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 A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AND SITE COMPATIBILITY CERTIFICATE 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

ORDER

On September 15, 2011, Louisville Gas and Electric Company ("LG&E") and Kentucky Utilities Company ("KU") (collectively "Joint Applicants") filed an application pursuant to KRS 278.020, 807 KAR 5:001, Sections 8 and 9, and KRS 278.216, requesting a Certificate of Public Convenience and Necessity ("CPCN") and a Site Compatibility Certificate for the construction of a 640 MW natural gas combined cycle combustion turbine ("CR 7") at the Joint Applicants' Cane Run Generating Station ("Cane Run") in Louisville, Kentucky, and for the purchase of natural gas simple cycle generation facilities in LaGrange, Kentucky from Bluegrass Generation Company, LLC ("Bluegrass Generation") which include three turbines with a combined capacity of 495 MW. The estimated cost of constructing the facilities at Cane Run, including a 20-inch natural gas pipeline, is $583 million. The cost of the Bluegrass Generation purchase is $110 million. Joint Applicants propose an optimal ownership split of CR 7 with KU owning 78 percent and LG&E owning 22 percent.[1] For the Bluegrass Generation facilities, the Joint Applicants propose an ownership arrangement of 31 percent for KU and 69 percent for LG&E.[2] The ownership split balances the production cost savings of CR 7 and balances each company's individual reserve margins through 2020. The proposed natural gas generating facilities are intended to replace the energy and capacity currently provided by the Joint Applicants' Cane Run, Tyrone, and Green River coal-fired units, which are slated to be retired in 2016.

The following parties were granted full intervention in this matter: (1) the Attorney General of the Commonwealth of Kentucky, by and through his Office of Rate Intervention; (2) Kentucky Industrial Utility Customers, Inc. ("KIUC"); and (3) Sierra Club and Natural Resources Defense Council (collectively "Environmental Intervenors"). On October 18, 2011, the Commission issued an Order establishing a procedural schedule for the processing of this matter. The procedural schedule provided for two rounds of discovery on the Joint Applicants, an opportunity for the filing of intervenor testimony, one round of discovery on intervenor testimony, and an opportunity for the Joint Applicants to file rebuttal testimony.

The Commission scheduled and held a public meeting in Louisville, Kentucky on March 8, 2012 to receive public comments on the Joint Applicants' proposal to construct a combined cycle natural gas combustion turbine at Cane Run and the proposed acquisition of the simple cycle gas combustion turbines from Bluegrass Generation. A

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[1] Application, ¶ 11; Direct Testimony of David S. Sinclair ("Sinclair Testimony"), Exhibit DSS-1, Joint Applicants' 2011 Resource Assessment, p. 35.

[2] *Id.*

formal hearing was conducted at the Commission's offices in Frankfort, Kentucky on March 20, 2012. The parties submitted post-hearing briefs on April 3, 2012. The matter is now before the Commission for a decision.

JOINT APPLICANTS' PROPOSAL

Joint Applicants maintain that their self-build proposal, as well as the proposed Bluegrass Generation acquisition, represents the least-cost option to comply with certain new and pending environmental regulatory requirements under the Federal Clean Air Act as amended. Joint Applicants state that the decision to retire their coal-fired generating facilities at Cane Run, Green River, and Tyrone was driven by the proposed Cross-State Air Pollution Rule ("CSAPR"), the Mercury and Air Toxics Standards ("MATS")[3] rule, and the National Ambient Air Quality Standards ("NAAQS").

CSAPR, which was finalized by the EPA on July 6, 2011, requires certain states to significantly improve air quality by reducing power plant emissions that contribute to ozone and/or fine particle pollution in other states.[4] CSAPR imposes significant

[3] At the time of the filing of the instant application, the national emission standards for hazardous air pollutants aimed at reducing mercury, other metals, acid gases, and organic air toxics was known as the HAPS rule. On December 21, 2011, the federal Environmental Protection Agency ("EPA") finalized the National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial–Institutional Steam Generating Units. The final HAPS rule became effective on April 16, 2012 and is now known as the MATS rule or the Utility Maximum Achievable Control Technology "Utility MACT" rule.

