

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

<b>ELECTRONIC 2024 JOINT</b>	)	
<b>INTEGRATED RESOURCE PLAN</b>	)	
<b>OF LOUISVILLE GAS AND ELECTRIC</b>	)	<b>Case No. 2024-00326</b>
<b>COMPANY AND KENTUCKY</b>	)	
<b>UTILITIES COMPANY</b>	)	

**ATTORNEY GENERAL'S INITIAL COMMENT**

The Attorney General provides this comment pursuant to the Commission’s Scheduling Order of October 30, 2024. This Comment relates to the Integrated Resource Plan (“IRP”) filed by Louisville Gas and Electric Company and Kentucky Utilities (“LG&E and KU” or “the Companies”) on October 18, 2024.

**I. Background**

LG&E serves 436,000 electric customers and 335,000 natural gas customers in Louisville and 16 surrounding counties. KU serves 570,000 customers in 77 Kentucky Counties and 5 Virginia Counties.<sup>1</sup> The Companies supply approximately 30,000 to 35,500 GWh of energy to their customers each year, with a winter peak of 7,100 MW.<sup>2</sup> In order to meet these needs, the Companies employ a generation fleet consisting of 11 coal units, 1 natural gas combined cycle unit, and 17 natural gas combustion turbine units, totaling 7,909 MW of winter capacity.<sup>3</sup> Further, the Companies own 134 MW of hydro

---

<sup>1</sup> IRP Vol 1, 5-1.

<sup>2</sup> IRP Exec. Summary.

<sup>3</sup> IRP Vol 1, 5-1.

generation, 12 MW of solar generation, and less than 1 MW of wind generation.<sup>4</sup> Lastly, the Companies are able to limit service by 150 MW if needed under curtailable service and demand conservation riders.<sup>5</sup>

## **II. The IRP Process**

Electric utilities are required to file an IRP with the Commission every three years.<sup>6</sup> The IRP process requires a utility to consider many factors and formulate a plan to serve its customers with an adequate and reliable electricity for the next fifteen years at the lowest possible cost.<sup>7</sup> Factors to consider, among others, include customer characteristics, service territory, current facilities, forecasted demand, economic and demographic assumptions, resource acquisitions, demand-side management programs, new sources of generation, the state of transmission facilities, bulk power sales and purchases, and interconnections with other utilities.<sup>8</sup>

## **III. Recommended Plan**

The Companies have presented a recommended plan that, over the next fifteen years, includes constructing two new natural gas combined cycle (“NGCC”) units, installing 900 MW of battery storage, adding 500 MW of solar resources, installing selective catalytic reduction (“SCR”) equipment to the Ghent Generating Unit 2, and complying with effluent limit guideline regulations (“ELG”) at the Ghent and Trimble

---

<sup>4</sup> IRP Vol 1, 5-1.

<sup>5</sup> IRP Vol 1, 5-1.

<sup>6</sup> KRS 278.230; 807 KAR 5:058.

<sup>7</sup> 807 KAR 5:058(7-8).

<sup>8</sup> 807 KAR 5:058(5).

County Generating Units.<sup>9</sup> The plan would also call for the retirement of coal units Brown 3 and Mill Creek 3 and 4.<sup>10</sup>

#### **IV. Attorney General's Comments**

##### **a. The Companies should maximize the lifespan of their existing resources.**

The Kentucky General Assembly recently passed sweeping legislation articulating certain policies for energy generation in the Commonwealth.<sup>11</sup> Those policies generally favor an “all-of-the-above approach” to meet the “significantly increase[ing]” “demand for reliable, resilient, dispatchable electrical power.”<sup>12</sup> The General Assembly specifically determined that, “further retirement of fossil fuel-fired electric generating resources is not necessary for the protection of the environment of the health, safety, and welfare of the citizens of the Commonwealth,” and, “health, happiness, safety, economic opportunity, and general welfare of the citizens of the Commonwealth will be promoted and protected by the operation of fossil fuel-fired electric generating resources and, conversely, those interests would be harmed by the premature retirement of those generating resources.”<sup>13</sup>

The Companies’ plan to retire three coal units over the period of the IRP. The Companies should ensure that they are maximizing the lifespan of existing resources.

---

<sup>9</sup> IRP Vol 1, 8-1.

<sup>10</sup> IRP Vol 1, 8-1.

<sup>11</sup> KRS 164.2807.

<sup>12</sup> KRS 164.2807(1)(e).

<sup>13</sup> KRS 164.2807(1)(k-1).

At a time when costs for new generation resources are increasing, every effort should be made to be a good steward of the resources for which ratepayers have already paid.

