (“Department”). As mentioned, the Company is generally amendable to the Department’s recommendations.

The Company will then respond to the suggestions and questions commenters raised regarding the proposed gas quality standards.² Finally, CenterPoint Energy will address some of the other specific concerns raised by Fresh Energy, the Minnesota Center for Environmental Advocacy, and the Sierra Club (“Fresh Energy et al.”).

¹ Commenters included local government entities, non-profit environmental organizations, a non-profit agricultural research institution, a labor union, a coalition of entities involved in the Minnesota bioeconomy, two trade organizations representing the interests of entities involved in RNG or biogas production, and several for-profit companies that are working to develop RNG projects in Minnesota.

² The following commenters addressed the proposed gas quality standards: Fresh Energy, the Minnesota Center for Environmental Advocacy, and the Sierra Club, the American Biogas Council (“ABC”), the Coalition for Renewable Natural Gas (“RNG Coalition”), and the Partnership on Waste and Energy.

II. Department's Comments

The Department recommends the Commission approve CenterPoint Energy's proposal with three modifications. Specifically, the Department proposes that:

1. RNG producers pay all of the costs of interconnecting to CenterPoint Energy's system;
2. The Company include an explicit statement in its gas quality standards prohibiting the acceptance of RNG from hazardous sources; and
3. The Company charge RNG customers the same non-gas margin as charged to interruptible transportation customers, less the conservation cost recovery charge ("CCRC") (\$0.15748 per therm).

In addition, the Department recommends the Commission require the Company to:

- Track all actual costs separately for each RNG producer or developer that the Company interconnects and the total RNG received for each RNG producer or developer (in dekatherms);
- Seek prior approval from the Commission and explain how any transactions with its affiliates would comply with Minn. R. 7825-1900 – 7825-2300 and Minn. Stat. § 216B.48 and the relevance of these regulations to all applicable projects;
- Seek approval from the Commission prior to engaging in any RNG transactions for its fueling station;
- Absorb any rebates or incentives used by the Company in its interconnection process as a shareholder expense; and
- Track and identify all of the customers the Company adds (to lines built to accommodate RNG Interconnect Customers) and the associated costs and revenues and provide a discussion and analysis in its next general rate case.

The Company addresses each proposed modification and recommendation below.

a. Exit Fees

The Department proposes that RNG producers pay all the costs of interconnection, either by paying the entire contribution-in-aid-of-construction ("CIAC") up front, or imposing an exit fee if the producer leaves the system before fully paying for all of the interconnection and removal costs. The Company has no objection to the recommendation that RNG Interconnect Customers be required to pay an exit fee if they leave CenterPoint Energy's system before repaying the costs attributable to them. The Company proposes to add the following language to its proposed Interconnection Tariff to implement this requirement:

Exit Fee:

If Customer suspends RNG production, Customer will pay an exit fee equal to the total cost of installing the RNG facilities, including main to connect to CenterPoint Energy's distribution system, and any costs for removal of facilities, less the initially paid contribution-in-aid-of-construction; any depreciation of facilities that has occurred between project inception and suspension of RNG production; and any cost for infrastructure that is utilized by other customers.

The Company has attached proposed tariff sheets including this addition in Exhibit A.

The Company does not support the recommendation that the Company charge a CIAC upfront for the full costs of interconnection because the Company is concerned that an upfront CIAC would discourage smaller RNG Interconnect Customers who may struggle to raise enough capital upfront to pay the full cost of interconnection.

b. Statement Regarding Hazardous Waste

The Company has no objection to the Department's recommendation to add a statement about hazardous waste to the proposed gas quality requirements. We propose the following language, slightly modified from the Department's proposed language, for clarity and to better fit the conventions of the gas quality standards proposed by the Company:

17.09 Gas from Hazardous Waste Landfills

RNG sourced from Hazardous Waste Landfills will not be knowingly purchased, accepted, or transported on CenterPoint Energy's system. Customer must certify and provide documentation that the RNG feedstock is not derived or collected from a hazardous waste landfill prior to interconnection and whenever there is a change in feedstock.

The Company has attached proposed tariff sheets including this addition in Exhibit B.

c. Receipt Charge of \$0.15748 per Therm

The Company has no objection to the recommendation that the per therm rate for RNG Interconnect customers be set at \$0.15748. For clarity however we note that \$0.15748 is not the Company's current non-gas margin charged to large interruptible transportation customers less the CCRC. The Company calculated \$0.15748 as the appropriate total rate for RNG Interconnect Customers as shown in Exhibit E to the Petition, page 5, but then rounded down to reach its proposal of \$0.15000. The calculation did include the current non-gas margin charged

to large interruptible customers as one input, but the calculation also accounted for RNG specific costs that the Company expects to incur.

The Company has attached proposed tariff sheets including this modification in Exhibit A.

d. Affiliate Transactions

The Department recommends the Commission require CenterPoint Energy to (1) seek prior approval for any transactions with affiliates arising from the interconnection projects, and (2) explain how the proposed affiliate transaction would comply with the affiliate statute, rules, and orders.

