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**

SIERRA CLUB AND NATURAL RESOURCES DEFENSE COUNCIL'S POST HEARING BRIEF

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This proceeding involves the first phase of Kentucky Utilities Company and Louisville Gas & Electric's (collectively, the "Companies") long term expansion plan, which involves four new natural gas combined cycle ("NGCC") facilities and a total cost to ratepayers of more than [redacted] between now and 2040. The question before the Commission is whether the first phase of that plan – the purchase of the Bluegrass combustion turbines and construction of a Cane Run NGCC facility – is just, fair, and reasonable given that the Companies are failing to pursue available and cost-effective demand side management ("DSM") that the Companies' modeling shows would reduce present value energy production costs through 2040 by [redacted]. The unreasonableness of the Companies' proposal is also shown by the fact that the Companies engaged in only a pro forma consideration of renewable resources, and ignored the possibility of future greenhouse gas emission prices that numerous other utilities factor into their energy planning. On this record, the Commission cannot approve the Companies' Certificate of Public Convenience and Necessity ("CPCN") request for the Cane Run NGCC without the inclusion of additional cost-effective DSM and wind generation resources.

At hearing and in testimony, the Companies repeatedly misconstrued the Environmental Intervenors' position as opposing the pursuit of any natural gas generation by the Companies. In reality, the Environmental Intervenors have not challenged the fact that natural gas will remain part of the Companies' energy mix for the foreseeable future. Instead, the question at issue is whether adding only natural gas to the Companies' existing coal and DSM is the least-cost option for ratepayers. The record demonstrates it is not, and that a portfolio maximizing cost-effective DSM and renewable resources would minimize costs by delaying or reducing (though not eliminating) the need for expensive investments in additional natural gas capacity. The Companies have not engaged in such a portfolio approach but, instead, have proposed only to add multiple natural gas facilities to their existing coal and DSM between now and 2040. In short, it is the Companies, not the Environmental Intervenors, who have excluded resources – increased DSM and renewables – that are a necessary part of the least-cost approach required by law. As such, the Commission should reject the Companies' Cane Run NGCC proposal so that a least-cost portfolio involving all cost-effective energy options can be developed.

I. FACTUAL BACKGROUND

1. The Companies' CPCN Application and Long-Term Expansion Plan

On September 15, 2011, the Companies submitted an application for a CPCN and Site Compatibility Certificate to construct a 640-megawatt ("MW") net NGCC facility at the site of the Cane Run Generating Station and to purchase existing simple cycle combustion turbines from Bluegrass Generation Company. The Companies projected the capital cost for the Cane Run NGCC and pipeline at $583 million and the purchase price for the Bluegrass facilities at $110 million. (Application at 6). The proposed facilities are intended to replace the energy and capacity currently provided by the Cane Run, Tyrone, and Green River coal-fired power plants, which the Companies intend to retire in 2016. The Companies also plan to increase the operation of their remaining coal-fired power plants (Sinclair Reb. at 17), and to pursue the DSM programs approved by the Commission in Case No. 2011-00134. The Companies did not propose any additional DSM or any renewable generation as part of this application.

The Companies stated that they attempted to identify generation alternatives to the Cane Run/Bluegrass proposal through a Request for Proposals ("RFP") process that sought offers for between 1MW and 700MW of firm winter and summer capacity. (Sinclair Dir. at p. 16). The RFP was internally issued on December 1, 2010, but the letter sending it to potential energy suppliers is dated December 17, 2010. The RFP identified a response deadline of January 28, 2011, by which time interested parties needed to provide proposals that were as "comprehensive as possible so that the Companies may make a definitive and final evaluation of the proposal's benefits to its customers without further contact with the Seller." (Hearing Ex. 1, RFP at 1). Only 18 of the 116 parties to whom the RFP was sent responded with offers. (Sinclair Dir. at p. 16). Of the 50 total offers received, 16 involved wind resources from six different wind farms. (Resource Assessment at 13-14). One solar energy offer was made. The Companies then went through a two-step screening process that led to the elimination of all non-natural gas or nuclear proposals. (*Id.* at 20).