- b. The Companies should exercise great care to ensure the corporate goals of their parent do not drive its generation selection decisions to the extent those goals are at odds with the policies of the Commonwealth.**

PPL, the parent Company of LG&E/KU has an, “ambitious goal to achieve net-zero carbon emissions by 2050,” and targets a 70% emissions reduction by 2035.<sup>14</sup> The Companies admit that their actions contribute to and help inform PPL’s emissions goals.<sup>15</sup> The Attorney General is concerned that there is a potential for the corporate goals of PPL to run contrary to the policy and law of the Commonwealth at a time when the Companies decide whether to retire fossil-fuel fired units. To that end, the Companies should exercise care to ensure that their retirement decisions are consistent with Kentucky law and are not driven by the policy goals of its corporate parent.

- c. The Companies should focus on generating reliable, dispatchable power.**

The Companies propose to construct two new NGCC units, but they also propose to construct 500 MW of unreliable, intermittent generation.

For over a century, coal-fired electric generation plants have been providing safe, reliable, largely base-load power during all weather conditions, 24 hours-per-day, 365 days-per-year, year-in and year-out. These facilities are capable of sustained output of low-cost energy for prolonged periods, often for months on end. The predictable start-

---

<sup>14</sup> See Response to AG Supplemental Data Request 2-2.

<sup>15</sup> See Response to AG Supplemental Data Request 2-2.

up times and trustworthiness of these dispatchable plants allow utilities and grid operators to meet the needs of the grid and energy markets. Intermittent generation, on the other hand, lacks this reliability, and is subject to the constantly changing weather.<sup>16</sup> Moreover, dispatchable, turbine-driven, synchronous generation resources such as coal-fired plants provide a natural inertia that forces the flow of electrons down the wires. This natural inertia helps to regulate electric frequency and retard its decay, keeping it at or near 60 Hz, and produces short circuit strength that provides ride-through capability for intermittent or sustained oscillations.

Electrons traveling on the grid move in accordance with well-defined principles of physics and engineering—they do not do so in response to politics or wishful thinking. Dispatchable thermal resources such as coal-fired plants can also be utilized on the grid as spinning reserves, to quickly provide voltage support, ramping and additional frequency regulation.<sup>17</sup> There is currently no clear path forward to a viable electric grid run solely on intermittent resources. Thermal generation—coal, natural gas and nuclear—are necessary today, tomorrow and will continue to be well into the future.<sup>18</sup>

---

<sup>16</sup> “The lessons of the recent decade make it clear that [renewable] technologies cannot be surged in times of need, are neither inherently “clean” nor even independent of hydrocarbons, and are not cheap.” *The Energy Transition Delusion: A Reality Reset*, [https://media4.manhattan-institute.org/sites/default/files/the-energy-transition-delusion\\_a-reality-reset.pdf](https://media4.manhattan-institute.org/sites/default/files/the-energy-transition-delusion_a-reality-reset.pdf), (accessed September 27, 2023).

<sup>17</sup> See, Interim Joint Committee on Natural Resources and Energy Hearing August 3, 2023, testimony of PJM Vice-President for State and Member Services Asim Haque, YouTube video accessible at <https://www.youtube.com/watch?v=Bja3IDPFPMs> at 22:07–25:30 (last accessed August 15, 2023).

<sup>18</sup> The Attorney General acknowledges that at some point in the future, some sort of breakthrough technology may be developed to enable this transformation. But until then, the grid will continue expanding and will require a continuous, sustained flow of electrons to power the electric grid.

Kentuckians do not want—or need—a grid like California’s, “that is over-reliant on intermittent energy resources, voluntary service curtailments and imports from other regions.”<sup>19</sup> Those states that are transitioning their grid away from time-proven, fossil-fueled generation to more intermittent and less-reliable resources know that their energy bills will become less affordable over time;<sup>20</sup> in fact, some are having second thoughts about their prior decisions to jettison fossil-fueled generation plants.<sup>21</sup> It is imperative that the Commission take every measure to maintain and strengthen the reliability and resilience of Kentucky’s electric grid.

The Attorney General has consistently and repeatedly voiced concerns related to the reliability impacts of the increased penetration of intermittent resources in numerous Commission proceedings.<sup>22</sup> Solar generation however, does not possess the efficient operating characteristics offered by traditional dispatchable resources. Drawbacks to

---

<sup>19</sup> EKPC President & CEO Anthony “Tony” Campbell Letter to President Biden, July 13, 2021, [https://togetherwesaveky.com/wp-content/uploads/2022/07/2021-07-13\\_TCampbell-to-President-Biden.pdf](https://togetherwesaveky.com/wp-content/uploads/2022/07/2021-07-13_TCampbell-to-President-Biden.pdf) (accessed September 27, 2023).

