

**COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION**

In the matter of: :

ELECTRONIC TARIFF FILING OF : CASE NO. 2024-00125
LOUISVILLE GAS AND ELECTRIC :
COMPANY TO REVISE ITS LOCAL :
GAS DELIVERY SERVICE TARIFF :

**LOUISVILLE/JEFFERSON COUNTY METROPOLITAN SEWER DISTRICT'S
VERIFIED RESPONSE TO COMMISSION STAFF'S POST-HEARING REQUEST FOR
INFORMATION DATED NOVEMBER 13, 2024**

Comes Louisville/Jefferson County Metropolitan Sewer District ("MSD"), by counsel,
and does hereby tender its verified responses to Commission Staff's Post-Hearing Request for
Information dated November 13, 2024.

FILED: November 27, 2024

VERIFICATION

STATE OF OHIO

COUNTY OF Hamilton

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared, W. James Gellner, who, being by me first duly sworn deposed and said that:

He has supervised the preparation of responses to post-hearing data requests on behalf of the Louisville Metropolitan Sewer District before the Kentucky Public Service Commission in an Application filed by Louisville Gas & Electric Company, and the things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.



W. James Gellner

SWORN TO AND SUBSCRIBED BEFORE ME this

27 day of November, 2024



NOTARY PUBLIC



SHEILA MANES
NOTARY PUBLIC - OHIO
MY COMMISSION EXPIRES
05-31-27

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1. Refer to the Corrected Rebuttal Testimony of Tom C. Rieth, on behalf of Louisville Gas and Electric Company (LG&E), along with exhibit TCR-1 filed in the confidential record. Assuming the impacts represented in the four scenarios are valid, explain whether MSD believes that the attendant increase to customer bills is reasonable if customers must use more gas to achieve the same heating value to meet the needs of their gas-burning appliances.

Response:

If we assume all conditions within the four scenarios that LG&E has presented in TCR-1 are valid, then some LG&E customers would be receiving gas with a lower heating value under certain scenarios. However, each of these scenarios overstate the potential impacts of RNG injection near the Morris Forman WQTC site.

If RNG is injected into LG&E's system, it would be blended with the natural gas that is already in the distribution system. The resulting heating content would be a blend of the two gas sources. In the exhibits that LG&E provided from their model, the RNG would vary from 0-24% of the gas supply to customers under Scenario 2 or 25-49% under Scenario 3. This response considers Scenario 3, which is the worst-case scenario presented by LG&E. Under this worst-case scenario, LG&E has shown that the RNG makes up 49% of the gas supply to customers most impacted. The weighted average heating value of the two gas streams is:

$$(0.49 \times 967) + (0.51 \times 1,035) = 1,002 \text{ BTU/Scf}$$

So under Scenario 3, the LG&E customer would have a gas/RNG mixture with a heating value of 1,002 BTU/Scf, which is a 3.2% reduction from the 1,035 BTU/Scf minimum value that LG&E assumed for their scenarios.

But then you also need to consider that LG&E's models are based on a constant, maximum month RNG production condition. A maximum month value is the maximum daily RNG production of any 30-day period that is used for engineering design purposes, not a daily value that is sustained throughout the year. When looking at the RNG production compared to the natural gas consumption at Morris Forman WQTC, MSD accounted for the expected uptimes of major gas-consuming equipment onsite during times of high and low RNG production. In doing so, MSD anticipates the RNG production will exceed the gas consumption 9-10% of the time over a calendar year.

If you consider the weighted average of the heating value being reduced by 3.2% during 10% of the year, the impacted LG&E customer's gas consumption rate is expected to increase by a maximum of 0.32% over the entire year. This estimate is based on RNG making up 49% of the gas mixture as suggested by LG&E's modeling in Scenario 3. If the RNG/gas mixture contains 25% RNG, which is the lower part of the range in Scenario 3, the anticipated increase in gas consumption rate would be 0.16% over the entire year.

