

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC JOINT APPLICATION OF)
KENTUCKY UTILITIES COMPANY AND)
LOUISVILLE GAS AND ELECTRIC)
COMPANY FOR CERTIFICATES OF)
PUBLIC CONVENIENCE AND NECESSITY)
AND SITE COMPATIBILITY)
CERTIFICATES AND APPROVAL OF A)
DEMAND SIDE MANAGEMENT PLAN)

CASE NO. 2022-00402

**LEXINGTON-FAYETTE URBAN COUNTY GOVERNMENT
AND LOUISVILLE/JEFFERSON COUNTY METRO GOVERNMENT'S
POST-HEARING BRIEF**

Lexington-Fayette Urban County Government (“LFUCG”) and Louisville/Jefferson County Metro Government (“Louisville Metro”), by counsel, hereby submit their post-hearing brief.

I. Introduction

Kentucky Utilities Company (“KU”) and Louisville Gas and Electric Company’s (“LG&E”) (jointly, “LG&E/KU”) filed the underlying matter on December 15, 2022, which the Public Service Commission (“Commission”) deemed to have been filed on January 6, 2023. In their initial application, LG&E/KU sought approval of the following:

- Certificates of Public Convenience and Necessity (“CPCN”) and Site Compatibility Certificates for the construction of two 621 MW natural gas combined cycle combustion turbine (“NGCC”) facilities, one at LG&E’s Mill Creek Generating Station in Jefferson County, Kentucky (“Mill Creek NGCC”) and the other at KU’s E.W. Brown Generating Station in Mercer County, Kentucky (“Brown NGCC”)
- CPCN to acquire a 120 MWac solar facility to be built by a third-party solar developer in Marion County, Kentucky (“Marion County Solar Facility”)

- CPCN to construct a 120 MWac solar photovoltaic (“PV”) electric generating facility in Mercer County, Kentucky, (“Mercer County Solar Facility”)
- CPCN to construct a 125 MW, 4-hour (500 MWh) battery energy storage system (“BESS”) facility at KU’s E.W. Brown Generating Station (“Brown BESS”)
- The 2024-2030 Demand-Side Management and Energy Efficiency Program Plan (“Proposed DSM-EE Program Plan”) and related changes to the Companies’ Demand-Side Management Cost Recovery Mechanism (“DSM Mechanism”) tariff sheets to be effective January 1, 2024
- A declaratory order that their entry into non-firm energy-only power-purchase agreements (“PPAs”) for the output of four solar PV facilities with a combined capacity of 637 MW does not require Commission approval, but rather will be treated in the same manner as the portion of the solar PPA the companies entered into with Rhudes Creek Solar, LLC to serve the companies’ native load, including Fuel Adjustment Clause (“FAC”) cost recovery

Underlying LG&E/KU’s requested approvals in this matter was their plan to retire seven fossil fuel-fired electric generating plants.

During the pendency of the case, the Kentucky General Assembly enacted Senate Bill 4 in the 2023 Regular Session. This legislation requires a utility to obtain Commission approval prior to retiring a fossil fuel-fired electric generating plant. Prior to the enactment of this legislation, an electric utility company in Kentucky could retire any power plant, including natural gas- and coal-fired units, in the normal and usual course of that utility’s operational experience without having to first obtain approval from the Commission to effectuate that business decision. Accordingly, LG&E/KU filed an application for Commission approval of the retirement of the following seven fossil fuel-fired electric generating units: E.W. Brown Unit 3, Ghent Unit 2, Haefling Units 1 and 2, Mill Creek Units 1 and 2, and Paddy’s Run Unit 12

(collectively “Affected Units”). Although this retirement application was initiated as a separate Commission case, it has since been consolidated into the underlying matter.

The following analysis summarizes LFUCG and Louisville Metro’s position on L&E/KU’s requested approvals.

II. Analysis

A. Retirement of Fossil Fuel-Fired Electric Generating Units

LFUCG and Louisville Metro are supportive of LG&E/KU’s plan to retire the Affected Units. Retirement of these Affected Units will go a long way to achieve renewable energy goals. For example, on February 12, 2020, Louisville Metro Resolution No. 0009, Series 2020, was issued in which the Louisville Metro Legislative Council resolved to support a 100 percent clean, renewable electricity goal for Louisville Metro government operations by 2030 and a 100 percent clean, renewable energy goal for the entire community by 2040.¹ The renewable resolution also voiced support for revising building codes for new construction to require energy efficiency, conservation, and renewable energy applications toward an eventual goal of net zero or net positive energy, water, and waste for Louisville Metro.