[4] On December 30, 2011, in civil actions for review brought by several stakeholders, the United States Court of Appeals for the District of Columbia Circuit entered an order staying the implementation of CSAPR pending the court's resolution of the various petitions for review. The EPA is to continue administering the Clean Air Interstate Rule pending the court's resolution of the petitions for review.

reductions in sulfur dioxide ("SO_2") and nitrogen oxide ("NO_x") emissions that cross state lines beginning in 2012, with still more stringent SO_2 reductions in 2014.[5] Joint Applicants note that "CSAPR creates more stringent state-specific allowance budgets (or 'caps') for SO_2 and NO_x, and would allow for only limited interstate allowance trading to ensure that individual states actually have to make the reductions EPA desires . . . ."[6]

The MATS rule for power plants would reduce emissions from new and existing coal- and oil-fired electric utility steam generating units larger than 25 MW that produce electricity for consumption by the public. Any units which began construction after May 3, 2011 will be considered a new source and must be in compliance within 60 days after the rule is published in the *Federal Register*,[7] or upon startup, whichever is later. Existing units, or those units constructed on or before May 3, 2011, will have three years, plus 60 days after the rule is published in the *Federal Register,* to be in compliance (or April 16, 2015). There is also a possibility that a one-year extension may be granted to install the control devices. In addition, the EPA is providing a pathway for reliability critical units to obtain a schedule with up to an additional year (for a total of 5 years possible) to achieve compliance.[8] MATS would reduce emissions of

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[5] Kentucky is one of 16 states that will be subject to further SO_2 reductions in 2014 under CSAPR.

[6] Direct Testimony of Gary H. Revlett at p. 6.

[7] The MATS rule was published in the *Federal Register* on February 16, 2012, under 77 Fed. Reg. 9,304 (to be codified at 40 C.F.R. pts. 60 and 63).

[8] *See* December 16, 2011 Policy Memorandum issued by the EPA's Office of Enforcement and Compliance Assurance, re The Environmental Protection Agency's Enforcement Response Policy for use of Clean Air Act Section 113(a) Administrative Orders in Relation to Electric Reliability and the Mercury and Air Toxics Standard. Available at: www.epa.gov/compliance/resources/policies/civil/erp/mats-erp.pdf.

heavy metals, including mercury, arsenic, chromium, and nickel; and acid gases, including hydrochloric acid and hydrofluoric acid. These requirements would require the installation of Maximum Achievable Control Technology.

Lastly, Joint Applicants point out that air quality in Jefferson County currently fails to meet SO_2 requirements and the EPA's NAAQS will further restrict NO_x and SO_2 emissions beginning in 2016 and 2017. LG&E performed an evaluation of NAAQS compliance and concluded that retiring the Cane Run facility, constructing CR 7, and installing a scrubber at its Mill Creek Generating Station would reduce SO_2 in Jefferson County by 70 percent. Given these actions, Jefferson County should achieve attainment of SO_2 NAAQS and the Cane Run generation station would be in compliance with NO_x NAAQS.

In Case Nos. 2011-00161[9] and 2011-00162,[10] the Joint Applicants sought and received Commission approval of their 2011 Environmental Compliance Plans, which plans were the result of a comprehensive analysis that determined, on a unit-by-unit basis, whether it would be more cost-effective to install identified pollution control facilities or to retire the unit and buy replacement capacity. Based on the operating characteristics, age, and size of the units, the Joint Applicants determined that the cost of additional emission controls on their six coal-fired units at the Cane Run, Green

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[9] Case No. 2011-00161, Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of its 2011 Environmental Compliance Plan for Recovery by Environmental Surcharge (Ky. PSC Dec. 15, 2011).

[10] Case No. 2011-00162, Application of Louisville Gas and Electric Company for Certificates of Public Convenience and Necessity and Approval of its 2011 Compliance Plan for Recovery by Environmental Surcharge (Ky. PSC Dec. 15, 2011).

River, and Tyrone generating plants could not be justified and that they should be retired by the end of 2015. The six coal-fired units to be retired have a combined capacity of 797 MWs.

