

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

ELECTRONIC APPLICATION OF LOUISVILLE GAS)	
AND ELECTRIC COMPANY AND KENTUCKY)	Case No.
UTILITIES COMPANY FOR THE 2021 JOINT)	2021-00393
INTEGRATED RESOURCE PLAN)	

**ATTORNEY GENERAL’S RESPONSE
TO SUPPLEMENTAL POST-HEARING COMMENTS**

The Attorney General provides the following Response to Supplemental Post-Hearing Comments filed by the other parties in this action, which is a review of Louisville Gas and Electric and Kentucky Utilities’ (“LG&E/KU” or “Companies”) Integrated Resource Plan (“IRP”).

The Attorney General urges the Commission to (1) remember the importance of reliability in generation planning and (2) reject efforts to make private corporate policies binding on ratepayers.

First, the Attorney General urges the Commission to account for the importance fossil fuel generation plays in providing a reliable electric grid. Renewable generation, based on current technology and at a certain scale, simply cannot meet ratepayers’ reliability needs. As recently documented by S&P Global, renewables account for 14% of U.S. generation but only contribute 8.5% during peak hour generation.¹ These national

¹ As renewable energy expands, focus turns to reliability contributions, <https://www.spglobal.com/marketintelligence/en/news-insights/research/as-renewable-energy-expands-focus-turns-to-reliability-contributions> (accessed 8/25/22). “Averaging 14% of overall U.S. generation, the estimated contribution of renewables to U.S. independent system operator energy

averages are much larger than the 3.4% peak hour contribution renewables provide within the PJM footprint.²

Instead, fossil fuels provide the reliable generation required by the Commission's planning process. The North American Electric Reliability Corporation ("NERC") agrees³ and has acknowledged that continued investment in gas infrastructure is necessary, referring to gas as a "bridge fuel" that is "important to invest in."⁴ Even a current Department of Energy official acknowledged that the inability to rely on renewables is not simply an "interconnection problem," and that oil and gas should not be "vilified."⁵

Across the nation, in the face of rising pressure to pursue "renewable only" strategies, numerous utilities have chosen to keep coal and gas plants online longer than anticipated in order to meet demand.⁶ Just this summer, plans to retire at least six coal

production falls into high single-digit territory at peak hour, underscoring current green energy limitations when households and businesses need electricity the most."

² *Id.*

³ *Long-Term Reliability Assessment*,

https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2021.pdf,

(accessed August 29, 2022), at 5, "Natural gas is the reliability "fuel that keeps the lights on," and natural gas policy must reflect this reality."

⁴ 'Batteries aren't going to do it': NERC's Moura calls for gas investment to maintain reliability, <https://www.utilitydive.com/news/nerc-2022-reliability-report-gas-solar/627784/>, (accessed 8/25/22)

"Gas is a bridge fuel to where I think policies ultimately want to take us,' Moura said. 'Batteries aren't going to do it, and we're going to need a backup fuel for wind and solar. So this is important to invest in.'"

See also NERC 2022 State of Reliability July 2022, at page 45, https://www.nerc.com/pa/RAPA/PA/Performance%20Analysis%20DL/NERC_SOR_2022.pdf,

(accessed 8/25/22) "Until storage technology is fully developed and deployed at scale, natural-gas-fired generation will remain essential to providing the grid's rapidly increasing flexibility needs."

⁵ Jigar Shah: 'Oil and Gas Sector Shouldn't be Vilified', <https://www.rtoinsider.com/articles/30349-jigar-shah-oil-gas-sector-shouldnt-be-vilified>, (accessed 8/25/22).

