

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

**In the Matter of:**

<b>THE 2014 JOINT INTEGRATED RESOURCE</b>	)	
<b>PLAN OF LOUISVILLE GAS AND ELECTRIC</b>	)	
<b>COMPANY AND KENTUCKY UTILITIES</b>	)	<b>CASE NO. 2014-00131</b>
<b>COMPANY</b>	)	

**JOINT RESPONSE OF**  
**LOUISVILLE GAS AND ELECTRIC COMPANY**  
**AND KENTUCKY UTILITIES COMPANY**  
**TO THE COMMENTS OF WALLACE MCMULLEN AND SIERRA CLUB**

Louisville Gas and Electric Company (“LG&E”) and Kentucky Utilities Company (“KU”) (collectively “Companies”), pursuant to the Commission’s January 29, 2015 scheduling order in this proceeding, hereby submit their response to the Comments of Wallace McMullen and Sierra Club (collectively “Sierra Club”). For their responsive comments, the Companies state:

**I. The Integrated Resource Plan Standards and their Purpose and History**

The Environmental Groups begin their comments with a section concerning the Commission’s Integrated Resource Plan (“IRP”) standards, as set forth in 807 KAR 5:058, that is basically accurate but incomplete.<sup>1</sup> The “Necessity, Function, and Conformity” statement at the beginning of the IRP regulation states that its purpose is to “prescribe[] rules for regular reporting and commission review of load forecasts and resource plans of the state’s electric utilities to meet future demand with an adequate and reliable supply of electricity at the lowest possible cost for all customers within their service areas ....”<sup>2</sup> As the Commission recently stated:

The goal of the Commission in establishing the IRP process was to ensure that all reasonable options for the future supply of electricity

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<sup>1</sup> See Sierra Club Comments at 4-5.

<sup>2</sup> 807 KAR 5:058.

were being examined and pursued, and that ratepayers were being provided a reliable supply of electricity at the lowest possible cost.<sup>3</sup>

To achieve its purposes, the regulation requires the utilities to which it applies to file an IRP triennially, which includes five basic components: a plan summary, a statement of significant changes from the most recently filed IRP, a fifteen-year load forecast, a resource assessment and acquisition plan for the fifteen years covered by the IRP, and a collection of basic financial information.<sup>4</sup> The Companies' 2014 IRP fully satisfies the Commission's requirements in all their particulars.

But in addition to recognizing what the IRP is, it is important to state what it is not. The IRP is not a declaration of what the Companies will do in the future regardless of changed circumstances; rather, it is the Companies' expectation at a moment in time of what their customers' needs will be and the least-cost means of meeting those needs. Also, the IRP does not require or even permit the Commission to approve a load forecast, a resource plan, or proposed revenue requirements; rather, a Commission Staff report of comments and recommendations is the final product of the IRP process.<sup>5</sup>

It is also important to note that the IRP does not affect the Companies' rates, contrary to the Sierra Club's insinuation: "A utility's rates will almost certainly not be fair, just, and reasonable if they do not result from planning processes that seek to determine the least-cost, least-risk resource plan."<sup>6</sup> As explained further below, the Companies perform additional and independent analyses—analyses based on actual market and regulatory conditions at the time—before proposing any significant capital project to the Commission in certificate of public convenience

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<sup>3</sup> *In the Matter of: The 2009 Integrated Resource Plan of Kentucky Power Company, Inc.*, Case No. 2009-00339, Staff Report at 1 (Mar. 4, 2011).

<sup>4</sup> 807 KAR 5:058 §§ 5-9.

<sup>5</sup> 807 KAR 5:058 § 11(3).

<sup>6</sup> Sierra Club Comments at 5.

and necessity (“CPCN”) or environmental cost recovery (“ECR”) applications; those proceedings have either immediate or eventual impacts on rates, but the IRP does not.