Based on the joint load forecast that was used to prepare the Joint Applicants 2011 Integrated Resource Plan ("IRP"), the retirements of the Cane Run, Green River, and Tyrone coal units would contribute to the Joint Applicants experiencing a capacity shortfall of 877 MWs beginning in 2016 and increasing to 1,066 MWs in 2018.[11] Joint Applicants' projected total annual demand through 2018 reflects the difference between forecasted peak load and peak reductions, which reductions include the impacts of interruptible demands and Demand-Side Management ("DSM") programs.[12] The retirement of the Cane Run and Green River coal units would also impact the Joint Applicants' energy needs.[13] From 2006 through 2010, the combined energy produced by these coal units averaged 4,225 GWh.[14] Joint Applicants' 2011 IRP projects combined energy sales in 2016 to be 36,615 GWh and, in 2017, to be 37,074 GWh.[15] Lastly, the retirements will result in a 2016 reserve margin of approximately 4 percent versus Joint Applicants' target reserve margin of 16 percent.[16]

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[11] Sinclair Testimony, p. 15; Exhibit DSS-1, Joint Applicants 2011 Resource Assessment, p. 11.

[12] *Id.*

[13] *Id.*

[14] *Id.*

[15] *Id.*

[16] *Id.*

To address the projected capacity and energy deficit beginning in 2016, the Joint Applicants issued a request for proposals ("RFP") on December 1, 2010 for capacity and energy to more than 116 potential energy suppliers.[17] The RFP sought responses from parties with resources that would qualify as a Designated Network Resource for transmission purposes.[18] The RFP encouraged offers for firm summer and winter capacity ranging between 1 MW and 700 MW with the Joint Applicants having the flexibility to procure more or less than 700 MW, as well as the authority to aggregate capacity and energy from multiple parties to meet its needs.[19] Joint Applicants received 18 responses containing 50 offers.[20] The responses included power purchase agreements and asset sale offers for gas, coal,[21] nuclear, wind, biomass, and solar technologies.[22]

Joint Applicants' analysis of the RFP responses was conducted in two phases.[23] Phase I consisted of an initial screening of the responses through a scoring system,

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[17] Sinclair Testimony, p. 16; Exhibit DSS-1, Joint Applicants' 2011 Resource Assessment, p. 13.

[18] *Id.*

[19] *Id.*

[20] *Id.*

[21] Although the Joint Applicants received asset sale offers for coal as part of the responses to their RFP, they did not develop a site specific cost estimate for a new coal unit at Cane Run because the Joint Applicants' 2011 IRP did not identify coal as part of the companies' least-cost resource plan. *See* Sinclair Testimony, p. 17.

[22] Joint Applicants' Post-Hearing Brief, p. 3.

[23] Sinclair Testimony, p. 17; Exhibit DSS-1, Joint Applicants' 2011 Resource Assessment, p. 4.

which evaluated certain criteria such as cost, term, and site availability.[24] The scoring system was developed as follows: First, responses with unacceptable terms or sites were eliminated; second, the responses were ranked based on two cost measures: (a) levelized revenue requirements per MWh; and (b) levelized revenue requirements per firm capacity-year.[25] The 24 offers that scored the most favorable in both cost categories were selected for Phase II consideration.[26]

The Phase II analysis was conducted in two parts.[27] First, the preliminary Phase II analysis evaluated the top 24 Phase I offers, both individually and in various combinations, in more detail.[28] Joint Applicants utilized the Strategist resource planning software to assess each response's impact on future capacity needs and to determine capital revenue requirements.[29] Joint Applicants also utilized the PROSYM production costing model to evaluate the production cost revenue requirements associated with each offer.[30] A total system revenue requirement for the study period was then calculated using the capital revenue requirements, the production cost revenue requirements, and the revenue requirements for any fixed operation and maintenance

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[24] *Id.*

[25] Exhibit DSS-1, Joint Applicants' 2011 Resource Assessment, p. 15.

[26] *Id.*

[27] Sinclair Testimony, p. 17; Exhibit DSS-1, Joint Applicants' 2011 Resource Assessment, p. 16.