The Company agrees to inform the Department and Commission if any affiliates are, or become, involved in any interconnection project. In its notification, the Company will explain whether the affiliate rules and regulations are implicated, and if so, the Company will seek Commission approval of the transaction. The Company does not commit to obtaining preapproval of the engagement because of the timing required, but the Company does commit, upon learning of the existence of an affiliated interest in a particular interconnection process, to notify the Department and Commission of that relationship and to collaborate with the Department on whether an affiliate interest filing should be pursued.

e. Other Department Recommendations

In addition to the recommendations discussed above, the Department recommended that the Commission require (1) CenterPoint Energy to track costs and revenues associated with RNG Interconnect customers and other customers connecting to lines constructed to serve RNG Interconnect customers and RNG received from RNG Interconnect customers; (2) CenterPoint Energy shareholders to bear the expense of any rebates or incentives offered to RNG Interconnect customers or potential RNG Interconnect customers; and (3) CenterPoint Energy to seek approval from the Commission before engaging in any RNG transactions for its fueling station.

The Company has no objection to any of these recommendations. The Company notes, however, that it has no intention of offering any incentives to RNG Interconnect customers.

II. Gas Quality Standards

Several commenters expressed specific suggestions regarding CenterPoint Energy's proposed gas quality standards. In this section the Company will address issues raised by the American Biogas Council ("ABC"), the Partnership on Waste and Energy, the Coalition for Renewable Natural Gas ("RNG Coalition"), and Fresh Energy et al.

a. Periodic Reevaluation of Gas Quality Standards

Fresh Energy et al. recommends the Commission require CenterPoint Energy to periodically reevaluate its gas quality standards. In particular, Fresh Energy et al. recommended that the Company be required to reevaluate its gas quality standards whenever the California standards, which CenterPoint Energy used as a basis for its proposal, are updated.

The Company agrees that periodic reevaluation of the Company's gas standards is appropriate and necessary and accordingly has no objection to this proposed requirement.

b. Case-by-Case Deviations from Proposed Standards for Health Protective Constituents

Fresh Energy et al. recommends that CenterPoint Energy not be permitted to allow case-by-case deviations from proposed standards. Fresh Energy et al.'s argument focused on the standards addressing carcinogenic constituents. For the reasons described below, CenterPoint Energy requests the Commission allow the Company flexibility to deviate from its proposed standards where a deviation would be safe for customers, customers appliances, and Company equipment. However, the Company does not contemplate allowing for deviations for constituents of concern for human health and would not object to a requirement the Company strictly enforce its proposed standards for those constituents. Specifically, CenterPoint Energy would agree to strictly enforce limits and testing requirements for all of the constituents listed under "Health Protective Constituent Levels," but requests that the Commission grant flexibility for the Company with respect to pipeline protective constituent levels as well as other aspects of the proposed gas quality standards (e.g. gas heating value, delivery temperature, etc.).

The Company proposes to add the following sentence to its gas quality standards "CenterPoint Energy will not allow deviations from these standards related to the health protective constituent levels or testing requirements." The Company has attached proposed tariff sheets including this addition in Exhibit B.

c. Case-by-Case Deviations from Proposed Standards Not Related to Health Protective Constituent Levels

ABC, the Partnership on Waste and Energy, and the RNG Coalition each emphasized the importance of some degree of flexibility in applying the proposed gas quality standards to particular RNG projects. ABC stated "[T]he fact that CenterPoint Energy has said they may allow deviations from the standard on a case-by-case basis shows that they understand the industry well, and in some cases, flexibility is needed by both parties."

Some level of flexibility is particularly important given the mix of potential projects that developers have brought to the Company's attention. When RNG enters CenterPoint Energy's

system it will, generally speaking, flow toward end users. While the contractual purchaser of the RNG may be located upstream of the RNG Interconnect customer, the Company cannot separate the flow of RNG from the flow of other gas just as electrons generated with renewable electricity cannot be separated from non-renewable electrons on the grid.

Accordingly, an RNG project located in a rural area may represent a large proportion of supply for a small town. On the other hand, a project located in the metro area may make up only a small fraction of any one gas customer's supply. The Company designed its gas quality standards to be strict enough to ensure the safety of the gas for customers, customer's appliances, and the Company's system even in cases where RNG is a large percentage of the total supply.

However, the Company is aware that RNG Interconnect Customers will incur costs to comply with proposed gas quality standards, and it is possible that additional costs may prevent projects from going forward. Where there is enough blending into other gas supplies the Company may consider relaxing some of its standards while still ensuring the safety of every customer and the Company's equipment.^{3 4}

Another instance in which flexibility may be warranted is when temporary conditions cause an RNG Interconnect customer to exceed specifications in a way that does not pose short-term risk. For example, the proposed temperature specifications in the gas quality standards are designed to protect Company piping from long-term exposure to excessive heat. The Company would consider allowing a temporary deviation from these standards on, for example, a very hot day, rather than requiring an RNG Interconnect customer to install costly equipment to ensure that it will be able to meet temperature requirements every day of the year.