## **II. The Companies’ 2014 IRP Analyzes Existing Generating Units Consistent with Almost 20 Years of IRP Precedent and Development**

Notwithstanding that the Companies’ 2014 IRP analyzes existing generating units in a manner consistent with almost 20 years of IRP precedent and development for the Companies, the Sierra Club asserts that the Companies’ IRP contains three flaws concerning its analysis of the Companies’ existing generating units: (1) “the Companies did not allow Strategist to make market purchases”; (2) “the Companies never analyzed whether future capital and fixed costs could cause an existing unit to become uneconomic”; and (3) “the Companies designated Brown Unit 3 as must-run up to a certain capacity ...”<sup>7</sup> As explained below, the first claimed “flaw” is actually a virtue; the second is not a flaw, though the Companies could consider alternative means of analyzing possible unit retirements in scenarios that are part of future IRPs; and the third claimed “flaw” is not a flaw at all, but an assumption related to grid stability that was necessary at the time the Companies performed their analysis. Therefore, the Companies’ 2014 IRP is not flawed, though the Companies will consider proposals for improvement, as they have done throughout the history of the IRP process.

- A. The Companies’ constraint on market purchases and sales helps ensure there will be adequate resources available to meet customers’ needs.

The Sierra Club asserts that the Companies’ IRP is flawed because it assumes no energy-market transactions in its resource modeling,<sup>8</sup> but that is a virtue of the Companies’ IRP, not a flaw. Concerning short-term market purchases, it would be imprudent to rely on hourly energy markets to meet customers’ needs; the markets can be volatile (in terms of pricing and availability),

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<sup>7</sup> *Id.* at 6.

<sup>8</sup> *Id.* at 7-8.

and transmission constraints can prevent otherwise desirable energy transfers from occurring. In fact, an IRP based on short-term market energy purchases is not a viable plan. Certainly the Companies can and do make short-term energy-market purchases when the cost of energy available in the market is lower than the cost of energy from the Companies' next-to-be-dispatched generating units. But the Companies do not bet the stability of their grid—they do not jeopardize providing reliable service to their customers—on the hope that economical energy will be available in the markets from day to day, or even hour to hour. And just as it would be imprudent actually to build a resource portfolio based on such a bet, so it would be imprudent to engage in planning exercises like the IRP by making such assumptions. This will be particularly true if the federal Clean Power Plan is finalized and enforced in its proposed form (or a similar form), because it will likely require the further retirement of significant quantities of coal-fired generation. These retirements will tend to reduce, not increase, the amount of energy available for short-term purchase, whether economical or otherwise.

Concerning long-term energy purchases, it is not obvious from a long-term planning perspective that a long-term power-purchase agreement (“PPA”) will be more economical than for the Companies to build their own capacity. From a long-term planning perspective, the Companies' cost of constructing a particular generic resource technology is not likely to be materially different than a third-party's cost of construction. Although it is certainly true that the Companies have entered into economical long-term PPAs for purchases from existing generating units and will always seek third-party resources when making actual resource decisions, the IRP is a plan that evaluates various technologies, not a commitment to a particular resource. IRP planning is a long-term planning exercise: Over the long-term, the Companies presumably could build and operate a new generating unit for a cost similar to what any other entity would incur to

build and operate the same unit and then sell the Companies the unit's capacity and energy through a long-term PPA. Therefore, when the Companies analyze the array of available generating technologies and their associated costs in the Companies' IRPs, it is reasonable to assume they are in effect evaluating the costs of building, owning, and operating various technologies, as well as equivalent PPAs for capacity and energy from the same technologies. In this respect, the Companies have, in effect, evaluated long-term market purchases in their 2014 IRP, and Sierra Club's claimed flaw simply does not exist.

- B. Although the Companies' 2014 IRP Analysis Concerning Existing Generating Units Is Consistent with Practices Developed over Nearly 20 Years, the Companies Will Consider Alternative Means of Analyzing Possible Unit Retirements in Future IRPs.

The Companies' 2014 IRP is the product of a process refined over nearly 20 years of IRP submissions and Commission Staff comments issued under the Commission's current IRP regulations. The Companies therefore believe that their 2014 IRP complies in all particulars with the Commission's IRP regulations, including the Companies' analysis of their existing generating units.