Fossil fuel-fired generating plants are not sustainable, particularly coal-fired plants. Lonnie Bellar testified as to the need to retire the seven plants noted above.² This is verified by information from Louisville Metro Air Pollution Control District (“LMAPCD”).³

LMAPCD’s margin for meeting some air quality standards is razor thin. For example, the EPA in 2015 revised and established the current threshold of 70 parts per billion for the

¹ A copy of the Resolution was attached to Louisville Metro’s Motion to Intervene filed on January 20, 2023, in this matter.

² See generally Bellar Direct and Rebuttal Testimony.

³ As mentioned by Philip Imber, LMAPCD is “an air pollution control District created under KRS Chapter 77 and established by resolution of the Jefferson County Fiscal Court, now Louisville Metro. Responsibilities of LMAPCD include issuing and enforcing permits for sources of air pollution and monitoring the ambient air to ensure that it meets federal air quality standards.” Imber Rebuttal Testimony at 12.

National Ambient Air Quality Standard (“NAAQS”) for ozone measured over the highest 8-hour average for each day. When measured in the most recent complete three-year range of 2020-2022, the Louisville Metropolitan Statistical Area (“Louisville MSA”) registered 70 ppb,⁴ which is the maximum to maintain attainment status. This marks the first time that Louisville MSA has reached ground level ozone attainment for the 2015 standard and LMAPCD currently has pending an application with the EPA seeking redesignation of its NAAQS ozone status as being in attainment. However, the most recent data for the period spanning January 2021 to August 9, 2023, revealed Louisville MSA’s 8-hour ozone concentration to be 72 ppb, which exceeds the 2015 70-ppb standard set by the EPA.

As noted by Philip Imber, the EPA reviews these NAAQS every 5 years.⁵ The EPA has opened up consideration of revision to the current standard, and the Clean Air Scientific Advisory Committee has recommended the standard be lowered to 55-60 ppb.⁶ The Louisville MSA would need to take significant measures in order to reduce the 8-hour ozone concentration if such a standard would be lowered to this degree.

Air quality measurements for fine particulate matter are also concerning for LMAPCD. EPA’s current annual standard of attainment for PM_{2.5} is 12 micro grams per cubic meter ($\mu\text{g}/\text{m}^3$), which has been in place since 2013.⁷ The Louisville MSA meets the standards, but only narrowly. For example, the monitoring station at Durrett Lane has registered a PM_{2.5} range of 10.1 to 10.4 $\mu\text{g}/\text{m}^3$ for the last three full 3-year averages dating back to 2018. There has been a rise in 2023, such that the period spanning January 2021 to August 9, 2023, measured 11.2 $\mu\text{g}/\text{m}^3$.

⁴ LMG Hearing Exhibit 1 at 4.

⁵ VR: 8/25/2023; 11:00:30.

⁶ The Clean Air Scientific Advisory Committee (CASAC) provides independent advice to the EPA Administrator on the technical bases for EPA’s National Ambient Air Quality Standards.

⁷ VR: 8/25/2023; 11:02:13; LMG Exhibit 1 at 2.

Much like the ozone standard, the EPA is mandated by the Clean Air Act to review the standards for particulate matter every 5 years.⁸ EPA has proposed new standard for PM_{2.5} with a range of 9-10 µg/m³.⁹ It has taken comments on proposed rule.¹⁰ And not only has it officially proposed 9-10 µg/m³, the EPA has also requested comments for a standard as low as 8 µg/m³.¹¹

The Louisville MSA will have challenges if the EPA lowers the PM_{2.5} standard. When an area is deemed to be in non-attainment, an Air Quality District must prepare a compliance plan indicating means and methods to get back into attainment.¹² In such cases, Air Quality Districts look to point sources like coal-fired plants to find mechanisms and methods to have enforceable reductions. Specifically for LMAPCD, its top emitters of pollutants contributing to potential non-attainment on the NAAQS ozone and fine particulate matter standards are Mill Creek 1 and Mill Creek 2. Retirement of these plants would go a long way in either keeping the Louisville MSA in attainment or enabling the Louisville MSA to achieve attainment.