The Cane Run NGCC and Bluegrass proposals are part of the Companies' long term expansion plan. Under that plan, the Companies are projecting the need for additional NGCC facilities in 2020, 2026, and 2033, and another simple cycle turbine in 2040. (Sinclair Reb. at Ex. DSS-3). The total present value revenue requirement ("PVRR"), which reflects the total amount charged to ratepayers, for that plan is approximately [redacted] billion through 2040. ([redacted]).

A. Sierra Club and NRDC Intervention and Testimony

On November 22, the Sierra Club and Natural Resources Defense Council, on behalf of their thousands of Kentucky members, moved to intervene in this proceeding and also submitted a first set of requests for information on the Companies. The Commission granted the intervention motion on December 14, and the Companies responded to the information requests on December 19. The Kentucky Attorney General and Kentucky Industrial Utility Customers also intervened in the proceeding, though neither offered any testimony or witnesses.

On December 20, six days after being granted intervention and the day after receiving the Companies' information request responses, the Environmental Intervenors filed expert testimony from Paul Chernick and Dylan Sullivan. Sullivan[1] testified that a "robust portfolio of cost effective energy efficiency programs would reduce the capacity and energy needs" of the Companies, thereby reducing the amount of natural gas, coal, or other generation and capacity the Companies would need. (Sullivan Direct at 2). Sullivan explained that the Companies' projected DSM savings of between 0.25% and 0.55% of load per year was far short of what is cost-effectively achievable. (*Id.* at 4-5). He based this opinion on:

- The fact that other utilities and states are on track to achieve higher levels of DSM savings
- The high cost effectiveness test results of the Companies' current DSM programs, which create more than $3 dollars of benefit for every $1 spent and demonstrate that there is "likely cost effective energy efficiency being left on the table."

(*Id.* at 5-7). Sullivan identified DSM savings of 1% per year as a "robust but achievable portfolio" that would reduce the Companies' projected capacity shortfall by 145MW in 2016 and 194MW in 2017, and testified that further energy savings could likely be achieved through additional energy efficiency and demand response efforts. (*Id.* at 7). Sullivan opined that the best way to identify the amount of available cost-effective energy efficiency would be for the Companies to carry out an energy efficiency potential study, and that the CPCN should be denied so that the Companies' capacity needs could be evaluated on the basis of energy efficiency programs that target at least 1% annual savings. (*Id.* at 8).

[1] Sullivan is an expert on utility energy programs who has a Master's Degree in Civil and Environmental Engineering and has participated in groups advising numerous utilities in Ohio and neighboring states on energy efficiency. (Sullivan Dir. at 2).

In his testimony, Chernick[2] supported approval of the purchase of the Bluegrass facility, but recommended deferral of the Cane Run NGCC proposal to allow for the further analysis needed to identify a resource plan that is beneficial to the Companies' ratepayers. (Chernick Dir. at 3). Chernick recommended further analysis of four areas:

- Costs related to likely future greenhouse gas regulations, which the Companies unreasonably assigned a zero value to even as other utilities continue to factor in a range of costs related to greenhouse gas emissions.
- Risks related to higher fuel prices, which the Companies failed to take into account
- Pursuit of wind resources, which are readily available throughout the region, and solar power, which provides energy primarily at high-cost periods of peak demand
- Pursuit of the DSM savings identified in Sullivan's testimony

In light of the need for further analysis of these issues, Chernick recommended that the Commission either leave the docket open for consideration of the Cane Run NGCC and other resources, or to close the docket and invite the Companies to reapply for a portfolio of options that would be more beneficial to ratepayers. (*Id.* at 4).

B. The Companies' Rebuttal Testimony

On February 3, 2011, the Companies filed rebuttal testimony from David Sinclair. Sinclair testified that the RFP process had properly determined what resource options were "actually available in the marketplace," and dismissed the claim that the Companies could pursue additional cost-effective DSM as a "hypothetical" based on "vague generalities and unsupported assertions." (Sinclair Reb. at 3-4). Sinclair further contended that he modeled new scenarios involving a 1% annual DSM energy savings and all of the wind resources that were identified through the RFP process, but that in both cases the Cane Run NGCC was still identified as the least cost option. (*Id.* at 7-11). Finally, Sinclair attempted to defend the Companies' assumption

[2] Chernick has more than thirty years of experience as a consultant in utility regulation and planning, and has testified more than 250 times in thirty U.S. jurisdictions and five Canadian provinces. (Chernick Dir. at Ex. PLC-1).

that greenhouse gas emissions will pose zero future costs over the next forty years on the grounds that it was "not prudent to pay a premium today to address unknown and unknowable future greenhouse gas regulations." (Sinclair Reb. at 16).