Nonetheless, although the Companies do not agree with all of Sierra Club's criticisms at pages 8-12 concerning the Companies' analysis of capital and fixed operating and maintenance ("O&M") costs of existing units and the retirement of existing units, the Companies will consider performing alternative analyses for possible unit retirements in future IRP scenario modeling; indeed, the Companies already perform rigorous, time-consuming analyses of the kind suggested by Sierra Club when the Companies evaluate material capital investments in existing or new generating capacity. Therefore, if the Companies believe alternative analyses of possible unit retirements will improve future IRPs sufficiently to justify the significant time and resources required for such analyses, the Companies will perform alternative analyses for such units or in

such scenarios as the Companies believe will enhance the Commission's understanding of future IRPs.

- C. The Companies' 2014 IRP does not "violate[]" or "fail[] to conform to" any part of the Commission's IRP regulations.

The Sierra Club's claim that the Companies' IRP "violated" or "fail[ed] to conform to" 807 KAR 5:058 Section 8(3)(b)12" is false. Sierra Club's claim is that "the Companies' failure to analyze how expected capital and fixed O&M costs affect the economics of existing units" violated that section, yet 807 KAR 5:058 Section 8(3)(b)12 requires no such thing; rather, it requires a utility only to provide certain data, including capital and fixed O&M cost data, but does not require any particular analysis of that data. The Companies provided all the required data at 2014 IRP Volume I pages 8-19 – 8-65. Therefore, the Companies did not violate 807 KAR 5:058 Section 8(3)(b)12, and neither does the Companies' 2014 IRP violate or fail to conform to any other part of the Commission's IRP regulations.

This is not to suggest that the Companies believe their IRPs should never change; indeed, as explained above, the Companies agree that the Sierra Club's proposal concerning modeling capital and fixed O&M costs for certain units (as the Companies have described above) could enhance the Companies' IRPs, notably by making them reflect more accurately the analyses the Companies already conduct (and have conducted for years) before making generating-resource-related decisions and applications to the Commission. The Companies accept there may be room for improvement in their IRP processes, but the Sierra Club's accusation that the Companies violated the Commission's IRP regulations is groundless.

D. The Companies' Must-Run Constraint on Brown Unit 3 Was Reasonable.

Grid stability often requires generation from the Brown Generating Station. At the time the Companies performed their 2014 IRP, it was their understanding that placing a 155 MW must-run constraint on Brown Unit 3 would best satisfy grid-stability needs. By the time of the Companies' 2017 IRP, grid-stability needs from Brown and other generating stations could change, which is neither unusual nor at odds with the snapshot nature of IRP analyses.

**III. The Companies Will Continue to Evaluate the Future of Brown Units 1 and 2 in Future Proceedings**

Sierra Club devotes pages 14-20 of its comments to arguing that the Companies' 2014 IRP underestimates the likelihood of retiring Brown Units 1 and 2, and incorrectly characterizes Brown Units 1 and 2 as "less efficient than many other coal units in LG&E and KU's fleet."<sup>9</sup> In fact, Brown Units 1 and 2 are two of the Companies' more efficient coal units from a heat rate perspective. To be clear, the Companies do not have an ideological commitment in favor of or against any energy source or generating unit; the Companies' goal is now, and has always been, to provide safe and reliable service at the lowest reasonable cost. If that includes operating Brown Units 1 and 2 beyond 2020, the Companies will do so. If meeting that goal requires retiring Brown Units 1 and 2 (or any other units) by 2020 or sooner, the Companies will do that instead. The Companies have clearly demonstrated their willingness to propose generating capacity additions other than coal; indeed, the Companies have not proposed to build a coal-fired unit in over a decade,<sup>10</sup> and since then have proposed a significant wind-power PPA, natural gas combined-cycle units, the purchase of existing natural gas-fired combustion turbines, a PPA for energy and capacity from natural gas-fired combustion turbines, and a 10 MW solar array. The Commission

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<sup>9</sup> Sierra Club Comments at 12.