MSD agrees that this is an increase in the gas consumption rate to the LG&E customers. But under worst-case conditions modeled by LG&E, the most impacted, nearby customers would experience a maximum increase in their yearly gas consumption of 0.16-0.32%, which is far less than the value that LG&E has presented in their testimony.

All of LG&E's scenarios also assume that all of the RNG gas produced at Morris Forman WQTC is entering the LG&E system. LG&E did not take into account the potential that 66-100% of the RNG could be consumed by MSD at the Morris Forman WQTC. Previously, locating the RNG injection point upstream of the plant meter has been identified as an alternative that could allow RNG produced at Morris Forman WQTC to be reused by the plant, but also allowing excess RNG beyond plant demand to enter the LG&E distribution system. If only excess RNG above the natural gas demand from the plant enters LG&E's system, the potential impact to customers discussed above is further reduced.

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- 2a. Refer to LG&E's response to Commission Staff's Fourth Request for Information, Item 1. Explain whether MSD has undertaken an engineering analysis as contemplated on page 10 of this agreement.

Response:

MSD and Hazen have completed an engineering analysis of blending propane with RNG but not up to the requirements of the Interconnect Facility Agreement as proposed by LG&E. MSD has not executed an Interconnect Facility Agreement with LG&E. MSD and Hazen, who as Owner's Advisor on the Biosolids Processing Solution Project has provided technical support and resources to MSD to help make informed decisions, have been working with LG&E over the last two (2) years and submitted a Rate LGDS Service Request Form to LG&E in November 2022 but has not been asked by LG&E to fill out an Agreement. In the engineering and economic analysis of blending propane with RNG to increase the heating value from 970 BTU/SCF to 1,035 BTU/SCF, MSD has determined the following:

- MSD will not consider adding propane to RNG because doing so would increase the anticipated O&M costs of the RNG facility by \$0.7M/year. With the increased O&M costs, it would be cheaper for MSD to use all of their digester gas onsite to offset their natural gas consumption rather than inject propane and sell their digester gas as RNG. This estimate of increased O&M is based on the amount of propane required to increase the BTU content of RNG from 970 BTU/SCF to 1,035 BTU/SCF, average propane cost in KY of \$2.68/gallon, propane's heating value of 91,540 BTU/gallon, and a contingency of 10% (United States Propane Prices (consultenergy.org)).
- MSD is not in the business of storing and using large amounts of propane on-site and injecting it into an RNG gas stream. To do so would increase safety hazards onsite and expose MSD to more risk than MSD is willing to take on.
- MSD was considering RNG to offset their annual operating costs at their WQTCs and capital projects – not based on how much profit they would make from an RNG facility. If required to add propane to the RNG, it would be more advantageous based on life cycle costs for MSD to use the biogas onsite rather than sell it as RNG. If propane is required, reuse of gas on site is the best financial alternative for MSD's customers.
- The cost to construct a propane facility was not priced by MSD because the associated safety and site constraints would preclude propane blending. Propane blending would increase the RNG project's capital cost because MSD would be required to build facilities to store large amounts of propane on-site and inject it into the RNG gas stream.

Additional capital costs would also be required to safeguard buildings surrounding the propane storage and feed facility.

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- 2b. Refer to LG&E's response to Commission Staff's Fourth Request for Information, Item 1. Confirm that MSD would be unable to comply with the credit section as referenced on page 14 of this agreement. If not confirmed, explain why not.

Response:

If the outcome of this Tariff hearing is favorable towards MSD moving forward with an Interconnect Facility Agreement with LG&E, MSD believes they could comply with the credit section referenced in the Agreement. They have not contacted the banks they do business with on this specific credit requirement, but they are confident they would be able to work through the terms if they elect to finance the RNG facility themselves. If they elect to proceed with a Public Private Partnership with a third party financing, owning, and operating the RNG facility, then the Interconnect Facility Agreement terms would be passed on to the third party. Either way, MSD believes the terms of the credit section could be met.