Related to Fresh Energy et al.'s recommendation, the RNG Coalition recommended that CenterPoint Energy's gas quality standards include a process to allow a project-specific exception or modification to specific gas quality requirements. The Company expects that an RNG Interconnect Customer seeking an exception to the general gas quality requirements will alert their assigned Key Account Manager who will work with the customer and CenterPoint Energy's engineering department to determine whether an exception can be granted safely.

³ The Company believes that this addresses the RNG Coalition's request that the Company clarify whether blending strategies or other potential mechanisms to eliminate impacts to downstream consumers would be considered.

⁴ In such a case, the Company would expect and clearly document that the customer assumes the risk of a change in distribution flow that reduces the amount of blending available. For example, if construction activity or operational changes reduce the amount of gas flow so that the customer's RNG forms a larger proportion of total system gas, the Company may require that the customer either conform to the tariff specifications or reduce their RNG output to allow proper blending ratio.

d. Particular Constituents of Concern

ABC, the Partnership on Waste and Energy, and the RNG Coalition questioned whether the Company's standards could be more lenient with respect to oxygen, siloxanes, and required heating value.⁵ In addition, the RNG Coalition requested that the Company clarify whether RNG Interconnect customers would be required to test for constituents of concern that are not reasonably expected to be found at levels above other gas supplies flowing on the Company's system. As discussed below, after further review, the Company agrees with these commenters that a slightly more relaxed oxygen standard is justified, but the Company stands by its original proposals for both siloxanes and heating value.

i. Oxygen

The Company agrees with the commenters that it can relax its proposed oxygen specification to less than 0.4%. It is important to limit the amount of oxygen in RNG because of oxygen's potential corrosive effects on piping and other equipment. However, this corrosion will not occur without the presence of water. If the RNG meets the Company's proposed limitations on water, the risk of corrosion from oxygen at the 0.4% level is negligible. The Company has attached proposed tariff sheets including this modification in Exhibit B.

ii. Siloxanes

Siloxanes in gas form silica deposits in combustion equipment. These silica deposits can build up and cause malfunction in consumer appliances. Research on siloxanes both in California and Europe suggest that even very small concentrations of siloxane are potentially problematic. CenterPoint Energy proposes to adopt the California standard on siloxanes, which was reviewed and affirmed by a thorough 2018 investigation.⁶ A more lenient standard is not justified.

iii. Heating Value

The heating value of gas is a measure of the energy density of the fuel. It is related to the Wobbe Index which is a measure of interchangeability of fuel gases in gas burning appliances. The Wobbe index of gas is a function of its heating value and relative density. It is important

⁵ ABC and the Partnership on Waste and Energy requested more lenient standards for oxygen and heating value. The RNG Coalition questioned whether more lenient standards would be possible for oxygen and siloxanes.

⁶ Von Wald, et al., *Biomethane in California Common Carrier Pipelines: Assessing Heating Value and Maximum Siloxane Specifications An Independent Review of Scientific and Technical Information*, California Council on Science & Technology, 2018, available at <https://c4bes.org/wp-content/uploads/2018/09/Biomethane-Summary-Report.pdf> (last visited July 6, 2020) ("There is not enough evidence to recommend any changes to the maximum allowable siloxanes concentration at this time.")

that the Wobbe index of RNG added to the Company's system be similar to other gas the Company delivers so that RNG will burn properly and safely in customer appliances. Generally, RNG producers improve the heating value and Wobbe index of their product by removing more carbon dioxide to create RNG that has a higher concentration of methane. RNG producers of standard biogases will not be able to achieve the Company's required Wobbe index without meeting or exceeding the Company's proposed heating value, and because of the importance of the Wobbe index for safe and proper combustion of gas, the Company does not think it is of value to lower the heating value proposed in the Company's gas quality specifications. In the unlikely case of an RNG Interconnect customer that can demonstrate that they are capable of achieving the required Wobbe index without also achieving the required heating value, the Company would work with that customer and consider making an exception.

e. Constituents Tested Depends on RNG Source

With respect to RNG Coalition's question about whether the Company would require RNG Interconnect customers to test for constituents of concern that are not reasonably likely to exceed the specified levels, the Company notes that it has proposed constituent testing to be dependent on the source of the RNG. Because RNG produced from dairy manure is very unlikely to contain problematic levels of antimony, for example, testing for antimony will not be required for dairy projects.⁷

III. Other Specific Concerns Raised by Fresh Energy et al.

In addition to the gas quality specification concerns discussed above, Fresh Energy et al. raised a variety of additional concerns with CenterPoint Energy's proposal. Many of Fresh Energy et al.'s concerns are not specifically related to this proposal but are instead editorial comments expressing Fresh Energy et al.'s disapproval of natural gas in general or wishes for a more holistic statewide policy on optimal uses for biogas resources.⁸ The Company will not address these comments because it finds them to be neither relevant nor constructive in this context. Nor is there any reasonable proposal the Company could make to the Commission to address these concerns.

However, the Company will respond to the following recommendations and issues raised by Fresh Energy et al.:

⁷ Antimony is a constituent of concern for landfill-sourced RNG because it is used in various industrial applications and consumer products such as batteries, paint, and glass. The Company's proposed standards are consistent with the California Public Utilities Commission standards in not requiring dairy manure RNG projects to test for antimony.

