COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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| ELECTRONIC 2021 JOINT INTEGRATED | ) | |
| RESOURCE PLAN OF LOUISVILLE GAS AND | ) | CASE NO. |
| ELECTRIC COMPANY AND KENTUCKY | ) | 2021-00393 |
| UTILITIES COMPANY | ) | |

**LOUISVILLE/JEFFERSON COUNTY METRO GOVERNMENT'S SUPPLEMENTAL COMMENTS TO THE LOUISVILE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY 2021 JOINT INTEGRATED RESOURCE PLAN**

Louisville/Jefferson County Metro Government (Louisville Metro) appreciates the Commission's affording the parties to this matter an opportunity to provide supplemental comments on the 2021 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company (Joint IRP). Louisville Metro hereby submits its supplemental comments as follows.

## SUPPLEMENTAL COMMENTS

The Joint IRP indicates that Louisville Gas and Electric Company and Kentucky Utilities Company (LG&E/KU) will need replacement capacity and energy by 2028, at the earliest, due to the retirements of Mill Creek 1 (300 MW) in 2024, Mill Creek 2 (291 MW) in 2028, and Brown 3 (412 MW Summer Rating) in 2028.[1] The Joint IRP further informs that LG&E/KU's Long-Term Resource Planning Analysis evaluated certain dispatchable and non-dispatchable resources.[2] Along with battery storage, the only dispatchable resources selected by LG&E/KU for evaluation

[1] Joint IRP at 8-1, Table 8-1.

[2] Joint IRP at 5-39 through 5-40, Tables 5-15 and 5-16.

in their Long-Term Resource Planning Analysis were large-frame simple-cycle combustion turbines (CT or SCCT) and natural gas combined cycle combustion turbines (NGCC) with carbon capture and sequestration (CCS).[3] The Joint IRP notes "[b]ased on the Biden Administration's energy policy and the national focus on moving to clean energy, the current environment does not support the installation of NGCC without CCS due to its $CO_2$ emissions."[4] Along with selecting wind and solar non-dispatchable resources for evaluation in their Long-Term Resource Planning Analysis, the Joint IRP states that all of these selected resources will "set the foundation for a clean energy transition" for LG&E/KU.[5]

The Joint IRP, across all nine evaluated scenarios, contemplates adding a combination of CTs, solar, and battery storage. The Long-Term Resource Planning Analysis also contemplates the addition of wind resources primarily in the scenarios involving high fuel price at the end of the 15-year Joint IRP period. The Joint IRP notes that "NGCC with CCS is not cost-competitive with solar combined with SCCTs or battery storage in any of the scenarios modeled in this analysis."[6]

At the two-day hearing, LG&E/KU witnesses discussed the request for proposals the companies issued in June 2022 (June RFP) soliciting replacement capacity and energy due to the upcoming retirements of Mill Creek 1, Mill Creek 2, and Brown 3 resulting in the companies being capacity deficit by 2028.[7] LG&E/KU witnesses informed that responses to the June RFP are due in late August and that it should complete its economic evaluation of the responses shortly

[3] *Id.*

[4] *Id.*

[5] Joint IRP at 5-39.

[6] Joint IRP at 5-43.

[7] July 13, 2022 Hearing Video Recording (HVR) at 08:15:30.

thereafter.[8] Also at the hearing, LG&E/KU witnesses under cross-examination acknowledged for the first time new information that the companies will submit as a response to the request for proposals issued by the companies in June 2022 proposals to self-build two 660 MW NGCCs. One of the NGCC will be located at Mill Creek in Jefferson County and the other at Brown in Mercer County. Notably, the companies anticipate that neither of the proposed NGCCs will be equipped with CCS technology[9] even though the Joint IRP evaluated NGCCs with CCS as a resource alternative due to the current environment not supporting "the installation of NGCC without CCS due to its $CO_2$ emissions."[10] Contrary to what the companies have provided in their Joint IRP filing, LG&E/KU are now considering NGCC without CCS as a potentially viable resource alternative for replacement of existing generation resources that will ultimately be retired by 2028.[11]

LG&E/KU witnesses also informed at the hearing that the companies intend to file an application requesting a Certificate of Public Convenience and Necessity (CPCN) by the end of this year at the earliest for approval to address replacement of generation resources.[12] LG&E/KU witnesses also informed that the companies will also file an application addressing their demand-side management (DSM) portfolio in conjunction with the filing of the CPCN application.[13]

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[8] July 13, 2022 HVR at 14:40:00.

[9] July 13, 2022 HVR at 16:17:00.

[10] IRP at 5-40.

