Commonwealth of Kentucky
Before the Public Service Commission

In the Matter of:

APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR A DECLARATORY ORDER REGARDING THE PROPER METHOD OF MUNICIPAL FRANCHISE FEE RECOVERY ) ) Case No. 2016-00317

DIRECT TESTIMONY OF ALLEN R. NEALE ON BEHALF OF THE LOUISVILLE/JEFFERSON COUNTY METRO GOVERNMENT

March 14, 2017
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I. QUALIFICATIONS AND SUMMARY OF TESTIMONY

Q. Mr. Neale, please identify yourself for the record.
A. My name is Allen R. Neale. I am a Consultant working in conjunction with Daymark Energy Advisors (“Daymark”). My business address is Allen R. Neale c/o Daymark Energy Advisors, One Washington Mall, 9th Floor, Boston, MA 02108.

Q. On whose behalf are you testifying in this proceeding?
A. I am submitting testimony on behalf of the Louisville/Jefferson County Metro Government (“Louisville Metro”) to review the filing by Louisville Gas and Electric Company (“LG&E” or the “Company”) with the Kentucky Public Service Commission (the “KY PSC” or “Commission”) in the matter of the application for a Declaratory Order Regarding the Proper Method of Municipal Franchise Fee Recovery, which has been docketed as Case No. 2016-00317.

Q. Please describe your educational background.
A. I received a Master’s of Business Administration from Southern New Hampshire College. I also have a Bachelor of Science in Engineering Technology in Mechanical Engineering from Wentworth Institute.

Q. Please summarize your experience and qualifications.
A. I have over 25 years of experience in the natural gas distribution business in Massachusetts. In 1973, I joined Essex County Gas Company (then Haverhill Gas) as a Junior Engineer and subsequently held the following positions: Corrosion Engineer; Supervisor of Distribution; Administrative Assistant; Vice President of Engineering, Meter Shop and Production; and finally, Vice President of Gas Supply, Planning, Rates, Regulatory, and Environmental Matters. As these various job titles indicate, I have a broad range of experience at various levels within a gas distribution company, including field work as a distribution system corrosion engineer and as a supervisor of distribution overseeing main and service repair, replacement and new installations. Later, I was in
charge of Department of Transportation and Massachusetts Department of Public Utilities Annual Reports for the company. My years as a Vice President provided substantial management and executive decision making experience as well as involvement in rates and regulatory affairs. In 1999, following regulatory approval of the merger involving the Essex and the Boston Gas Companies, I became the President of ARN Enterprises which owned and operated CRW Finishing Company, a metal finishing business. A copy of my resume is attached as Exhibit ARN-1.

Q. Have you testified before this Commission?
A. No. However, I have offered testimony before other regulatory commissions on gas distribution company accelerated capital replacement plans in numerous proceedings. Recently, I testified in several cases before the Maryland Public Service Commission, including: (1) Case No. 9335 where the Washington Gas Light Company filed an application for approval to implement a Strategic Infrastructure Development and Enhancement Plan (“STRIDE”) and an associated cost recovery mechanism; (2) Case No. 9332 where Columbia Gas of Maryland filed an application for approval of a STRIDE capital plan and rider; (3) Case No. 9417 where Columbia Gas of Maryland filed an application for approval to increase rates and charges, and (4) Case No. 9331 where Baltimore Gas and Electric Company filed an application for approval of its proposed first amendment under the Maryland STRIDE law and accompanying cost recovery mechanism. In Massachusetts, I submitted testimony on Gas System Enhancement Plans in six separate proceedings initiated by Massachusetts gas distribution companies for review of accelerated replacement of targeted leak-prone system components.

I have also testified on numerous occasions before the Massachusetts Department of Public Utilities during my tenure as an executive of the Essex Gas Company and more recently in my capacity as a consultant.

Q. What is the purpose of your testimony here?
A. I have been asked by the Louisville Metro to provide my opinion whether the gas supply received at the citygate interconnections between LG&E and the interstate pipeline
transmission system for redelivery to LG&E’s customers located within Louisville Metro also serves additional customers within LG&E’s service territory.