Sinclair attached to his rebuttal testimony an evaluation of the Companies' DSM programs carried out by a consulting firm, ICF International ("ICF Report").[3] While Sinclair cited the report as finding that the Companies' DSM programs "meet or exceed best practices," (Sinclair Reb. at 6), the ICF Report also recommended that the Companies carry out an energy efficiency potential study and develop additional DSM programs for the commercial sector. (ICF Report at 24, 74-75). Sinclair also attached to his rebuttal testimony exhibits purporting to show that the Cane Run NGCC remained the least cost option even after factoring in 1% annual DSM savings and wind resources. (Sinclair Reb. at Ex. DSS-1 to DSS-4). But those same exhibits demonstrate that scenarios involving 1% annual DSM savings would have an energy production PVRR that is [redacted] than that of the Companies' proposed expansion plan (*id.* at [redacted]), and that a scenario involving both 1% annual DSM savings and wind resources would eliminate the Companies' projected need for a second NGCC plant in 2020. (*Id.* at Ex. DSS-3).

C. The Hearing

On March 20, 2012, the Commission held a 1-day long hearing regarding the Companies' application. At the hearing, the Companies entered the testimony of four witnesses, two of whom – Sinclair and Lonnie Bellar – were cross-examined by the parties. The Environmental Intervenors entered the testimony of Sullivan and Chernick, whom the parties declined to cross-

[3] The ICF Report was included as Appendix A to Sinclair's rebuttal testimony, and was also entered as Exhibit 9 at the hearing.

examine, but whom the Commission and Staff questioned briefly. A number of key points of testimony came out at the hearing, including that:

- The Companies have not initiated the energy efficiency potential study or expansion of commercial sector DSM programs recommended by their consultant ICF. March 20, 2012 Public Hearing, 12:23:20 – 12:23:56.

- The Companies had no DSM programs for industrial customers, and based their claim that industrials were uninterested in such programs solely on conversations with a few industrial customers. March 20, 2012 Public Hearing, 12:27:03 – 12:27:47

- The Companies took more than four months to develop the Cane Run NGCC proposal, yet provided potential energy suppliers only six weeks, over the Christmas and New Year's holidays, to develop comprehensive responses to the RFP. March 20, 2012 Public Hearing, 1:07:33 – 1:08:42.

[redacted]

- The 1% annual DSM energy savings called for by Sullivan is a floor of what is reasonable, not the ceiling of what level of savings is achievable. March 20, 2012 Public Hearing, 16:35:10 – 16:36:15

II. LEGAL BACKGROUND

Under Kentucky law, the Companies cannot install the Cane Run NGCC facility until they receive a certificate that "public convenience and necessity require the service or construction." KRS § 278.020(1). Before the Commission can grant such a certificate for a new facility, it must determine that there is both a need for the facility and "an absence of wasteful duplication resulting from the construction of the new system or facility." *Kentucky Utilities Co. v. Public Service Com'n*, 252 S.W.2d 885, 890 (Ky. 1952). This standard requires more than just a showing that there is a need for new generation, as the statutory mandate to avoid "wasteful duplication" forecloses "excessive investment in relation to productivity or efficiency, [or] an unnecessary multiplicity of physical properties." *Id.* In reviewing a CPCN application, the Commission has the authority to "issue or refuse to issue the certificate, or issue it in part and refuse it in part." KRS § 278.020(1).

Commission decision making is guided by the overall requirement that utility rates are "fair, just, and reasonable." KRS § 278.030(1); KRS § 278.040; *Kentucky Public Service Com'n v. Com. ex rel. Conway*, 324 S.W.3d 373, 377 (Ky. 2010). This standard is satisfied if a utility has the "lowest reasonable rate" that allows it to "operate successfully, to maintain its financial integrity, to attract capital and to compensate its investors for the risks assumed even though they might produce only a meager return on the so-called 'fair value' rate base." *Com. ex rel. Stephens v. South Central Bell Tel. Co.*, 545 S.W.2d 927, 931 (Ky. 1976). As the Commission recently explained, it has long been recognized that "'least cost' is one of the fundamental principles utilized when setting rates that are fair, just, and reasonable." *In the Matter of: Application of Kentucky Power Co.*, Case No. 2009-00545, 2010 WL 2640998 (Ky. P.S.C. 2010).