<sup>20</sup> See, e.g., *California’s Dilemma: How to Control Skyrocketing Electric Rates While Building the Grid of the Future*, <https://www.utilitydive.com/news/californias-dilemma-how-to-control-skyrocketing-electric-rates-while-buil/597767/> (accessed September 5, 2023).

<sup>21</sup> See, e.g., *Newsom Embraces Dirty Energy in Bid to Stave off Blackouts*, <https://www.politico.com/news/2023/08/30/Newsom-aliso-canyon-dirty-energy-blackouts-00113534> (accessed September 8, 2023).

<sup>22</sup> See, *Electronic 2020 Integrated Resource Plan Of Big Rivers Electric Corporation*, Case No. 2020-00299; *Electronic 2021 Integrated Resource Plan Of Duke Energy Kentucky, Inc.*, Case No. 2021-00245; *Electronic Joint Application Of American Electric Power Company, Inc., Kentucky Power Company And Liberty Utilities Co. For Approval Of The Transfer Of Ownership And Control Of Kentucky Power Company*, Case No. 2021-00481; *Electronic 2021 Joint Integrated Resource Plan Of Louisville Gas And Electric Company And Kentucky Utilities Company*, Case No. 2021-00393; *Electronic 2022 Integrated Resource Plan Of East Kentucky Power Cooperative, Inc.*, Case No. 2022-00098; *Investigation of the Fuel Adjustment Clause Regulation 807 KAR 5:056, Purchased Power Costs, and Related Cost Recovery Mechanisms*, Case No. 2022-00190; *Electronic Application Of Big Rivers Electric Corporation For Approval Of Amendment To Power Purchase Agreement*, Case No. 2022-00296; and *Electronic Application Of Duke Energy Kentucky, Inc. For (1) An Adjustment Of Electric Rates; (2) Approval Of New Tariffs; (3) Approval Of Accounting Practices To Establish Regulatory Assets And Liabilities; And (4) All Other Required Approvals And Relief*, Case No. 2022-00372.

utility scale solar generation include operability limited to only when the sun is shining,<sup>23</sup> the potential for extensive damage and outages during weather events, such as hail,<sup>24</sup> a limited lifespan,<sup>25</sup> displacement of agricultural use of valuable farmland,<sup>26</sup> and uncertainty regarding environmental issues at the time of disposal.<sup>27</sup>

The Companies should focus on generating the dispatchable power that their ratepayers rely on to power their lives and business every day.

**d. The Companies should take action to insulate existing ratepayers from the rate-distorting impacts of large new loads, like data centers.**

The Companies cite management of data center load as an area of concern in the IRP. The Companies are right to highlight this issue. The Companies should protect existing ratepayers from the rate-distorting impacts data center proliferation can bring. Even during the pendency of this matter, plans have been announced for the construction of a new data center in the LG&E service territory.<sup>28</sup> The Companies admit that the, “2024 IRP Resource Adequacy Analysis indicate that the Companies would need more

---

<sup>23</sup> *The Advantages and Disadvantages of Solar Energy*, <https://www.constellation.com/energy-101/energy-innovation/solar-energy-pros-and-cons.html> (accessed September 6, 2023). On average, Kentucky experiences about 4.94 peak sun hours per day. *Average Peak Sun Hours By State*, <https://thegreenwatt.com/average-peak-sun-hours-by-state/> (accessed September 6, 2023).

<sup>24</sup> *Nebraska solar farm crippled by hail, underscoring power source's fragility*, <https://www.foxnews.com/politics/nebraska-solar-farm-crippled-hail-underscoring-power-sources-fragility> (access June 29, 2023).

<sup>25</sup> *Challenge to stop solar panels becoming a 'waste mountain'*, <https://www.bbc.com/news/science-environment-65602519> (accessed September 7, 2023).

<sup>26</sup> *The promise of solar farm income and why it's not winning everyone's heart*, <https://www.cincinnati.com/in-depth/news/2021/09/16/invitation-solar-farm-not-sitting-well-rural-neighbors-kentucky/5649016001/> (accessed September 7, 2023).

<sup>27</sup> *Challenge to stop solar panels becoming a 'waste mountain'*, <https://www.bbc.com/news/science-environment-65602519> (accessed September 7, 2023).