⁸ The Company agrees that Minnesota would benefit from such a policy. The Natural Gas Innovation Act (S.F. 3013), supported by CenterPoint Energy in the last regular legislative session, included a study of all biogas resources in the state including discussion of the optimal use of each resource (e.g. electricity generation, RNG, etc.). The Act would have also made it possible for gas utilities to propose pilot programs to support the use biogas for purposes other than RNG.

- Recommend that the Commission require a life cycle carbon accounting of biogas production and upgrade facilities in the Interconnection Feasibility Study and prohibit climate intensive producers from interconnecting to the Company's system;
- Recommended that the Company restore the CCRC to the delivery charge for RNG Interconnection service;
- Questioned the safety of using RNG in homes; and
- Expressed concern for ability of small producers to take advantage of the proposed service.

a. Require Life Cycle Carbon Accounting Prior to Interconnection

Fresh Energy et al. recommends the Commission require that the Company estimate the lifecycle carbon intensity of RNG as part of the Interconnection Feasibility Study and refuse to interconnect RNG Interconnect customers that are determined to be climate intensive. The Company disagrees with this proposal.

The Company emphasizes first, that RNG produced in the United States is generally already assessed for its carbon intensity in compliance with federal Renewable Fuels Standard or state Low Carbon Fuel Standard requirements.⁹ To require RNG Interconnect Customers to demonstrate carbon benefits before interconnection would be duplicating requirements that are already imposed by RNG buyers or compliance markets.¹⁰

In addition, the estimated carbon intensity of any particular RNG project is not a good test of overall project value. Consider two example projects: (1) a project that uses methane from manure that would otherwise be emitted directly into the atmosphere as a substitute for gasoline in vehicles and (2) a project that uses food waste as a substitute for fossil natural gas in an industrial process. The lifecycle carbon intensity of the first project will likely be deeply negative¹¹ whereas the lifecycle carbon intensity of the second project may be near zero or even slightly positive (while still being significantly less carbon intensive than use of fossil

⁹ See California and Oregon low-carbon fuel standard programs require individual lifecycle carbon assessments https://ww2.arb.ca.gov/sites/default/files/2020-06/basics-notes_1.pdf (last visited July 6, 2020) (California Low-Carbon Fuel Standard), <https://www.oregon.gov/deq/aq/programs/Pages/Clean-Fuel-Pathways.aspx> (last visited July 6, 2020) (Oregon Low-Carbon Fuel Standard). The EPA does not require individual carbon intensity assessments for compliance with the Renewable Fuel Standard but does evaluate average lifecycle carbon intensities for RNG by feedstock. <https://www.epa.gov/renewable-fuel-standard-program/lifecycle-analysis-greenhouse-gas-emissions-under-renewable-fuel> (last visited July 6, 2020).

¹⁰ If CenterPoint Energy were to buy RNG through, for example, a green tariff program, it would be entirely appropriate and necessary for the Company to require a demonstration of carbon reduction.

¹¹ All approved California LCFS pathways for dairy RNG have carbon intensities below -157 gCO₂e/MJ. <https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities> (last visited July 6, 2020).

natural gas in industry).¹² However, the second project may support a local government organic recycling effort and have important benefits in the community for waste management and water quality. It may also offset the use of fossil fuels for a process that cannot be electrified or otherwise made less carbon intensive. Note also that RNG projects may change feedstocks or end uses after they are built, so an *a priori* estimate of carbon intensity may not even accurately reflect the long-term carbon emissions benefits of any particular project.

No other states, utilities, or pipelines require RNG Interconnect Customers to demonstrate carbon benefits prior to interconnection. RNG producers may interconnect with any federally regulated interstate pipelines (including interstate pipelines operating in Minnesota) as well as many other local distribution company systems outside of Minnesota.¹³ To require RNG Interconnect customers to pass an extra carbon test before interconnection would uniquely disadvantage CenterPoint Energy and potential projects near CenterPoint Energy's distribution system, and would discourage development of these resources.

Finally, the Company is uncomfortable with the idea of imposing environmental tests on customers before offering them services. The Company does not require any other large customer to demonstrate that their business is "environmentally friendly" or that their use of CenterPoint Energy's services will produce benefits for the state, nor do we think that it would be appropriate for us to do so. If the state wants to shape or limit development of the RNG industry for environmental reasons, it seems more appropriate for the Minnesota Pollution Control Agency or a similar body to directly impose these requirements.

Notwithstanding the above, the Company does believe that there is likely value for the Company, the Commission, and other stakeholders interested in gas decarbonization and RNG to have information on the carbon intensities of RNG projects built in the state. Such information could be valuable when the Commission considers future proposals related to RNG. Accordingly, the Company proposes to work with RNG Interconnect customers interconnecting under this service to collect lifecycle carbon intensity information. Carbon intensities for facilities participating in the California LCFS are public,¹⁴ and RNG Interconnect Customers not participating in the California LCFS may nonetheless be willing to share information to support development of the RNG industry in the state. The Company will collect information that is publicly available, or that customers are willing to share, but the Company will not require this information as a prerequisite to service.