⁶ *America Leans on Aging Power Plants to Fend Off Electricity Shortages*, <https://www.wsj.com/articles/america-leans-on-aging-power-plants-to-keep-the-lights-on-11652693581>, (accessed 8/25/22).

plants have been abandoned because the generation from those units is necessary to meet current demand.⁷ Even California, a leading proponent in the move toward renewable energy, has recently been forced to reverse course on the planned retirement of a nuclear plant in order to maintain reliability.⁸ In sum, many policy-makers who have championed the replacement of fossil fuel generation by renewables, in order to meet emissions goals, are now faced with the engineering and technological realities of the current state of development for renewables. Unfortunately, some will choose irresponsibly to minimize these limitations, shifting blame to supply chain issues and trade restrictions. While those and other factors have undoubtedly affected the logistics and cost of renewable adoption, those factors obscure the fundamental truth that “renewables only” cannot provide ratepayers with a reliable electric system based on today’s technology.⁹

⁷ *U.S. coal plants delay closures in hurdle for clean energy transition*, <https://www.reuters.com/business/sustainable-business/us-coal-plants-delay-closures-hurdle-clean-energy-transition-2022-08-10/>, (accessed 8/25/22).

⁸ *Not so fast: California’s last nuke plant might run longer*, <https://apnews.com/article/california-gavin-newsom-canyons-pollution-0ec77ff91a09655b3fdd349345915e8e>, (accessed 8/25/22). “An aggressive push toward renewable energy has run headlong into anxiety over keeping the lights on in California, where the largest utility is considering whether to try to extend the lifespan of the state’s last operating nuclear power plant.”

⁹ *System & Resource Outlook Report of August 17, 2022*, https://www.nyiso.com/documents/20142/32810936/2021-2040_System_Resource_Outlook_Report_v17_BIC.pdf/1fb55e7e-b0b2-7400-84ff-1548c6eeaa63, (accessed August 29, 2022). Specifically, see *Report* at page 13, “To achieve an emission-free grid, dispatchable emission-free resources (DEFERs) must be developed and deployed throughout New York. DEFERs that provide sustained on demand power and system stability will be essential to meeting policy objectives while maintaining a reliable electric grid. While essential to the grid of the future, such DEFER technologies are not commercially viable today.”

As the Commission is likely aware, leaders of two of Kentucky's non-profit utilities recently penned an Op-Ed that appeared in various outlets across the state.¹⁰ In part, the piece offers the following summary of the state of the electric utility market:

In recent months, electric utility customers across the U.S. have received a shock as they opened their monthly electric power bills. The high costs they are experiencing are largely the result of years of unsound government energy policies, which have cut options to fuel reliable energy. U.S. electricity producers have been forced to depend more on natural gas and must compete against foreign nations for our domestic natural gas supplies. Those nations are willing to pay 1,000 percent more than U.S. consumers are accustomed to paying. Some, notably Russia, have taken advantage of the situation to weaponize energy to advance their radical interests.

U.S. policy-makers have enthusiastically incentivized solar and wind generators, regardless of how well the operating characteristics of those technologies match up with U.S. energy needs. But when those solar and wind resources do not perform – an occurrence as predictable as the sun setting and the seasons changing – energy producers must turn to reliable 24/7/365 thermal energy resources. For large-scale energy production, that means natural gas, coal and nuclear. But, facing ever-stricter regulations and price competition from heavily subsidized renewable resources, coal and nuclear plants increasingly are being driven into retirement.

In 2020, the U.S. added 27.6 gigawatts (GW) of solar and wind resources, along with 6.6 GW of natural gas; virtually no coal or nuclear resources were added. In fact, over the past decade, 95 GW of coal capacity has been shut down, along with 12 nuclear reactors. Today, no new coal plants are being built in the U.S., and only two nuclear reactors are under construction. As a consequence, when solar and wind do not show up, electricity providers increasingly must turn to one key flexible resource – natural gas. Today, 40% of U.S. electricity generation is fueled by natural gas, up from 17% in 2001.