[28] *Id.*

[29] Joint Applicants' 2011 Resource Assessment, p. 16.

[30] *Id.*

expenses, gas transportation costs, and firm electric transmission costs.[31] Strategist was then used to develop the least-cost expansion plan for each offer.[32] Production costs were then developed for each expansion plan and each alternative was analyzed based on its impact on the Joint Applicants' ability to serve native load only.[33] The offers were further evaluated under two limited economy market purchase scenarios: (1) no economy purchases; and (2) limited economy purchases.[34] The analysis was conducted relative to a base case scenario for natural gas and electric prices.[35]

The final Phase II analysis consisted of the Joint Applicants meeting with the top respondents and asking them to update their offers to best and final offers.[36] The updated offers were evaluated along with additional self-build options and were analyzed similar to the preliminary Phase II analysis.[37] Based on the RFP and self-build analysis, the Joint Applicants determined that the least-cost alternative for meeting their future capacity and energy needs was to build a new natural gas combined cycle combustion turbine at Cane Run and to purchase from Bluegrass Generation its existing simple cycle combustion turbine facilities in LaGrange, Kentucky.

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[31] *Id.*

[32] Joint Applicants' 2011 Resource Assessment, p. 18.

[33] Joint Applicants' 2011 Resource Assessment, p. 19.

[34] *Id.*

[35] *Id.*

[36] *Id.*

[37] *Id.*

ENVIRONMENTAL INTERVENORS' POSITION

Environmental Intervenors recommend that the Joint Applicants' proposal be denied. Environmental Intervenors argued that the "exclusively natural gas generation" proposed by the Joint Applicants is not the least-cost alternative to address the Joint Applicants' capacity shortfall. Environmental Intervenors maintain that a diversified portfolio that combines additional DSM programs, renewable energy, and natural gas would be a lower-cost option for the Joint Applicants' ratepayers because it would delay or reduce the need for more expensive natural gas capacity additions.[38]

Environmental Intervenors contend that the Joint Applicants failed to identify a least-cost plan that included all cost-effective DSM programs beyond those programs that were approved by the Commission in the Joint Applicants' most recent DSM application, Case No. 2011-00134.[39] Environmental Intervenors point out that the 0.52 percent level of annual energy savings that the Joint Applicants' existing DSM programs are projected to achieve is substantially below the level of energy savings being achieved by DSM programs in other states.[40] Environmental Intervenors further point out that the Joint Applicants' own DSM consultant, ICF International ("ICF"), issued a report that indicated, among other things, that the benefits of the Joint Applicants' DSM

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[38] Environmental Intervenors' Post-Hearing Brief, p. 23.

[39] Case No. 2011-00134, 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 (Ky. PSC Nov. 9, 2011).

[40] Environmental Intervenors' Post-Hearing Brief, p. 12.

programs outweighed their costs by a ratio of three-to-one or more.[41] According to the Environmental Intervenors, this high benefit-to-cost ratio establishes that the Joint Applicants could achieve more energy savings if they were to expand on their existing DSM programs or implement new DSM programs such as in the commercial and industrial customer classes.[42] Environmental Intervenors note that a more robust DSM portfolio that would achieve annual energy savings of at least one percent would reduce the present value revenue requirement ("PVRR") for the Joint Applicants' energy production, thereby delaying the need for capacity and/or reducing the amount of capacity needed.[43]

Environmental Intervenors also asserted that the Joint Applicants engaged in a perfunctory review of alternative renewable resources.[44] Noting that potential energy suppliers had only a six-week time frame over the Christmas and New Year's holidays to provide complete proposals, Environmental Intervenors argue that the Joint Applicants' "RFP process was abbreviated to the point where it was unlikely to result in a wide array of renewable energy resource proposals."[45] In addition, Environmental Intervenors also claimed that, by assigning a 15 percent capacity factor to wind resources, the Joint Applicants focused only on capacity that wind generation could provide at periods of peak summer energy demand and failed to recognize the

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[41] Environmental Intervenors' Post-Hearing Brief, p. 14.