It is well established that in a CPCN proceeding it is the applicant that bears the burden of proving that the statutory standards of public convenience and necessity, and of fair, just, and reasonable rates, have been satisfied. *See Energy Regulatory Comm'n v. Kentucky Power Co.*, 605 S.W.2d 46, 50 (Ky.App. 1980) ("Applicants before an administrative agency have the burden of proof."). Where an applicant has not carried its burden of proof, the Commission must deny the application even in the absence of evidence specifically refuting the applicant's claims. *Id.* at 50-51.

III. ARGUMENT

1. The Commission Should Deny the CPCN For the Cane Run NGCC As Proposed Because the Companies Have Failed To Identify a Least Cost Plan That Includes All Cost-Effective DSM.

The largest deficiency in the Companies' CPCN filing is their failure to incorporate any DSM beyond what the Commission had already approved in case number 2011-00134. The 0.52% level of annual energy savings that such existing DSM programs are projected to achieve is substantially below that which is being achieved by robust DSM programs in other states, and the Companies' own consultant has identified additional energy savings opportunities that the Companies have not pursued. Achieving even 1% annual energy savings through increased DSM would reduce PVRR for energy production by [redacted] by delaying the need for new power generation capacity and/or reducing the amount of such capacity that is needed. The Companies' failure to pursue such savings renders the Cane Run NGCC proposal without additional DSM not the least-cost alternative and, therefore, not just and reasonable.

A. The Commission has recognized that CPCN proceedings are an appropriate forum in which to promote increased levels of DSM.

The Commission has long recognized the importance of utilities implementing DSM programs to reduce electricity costs for ratepayers. For example, in an order issued last October, the Commission explained that it:

> Recognizes the importance of greater deployment of energy efficiency initiatives to Kentucky's electric generating utilities due to the reliance on low cost coal-fired base load generation. Even though there has been no legislative mandate to adopt its goals, Kentucky's 7-Point Strategy for Energy Independence (Kentucky's Energy Plan) issued in November 2008 includes specific goals for energy efficiency as well as renewables and biofuels by 2025. The Commission also notes that Kentucky's reliance on coal-fired generation will face increasing pressure as costs are incurred to meet proposed and potential new federal environmental regulations.

> In several administrative cases, the Commission has noted its support for energy efficiency. In addition, in recent cases where utilities were requesting a general increase in base rates, the Commission has questioned utilities regarding their conservation and energy efficiency efforts. In those cases, the Commission has stated its belief that conservation, energy efficiency and demand-side management will become more important and cost-effective as there will likely be more constraints placed upon utilities whose main source of supply is coal-based generation. As a result, the Commission has encouraged all electric energy providers to make a greater effort to offer cost-effective demand-side management and other energy efficiency programs.

In re: Consideration of the New Federal Standards of the Energy Independence and Security Act of 2007, KPSC Case No. 2008-00408, Oct. 6, 2011 Order, at pp. 21-22 (citations omitted).

At hearing, the Companies' witness Sinclair suggested that the Companies need not pursue additional DSM in this proceeding because the Commission has already approved various DSM programs proposed by the Companies in Case No. 2011-00134. March 20, 2012 Public Hearing, 15:13:38 - 15:15:35. According to the Companies, that approval relieves them from the need to evaluate further energy savings that could be achieved even when, as here, the Companies are proposing hundreds of millions of dollars or more of investments that ratepayers will be financing for decades to come. The Companies' position, however, is inconsistent with Commission precedent, which makes clear that "the CPCN authority provided the Commission pursuant to KRS 278.020 also effectively treats cost-effective energy efficiency as a priority resource." *In re Consideration of New Federal Standards*, Order at p. 21. In addition, the "least cost" approach that is a "fundamental principle[] utilized when setting rates that are fair, just, and reasonable," *In re Application of Kentucky Power Co.*, 2010 WL 2640998, cannot be achieved unless all cost-effective and available resources, including DSM, are evaluated in developing a least-cost portfolio. As such, a utility seeking a CPCN must evaluate cost-effective DSM opportunities in order to ensure that any plan the Commission approves is least-cost.