Q. What conclusions do you reach in your testimony?
A. Based on my review and analysis to date, I conclude and recommend the following:

1. Gas supply received via the LG&E citygate interconnections with Texas Gas Transmission System (Texas Gas):
   i. utilize the right of way corridor (ROW) within Louisville Metro in order to serve customers located in the counties of Jefferson, Bullitt, Nelson and Shelby; and
   ii. possibly utilize this same ROW in order to serve customers located in Oldham, Marion and Anderson;

2. Gas supply received via the LG&E citygate interconnections with Tennessee Gas Pipeline System (TGP) is likely to serve the counties of Marion, Washington, Mercer, Green and Larue;

3. A review of the Company’s network analysis (defined further below) for each segment of its entire distribution system, the direction of gas flow, operating pressure and all null points for its most recent winter peak day, should allow substantiation of preliminary conclusions 1 and 2 above; and

4. The Commission should
   i. require the Company to provide a copy of its network analysis for its entire service territory at a sufficient level of detail to show the requested direction of flow, operating pressure and null points on all major distribution/transmission segments, mains and laterals, and identify the citygate interconnections with interstate gas transmission systems and storage facilities;
   ii. allow Louisville Metro the opportunity to review this network analysis, with technical assistance from LG&E if necessary, to interpret the information contained therein; and
   iii. provide additional time to ask discovery questions about LG&E’s gas distribution system, including but not limited to the network analysis requested above, in order to ensure intervenors may gain a full
understanding of how gas supply flows through the Company’s Louisville Metro ROW.

II. SCOPE OF REVIEW

Q. Have you reviewed the Company’s filing and all discovery in this proceeding?
A. I have reviewed the limited information I have been told is available at this time for this proceeding, which includes the following non-confidential documents:

- Louisville Metro Complaint, Exhibit 1, Metro Council Districts in Jefferson County
- Louisville Metro Complaint, Exhibit 2, Incorporated Cities in Jefferson County
- Louisville Metro Complaint, Exhibit 3, Incorporated Cities and Metro Council Districts in Jefferson County (i.e., the information contained in Exhibits 1 and 2 shown on the same map)
- Louisville Metro Complaint, Exhibit 4, Natural Gas Distribution Service Areas (within the state of Kentucky)
- Louisville Gas and Electric P.S.C. Gas No. 10, Original Sheet 90, Adjustment Clause, Franchise Fee, Applicability and Monthly Charge

I also have reviewed, subsequent to executing a non-disclosure agreement, the following two CONFIDENTIAL documents:

- Addendum to Louisville Metro Amended Complaint, Jefferson County Gas Mains (LGE map.pdf), and
- Addendum to Louisville Metro Amended Complaint, Gas Transmission in Kentucky, Kentucky Department of Economic Development, Frankfort, 1984 (Gas_Transmission_1984_Map.pdf)

Q. Please describe the scope of review in this testimony.
A. The scope of my review for my testimony is to evaluate whether the documents made available to me for review, listed above, provide sufficient information to conclude that gas supply received via the Company’s citygate interconnections with Texas Gas
Transmission System (Texas Gas) flow through the Company’s distribution/transmission facilities located within the Louisville Metro ROW for further distribution to all municipalities within Louisville Metro and to counties outside the confines of Louisville Metro.

Q. Please explain why your review is focused on gas supply flow through the Company’s Metro Louisville ROW.

A. My understanding is that the Company currently only collects the franchise fee from a portion of customers within Jefferson County, and no customers outside Jefferson County. Additionally, the Commission has issued a decision, in KY PSC Case Nos. 2016-00317 and 2016-00347, stating its intention to review the Company’s franchise fee collection practices. As indicated above without the use of the ROW in Louisville Metro gas would not be available for use by customers living in Jefferson, Bullitt, Nelson and Shelby counties, and possibly not available for use in customers living in Oldham, Marion and Anderson counties.

Q. Does the scope of your testimony include an assessment of the appropriate allocation of the City of Louisville’s franchisee fee?

A. No. I have been retained to make an evaluation of LG&E’s utilization of the Louisville Metro ROW from an engineering perspective only.

II. KEY TERMS RELATED TO GAS FLOW

Q. Please provide a definition for the term “citygate” interconnection.

A. A citygate interconnection is the point at which the LG&E distribution system, including both mains and distribution segments, physically interconnect with the interstate gas transmission pipeline system. Based on my review of CONFIDENTIAL exhibit Gas Transmission in Kentucky, 1984, shows that LG&E has several citygate interconnections with Texas Gas as well as two citygate interconnections with TGP.¹ The purpose of the

¹ I also confirmed these citygate interconnections currently exist by reviewing the more up-to-date publicly available system maps published on each interstate pipeline’s electronic bulletin boards (EBBs).

citygate interconnection is to allow the utility to receive gas supply being transported in volume and under high pressure from production areas located far from the utility’s market area. The citygate interconnection facility is sized to meet the daily requirements of the utility as well as to reduce the pressure at the receipt point to the utility’s distribution system operating pressure.