<sup>28</sup> See AG Supplemental Data Request 1-1.

generation resources than currently planned to serve the combination of this load (402 MW) and the second phase of BlueOval SK (120 MW).”<sup>29</sup>

The addition of this data center and ones like it over the coming years brings the potential for negative impacts to existing ratepayers. Utilities have now begun to make structural changes to their tariffs to address the emergence of these types of users.<sup>30</sup> The Companies should take tariff and ratemaking actions to ensure that these heavy users of system pay the full cost of service needed to serve them. Large data centers have the potential to erode quickly any existing reserve capacity and transmission margin on a system, driving new incremental costs that would not have been incurred but for their participation. The scale of their usage makes them distinguishable from other large commercial and industrial users seeking to obtain service.

The Companies should insulate existing ratepayers from these effects.

**e. Generation resource costs are increasing.**

The Companies should consider whether tax credits, which extravagantly subsidize intermittent resources, will even be available in the future. As demonstrated by the Companies, capital costs for solar resources are more expensive than those for a single cycle combustion turbine before subsidies are considered.<sup>31</sup> Solar resources only begin to look favorable by comparison when the Investment Tax Credits and Production Tax Credits offered under the inaccurately named Inflation Reduction Act are considered.

---

<sup>29</sup> See Response to AG Supplemental Data Request 1-1.

<sup>30</sup> *AEP Ohio reaches agreement with stakeholders on data center interconnection rules*, <https://www.utilitydive.com/news/aep-ohio-data-center-agreement-stakeholders-indiana-epri/730873/>, (accessed March 3, 2025).

<sup>31</sup> IRP Vol 1, 6-5.



However, the political winds have changed since those subsidies were lavished, and there is a potential that the economic playing field between traditional and intermittent resources will be balanced by executive action, legislative action, or some combination thereof in the coming years.<sup>32</sup>

Further, the technical limitations of intermittent resources limit the usefulness of comparing costs for those resources to the cost for traditional resources. Intermittent resources only operate under certain conditions, such as during certain hours of the day, during hours when the sun is shining, and when other weather factors allow. Relying on the unpredictability of weather and nature to provide reliable service is nonsensical. The unpredictable nature of the availability of these resources requires back-up generating resources to be available in order to ensure the availability of service. When the cost of that back-up generation is included, this has the potential to change the cost-benefit analysis for intermittent resources dramatically.

**f. The Companies should take care to respect and abide by all applicable state and federal energy laws.**

As the Companies are aware, environmental regulation is an ever-evolving landscape. Within the last two months, that landscape has shifted once again.<sup>33</sup> This is undoubtedly a difficult time to be a decision-maker at a utility. Unfortunately, utility decision-makers are often faced with the unenviable task of making long-term

---

<sup>32</sup> *Unleashing American Energy*, Executive Order January 20, 2025.

<sup>33</sup> *Unleashing American Energy*, Executive Order January 20, 2025.

investment decisions in a regulatory environment that increasingly encounters great short-term volatility. That fact is not lost on the Attorney General.

As a general matter, it would be understandable that a decision-maker might attempt to forecast which policy might win out in the long-term and let that policy guide its decision-making. And indeed, forecasting a variety of factors is a necessary part of the IRP process. But as energy laws and policies change, it is important that utilities abide by the laws and policies that are in effect at that time. To do otherwise would deny voters their voice in these matters in this heavily regulated space. Equally as important is that the utility not lose sight of the reality of the principles of engineering and physics that must be adhered to in order to make system work. The Companies are aware of these facts, and the Attorney General expects the Companies will continue to adhere diligently to these limiting principles no matter how difficult that task may be.

### **Conclusion**

The Attorney General greatly appreciates the Commission for the opportunity to comment in this proceeding and the Companies for their efforts to ensure that Kentuckians continue to receive reliable and affordable electric service.

Respectfully submitted,

RUSSELL COLEMAN  
ATTORNEY GENERAL



---

J. MICHAEL WEST  
LAWRENCE W. COOK  
ANGELA M. GOAD  
JOHN G. HORNE II  
ASSISTANT ATTORNEYS GENERAL  
1024 CAPITAL CENTER DRIVE SUITE 200  
FRANKFORT, KY 40601-8204  
PHONE: (502) 696-5433  
FAX: (502) 573-1005  
[Michael.West@ky.gov](mailto:Michael.West@ky.gov)  
[Larry.Cook@ky.gov](mailto:Larry.Cook@ky.gov)  
[Angela.Goad@ky.gov](mailto:Angela.Goad@ky.gov)  
[John.Horne@ky.gov](mailto:John.Horne@ky.gov)

*Certificate of Service and Filing*

Pursuant to the Commission's Order dated March 17, 2020 in Case No. 2020-00085, and in accord with all other applicable law, Counsel certifies that, on March 7, 2025, a copy of the forgoing was served on the individuals on the e-service list.

this 7th day of March, 2025.



---

Assistant Attorney General