<sup>10</sup> The Companies proposed, and received approval to construct, TC2 in Case No. 2004-00507.

can therefore be assured that the Companies will continue to evaluate dispassionately the future of Brown Units 1 and 2 in future proceedings, including their future IRP proceedings.

One Sierra Club argument in this section of their comments deserves special note, namely that the Companies' analysis is somehow flawed because it did not assign probabilities to the various gas-price scenarios modeled in the 2014 IRP.<sup>11</sup> Yet Sierra Club answers its own criticism in its comments: The Companies used three different gas-price forecasts from the U.S. Department of Energy's Energy Information Administration ("EIA"), and the EIA did not assign probabilities to the forecasts, so the Companies did not, either.<sup>12</sup> Instead, the Companies took an approach similar to the EIA's by modeling a number of different scenarios using different assumptions to determine which generating technologies were most robust across a range of assumptions. The Companies did not assign weights to the three load scenarios, either, though Sierra Club does not appear to object to that, perhaps because they favor the low-load scenario that most strongly supports retiring at least one of the smaller Brown units. That aside, the Companies believe their multi-scenario modeling and analytical approach, without attempting to weight each assumption in each scenario, is appropriate for broad, non-binding planning exercises like the IRP to provide general guidance about which technology or technologies are most robust across a range of different assumptions.

#### **IV. The Companies' 2014 IRP Adequately Accounts for Demand-Side Management and Energy Efficiency ("DSM-EE")**

The Companies' 2014 IRP used the best DSM-EE data available at the time of the filing (April 21, 2014) to inform the Companies' analysis: the Cadmus Energy-Efficiency-Potential

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<sup>11</sup> Sierra Club Comments at 18-20.

<sup>12</sup> *Id.* at 19.



Study filed in Case No. 2014-00003.<sup>13</sup> Cadmus is a reputable third-party vendor that evaluated residential and commercial DSM-EE potential in the Companies’ service territories. The study concluded that over the 20-year study period (2014-2033) there would be a range of 941 GWh to 1,478 GWh of achievable electricity savings by 2033, representing 3.9% to 6.1% of residential and commercial sales in 2033.<sup>14</sup> The study noted also that, due to the Companies’ active marketing, advertising efforts, and relationships with trade allies, the Companies were rapidly depleting the achievable energy efficiency potential in their service territories, and were on track to exhaust their achievable energy efficiency potential by 2018.<sup>15</sup> In other words, based on proven DSM-EE technologies, economics, customer behaviors, and other relevant factors at the time Cadmus performed the study, the Companies’ DSM-EE programs were on track to reach their forecasted achievable DSM-EE potential for the entire 20-year study period by 2018. As the Companies stated in that proceeding, that does not mean the Companies will end their DSM-EE programs in 2018, or that they will refrain from introducing new programs. It means only that the Companies’ DSM-EE portfolio, as recently approved by the Commission, is on track to achieve significant savings—indeed, the forecasted level of achievable savings through 2033—by 2018. That speaks well of the Companies’ DSM-EE efforts.

It is important to recall that in the Cadmus study “achievable potential” is a subset of economic potential, which in turn is a subset of technical potential. In other words, Cadmus began by analyzing how much energy-efficiency potential exists in the Companies’ service territory unconstrained by economics or customer behavior; that was the technical potential. Cadmus then

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<sup>13</sup> *In the Matter of: Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Review, Modification, and Continuation of Existing, and Addition of New, Demand-Side Management and Energy Efficiency Programs*, Case No. 2014-00003, Testimony of Michael E. Hornung Exhibit MEH-3 (Jan. 17, 2014).

<sup>14</sup> *In the Matter of: Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Review, Modification, and Continuation of Existing, and Addition of New, Demand-Side Management and Energy Efficiency Programs*, Case No. 2014-00003, Testimony of Michael E. Hornung at 6 (Jan. 17, 2014).

<sup>15</sup> *Id.*

narrowed that range of potential with economic constraints, determining how much energy-efficiency would be economical given the Companies' avoided costs and other relevant factors; that was the economic potential. Finally, Cadmus examined the behavior of the Companies' customers, recognizing that the Companies' DSM-EE programs are voluntary, to determine how much DSM-EE programming customers are likely to consume; that is what Cadmus called "achievable potential," and it is the level of DSM-EE savings the Companies used in their 2014 IRP because it was the best information available at the time the Companies performed their IRP analyses.