In order for the Commission to approve retirement of these seven generating plants, Senate Bill 4 requires the Commission to find that LG&E/KU's evidence overcomes a rebuttable presumption against retirement on the following issues:

- That replacement generating capacity for the retiring unit is dispatchable, will maintain or improve system reliability and resilience, and will maintain sufficient reserve capacity;
- That the unit retirement will not harm utility ratepayers;
- That the unit retirement does not result from federal financial incentives or benefits; and

⁸ VR: 8/25/2023; 11:01:00.

⁹ VR: 8/25/2023; 11:06:45.

¹⁰ VR: 8/25/2023; 11:07:02.

¹¹ VR: 8/25/2023; 11:07:25.

¹² VR: 8/25/2023; 11:08:00.

- That the unit retirement will result in cost savings for customers after accounting for all known direct and indirect costs of the retirement.

LFUCG and Louisville Metro believe that the evidence in the case is sufficient for the Commission to make such a determination and approve the retirement of those plants, as proposed by LG&E/KU.

B. CPCN for Two NGCCs

LG&E/KU's proposal to construct two new NGCCS is unnecessary and imprudent. Michael Goggin provided detailed testimony on how LG&E/KU overstated the need for these two NGCCs, including (1) that LG&E/KU overstated capacity needs by undervaluing the contribution of imports,¹³ (2) that LG&E/KU understated the reliability of renewable and storage resources,¹⁴ (3) that LG&E/KU overstated the capacity contributions of gas generation, as evidenced by rolling blackouts during Winter Storm Elliott,¹⁵ (4) that LG&E/KU overstated the need for additional capacity by assuming unreasonably high costs associated with generation shortages,¹⁶ and (5) that BESSs provide better flexible capacity as compared to NGCCs.¹⁷

Rather than construct these two NCGGs, LG&E/KU could meet its capacity needs by joining a Regional Transmission Operator ("RTO"), such as PJM Interconnection, LLC ("PJM"). As Andrew Levitt's testimony demonstrates, membership in PJM would reduce¹⁸ LG&E/KU's capacity requirements by at least 900 MW by (1) taking advantage of regional diversity of demand patterns within PJM,¹⁹ (2) utilizing a lower installed reserve margin,²⁰ and (3) increasing

¹³ Goggin Testimony at 6-23.

¹⁴ *Id.* at 23-29.

¹⁵ *Id.* at 29-41.

¹⁶ *Id.* at 41-44.

¹⁷ *Id.* at 44-46.

¹⁸ Levitt Testimony at 22-28.

¹⁹ *Id.* at 8-14.

²⁰ *Id.* at 14-20.

the capacity of LG&E/KU's solar resources.²¹ The avoided capacity costs that LG&E/KU would recognize by joining PJM would save customers more than \$125 million per year.²² In addition, there are additional economic and reliability benefits for LG&E/KU to join PJM, such as annual production cost benefits of up to \$66 million²³ and better access to low-cost renewable sources of generation.²⁴

At the very least, the Commission should order LG&E/KU to perform and submit a comprehensive study on joining PJM, specifically addressing the comments of Andrew Levitt in this matter.

C. Addition of Solar Generation in LG&E/KU's Generating Portfolio and Brown BESS

LFUCG and Louisville Metro support LG&E/KU's proposals to acquire the Marion County Solar Facility, to construct the Mercer County Solar Facility, and to construct the Brown BESS. The solar facilities represent cost-effective sources of generation that modernize and move LG&E/KU's generation fleet in the right direction. In addition, although it appears that the Brown BESS may not be the most economical source based solely on its estimated capital investment,²⁵ it will be "a useful resource in managing the Companies' operating reserve requirements due to a battery's ability to instantly respond when called upon (assuming it is charged) and avoid fast starting a simple cycle combustion turbine as David Sinclair notes.²⁶ Moreover, it improves the reliability and dispatchability of LG&E/KU's fleet. LFUCG and Louisville Metro recommend that the companies be required to file an annual report identifying

²¹ *Id.* at 20-22.

²² *Id.* at 30-33.

²³ *Id.* at 33-37.

²⁴ *Id.* at 37.

²⁵ Bellar Rebuttal Testimony at 17.

