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PUBLIC SERVICE COMMISSION

Mr. Jeff DeRouen
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40601

January 23, 2012

RE: ***Joint Application Of Louisville Gas And Electric Company and Kentucky Utilities Company for Certificates of Public Convenience and Necessity for the Construction of a Combined Cycle Combustion Turbine at the Cane Run Generating Station and the Purchase of Existing Simple Cycle Combustion Turbine Facilities from Bluegrass Generation Company, LLCin LaGrange, Kentucky***
Case No. 2011-00375

Dear Mr. DeRouen:

Please find enclosed and accept for filing ten copies of the Sierra Club and NRDC's Response to the Commission Staff's First Set of Requests in the above-reference docket.

If you have any questions, please do not hesitate to contact me.

Sincerely,

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COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

Joint Application Of Louisville Gas And Electric Company and Kentucky Utilities Company for Certificates of Public Convenience and Necessity for the Construction of a Combined Cycle Combustion Turbine at the Cane Run Generating Station and the Purchase of Existing Simple Cycle Combustion Turbine Facilities from Bluegrass Generation Company, LLC in LaGrange, Kentucky	)))))))	**CASE NO. 2011-00375**

Responses and Objections from Environmental Intervenors to First Information Request of Commission Staff

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Intervenors Sierra Club and Natural Resources Defense Council ("Environmental Intervenors") hereby submit their responses and objections to the First Information Requests of the Commission Staff.

Question

1. Refer to the table on page 4 of the Direct Testimony of Dylan Sullivan ("Sullivan Testimony"). Confirm that the annual percentages contained in the table were derived by dividing the numbers in Column G of Exhibit DES-2 by the numbers in Column B of that same exhibit.

Response: Dylan Sullivan

1. Mr. Sullivan confirms that is how the annual percentages were derived.

Question

2. Refer to pages 7-8 of the Sullivan Testimony where he recommends that the Commission "[d]eny the Companies' application for a Certificate of Public Convenience and Necessity."

a. Confirm that Mr. Sullivan's recommendation applies to both projects included in the Certificate of Public Convenience and Necessity ("CPCN'') request of Louisville Gas and Electric Company and Kentucky Utilities Company ("LG&E & KU").

b. Explain whether Mr. Sullivan consulted with the Environmental Intervenors' other witness, Mr. Paul L. Chernick, who opposes the Cane Run combined cycle plant, but does not oppose the Bluegrass Generation purchase.

Response: Dylan Sullivan

2.

a. Mr. Sullivan confirms that his recommendation applies to both projects.

b. Mr. Sullivan did not consult with Mr. Chernick. However, the thrust of Mr. Sullivan's testimony was to indicate to the Commission that they should consider the impact a robust portfolio of energy efficiency programs would have on the Companies' capacity needs when determining whether to grant a Certificate of Public Convenience and Necessity. If the Commission finds that the purchase of Bluegrass Generation is warranted (given that energy efficiency alone cannot meet the Company's claimed capacity shortfall), Mr. Sullivan would not object.

Question

3. Refer to Exhibit DES-2, Column G, which has the heading "Planned Annual Savings (GWh)" and a footnote which references Table 8.(3)(e)(3) from the LG&E/KU 2011 Integrated Resource Plan ("IRP"). The GWh levels in the exhibit for the years 2012 to 2017 match the differences between the "Total Annual Energy Reduction" levels shown for each of the years from 2012 to 2017 in the IRP table, meaning that the GWh levels in the exhibit under the "Planned Annual Savings" heading are actually the incremental energy savings for each of the years from 2012 to 2017. The planned annual energy savings in the IRP table compared to what is identified in the exhibit as "Planned Annual

Calendar Year	GWh Savings per IRP table	GWh Savings per Exhibit DES-2
2012	557.6	168
2013	705.9	148
2014	901.8	196
2015	994.9	93
2016	1,088.1	93

2017	1,191.2	93

a. Explain how substituting the annual energy savings in the second column above for the incremental annual energy savings in the third column above, as taken from Column G of Exhibit DES-2, impacts the results shown in Column J of the exhibit under the heading "Average Coincident Incremental Demand Savings (MW)." Provide a revised exhibit, if appropriate.

b. The annual energy savings in the second column above, as taken from Table 8.(3)(e)(3) of the LG&E/KU 2011 IRP, exceed 1.5 percent of the combined projected sales for LG&E/KU shown in Column B of Exhibit DES-2 for each year from 2012 to 2017. Explain whether the fact that, based on their existing plans for energy efficiency and demand-side management ("DSM") programs, LG&E/KU are positioned to realize energy savings greater than 1.0 percent of sales, the level advocated by Mr. Sullivan, negates his recommendation.

Response: Dylan Sullivan

3.

a. Mr. Sullivan should have labeled Column D in Exhibit DES-2 as ""Robust" Incremental Annual EE Goal", Column E as ""Robust" Incremental Annual Savings, Column G as "Planned Incremental Annual Savings," Column H as "Supplemental Incremental Annual Savings from "Robust,"" Column I as "Supplemental Cumulative Savings from "Robust"" and Column J as "Average Coincident Supplemental Demand Savings from "Robust."" The confusion results from Sullivan's regrettable double-use of "incremental:" in some places (column H, I) Mr. Sullivan means to refer to energy savings additional to the Companies' plan; in other places (column D, E, G), Sullivan means to refer to annualized energy savings from measures installed by the utility in the given year (the traditional energy efficiency industry use of the term "incremental").