B. The Companies could achieve significant further energy savings through additional cost effective DSM programs.

The Companies tried to dismiss the ability to achieve higher levels of energy savings from additional DSM programs as merely "hypothetical" and based on "vague generalities and unsupported assertions." (Sinclair Reb. at 3-4). But in reality, the Companies own consultant, ICF International, along with the testimony of Environmental Intervenors' witness Sullivan and DSM performance and targets in other states demonstrates that far more energy savings is cost-effectively achievable by the Companies.

a. The ICF Report identified that significant additional energy savings could be achieved through cost-effective DSM programs.

In March 2011, ICF International released a report of its assessment of the Companies' DSM programs for 2011 through 2017, which are the programs that the Commission approved in case number 2011-00134 and that the Companies assumed in this proceeding. In contrast to the Companies' claim here that additional DSM is "hypothetical," that report made clear that additional energy savings are readily achievable. The ICF Report evaluated the Companies' DSM programs in terms of the four cost-effectiveness tests set forth in the California Standard Practice Manual, and found that the benefits of those programs outweigh their costs by a ratio of three-to-one or more. (ICF Report at 26). This high-benefit to cost-ratio provides strong evidence that the Companies are leaving significant amounts of cost-effective DSM opportunities on the table, and that spending more resources on existing programs or adding more programs will lead to significant additional energy savings. (Sullivan Dir. at 6-7).

For example, under the Total Resource Cost ("TRC") test, which is the "primary cost effectiveness test," the Companies' current DSM programs have an overall benefit of 3.01 dollars in avoided energy costs for every dollar that is spent. (ICF Report at 26). That TRC score indicates that the Companies could expand the DSM programs to go after much deeper energy savings, while still staying cost effective and delivering net benefits to the service territory. Similarly, the "secondary cost-effectiveness test," the Utility Cost Test ("UCT"), revealed a benefit-cost ratio for the Companies' existing DSM programs of 3.39 (ICF Report at 26), which indicates that there is significant opportunity to cost-effectively increase the DSM incentives offered in order to increase participation in energy saving programs.

The ICF Report also identified specific areas where the Companies could expand their DSM efforts. For example, the ICF Report recommended that the Companies "develop additional programs targeting the commercial sector." (*Id.* at 75). The ICF Report also recommended that the Companies "promote additional" load control management "program options that would result in greater participation, lower program units costs, and greater cost-effectiveness." (*Id.* at 75). At hearing, the Companies' witness Sinclair acknowledged that the Companies had not carried out those recommendations. March 20, 2012 Public Hearing, 13:41:04 – 13:48:11.

b. The record demonstrates that additional DSM savings could be achieved in the industrial and commercial sectors.

In contrast to Sinclair's rejection of the potential for additional DSM, the record demonstrates that the Companies could achieve additional savings by targeting more DSM programs towards commercial and industrial customers. For example, a 2011 report by the Consortium for Energy Efficiency ("CEE Report", Hearing Ex. 11), a utility industry energy efficiency organization of which the Companies are a member (*see* CEE membership list, Hearing Ex. 12), evaluated how DSM programs and savings are distributed between the industrial, commercial, and residential sectors by collecting data from 352 utility and non-utility program administrators in 47 states and seven Canadian provinces. (CEE Report at 6). That report found that 64% of DSM energy savings in 2010 came from the commercial and industrial sectors, while 30% came from the residential sector. (*Id.* at 29). In addition, 39% of program spending went to commercial and industrial DSM programs, while only 23% went to residential programs. (*Id.* at 16, Figure 4). By contrast, the Companies have no industrial sector DSM programs, and only 14% of the Companies' DSM spending goes to commercial sector programs. (ICF Report at 25). Given this disparity, ICF International recommended that the Companies "target a greater percentage of their program spending on the commercial sector." (*Id.* at 24). To date, the Companies have not done so.