¹² The only California LCFS approved pathway for food waste has a carbon intensity of -23 gCO₂e/MJ. <https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities> (last visited July 6, 2020).

¹³ The Company is aware of RNG interconnection to local distribution companies or regulatory approval for interconnection to local distribution companies in the following states: California, Colorado, Florida, Hawaii, Iowa, Nevada, New York, and Oregon. The Company is likely not aware of all local distribution companies that allow RNG interconnection.

¹⁴ See <https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities>.

b. Inclusion of the CCRC in RNG Charges

Fresh Energy et al. recommends CenterPoint Energy charge RNG Interconnect Customers conservation charges per therm of RNG produced, stating that the Company's proposed omission is "predicated on the assumption that RNG production, distribution, and consumption result in a net environmental benefit that is greater than the environmental benefit of conservation."¹⁵

This is a mischaracterization of CenterPoint Energy's reasoning for omitting conservation charges from proposed RNG production rates. The Company did not argue, and would not agree, that RNG is more environmentally beneficial than conservation. Instead, CenterPoint Energy's argument for omitting the CCRC from RNG acceptance fees had two main points.

First, customers that pay for CenterPoint Energy's Conservation Improvement Program ("CIP") have the ability to participate in CIP programs that can help them reduce their gas consumption and accordingly their bill. CenterPoint Energy's CIP does not have programs to help RNG Interconnect customers reduce their production, nor would RNG Interconnect Customers be interested in such a program.

Second, unlike energy waste, RNG production is environmentally beneficial. CIP programs place a fee on energy use in order to discourage wasteful use of energy, and it does not make sense to extend this fee to production of energy, particularly low-carbon energy. If we are required to charge RNG Interconnect Customers for CIP, electric utilities should also be required to charge interconnected wind and solar producers. The Company does not agree with the proposal to impose CIP charges for interconnection services.

c. Safety of RNG Use

Fresh Energy et al. cite a series of studies that they claim demonstrate that natural gas is problematic for indoor air quality. In general, CenterPoint Energy will not address these arguments because they are not relevant to the question of whether CenterPoint Energy should be able to interconnect RNG Interconnect customers, or at least no more relevant to the question of whether to interconnect with RNG Interconnect customers than to the question of whether any customer should be able to connect to the Company's system.¹⁶

However, Fresh Energy et al. cites one study that found that "exposure to combustion exhaust from RNG-fueled appliance has a slightly greater impact on DNA damage and on

¹⁵ Fresh Energy et al. at 11.

¹⁶ The Company's decision to refrain from addressing these studies should not be taken as a sign that the Company agrees with Fresh Energy et al.'s argument.

mutagenicity...than exposure to combustion exhaust from fossil natural gas.” Because this study is specific to RNG the Company will address it.

Fresh Energy et al. is correct to state that the study recommends additional research. However, the Company believes it is important to note that the study did not find consistent differences between RNG and fossil gas, finding difference in some tests but not others. We also note that the study’s overall conclusion is: “This research shows that biogas and biomethane combustion exhaust is similar to natural gas combustion exhaust meaning that the renewable fuels can be used safely in California.”¹⁷ Therefore the study does not support a conclusion that RNG is dangerous for human health.

d. Small Producers

Fresh Energy et al. asserts “CenterPoint Energy aims to develop a Minnesota marketplace for RNG that relies on interconnection to its pipeline system,”¹⁸ and goes on argue that the fee structure proposed by CenterPoint Energy will create barriers for small producers.

The Company is also concerned that smaller projects may not be able to access the Company’s system at the rates proposed. As the Company gains experience with this offering it will gain a better understanding of what projects are able to take advantage of the proposed service and which are not. The Company may be able to propose changes to the proposed service, such as multiple RNG Interconnect customer rates classes, that make the service more accessible to small producers.

The Company is also in agreement with Fresh Energy et al. that it is likely not feasible or desirable to interconnect all biogas resources with the natural gas grid. Small and geographically remote sources may not be good candidates for interconnection. Sources with nearby thermal or electrical loads may be better used nearby. CenterPoint Energy supports such uses of biogas when possible through existing regulatory mechanisms. For example, the Company provides CIP rebates to projects that use nearby biogas resources to offset the use of natural gas. And, as noted above, the Natural Gas Innovation Act, supported by CenterPoint Energy, would have required the Department of Commerce to inventory biogas resources in the state and make recommendations on the best uses for each source and would have allowed CenterPoint Energy to propose pilots to incentivize uses of biogas other than RNG.

However, it is not reasonable for the Commission to require the Company to wait for a holistic plan for biogas in the state before approving the proposed tariff. There are RNG Interconnect

¹⁷ Kleeman, et al. *Air Quality Implications of Using Biogas to Replace Natural Gas in California*, May 2020, p. 3, available at <https://ww2.energy.ca.gov/2020publications/CEC-500-2020-034/CEC-500-2020-034.pdf> (last visited July 6, 2020).

¹⁸ Fresh Energy et al. at 9.