In Exhibit DES-2, Mr. Sullivan means to show the impact a "robust" portfolio of energy efficiency programs that leads to the incremental annual savings specified in Column D would have on the Companies' need for capacity. To do this, he compared the Companies planned incremental annual savings (Column G) to the savings produced from a portfolio that saves the incremental amount of energy specified in Column D, and conservatively estimated the additional capacity benefit that this "supplemental" energy efficiency would provide. Because Mr. Sullivan is interested in the impact of this "supplemental" energy efficiency, and the Companies have already included the savings specified in the "Planned Annual Savings" heading in its analysis, it would not be appropriate to use the Cumulative savings as suggested in the interrogatory.

Mr. Sullivan will supplement Exhibit DES-2 with corrected column headings.

b. When Mr. Sullivan advocates that the Companies save 1% of its annual sales (Sullivan at 8, Line 1), Mr. Sullivan is advocating for an *incremental* annual savings of 1%. The Duke Energy Ohio potential study Mr. Sullivan references on Page 5 expresses potential as annual *incremental* savings. Mr. Sullivan's testimony does not negate itself because he is advocating for 1% annual incremental savings, while the Companies never plan to save more than .49% of its load incrementally each year.

Question

4. The specific wording of the first sentence of Kentucky Revised Statute 278.285, which authorizes the Commission to approve DSM programs and recovery of the costs of DSM programs, is as follows:

> The commission may determine the reasonableness of demand-side management plans proposed by any utility under its jurisdiction. *(Emphasis* added)

Explain whether Mr. Sullivan is aware that this language has been interpreted to limit the Commission's authority such that it cannot require a utility to implement programs other than those proposed by the utility.

Response: Dylan Sullivan and Counsel

4. Environmental Intervenors object to this request to the extent that it seeks a legal conclusion from an expert witness. Subject to and without waiving the foregoing objection, Intervenors state that Mr. Sullivan was not aware of the interpretation of Kentucky Revised State 378.285 when he filed his testimony.

Intervenors note that while the Commission may not have the authority to require Louisville Gas & Electric and Kentucky Utilities (collectively, "the Companies") to implement demand side management programs, it has authority to deny the Certificates of Public Convenience and Necessity if they are not prudent. In this case, the Companies are seeking Certificates of Public Convenience and Necessity and a Site Compatibility Certificate for the construction of a 640 MW net summer rating natural gas combined cycle combustion turbine at the Companies' Cane Run Generating Station, including a 20-inch natural gas pipeline, and for the purchase of Bluegrass Generation Company, LLC's facilities in LaGrange, Kentucky, which include natural gas simple cycle combustion turbines. The Companies claim these new operating systems are required to offset a capacity shortfall that will occur because of the retirements of Cane Run, Green River and Tyrone coal-fired power plants. These projects will cost the ratepayers almost $700 million dollars. The Commission needs to determine whether these projects are reasonable and prudent. Based on the record to date, the Commission should determine

that the Companies proposal is not prudent because the Companies did not properly consider energy efficiency, demand side management, and renewable options. Moreover, the Commission could also determine that one of these other alternatives represents the least cost option. *See, e.g.*, Alliance to Protect Nantucket Sound v. Dep't of Pub. Utilities, 461 Mass. 166 (2011) (The Massachusetts Supreme Court recently ruled in favor of Cape Wind by upholding the decision of the state Public Utility Commission to approve the long-term power contract between National Grid and Cape Wind. The decision is notable in that the court has upheld that concept of "cost effectiveness" as including the reduction of greenhouse gases due, in part, to the need to ensure that a utility can comply with reasonably foreseeable restrictions on such emissions.).

Question

5. Refer to page 7, lines 9-12, of the Direct Testimony of Paul Chernick ("Chernick Testimony"). Explain how "[t]he possibility that additional supply resources would allow the Companies to retire such units as Mill Creek 1 and Brown 1 and 2 . . . ." impacts the LG&E/KU request for a CPCN in this proceeding based on their planned retirement of 797 MW of existing capacity (Cane Run, Green River and Tyrone units).

Response: Paul Chernick

5. Any additional costs avoided by the resources selected would increase the benefits of those resources. A mix of resources that allowed the retirement of Mill Creek 1 and Brown 1 and 2 might well have a risk-adjusted expected cost lower than the proposed portfolio.

Question

6. Refer to page 12, lines 20-21, of the Chernick Testimony. Confirm that the text in the question is incomplete and provide an accurate rewording thereof.

Response: Paul Chernick

6. The question should read "Did the Companies take the different risks of plant ownership and power purchases *into account* in the Resource Assessment?"