With regards to industrial sector DSM, the Companies' witness Sinclair asserted that "to date, there has not been enough interest by industrial customers to support cost effective DSM-EE programs." (Sinclair Reb. at 5). At hearing, however, Sinclair acknowledged that such claim was not based on a market potential study (also referred to as an "energy efficiency potential study") or the offer of DSM programs to industrial customers. Instead, the Companies' dedication of zero resources towards industrial DSM was based on conversations that the Companies had with a handful of industrial customers. March 20, 2012 Public Hearing, 12:27:03 – 12:27:47. A handful of conversations is plainly insufficient to justify the Companies' failure to seek any energy savings from a sector that makes up a substantial portion of the Companies' energy load.

The Commission should reject any argument that Kentucky law somehow excuses the Companies from seeking energy savings in the industrial sector. The Companies will likely note that Kentucky law authorizes the Commission to "allow individual industrial customers with energy intensive processes to implement cost-effective energy efficiency measures in lieu of measures approved as part of the utility's demand-side management programs if the alternative measures by these customers are not subsidized by other customer classes." KRS § 278.285(3). But that law plainly provides only that the Commission can exempt individual industrial customers from a utility DSM program if those customers are implementing their own energy efficiency efforts. That law does not excuse the Companies from the need to offer industrial DSM programs.

C. The Companies have not carried out the energy efficiency potential study recommended by ICF International.

In his rebuttal testimony, Sinclair explained that "determining how to meet customers' current and future energy needs requires examining what is actually available in the marketplace." (Sinclair Reb. at 3). Yet with regards to DSM, the Companies have failed to do exactly that.

In particular, the way to determine "what is actually available in the marketplace" with regards to DSM is to carry out an energy efficiency potential study or market characterization study. In its assessment of the Companies' DSM programs, ICF International recommended that the Companies "commission a potential study or market characterization study" the results of which "could be used to help plan programs that capture savings where potential is greatest and/or most cost effective." (ICF Report at 75). The Environmental Intervenors' witness Sullivan similarly recommended an energy efficiency potential study as the most effective tool for identifying the levels of cost effective DSM that are available to the Companies and the best ways to achieve those levels. (Sullivan Dir. at 8). The Companies, however, have failed to do so, despite receiving ICF International's recommendation in March 2011, a full six months before the Companies filed its CPCN application. In the absence of such a study, the Companies simply have no basis to claim that additional cost effective DSM is not achievable.

D. Additional DSM Would Reduce the Companies' Energy Production PVRR by [redacted].

The Companies' own economic modeling shows that achieving additional DSM energy savings would save ratepayer money by reducing the Companies' overall energy production costs through 2040. In response to Sullivan's un-rebutted testimony that "other utilities are finding 1% savings to be achievable and cost-effective," the Companies modeled the impact of a 1% annual DSM energy savings on their proposal. The Companies cite to the results of that modeling to contend that even with 1% annual DSM energy savings, the Cane Run NGCC would still be needed. (Sinclair Reb. at 7-8). But that modeling also shows that 1% annual energy savings which, as Sullivan testified at hearing is simply a reasonable floor not a ceiling on what is cost-effectively achievable, March 20, 2012 Public Hearing, 16:35:10 – 16:36:15, would significantly reduce PVRR for energy production costs through 2040. In particular, the net PVRR for the Companies proposed expansion plan is [redacted] through 2040, including [redacted] in production costs and [redacted] in capital costs. ([redacted]). By contrast, the PVRR after factoring in 1% annual DSM energy savings reduces overall PVRR to [redacted], including [redacted] in production costs and [redacted] in capital costs. ([redacted]). In other words, the Companies' own modeling shows that increased DSM would lead to a lower cost resource plan than the Companies' proposal. As such, the CPCN for the Cane Run NGCC cannot be approved without the inclusion of additional cost-effective DSM.

1. The Application Should Be Denied Because the Companies Engaged in Only a Pro Forma Review of Renewable Energy Resources.

The Commission should deny the CPCN for the Cane Run NGCC because the Companies engaged in nothing more than a pro forma review and dismissal of renewable resources. In their filings, the Companies spend significant time describing their RFP process for identifying resource options and the two-phase analysis they used to sift through the proposals that were received. But that process was fundamentally flawed in at least two ways.