The Sierra Club is not satisfied with this reasonable, evidence-based approach. They assert the Companies should simply have assumed additional DSM-EE-related savings in 2019 and beyond.<sup>16</sup> They argue the Companies' modeling software, Strategist, should have been allowed to "select DSM as a resource."<sup>17</sup> But they do not state with any specificity which DSM-EE programs Strategist should have been allowed to choose, much less how one could defend having a model simply "select" DSM-EE programming as a resource in Kentucky, a state in which customer participation in utility DSM-EE programming is voluntary. And Sierra Club does not propose a single DSM-EE program or technology—not one—for the Companies to implement in 2019 or beyond. Instead, they assert that DSM-EE technology will continue to improve, and the Companies should assume in their planning savings from technologies that do not exist.

Although the Companies agree that DSM-EE technology will continue to improve—indeed, the Companies continually review new DSM-EE technologies and programs—it would nonetheless be unwise to follow any approach that would have safe and reliable service depend on technologies that are unproven or do not exist. Certainly the Companies will continue to study

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<sup>16</sup> See Sierra Club Comments at 22-25.

<sup>17</sup> *Id.* at 22.

new DSM-EE technologies and program opportunities, and will seek to implement them to the extent they are projected to be economical under the four California Standard Practice Manual tests the Commission requires utilities to use when evaluating DSM-EE programs.<sup>18</sup> Contrary to the Sierra Club's claim that the Companies are "reluctan[t] to aggressively pursue DSM,"<sup>19</sup> the Companies have the most comprehensive and successful DSM-EE portfolio in the Commonwealth, and they intend to keep it that way within the confines of Commission-prescribed cost-benefit tests. The Commission very recently approved the Companies' 2014-2018 DSM-EE Program Plan,<sup>20</sup> which contains the programs of which the Companies are currently aware that, at a portfolio level, satisfy the Commission-prescribed cost-benefit tests; certainly at the time the Companies performed their 2014 IRP analysis there were no other programs of which the Companies were aware that would have created additional DSM-EE savings and would have passed the applicable cost-benefit tests. And the Companies' 2014-2018 DSM-EE Program Plan is projected to achieve Cadmus's projected DSM-EE potential through 2033 by the year 2018. Therefore, the Companies used the Cadmus study's achievable DSM-EE potential for the full term of the 2014 IRP planning period (2014-2030) but accelerated the achievement of the total 20-year potential based upon the projected annual savings of the Companies' current DSM-EE programming, aligned with findings of the Cadmus study, such that the full 20-year potential is achieved in 2018, much earlier than if it were annualized equally over the 20 years of the Cadmus study.

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<sup>18</sup> *In the Matter of the Joint Application of the Members of the Louisville Gas and Electric Company Demand-Side Management Collaborative for the Review, Modification, and Continuation of the Collaborative, DSM Programs, and Cost Recovery Mechanism*, Case No. 1997-00083, Order at 20 (April 27, 1998).

<sup>19</sup> Sierra Club Comments at 23.

<sup>20</sup> *In the Matter of: Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Review, Modification, and Continuation of Existing, and Addition of New, Demand-Side Management and Energy Efficiency Programs*, Case No. 2014-00003, Order (Nov. 14, 2014).

Finally, concerning Sierra Club's assertion that industrial DSM-EE might produce meaningful additional capacity reductions, there are three noteworthy points. First, with respect to capacity reductions, which are the only reductions important to IRP capacity planning, the Companies have offered for years curtailable service riders, under which the Companies' largest industrial customers receive bill credits for being interruptible at certain levels and under certain conditions. The Companies' IRP analyses took into account the ability to curtail these customers. Second, the Companies did not offer industrial DSM-EE programs at the time they performed their 2014 IRP analyses, and based on input from their industrial customers it appeared unlikely to be economical to offer such programs during the 2014 IRP planning period. Third, a number of the Companies' largest industrial customers have told the Companies about the customers' own impressive energy-efficiency efforts, the savings from which effectively are embedded in the Companies' load forecasts in the form of reduced energy consumption. Also, the Companies use in their load forecasts data from the EIA concerning end-use efficiency trends, which helps the Companies' IRP account for forecasted naturally occurring efficiency gains.<sup>21</sup> Nonetheless, by the time of the Companies perform their 2017 IRP analysis they likely will have received the results of the industrial DSM-EE-potential study Cadmus will perform for the Companies' service territories, and the Companies will include any insights from that study in their 2017 IRP.