[42] *Id.*

[43] Environmental Intervenors' Post-Hearing Brief, p. 12.

[44] Environmental Intervenors' Post-Hearing Brief, p. 19.

[45] *Id.*

"significant contribution that wind resources can make to meeting the Companies energy needs."[46] Based on the Joint Applicants' own modeling, Environmental Intervenors maintain that evaluating a one percent DSM energy savings combined with the wind resource proposals received during the RFP would delay the Joint Applicants' need for additional gas generating capacity in 2020 until 2025.[47]

Lastly, Environmental Intervenors argue that the Joint Applicants have arbitrarily assigned a value of $0 to likely future greenhouse gas regulations.[48] Environmental Intervenors contend that the value assumed by the Joint Applicants does not accurately reflect the future costs of CR 7 and that such a value skews the analysis in favor of natural gas and coal-fired generation and against DSM and renewable generation.[49]

KIUC'S POSITION

In its post-hearing brief, KIUC states that it does not oppose the Joint Applicants' decision to retire the six coal-fired units at the Cane Run, Tyrone, and Green River generating stations. KIUC also stated that it did not oppose the Joint Applicants' proposal to construct a natural gas-combined cycle facility at Cane Run and purchase three existing simple cycle gas combustion turbines from Bluegrass Generation in order to meet the capacity deficiency that results from retiring the six coal units. Agreeing with the Joint Applicants, KIUC maintains that the Joint Applicants' proposal is

[46] *Id.*

[47] Environmental Intervenors' Post-Hearing Brief, p. 21.

[48] *Id.*

[49] *Id.*

reasonable and cost-effective in light of the new EPA air emissions regulations impacting coal generating units and the current low price of natural gas.

KIUC disagreed with the Environmental Intervenors' position that the Joint Applicants' capacity deficit could be met through a combination of wind generation purchases and DSM. KIUC noted that the evidence presented by the Joint Applicants established that the wind generation bid in response to the Joint Applicants' RFP was neither cost-effective nor reliable when compared to the Joint Applicants' proposal. Lastly, KIUC contends that the Environmental Intervenors' argument that the Joint Applicants should expand their DSM portfolio to include industrial customers would violate KRS 278.285(3)[50] and that the Joint Applicants' "large industrial load is not the untapped DSM resource that the Environmental Intervenors imagine it to be."[51]

DISCUSSION

No utility may construct any facility to be used in providing utility service to the public until it has obtained a CPCN from this Commission.[52] To obtain a CPCN, the

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[50] KRS 278.285(3) provides, in relevant part, as follows:

> The commission shall 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. Such individual industrial customers shall not be assigned the cost of demand-side management programs.

[51] KIUC's Post-Hearing Brief, p. 2.

[52] KRS 278.020(1).

utility must demonstrate a need for such facilities and an absence of wasteful duplication.[53]

"Need" requires:

> [A] showing of a substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed or operated.
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> [T]he inadequacy must be due either to a substantial deficiency of service facilities, beyond what could be supplied by normal improvements in the ordinary course of business; or to indifference, poor management or disregard of the rights of consumers, persisting over such a period of time as to establish an inability or unwillingness to render adequate service.[54]

"Wasteful duplication" is defined as "an excess of capacity over need" and "an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties."[55] To demonstrate that a proposed facility does not result in wasteful duplication, we have held that the applicant must demonstrate that a thorough review of all reasonable alternatives has been performed.[56] Selection of a proposal that ultimately costs more than an alternative does not necessarily result in

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[53] *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 252 S.W.2d 885 (Ky. 1952).

[54] *Id.* at 890.