First, the RFP process was abbreviated to the point where it was unlikely to result in a wide array of renewable resource proposals. In particular, the Companies issued the RFP on December 1, 2010, but did not send it to potential energy suppliers until December 17. Responses were to be "as comprehensive as possible" in order to enable the Companies to make a "definitive and final evaluation . . . without further contact," yet were also to be submitted by January 28, 2011. (RFP at 1, 7). This means that potential energy suppliers had six weeks, over the Christmas and New Year's holidays, to provide complete proposals to the Companies.[4] Such a shortened process hardly constitutes a thorough effort to identify and evaluate potential renewable resource opportunities.

Second, the Companies gave short shrift to wind resources by focusing only on the capacity such generation could provide at periods of peak summer energy demand. In evaluating wind proposals, the Companies assigned a 15% capacity factor to the resource on the basis that "wind conditions are usually very poor at the time of summer peak." (Sinclair Reb. at 9). But this approach shortchanged the significant contribution that wind resources can make to meeting the Companies' energy needs. The Companies' analysis identified the per megawatt hour

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[4] The Companies themselves had over four to five months to develop its alternative. See March 20, 2012 Public Hearing, 1:07:33 – 1:08:42 (Witness Sinclair admits that the Companies did not finish formulating their self-build alternative until late April/early May of 2011).

levelized cost of the various wind proposals at between [redacted], while utilities in Oklahoma, Kansas, and Minnesota have contracted to purchase wind power for $25 to $47 per megawatt hour. (Chernick Dr. at 14). By contrast, the levelized cost for the NGCC and combustion turbine proposals that the Companies received ranged from [redacted].

In addition, the 15% capacity factor for wind is accurate only during a portion of each day in the summer months. At other times of the year, wind resources are projected to have far higher capacity factor, often exceeding the [redacted] capacity factor that the Companies assumed for the Cane Run NGCC. For example, with its proposal to the Companies for the Maysville Wind project in Kentucky, NextEra Energy [redacted]

While such data suggests that wind resources may not be able to contribute substantially to the Companies peak capacity needs, the Companies should have evaluated whether such generation could serve off-peak energy needs that the Companies are currently planning to meet by running their remaining coal-fired power plants at higher capacity factors.

In his rebuttal testimony, Sinclair asserted that wind was properly rejected because even if the Companies pursued all of the wind resource proposals they received, the energy shortfall that the Cane Run NGCC plant is intended to satisfy would not be entirely eliminated. (Sinclair

Reb. at 10-11). But the relevant question is not whether, as the Companies considered, the Cane Run NGCC proposal could be replaced with "nothing but wind proposals." (Sinclair Reb. at 9). Instead, it is whether wind resources would help create a lower-cost proposal for the Companies. And on that question, the Companies own modeling shows that evaluating the 1% annual DSM energy savings identified by Sullivan and the wind resources identified during the RFP process would eliminate the Companies' projected need for an additional NGCC facility in 2020 and, instead, delay the need for an additional facility until 2025. (Sinclair Reb. at Ex. DSS-3). As such, the Commission cannot approve the CPCN for the Cane Run NGCC without inclusion of additional cost-effective DSM and wind generation resources.

A. The Application Should Be Denied Because the Companies Have Arbitrarily Assigned a Value of $0 to Likely Future Greenhouse Gas Regulations.

The Commission should also deny the CPCN because it does not accurately reflect the likely future costs of the Cane Run NGCC plant. In particular, the Companies' application ignores the costs that ratepayers will likely face due to future greenhouse gas regulations. Because natural gas and coal-fired power generation both produce a significant amount of greenhouse gas emissions while DSM, wind, and solar produce none, a failure to account for the likely future cost associated with such emissions skews the analysis in favor of the former energy sources and against the latter. Such failure is also inconsistent with the practice of numerous utilities throughout the country, and ignores Commission policy on this issue.

In a 2008 report to the General Assembly, the Commission made clear that "IRP and CPCN filings should provide best available estimates of expected carbon impacts in justifying resource selections among portfolio options."[5] Rather than follow this advice, the Companies

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[5] *In re An Investigation of the Energy and Regulatory Issues in Section 50 of Kentucky's 2007 Energy Act*, Case No. 2007-00477, A Report to the Kentucky General Assembly (July 1, 2008), at 44.

remained silent on the issue in their application. After Environmental Intervenors identified this shortcoming in the Companies' filing, the Companies responded that it would not be prudent to factor a greenhouse gas emission cost into the analysis because such regulations are "unknown and unknowable." (Sinclair Reb. at 16).