Q. Please describe what is meant by the term “direction of gas flow”.

A. The term “direction of gas flow” refers to the path that natural gas flows on the utility’s distribution system, which in turn is determined by the operating pressure for a given segment of that system. For example, when the interstate pipeline delivers gas supply at high pressure to the utility’s citygate station, the gas supply is assumed to move from the interstate into the distribution system. How the gas supply travels from there to other points on the utility’s distribution system depends upon how the distribution system is configured. If the citygate station is located at or immediate upstream of a specific municipality, it is likely that the direction of flow is from the citygate station to residential gas customers located via facilities located within that municipality’s ROW.

Q. What is meant by the term “null point”?

A. The term null point refers to that point on a pipeline, whether an interstate transmission system or a utility’s distribution system, where gas supply flows under pressure from both directions and reaches a point of equilibrium such that pressure is equalized and at that point gas flow is stationary but the pipeline remains full.

Q. What is “Network Analysis”?

A. A system planner can see can see the effect load growth has on the system as the planner reviews Network Analysis over time. As new load is added to the distribution system, pressures drop. When those pressure drops become too severe, the remedy are larger pipes, system looping and/or pressure regulation. Network Analysis tools allow a system planner to optimize the length and diameter of the pipe that needs to be installed to

(Attached as Exhibit ARN-4), and http://pipeportal.kindermorgan.com/PortalUI/DefaultKM.aspx?TSP=TGPD, which requires selecting “informational Postings”, then “Tariff” then a specific Zone; Kentucky is in Zone 2 (Attached as Exhibit ARN-3).
remedy the peak day low pressure issues. Just as the Company arrays gas supplies to meet the peak day distribution system needs, the system itself must be designed to deliver those supplies to the customer.

The Company’s distribution system configuration is made up of a combination of large diameter mains, operating at a relatively high pressure, and narrower diameter distribution pipelines, operating at a lower pressure, that ultimately deliver gas supply to individual service lines connected to homes and businesses. Because the volume of gas that can be delivered over a given segment, subsystem or system is a function of interior pipe diameter and pressure, direction of gas flow can vary by main versus distribution segments and where these segments are located in relation to citygate interconnections. Network Analysis shows the effects on deliverable gas from citygate interconnections depending on the configuration of mains and distribution facilities and the change in the amount and location of customer demand over time.

Thus, Network Analysis is an important step in the evaluation of whether the Company’s facilities located in a municipality’s ROW are used to deliver supply to gas customers located elsewhere within the Company’s service territory.

### III. PRELIMINARY GAS FLOW EVALUATION

**Q. Did the information you reviewed for this testimony include the Company’s Network Analysis or information on direction of gas flow?**

**A. No it did not.** Even though one of the Confidential documents I reviewed presented a map showing some detail indicating the location and diameter of pipeline segments within the entire state, the pipelines all had the same color, so it was difficult to distinguish which one belonged to a interstate pipeline and which one to a utility.² Further, it appeared to be missing direction of gas flow and operating pressure, and certainly provided no indication of the location of any null points.

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I did find some information on the location of interstate gas transmission system citygate station interconnections with LG&E on a public document presenting a map of LG&E’s Gas System overlaying a map of towns served and the counties in which these towns are located, as well as the location of citygate interconnections with Texas Gas and TGP, which allowed me to draw a preliminary conclusion.\(^3\)

Q. **What are the major differences between these two documents?**

A. The Confidential document is dated 1984, while the public document was filed only recently, in the Company’s rate case filed in Case No. 2016-00371. In addition, the public document more clearly shows the location of citygate interconnections with Texas Gas versus TGP.

Q. **What is the significance of being able to see the location of citygate interconnections with Texas Gas and TGP?**

A. I am relying upon my review of the public LG&E Gas System Map, provided in Exhibit LEB-1, for my conclusion about the significance of the locations of LG&E’s citygate interconnections. These locations are important because Texas Gas traverses Jefferson County, which is geographically identical to Louisville Metro, while TGP does not. Further, LG&E has only two citygate interconnections with TGP, which are located far away from Jefferson County at the end of LG&E laterals that terminate in Marion and Metcalfe counties.