**V. The Companies' 2014 IRP Adequately Accounted for Wind Power Based on the Best Information Available When the Companies Conducted their 2014 IRP Analyses**

The Sierra Club asserts the Companies did not take into account in their 2014 IRP the latest developments in wind technology.<sup>22</sup> The first page of the IRP states explicitly that it is a snapshot view of how available technologies can meet customers' future energy needs:

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<sup>21</sup> 2014 IRP Volume I page 5-10 ("Itron provides regional databases with information from the Energy Information Administration ("EIA") that supports the modeling of appliance saturation and efficiency trends.").

<sup>22</sup> Sierra Club Comments at 25-28.

This Integrated Resource Plan represents a snapshot of an ongoing resource planning process using current business assumptions. The planning process is constantly evolving and may be revised as conditions change and as new information becomes available. Before embarking on any final strategic decisions or physical actions, the Companies will continue to evaluate alternatives for providing reliable energy while complying with all regulations in a least-cost manner. Such decisions or actions will be supported by specific analyses and will be subject to the appropriate regulatory approval processes.

To evaluate different generating technologies over the IRP planning period, the Companies engage a reputable third-party consultant (in this case Burns & McDonnell) to provide cost and performance data for a broad range of technologies, including wind and solar. The Companies then take that data—provided at a particular moment in time—and conduct their analyses. Because it takes at least 12 months to develop an IRP, it is possible for specific technology costs and performance characteristics to change while the Companies are conducting their analyses. That is unavoidable; it will be as true for the Companies’ 2017 and later IRPs as it was for the 2014 IRP. But that does not detract from the validity of the analyses the Companies performed, which used the best information available at the time the Companies performed their analyses, including the best information then available concerning wind and solar technologies.

It is important to note that actual resource decisions and commitments are based on responses to requests for proposals (“RFPs”) issued when new resources are needed; that information truly gives a picture of what the market is willing to offer the Companies, a picture than simply cannot be available for IRP analyses. This provides an opportunity for market participants, including existing generation owners and developers, to respond. And as shown in the Companies’ applications for certificates of public convenience and necessity for Cane Run Unit 7 and Green River Unit 5, the Companies employ a robust and rigorous process for evaluating

the results of the RFP process. RFP responses in those cases have included PPAs from wind developers in other states.

## **VI. The Companies' 2014 IRP Adequately Accounted for Distributed Solar**

Sierra Club criticizes the Companies for not adequately accounting for the potential effects of the growth of distributed solar capacity in the Companies' service territories.<sup>23</sup> In particular, Sierra Club cites an April 30, 2014 filing it made in Kentucky Power Company's most recent IRP proceeding, which included the comments of Karl R. Rabago concerning the claimed solar-energy potential in Kentucky.<sup>24</sup> The Companies are not familiar with Mr. Rabago, and his comments are not in evidence in this case. But more importantly, the Companies filed their 2014 IRP on April 21, 2014, so it would not have been possible for the Companies to account for Mr. Rabago's insights in the 2014 IRP.

That aside, the Companies evaluated utility-scale solar in their 2014 IRP because it was less expensive than distributed solar.<sup>25</sup> And as Sierra Club noted in its comments, the Companies have gone beyond merely studying utility-scale solar, and have sought and received approval for the first utility-scale solar project in Kentucky.<sup>26</sup>

But perhaps more importantly, Sierra Club's comments do not provide any indication that distributed solar capacity would be likely to have any significant impact on the Companies' IRP. More concretely, approximately 250 residential and commercial customers with solar generation are currently participating in the Companies' net metering tariff, which has been in place for more than a decade. The total installed solar capacity for these customers is 1,254 kW, or about 5 kW per installation. To be generous, one could assume that as much as 90 percent of the rated capacity

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<sup>23</sup> *Id.* at 28-30.