The Companies' uncertainty rhetoric notwithstanding, the Companies actually treat the greenhouse gas issue as if there were complete certainty around it. In particular, the Companies assign a price of $0 to greenhouse gas emissions, thereby asserting certainty that neither the U.S. EPA nor Congress will regulate or establish a price for greenhouse gas emissions between now and 2040. As the Environmental Intervenors' expert witness Paul Chernick testified, numerous other utilities disagree with the Companies' certainty and claim that it would be not prudent to incorporate likely greenhouse gas emission costs into resource planning. For example:

- Duke Energy Carolinas' September 2011 South Carolina IRP assumed a CO_2 price starting at $12/ton in 2016 and increasing to $42/ton by 2031, with higher CO_2 price assumptions in sensitivity analyses.

- Georgia Power's August 2011 IRP modeled four different CO_2 price levels ranging from $0 to $30/ton starting in 2015 to "span the plausible short term and long term range of CO_2 requirements."

- Delmarva, in its December 2010 Delaware IRP assumed a federal CO_2 price of $20 per ton in 20 18, increasing to $25 per ton by 2020.

- Ameren Missouri's February 2011 IRP includes a CO_2 cap-and-trade case with a price of $7.50/ton in 2015, increasing to $47/ton in 2040.

- The Tennessee Valley Authority's March 2011 IRP evaluated resources with eight CO_2 price-scenarios ranging from a $O/ton low case to a high case with prices rising from $17 per ton in 2012 to $94 per ton by 2030.

- PacifiCorp's March 2011 Utah IRP used four CO_2 price cases, ranging from no CO_2 price, to as much as $25/ton in 2015, with various escalation rates. PacifiCorp utility also modeled two scenarios involving hard caps on overall $C0_2$ emissions.

- Duke Energy Ohio July 2011 IRP included a CO_2 price beginning in 2016.

- The Avoided Energy Supply Cost Report, sponsored by the New England utilities (including NStar, National Grid, Northeast Utilities, Central Maine Power and United Illuminating), included a base CO_2 price of $2/ton in 2012, rising to $15/ton in 2018 and $39/ton in 2026, as well as low and high cases with prices of $2/ton and $64/ton in 2026 (all in constant 2010 dollars).

(Chernick Dir. at 8-10).

It is true that there is uncertainty as to when the federal or state government will regulate greenhouse gas emissions from existing sources and as to the cost that regulations will impose on such emissions. But the proper way to address such uncertainty is not to simply declare, as the Companies have, that the costs are zero. Instead, as the utility filings cited by Chernick show, prudent utility planning calls for carrying out sensitivity analyses that assume a range of different CO_2 prices and assigning reasonable probabilities to each scenario so that the Companies can develop the lowest-cost plan for approaching likely future scenarios. (Chernick Dir. at 8). The Commission should deny the CPCN so that the Companies can submit a plan factoring in such prudent analyses.[6]

IV. CONCLUSION

This proceeding is not about whether natural gas generation is going to play a major role in the Companies' future energy mix. Environmental Intervenors agree it will. What this proceeding is about is whether the exclusively natural gas generation proposed by the Companies is the least-cost energy mix or whether a portfolio of additional DSM, renewable energy, and natural gas represents the least-cost alternative. The record shows that such a diversified portfolio would be a lower cost option for ratepayers because it would delay or reduce (though not eliminate) the need for expensive natural gas capacity additions. As such, the Commission

[6] The Environmental Intervenors are not saying that natural gas will not be part of a least-cost alternative if the Companies consider these costs but rather that it is impossible to determine what mix of DSM, renewable generation, and natural gas generation is the least-cost alternative until these additional costs are examined.

should not approve the CPCN for the Cane Run NGCC without requiring the addition of cost-effective DSM and wind generation resources.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I certify that I mailed a copy of this Post-Hearing brief by first class mail on April 3, 2012 to the following:

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