Customers that intend to move forward with Minnesota RNG projects whether or not CenterPoint Energy can interconnect with them.¹⁹ These projects have the means to pay the full costs of interconnection. If these projects are interconnected to CenterPoint Energy's system, they will help bear common system costs and thereby bring down rates for existing customers. Denying CenterPoint Energy's Petition will not lead to the development of the holistic state biogas policy that both CenterPoint Energy and Fresh Energy et al. desire, but will only delay or prevent some RNG projects, and drive others to interconnect with the interstate system.

IV. Conclusion

The Company thanks the Commission for consideration of these Reply Comments and thanks all of the Commenters for their analysis of the Petition. The proposed new service will answer demand from potential customers, benefit existing ratepayers, and further the development of the state's bioeconomy. The Company requests the Commission approve the Petition, as modified in these Reply Comments.

¹⁹ See May 26, 2020 Comments of AMP Americas.

Exhibit A: RNG Interconnection Tariff

Docket No. G-008/M-20-434

July 10, 2020

RENEWABLE NATURAL GAS INTERCONNECT SERVICE**Availability:**

Available to any customer who has signed and executed an Interconnection Agreement for the delivery of renewable natural gas ("RNG") at a metered location on the customer's premises. CenterPoint Energy's acceptance of the RNG is contingent on the RNG meeting the testing and quality requirements as set forth in the Gas Quality Standards.

Customers that deliver natural gas into CenterPoint's system must do so for a minimum of one (1) year, and termination of the agreement is subject to the terms of the Interconnection Agreement.

<u>Monthly Basic Charge</u>	<u>Charge Per Therm</u>
<u>\$7,500.00</u>	<u>\$0.15748</u>

Special Conditions:

Subject to conditions included in the Interconnection Agreement and Gas Quality Standards.

Nomination and Gas Delivery Specifications:

Customers must supply the volumes designated in the Interconnection Agreement, at the rate and pressure specified in the Interconnection Agreement, and per the quality requirements set forth in the Gas Quality Standards.

Due Date:

The due date printed on customer bills will not be more than five days before the next scheduled billing date. However, customers who have selected the AutoPay option may select a due date which is greater than five days before the next scheduled billing date.

Late Payment Charge:

Delinquent amounts are subject to a late payment charge of 1.5% or \$1.00, whichever is greater. No late payment charge will be applied if the delinquent amount is \$10.00 or less.

All payments received will be credited against the oldest outstanding account balance before application of any late payment charge. The late payment charge will be assessed on unpaid amounts at the next scheduled billing date.

Feasibility:

Consistent with the terms set forth in the Interconnect Agreement, the rendering of service to the Customer shall be economically feasible so that the cost of extending such service will not have an undue burden on other customers. All RNG Interconnection projects will be justified using the following formula:

$$\frac{\text{Allowable Investment}}{\text{Est. Annual Gas Margin}} = \text{Divided by Cost of Service Factor}$$

Estimated annual gas margin is the annualized per therm receipt charge for the RNG the Customer delivers into the Company's system and \$12,000 of the annualized basic charge, plus the estimated annualized per therm delivery charge for natural gas delivered to the Customer for use in producing RNG and the annualized basic charge for the delivered natural gas. The Cost of Service Factor is the currently effective Cost of Service Factor for Dual Fuel service as defined in Section VI, Page 5.

If in the opinion of CenterPoint Energy, RNG Interconnect Service is not economically feasible, CenterPoint Energy will make an estimate of the cost of the project and move forward with the RNG Interconnect only if the applicant pays a non-refundable contribution-in-aid-of-construction to CenterPoint Energy for the portion of the capital expenditure and annual operating costs not justified by the annual revenue.

RENEWABLE NATURAL GAS INTERCONNECT SERVICE (CONTINUED)**Exit Fee:**

If Customer suspends RNG production, Customer will pay an exit fee equal to the total cost of installing the RNG facilities, including main to connect to CenterPoint Energy's distribution system, less the initially paid contribution-in-aid-of-construction; any depreciation of facilities that has occurred between time of project inception and suspension of RNG production; and any cost for infrastructure that is utilized by other customers.

Contract:

Customer must sign a separate Interconnection Agreement for each delivery point.

Applicable Riders:

RNG Interconnection Service is subject to the Large Commercial / Industrial Credit Policy Rider and Franchise Fee Rider. The Franchise Fee applicable to Large Volume Dual Fuel customers shall be applicable to customers taking service under this tariff.

RNG Interconnection Service is not subject to the Gas Affordability Program, Decoupling, or Conservation Improvement Program Riders.

Exhibit B: RNG Quality Standards

Docket No. G-008/M-20-434

July 10, 2020

17.00 RENEWABLE NATURAL GAS QUALITY STANDARDS

A Renewable Natural Gas ("RNG") Interconnect Customer's RNG shall conform to the following quality specifications at the time of receipt at the interconnection point. CenterPoint Energy may allow deviations from these standards on a case-by-case basis in its discretion. CenterPoint Energy will not allow deviations from these standards related to the health protective constituent levels or testing requirements.