[11] *See* LG&E/KU's Response to Commission Staff's Second Request for Information, Item 2 in which the companies state: "The assumption regarding CCS for NGCC units relates only to new units. All new generation units are subject to New Source Performance Standards for selected emissions including $CO_2$. There has been discussion in the industry that the EPA is considering tightening $CO_2$ emission limits for new NGCCs that would have the effect of requiring CCS."

[12] July 13, 2022 HVR at 14:40:00.

[13] *Id.*

Although LG&E/KU will not need replacement capacity and energy until 2028 and although the companies' current suit of DSM programs will not expire until 2025, LG&E/KU intend on filing applications addressing these two areas by the end of this year which is effectively two to five years in advance of each of those milestones. In light of these circumstances, it begs the question as to why the companies intend on filing a CPCN application and a DSM application by the end of this year, which is years in advance of any need to address their DSM programs and generation resource questions. Louisville Metro is concerned that the intended timing of the CPCN application and related DSM filing at the end of this year is driven by the timeline for the possible construction of a generation resource that would involve an NGCC without CCS, a generation resource that was not considered in the Joint IRP. At the hearing, company witness David Sinclair testified that a SCCT will generally take approximately 12-18 months to construct and a NGCC will take about 3 years to construct.[14] LG&E/KU should clearly explain its reasoning on why it intends to file a CPCN application and a DSM application by the end of this year given that the generation resource need is not required until 2028.

LG&E/KU witness Lonnie Bellar testified that PPL and the companies have made a commitment to achieve net-zero carbon emissions by 2050. Acknowledging that PPL's Climate Assessment Report qualifies that commitment with pace of technological advancement that is unknown at this time and that at worst PPL and LG&E/KU will achieve an 80 percent reduction in greenhouse gas emissions from 2010 levels by 2050, the potential for replacement generation to be in the form of two NGCCs not equipped with CCS technology would not be consistent with the companies' net-zero carbon emissions commitment.

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[14] July 12, 2022 HVR at 4:00:00. Louisville Metro notes that the general construction period of a utility scale solar project is around 12 to 18 months.

In light of Louisville Metro Resolution No. 0009, Series 2020,[15] Louisville Metro has sincere and significant concerns regarding how LG&E/KU will address their capacity and energy shortage in 2028 and the nature of their intended CPCN filing at the end of this year. Louisville Metro's concerns are amplified due to the recent passage of the Inflation Reduction Act. Louisville Metro recommends that LG&E/KU, as part of any upcoming CPCN filing, should factor the impact of any and all applicable incentives provided by the Inflation Reduction Act, which contains significant incentives and tax credits for renewable energy resources and energy efficiency programs. The legislation provides $9 billion for states to issue rebates to homeowners for whole-home retrofits and for efficient heat pumps, heat pump water heaters, and other electrical equipment (and training and education for contractors). Most of those funds would be for low- and moderate-income households, and the legislation provides billions more in loans and grants for upgrades to subsidized apartments.[16] The Inflation Reduction Act also provides over $60 billion to on-shore clean energy manufacturing in the U.S. across the full supply chain of clean energy technologies, including $30 billion in production tax credits to accelerate U.S. manufacturing of solar panels, wind turbines, batteries, and critical mineral processing and $10 billion in investment tax credits to build clean technology manufacturing facilities for the production of electric vehicles, wind turbines, and solar panels.[17] Further, the legislation provides tax credits for clean sources of electricity and energy storage and roughly $30 billion in targeted

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[15] Resolution No. 009, Series 2020 resolved to support 100 percent clean, renewable electricity for Louisville Metro operations by 2030; 100 percent clean energy for Louisville Metro operations by 2035; and 100 percent clean energy community-wide by 2040.

[16] https://www.democrats.senate.gov/imo/media/doc/summary_of_the_energy_security_and_climate_change_investments_in_the_inflation_reduction_act_of_2022.pdf

[17] *Id.*

grant and loan programs for states and electric utilities to accelerate the transition to clean electricity.[18] The Inflation Reduction Act is truly a transformational legislation that could have a significant impact on LG&E/KU's resource planning and should be taken into account before any decision is made by the companies with respect to their future resource requirements.

Respectfully submitted,

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[18] *Id.*

CERTIFICATE OF SERVICE

In accordance with the Commission's July 22, 2021 Order in Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19*, this is to certify that the electronic filing was submitted to the Commission on August 22, 2022; that the documents in this electronic filing is a true representation of the materials prepared for the filing; and that the Commission has not excused any party from electronic filing procedures for this case at this time.

/s/ Quang Nguyen ________________
Counsel for Louisville Metro