<sup>24</sup> *Id.* at 28-29.

<sup>25</sup> 2014 IRP Vol. I at 6-38.

<sup>26</sup> Sierra Club Comments at 29.

(about 1.1 MW) would be available at the peak hour. Peak demand in the IRP base load forecast grows by 53 MW each year on average. Therefore, it would take about 11,000 more customers with distributed solar generation to delay the need for capacity by one year. The number of net metering participants has grown on average by approximately 20 percent annually over the last two years. Assuming this annual growth rate continues, by the end of the 2014 IRP planning period (2028), about 2,675 customers would have solar generation contributing about 12 MW at the peak hour (assuming the peak hour does not occur at night, which was the case for KU's all-time peak load in January 2014, which was also when the Companies set their all-time combined-system peak load). Therefore, even making generous assumptions about distributed solar capacity in the Companies' 2014 IRP likely would not have significantly affected any scenario's results.

Also, the Companies' low-load-forecast scenario, primarily designed to capture lower economic growth, grows at only 35 MW each year (18 MW per year lower than the base load forecast). This scenario could also be viewed as an aggressive distributed solar scenario, though it would be truly aggressive compared to even the most recent growth rate of distributed solar in the Companies' service territories.

Finally, Sierra Club asserts that the Companies "appear poised to take steps that would deter customers from investing in rooftop solar" by proposing increased residential basic service charges in the Companies' pending base rate cases, and urges the Commission not to grant the Companies' requested increases to prevent "discourage the adoption of distributed solar generation[.]"<sup>27</sup> On their face, these comments have nothing to do with the Companies' 2014 IRP, and therefore are inappropriate to include in the record of this proceeding. That notwithstanding, as the Companies explained in the pending base-rate cases, the proposal to increase residential

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<sup>27</sup> Sierra Club Comments at 30.

basic service charges follows from the Companies' cost-of-service studies, and is not an attempt to discourage the adoption of distributed solar generation.

## **VII. The Companies' Load Forecasting Methodology Is Reasonable**

Sierra Club's final criticism of the Companies' 2014 IRP is that the Companies' forecasted sales have exceeded actual sales in 7.75 of the last 9.75 years, on average by less than 1.5%.<sup>28</sup> But such a low average difference between projected and actual sales, particularly given the multitude of factors well beyond the Companies' control that influence annual energy consumption, is actually remarkably good. And it is important to bear in mind that peak loads, not annual energy sales, are what drive generating-capacity needs.

## **VIII. Conclusion**

The Commission's approach to the IRP process has worked well for utilities and the Commonwealth for over 20 years, and has allowed the Companies to provide continuous service during that time period, never having to curtail load due to a lack of generation supply. In their 2014 IRP, the Companies have continued to follow that process, as set out in the Commission's IRP regulation and previous Commission Staff comments, by producing a complete and thorough long-term resource plan and load forecast that take into account all reasonably foreseeable risks and uncertainties. Although nothing in the Environmental Groups' comments demonstrates the need to change that long-standing and well-functioning process, the Companies will consider whether alternative analyses of possible unit retirements would improve future IRPs.

The Companies look forward to the Commission Staff's report.

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<sup>28</sup> *Id.* at 30-32.



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Respectfully submitted



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**CERTIFICATE OF SERVICE**

This is to certify that Louisville Gas and Electric Company and Kentucky Utilities Company's March 18, 2015 electronic filing of the Joint Response is a true and accurate copy of the same document being filed in paper medium; that the electronic filing has been transmitted to the Commission on March 18, 2015; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and that an original and one copy in paper medium of the Joint Response are being hand delivered to the Commission on March 18, 2015; and that on March 18, 2015, electronic mail notification of the electronic filing will be provided to the following:

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