17.01 General Specifications

CenterPoint Energy's Interconnection equipment will have automatic and remote shut off capabilities for quality standards measured at the receipt station. CenterPoint Energy may shut-in an RNG Interconnect Customer not conforming to the following specifications:

1. Wobbe Index: The RNG shall have a minimum Wobbe Number of 1290 and shall not have a maximum Wobbe Number greater than 1400.
2. Heating Value: The minimum higher heating value is nine hundred and seventy-five (975) Btu (gross) per standard cubic foot on a dry basis. The maximum heating value is one thousand (1100) Btu (gross) per standard cubic foot on a dry basis.
3. Moisture Content or Water Content: The RNG shall have a water content not in excess of seven (7) pounds per million standard cubic feet.
4. Mercaptan Sulfur: The RNG shall not contain more than three tenths (0.3) grains of mercaptan sulfur, measured as sulfur, per hundred standard cubic feet (5 ppm).
5. Total Sulfur: The RNG shall not contain more than seventy-five hundredths (0.75) of a grain of total sulfur compounds, measured as sulfur, per one hundred (100) standard cubic feet (12.6 ppm). This includes COS and CS₂, hydrogen sulfide, mercaptans and mono, di and poly sulfides.
6. Carbon Dioxide: The RNG shall not have a total carbon dioxide content in excess of three percent (3%) by volume.
7. Oxygen: The RNG shall not have an oxygen content in excess of four-tenths of one percent (0.4%) by volume, and customer will make every reasonable effort to keep the gas free of oxygen.
8. Inerts: The RNG shall not contain in excess of four percent (4%) total inerts (the total combined carbon dioxide, nitrogen, oxygen and any other inert compound) by volume.
9. Hydrocarbons: The RNG hydrocarbon dew point is not to exceed 45 degrees F at the delivery pressure.
10. Merchantability: The RNG shall not contain dust, sand, dirt, gums, oils and other substances at levels that would be injurious to utility facilities or that would cause gas to be unmarketable.
11. Delivery Temperature: The RNG delivery temperature is not to be below 50 degrees F or above 105 degrees F.
12. Liquids: The RNG shall contain no liquids at or immediately downstream of the receipt point.

17.02 Constituent Laboratory Testing Based on Source for Health Protective and Pipeline Integrity Protective Constituent Levels

Depending on the source of the RNG, CenterPoint Energy may require an RNG Interconnect Customer to complete laboratory testing for some or all of the trace constituents listed in the following table.

17.00 RENEWABLE NATURAL GAS QUALITY STANDARDS (CONTINUED)

17.02 Constituent Laboratory Testing Based on Source for Health Protective and Pipeline Integrity Protective Constituent Levels (Continued)

<u>Constituent</u>	<u>Trigger Level</u> <u>mg/m³</u>	<u>Lower Action Level</u> <u>mg/m³ (ppmv)</u>	<u>Upper Action Level</u> <u>mg/m³ (ppmv)</u>
<i>Health Protective Constituent Levels</i>			
<i>Carcinogenic Constituents</i>			
Arsenic	0.019 (0.006)	0.19 (0.06)	0.48 (0.15)
p-Dichlorobenzenes	5.7 (0.95)	57 (9.5)	140 (24)
Ethylbenzene	26 (6.0)	260 (60)	650 (150)
n-Nitroso-di-n-propylamine	0.033 (0.006)	0.33 (0.06)	0.81 (0.15)
Vinyl Chloride	0.84 (0.33)	8.4 (3.3)	21 (8.3)
<i>Non-Carcinogenic Constituents</i>			
Antimony	0.60 (0.12)	6.0 (1.2)	30 (6.1)
Copper	0.060 (0.02)	0.6 (0.23)	3 (1.2)
Hydrogen Sulfide	30 (22)	300 (216)	1500 (1080)
Lead	0.075 (0.009)	0.75 (0.09)	3.8 (0.44)
Methacrolein	1.1 (0.37)	11 (3.7)	53 (18)
Toluene	904 (240)	9000 (2400)	45000 (12000)
Alkyl Thiols (mercaptans)	(12)	(120)	(610)
<i>Pipeline Integrity Protective Constituent Levelsⁱⁱ</i>			
Siloxanes	0.01 mg Si/m ³	0.1 mg Si/m ³	=
Ammonia	0.001vol%	=	=
Hydrogen	0.1vol%	=	=
Mercury	0.08 mg/m ³	=	=
Biologicals	4 x 10 ⁴ /scf (qPCR per APB, SRB, IOB ⁱⁱⁱ group) and commercially free of bacteria of >0.2 microns	=	=

Notes: i) The first number in this table are in milligrams per cubic meter of air (mg/m³), while the second number () is in parts per million by volume (ppmv). ii) RNG supplies that contain Pipeline Integrity Protective Constituents exceeding the Trigger Level, but lacking a Lower or Upper Action Level, will be analyzed and addressed on a case-by-case basis based on the RNG's potential impact on pipeline system integrity. iii) APB – Acid producing Bacteria; SRB – Sulfate-reducing Bacteria; IOB – Iron-oxidizing Bacteria