Q. **Please provide your preliminary conclusion based on your review of these two documents?**

A. Based on my review of these two documents, it appears that the counties of Jefferson, Bullitt, Nelson and Shelby are served by gas supply received at three citygate interconnections with Texas Gas shown on the public document, Exhibit LEB-1, as being located in Jefferson County. For the same reason, it appears that all LG&E gas customers located within Jefferson County are likely to be served by gas supply from these three citygate stations. Since these citygate stations appear to be located within Jefferson County.

\(^3\) Case No. 2016-00371, Testimony of Lonnie E. Bellar, Exhibit LEB-1, page 1 of 1, filed November 23, 2016. Attached as Exhibit ARN-2.
Louisville Metro, it is likely that LG&E’ distribution/transmission facilities that extend from these citygate stations are located within the Louisville Metro’s ROW.

Q. Can you determine from your review whether LG&E gas customers in these three counties would receive gas service if LG&E were unable to take gas supply at these three citygate stations?
A. On the basis of my necessarily preliminary review of limited data, it appears to me that without the ability to take receipts from these three citygate stations off of Texas Gas in Jefferson County, these three counties, Bullitt, Nelson and Shelby, as well as Jefferson County, would not receive gas service. Furthermore, I conclude that without access to the LG&E facilities located in the Louisville Metro ROW, gas may not be able to arrive in the adjacent counties of Oldham, Spencer, Marion and Anderson.

Q. Do you conclude that other counties shown on Exhibit LEB-1 also received service due to the use of the Company’s distribution facilities located in the Metro Louisville ROW?
A. On the basis of my preliminary review, I conclude that it is not as likely that certain cities and towns served by LG&E would receive gas supply via the distribution facilities located in the Metro Louisville ROW. These counties may include Marion and Metcalfe as well as possibly Hardin, Larue, and Meade.

Q. Why do you conclude that the counties mentioned above are less likely to receive gas supply via the distribution facilities located in the Metro Louisville ROW?
A. My conclusion in this regard is best illustrated by noting the location of the Company’s two citygate interconnections with TGP in Marion and Metcalfe counties. The location of these two citygate stations at the end of two laterals extending to the farthest reaches of the Company’s service territory, suggests that the Company is relying upon the delivery pressure on TGP to push gas up each of those laterals, effectively becoming the primary source of gas supply for the towns served in Marion and Metcalfe counties. The likelihood of towns located in Hardin and Larue counties is dependent upon the operating pressure on these two laterals flowing south and where any null points are located. The likelihood that towns in Meade county will be served depends on the delivery pressure on
Texas Gas on the west side of LG&E’s system as well as how much gas supply may be
delivered from the two storage facilities located in the same area

Q. Please explain why you emphasize that your conclusions are preliminary.

A. As summarized above and below, my conclusions are preliminary because they are
necessarily contingent upon my ability to substantiate my observations with additional
information that can be obtained only from a review of the network analysis I have
requested above.

IV. CONCLUSION

Q. Please summarize your conclusions and recommendations?

A. Based on my review of the limited information available to me in this case, I conclude
that

1) Gas supply received via three LG&E citygate interconnections with Texas Gas utilize
and relay upon the Metro Louisville ROW in order to serve customers located in the
counties of Jefferson, Bullitt, Nelson and Shelby, and possibly the counties of
Oldham, Spencer, Marion and Anderson, as discussed in greater detail above;

2) A review of the Company’s network analysis for each segment of its entire
distribution system showing the direction of gas flow, operating pressure and all null
points for its most recent winter peak day, should allow substantiation of my
preliminary conclusions.

And I recommend that the Commission:

3) require the Company to provide a copy of its network analysis for its entire service
territory including the detail identified in conclusion 2) above;

4) allow intervenors the opportunity to review this network analysis, with technical
assistance from LG&E if necessary, to interpret the information contained therein;

and

5) provide additional time to ask discovery questions about LG&E’s gas distribution
system, including but not limited to the network analysis requested above, in order to ensure intervenors may gain a full understanding of how much gas supply flows through the Company’s Louisville Metro ROW.

Q. Does that conclude your testimony?

A. Yes, it does, however, I may amend my testimony based on any new information provided by the Company in pending data requests.