Question

7. Refer to pages 12-14 of the Chernick Testimony, wherein Mr. Chernick discusses renewable resources and how LG&E/KU should evaluate proposals to provide such resources.

   a. LG&E/KU evaluated renewable resource proposals (including wind and solar technologies) submitted in response to their December 2010 Request for Proposals ("RFP") for capacity and energy. Explain whether, based on his

criticisms of LG&E/KU, Mr. Chernick believes that they should have selected a wind power proposal from among the proposals submitted in response to the RFP.

b. In response to the question on page 12 concerning different risk characteristics inherent in the resource options that LG&E/KU is proposing compared to a renewable purchase power alternative, Mr. Chernick identifies various upside risks, from the perspective of a purchaser, associated with renewable purchase power contracts and various downside risks associated with LG&E/KU's decision to purchase the Bluegrass plant and construct, own, and operate a gas combined-cycle combustion turbine at the Cane Run site. Provide, in Mr. Chernick's opinion, the downside risks to LG&E/KU of entering into a renewable purchase power agreement.

Response: Paul Chernick and Counsel

7.

a. Environmental Intervenors object to this request to the extent that it suggests that Intervenors bear the burden of identifying resource proposals that satisfy the requirements for obtaining a CPCN. In fact, it is the Companies as the applicants who bear the burden of setting forth the facts necessary to demonstrate entitlement to a CPCN 807 KAR 5:001(9)(2)(a). Subject to and without waiving the foregoing objection, Interveners state as follows:

The Companies' analysis is not complete enough for Mr. Chernick to reach a conclusion on this point.

b. With any resource, including a power-purchase agreement, the utility runs a risk that the resource will be delayed in coming on line or will perform poorly in a particular year in which replacement power is much more expensive. Even for this under-performance risk, there is an important difference between a power-purchase agreement that pays per MWh delivered and a utility-owned project with fixed capital and operating costs. If the resource behind a power purchase underperforms, the utility must procure replacement power, but saves the cost of the power that is not delivered. If the utility owns the resource, the utility must pay for replacement power, and also pay the fixed costs of the resource and pay for the completion or repair of the underperforming resource.

For wind and some other renewable resources, the utility also faces some risk that energy will be delivered in a substantially different time pattern than expected, with more energy in off-peak hours and low-load months. This potential problem can be limited by analysis of the historical wind patterns from the site and other tall towers.

Question

8. The sentence on line 6 of page 13 of the testimony, which begins, "[a]s summarized in . . . ." appears to be incomplete. Provide a corrected version of the sentence.

Response: Paul Chernick

8. The beginning of the answer should read "Yes. As summarized in Table 1..."

Question

9. On page 14, Mr. Chernick cites a number of recent wind power purchase agreements, specifically referencing their per MWh prices. Explain whether Mr. Chernick is familiar with the availability and reliability of wind power generation relative to that of gas-fired simple cycle and combined cycle generation, such as that which LG&E/KU have included in the CPCN request.

Response: Paul Chernick

9. Yes. The mechanical reliability of wind turbines are similar to that of combustion turbines, and the small size and large number of the turbines results in the much more consistent mechanical reliability for the wind farm overall. The output of the wind resource will vary with the wind output. Over the course of the year, the energy production of a large wind resource is probably more stable than the annual availability or energy production of the gas-fired plants. The capacity factor of a wind resource will generally be higher than that of a combustion turbine, but lower than that of a combined-cycle plant. The contribution of the wind resource to system reliability depends on the daily and seasonal pattern of wind speeds, as well as system load shapes and the composition of the generation system of the utility system and those of neighboring systems. The contribution of the gas-fired plants to system reliability depends primarily on the units' size and forced-outage rates, although maintenance rates may also be important for some systems.

Dated: January 23, 2012

Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that I mailed a copy of this Environmental Intervenors' Response to First Requests for Information by Commission Staff by first class mail on January 23, 2011 to the following:

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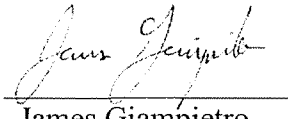

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A	B	C	D	E	F	G	H	I	J
Year	Combined Company Sales (GWh)	Combined Company Peak Demand (MW)	"Robust" Incremental Annual EE Goal (% of annual sales)	"Robust" Incremental Annual Savings (GWh)	"Robust" Cumulative Savings (GWh)	Planned Incremental Annual Savings (GWh)	Supplementall ncremental Annual Savings from "Robust" (GWh)	Supplemental Cumulative Savings from "Robust" (GWh)	Average Coincedant Supplemental Demand Savings from "Robust" (MW)
	1	**2**		**(B*D)**		**3**	**(E-G)**		**(I/6570h)*1000**
2012	34,511	7,210	0.5000%	173	173	168	5	5	1
2013	35,076	7,356	0.7500%	263	436	148	115	119	18
2014	35,530	7,477	1.0000%	355	791	196	159	279	42
2015	36,097	7,603	1.0000%	361	1,152	93	268	547	83
2016	36,615	7,654	1.0000%	366	1,518	93	273	820	125
2017	37,074	7,760	1.0000%	371	1,889	93	278	1,097	167
1, 2	Sinclair at 4								
3	From IRP Table 8.(3)(e)(3)								