17.00 RENEWABLE NATURAL GAS QUALITY STANDARDS (CONTINUED)**17.03 RNG Constituent Testing shall be based on the RNG source**

1. RNG from landfills shall be tested for all Health Protective and Pipeline Integrity Protective Constituent Levels.
2. RNG from dairies shall be tested for Ethylbenzene, Hydrogen Sulfide, n-Nitroso-di-n-propylamine, Mercaptans, Toluene, and the Pipeline Integrity Protective Constituent Levels.
3. Other organic waste sources, including RNG from publicly owned treatment works (i.e., water treatment and sewage treatment plants) shall be tested for p-Dichlorobenzene, Ethylbenzene, Hydrogen Sulfide, Mercaptans, Toluene, Vinyl Chloride, and the Pipeline Integrity Protective Constituent Levels.

17.04 Testing To Be Completed By Certified Labs

Testing required by this tariff will be performed by the RNG Interconnect Customer using independent certified third-party laboratories (Environmental Laboratory Accreditation Program (ELAP) certified, where applicable). CenterPoint Energy shall be notified of the RNG sampling and tests and have the option to observe the samples being taken. Test results will be shared with CenterPoint Energy within five calendar days of the test results being received by the RNG Interconnect Customer.

In its discretion, CenterPoint Energy may collect samples for testing at the receipt point utility meter.

Re-testing shall be allowed to verify and validate the results of any test. The cost of retesting shall be borne by the entity requesting the re-test.

17.05 RNG Pre-Interconnection Testing

1. Prior to the injection of RNG into CenterPoint Energy's distribution system, the RNG Interconnect Customer shall conduct two tests over a two- to four-week period for the Health Protective and Pipeline Integrity Protective Constituent Levels identified for that RNG source.
2. If during pre-injection testing, the RNG is found to contain Health Protective or Pipeline Integrity Protective Constituent Levels above the Lower Action Level, the RNG will not be accepted or transported by CenterPoint Energy. The RNG Interconnect Customer shall make necessary modifications to reduce constituent levels below the Lower Action Level and restart pre-injection testing.

17.06 RNG Periodic Testing

CenterPoint Energy will require periodic testing for Health Protective or Pipeline Integrity Protective Constituent Levels as follows:

1. If a Health Protective or Pipeline Integrity Protective Constituent Level has never been found at or above the Trigger Level or the most recent four periodic tests for that Constituent have shown concentrations bellow the Trigger Level, the RNG Interconnect Customer will retest for the Constituent at least once in every twelve-month period.
2. If a Health Protective or Pipeline Integrity Protective Constituent Level has been found above the Trigger Level in one of the four most recent tests for the Constituent, the RNG Interconnect Customer shall retest for that Constituent quarterly (at least once in every three-month period).

17.00 RENEWABLE NATURAL GAS QUALITY STANDARDS (CONTINUED)**17.07 RNG Shut-Off and Restart Procedures**

The RNG Interconnect Customer may be shut-off at CenterPoint Energy's sole discretion if any of the following occurs:

- RNG is found to be not in compliance with any of the General Specifications.
- CNP determines that a change in the biogas source at the facility or the upgrading equipment will potentially increase the level of any constituent over the previously measured baseline levels.
- Testing indicates that Health Protective or Pipeline Integrity Protective Constituent Levels are exceeding allowable concentration levels:
 - Any Health Protective Constituent Level is found at or above the Lower Action Level three times in a 12-month period.
 - Any Health Protective Constituent Level is found at or above the Upper Action Level.
 - Any Pipeline Integrity Protective Constituent Level is found at or above the Lower Action Level three times in a 12-month period.
- The RNG contains constituents at concentrations which prevent or restrict the normal marketing of RNG, are at levels that are injurious to pipeline facilities, or are at levels that present a health and/or safety hazard to CenterPoint Energy employees and/or the general public.
- Any other issue that CenterPoint Energy determines may jeopardize the safety or reliability of its employees, customers, service, or systems.

In the event that CenterPoint Energy rejects RNG for being outside of any specified gas quality range, it is the RNG Interconnect Customer's responsibility to divert the rejected RNG from the point of interconnection. In order to restart injection after an RNG Interconnect Customer has been shut-in, the RNG Interconnect Customer shall repeat Pre-Injection Testing procedures.

17.08 Notice of Change in Feedstock or Conditioning Process

Customer shall provide thirty (30) days advance notice to CenterPoint Energy before changing its RNG feedstock, feedstock source, or RNG conditioning process.

17.09 Gas from Hazardous Waste Landfills

RNG Sourced from Hazardous Waste Landfills will not be knowingly purchased, accepted, or transported on CenterPoint Energy's system. Customer must certify and provide documentation or other suitable proof that the RNG feedstock is not derived or collected from a hazardous waste landfill prior to interconnection and whenever there is a change in feedstock.

CERTIFICATE OF SERVICE

Erica Larson served the above Reply Comments and Exhibits of CenterPoint Energy to all persons at the addresses indicated on the attached list by having the document delivered by electronic filing.

/s/_____

Erica Larson
Regulatory Analyst
CenterPoint Energy

[illegible]

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