Promoters of solar and wind undoubtedly will maintain that utility-scale battery technology is the silver bullet to solve renewables' intermittency problem. But today, less than 1% of U.S. solar and wind capacity is backed up by batteries. The technology for large-scale storage remains largely in

¹⁰ *High electric bills are result of years of unsound energy policies*, <https://www.lanereport.com/157403/2022/07/op-ed-high-electric-bills-are-result-of-years-of-unsound-energy-policies/>, (accessed 8/25/22).

the developmental stage. Rapid deployment of large, utility-scale batteries to back up hundreds of gigawatts of solar and wind resources will require aggressive, expensive growth of battery-manufacturing capacity. Today, much of the mineral content necessary to produce lithium-ion batteries – the foremost technology being pursued for both utility energy storage and electric vehicles – comes from nations like China and Russia, whose interests do not align well with the U.S.

Policy-makers in Kentucky and elsewhere would be wise to reflect on the thoughts of industry leaders like Mr. Berry and Mr. Campbell. Reliability is of paramount importance for Kentucky ratepayers – not only the residential ratepayers who count on reliable electric service to stay warm in the winter and cool in the summer, but also the small businesses and industrial ratepayers who power Kentucky’s economic engine. As such, the Commission should make reliability a critical component in any decision.

Reliability is a necessary consideration in the context of this IRP due to LG&E/KU’s potential resource planning decision to build a new natural gas combined cycle (“NGCC”) generating unit. Specifically, some Commenters would like to have the economics of this potential resource selection reevaluated based on the passage of the so-called Inflation Reduction Act (“IRA”). Those Commenters argue that the passage of the IRA has fundamentally changed the economics of renewable and gas generation.¹¹ The legislation’s inapt name notwithstanding, those Commenters appreciate its actual

¹¹ See Supplemental Comment of Louisville/Jefferson County Metro Government at 5. “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.” See Supplemental Comment of Joint Intervenors at 18-19. “Joint Intervenors acknowledge that LG&E/KU could not have foreseen passage of the IRA, much less the specific contours of the enacted bill. And still, it is a subsequent development so significant and so at odds with the assumptions in the original IRP analyses, that it renders the earlier modeling even more inaccurate and unhelpful.”

purpose, which is to further subsidize renewable energy generation and transmission while disfavoring and penalizing fossil fuel generation.¹² The Joint Intervenors suggest that, in response to the IRA, the Commission should cause the Companies to engage in further planning to evaluate, “what effects... the IRA may have on their near-term and long-term resource planning, including on (1) the conclusions in the 2021 IRP, (2) the Companies’ evaluation of responses to the outstanding request for proposals, (3) the optimal timing of coal-fired unit retirements, and (4) the timeline and costs for development of more renewable resources.”¹³ The request to evaluate the IRA’s impact on “the evaluation of responses to outstanding request for proposals,” relates specifically to LG&E/KU’s potential NGCC generation investment. The intention behind these comments is plain— renewables should be favored, and fossil generation should be disfavored. Louisville Metro directly states that these concerns are expressed not due to reliability or cost considerations but, “[i]n light of Louisville Metro Resolution No. 0009, Series 2020,” which contains its community-wide 100% clean energy goal.¹⁴

Certainly, the IRA has affected the economics of renewables. It has likewise affected the economics of natural gas, through the imposition of a methane tax.¹⁵ However, in the context of an IRP, impacts to pricing of the supply-side resources only tell part of the story. In an IRP, the electric utilities *must* plan to provide an “adequate

¹² See Supplemental Comment of Joint Intervenors at 17-20. See Supplemental Comment of Louisville/Jefferson County Metro Government at 5-6.

¹³ See Supplemental Comment of Joint Intervenors at 20.

¹⁴ See Supplemental Comment of Louisville/Jefferson County Metro Government at 5-6.

¹⁵ *Inflation Reduction Act Methane Emissions Charge: In Brief*, Congressional Research Service, <https://crsreports.congress.gov/product/pdf/R/R47206>, (accessed 8/25/22).

and reliable supply of electricity to meet forecasted electricity requirements at the lowest possible cost.”¹⁶ Even if renewable resources are the “lowest possible cost” resource in certain scenarios, renewable resources fail to provide the “reliable supply of electricity” that ratepayers expect and deserve, and that the Commission requires.