²⁶ Sinclair Direct Testimony at 25.

the operational, reliability, and dispatchability benefits associated with the Brown BESS as mentioned by LG&E/KU in their testimony.

LFUCG and Louisville Metro also appreciate LG&E/KU's willingness to find innovative solutions to concerns raised by another governmental entity—Mercer County—as evidenced by the Stipulation and Recommendation filed in this matter on August 15, 2023.

D. Solar PPAs

LG&E/KU seeks a declaratory order confirming that the PPAs for the output of four solar PV facilities with a combined capacity of 637 MW does not require Commission approval, but rather will be treated in the same manner, including *potential* FAC cost recovery. LFUCG and Louisville Metro acknowledge the Commission's determination in Case No. 2020-00016 and do not oppose similar treatment of the four PPAs at issue in this matter.

E. Proposed DSM-EE Program Plan

LFUCG and Louisville Metro generally support the DSM-EE programs that LG&E/KU propose in its plan. They, however, believe that LG&E/KU's offerings should be more robust to further their longstanding support of energy efficiency. For example, over a decade ago, LFUCG adopted a resolution supporting energy efficiency measures to ensure it became a more resilient and sustainable community.²⁷

Stronger DSM-EE policies can take a variety of forms. Jim Grevatt highlighted several flaws in LG&E/KU's DSM-EE planning and decision-making process. He made several reasonable recommendations, including requiring LG&E/KU to conduct a low income market characterization study to capture demographic data and characteristics of their lower-income

²⁷ Resolution 220-2012, *available at* <https://drive.google.com/file/d/1RZbHVQd033yOccwSFfuFsXz5H1dDdq7P/view> (last visited Sept. 22, 2023).

customer segment,²⁸ to perform a meaningful analysis of comprehensive home retrofit program design opportunities that includes a rational analysis of the Pay As You Save (“PAYS”) program,²⁹ and to take the required steps to increase combined direct load control (“DLC”) and Bring Your-Own Device (“BYOD”) program participation.³⁰ These programs provide a mutual benefit to the utilities and their residential customers.

LG&E/KU must improve its coordination and cooperation with stakeholder groups interested in DSM-EE programs. Grevatt noted the problems of LG&E/KU’s DSM-EE program selection process, which he indicated “unreasonably eliminated fair consideration of programs.”³¹ LFUCG and Louisville Metro share similar concerns on LG&E/KU stakeholder meetings as it relates to programs in which they are interested and support the recommendations made by the Joint Intervenors, including the following:³²

- Establish measurable objectives for DSM programs;
- Enable Advisory Group participants to be more engaged in the DSM planning process;
- Encourage and facilitate participation in the DSM Advisory Committee;
- Continue analysis of PAYS;
- Prioritize Equity and Community Development;
- Leverage the Inflation Reduction Act’s numerous incentives to expand DSM programs;
- Include the Societal Cost Test when evaluating DSM programs; and
- Evaluate net metering and distributed energy resources (DERs) as resources on par with DSM programs and supply-side resources.

²⁸ Grevatt Testimony at 35-48.

²⁹ *Id.* at 49-53.

³⁰ *Id.* at 53-58.

³¹ *Id.* at 5.

³² *See* Joint Intervenors’ Response to Item 131 from LG&E/KU.

Respectfully submitted,



STURGILL, TURNER, BARKER & MOLONEY, PLLC

James W. Gardner

M. Todd Osterloh

333 W. Vine Street, Suite 1500

Lexington, Kentucky 40507

Telephone No.: (859) 255-8581

Facsimile No.: (859) 231-0851

jgardner@sturgillturner.com

tosterloh@sturgillturner.com

and

Susan Speckert, Commissioner of Law

David J. Barberie, Managing Attorney

Department of Law

200 East Main Street

Lexington, Kentucky 40507

(859) 258-3500

sspeckert@lexingtonky.gov

dbarberi@lexingtonky.gov

*Attorneys for Lexington-Fayette Urban County
Government*

and

MICHAEL J. O'CONNELL

JEFFERSON COUNTY ATTORNEY

Quang D. Nguyen

Assistant County Attorney

First Trust Centre

200 South Fifth Street, Suite 300N

Louisville, Kentucky 40202

502-574-6743 (phone)

502-574-0009 (fax)

Quang.Nguyen@louisvilleky.gov