In general, LG&E/KU should employ an “all of the above” energy strategy that considers all resource types for selection and chooses the lowest-cost resources that allow the utility to operate reliably for the benefit of its customers. Renewables can and do play a role in an “all of the above” energy strategy. In certain circumstances, and especially given the large government subsidies available to them, renewable resources may be cost-effective as one element of a diverse portfolio. But ultimately, generation planning must be approached from a rational perspective based on current, proven, and reliable technology. In consideration of this and future IRPs, the Commission should ensure that reliability is a critical element of the planning process. The Commission should require LG&E/KU, in their next IRP, to specify how they will ensure reliability while employing renewable energy, particularly during peak time demand.

Specifically, with regard to LG&E/KU’s potential decision to pursue NGCC generation in the current climate, not only is it reasonable for LG&E/KU to proceed with gas infrastructure investments, it is necessary. Perhaps the Supplemental Comment from the Kentucky Industrial Utility Customers (“KIUC”) said it best:

Other utilities are cynically proposing to scrap their existing generation fleets as quickly as possible in order to replace them with 100% capital cost, zero fuel cost renewable generation. Thankfully, LG&E/KU are sticking to

¹⁶ 807 KAR 5:058(8).

generation planning that is least cost for ratepayers, not generation planning that provides the maximum profit for shareholders.¹⁷

The Companies are to be lauded for engaging in generation planning which produces a reliable electric system at a time when the profitable and politically popular choice might be otherwise.

Second, while the Attorney General supports the Companies' efforts to plan generation in a reasonable manner as described above, criticism is necessary to the extent the Companies agree with other Commenters on another point. The net-zero emissions policy of the Companies' corporate parent entity, PPL, is entirely irrelevant to this generation planning process. Louisville Metro attempts to use PPL's corporate net-zero emissions policy as a sword with which to fatally preempt future gas generation.

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.¹⁸

No provision of law allows the Commission to consider private emissions goals in generation planning. LG&E/KU argue that their generation planning is consistent with aspects of this corporate policy, then accept that certain aspects of that corporate policy

¹⁷ See Supplemental Comment of KIUC at 3.

¹⁸ See Supplemental Comment of Louisville/Jefferson County Metro Government at 4.

are “irrelevant per se,” and later argue that still other aspects of their corporate policy, “will not become relevant until the Companies file their 2036 IRP.”¹⁹

Respectfully, this misses the point. LG&E/KU and their corporate parent do not make policy for Kentucky, nor for the United States. LG&E/KU have been granted the authority to offer utility service in Kentucky as long as they act in accordance with Kentucky’s laws. Those laws include planning to offer service at the lowest possible cost that provides an adequate and reliable supply of electricity. Those laws do not allow for deviation from that standard based on private, corporate emissions policies that may serve the interests of shareholders, but do not serve the interest of the ratepayers.²⁰

The Commission should afford no consideration to the Companies’ corporate net-zero emissions goals in the generation planning process or in any other proceeding.

In conclusion, this Office urges the Commission to consider the importance of reliability in generation planning and reject efforts to make private corporate policies binding on ratepayers. The Attorney General appreciates the Commission’s thoughtful consideration of these matters.

¹⁹ See Supplemental Comment of the Companies at 8-9.

²⁰ In fact, recently, the Legislature passed and the Governor signed SB 205 “AN ACT relating to state dealings with companies that engage in energy company boycotts” in the 2022 General Assembly to address the practice of financial institutions withholding capital from fossil fuel generation.

Respectfully submitted,

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Certificate of Service

Pursuant to the Commission's Orders in Case No. 2020-00085, and in accord with all other applicable law, Counsel certifies that an electronic copy of the forgoing was served and filed by e-mail to the parties of record.

This 6th day of September, 2022.



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