[55] *Id.*

[56] Case No. 2005-00142, Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky (Ky. PSC Sept. 8, 2005).

wasteful duplication.[57] All relevant factors must be balanced.[58] The Commission has long recognized that the principle of least cost is one of the fundamental foundations utilized when setting rates that are fair, just, and reasonable and that this principle is embedded in KRS 278.020(1).[59]

Based on the evidence of record, the Commission finds that the Joint Applicants have established that the proposed facilities are needed to address significant capacity shortfalls beginning in 2016 due to the need to retire the coal-fired generating units at the Cane Run, Green River, and Tyrone Stations, as well as projected load growth. Joint Applicants' decision to retire these coal units was the result of an extensive analysis to determine the least-cost alternative to comply with the aforementioned new and pending air emissions standards. Moreover, the Joint Applicants have sufficiently demonstrated that, absent additional capacity resources, their joint load forecasts and projected energy savings from DSM and energy efficiency projects indicate capacity shortfalls of 877 MW in 2016 and increasing to 1,066 MW in 2018 due to the retirements of the aforementioned coal units and projected load growth.

With respect to the Joint Applicants' proposed Bluegrass Generation acquisition, the parties to this matter have voiced no objection to this proposal. On the contrary,

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[57] *See Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 390 S.W.2d 168, 175 (Ky. 1965). *See also* Case No. 2005-00089, Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity for the Construction of a 138 kV Electric Transmission Line in Rowan County, Kentucky (Ky. PSC Aug. 19, 2005).

[58] Case No. 2005-00089, East Kentucky Power, Order dated August 19, 2005, at 6.

[59] Case No. 2009-00545, Application of Kentucky Power Company for Approval of Renewable Energy Purchase Agreement for Wind Energy Resources Between Kentucky Power Company and FPL Illinois Wind, LLC (Ky. PSC Jun. 28, 2010).

both Environmental Intervenors and KIUC expressly support approval of the purchase of the Bluegrass Generation facility. The Commission agrees and finds that the purchase of the Bluegrass Generation assets is part of the least-cost solution to the Joint Applicants' capacity needs. The evidence establishes that the purchase price of $110 million, or approximately $222/kW, is significantly less expensive than the estimated $850/kW cost to construct a comparable simple cycle gas combustion turbine as set forth in the Joint Applicants' 2011 Integrated Resource Plan. The evidence further establishes that the Bluegrass Generation facilities will assist the Joint Applicants in managing the reliability risks associated with Cane Run, Green River, and Tyrone as these units approach retirement; they will also help the Joint Applicants manage risks while CR 7 is being constructed and placed into operation; and they will allow the Joint Applicants to defer by one year the need for future generating capacity.

With respect to the proposal to construct CR 7, the Commission finds that the record is sufficient to demonstrate that the proposed construction project, combined with the Bluegrass Generation purchase, represent the least-cost resources to meet the Joint Applicants' capacity needs beginning in 2016. The Commission further finds that the proposed facilities are reasonable and will not result in wasteful duplication of utility facilities. The proposed facilities have the lowest net PVRR among all the alternatives that were considered.

Concerning the Environmental Intervenors' argument that the Joint Applicants failed to identify a least-cost plan that included all cost-effective DSM programs and that a more robust DSM portfolio would delay the Joint Applicants' need for capacity and/or reduce the amount of capacity needed, the evidence established that, even under a robust DSM portfolio that achieved one percent annual energy savings, the Joint Applicants' peak load would be reduced by only 125 MW. Compared with the Joint Applicants' total capacity need of 877 MW in 2016, the Environmental Intervenors' scenario would still leave the Joint Applicants needing 752 MW. Even taking into consideration the Joint Applicants' unopposed proposal to purchase the 495 MW Bluegrass Generation combustion turbines, the Joint Applicants would still be faced with a capacity shortfall of 257 MW and, because the Bluegrass Generation assets provide only peaking energy, Joint Applicants would experience a considerable energy shortfall of almost 3.2 million MWh.[60] Thus, even under Environmental Intervenors robust DSM scenario, construction of CR 7 would still be necessary.

Notwithstanding our finding above, the Commission does share the concern of Environmental Intervenors that the Joint Applicants have not adequately addressed one of the recommendations set forth in the ICF Louisville Gas and Electric Company/Kentucky Utilities Company DSM Program Review Report ("ICF Report").[61] In particular, the ICF Report recommended that the Joint Applicants commission a potential study or market characterization study to be used to help plan programs that capture savings where potential is greatest and/or most cost-effective.[62] Based on the market characterization study of the commercial sector, ICF also recommended that the Joint Applicants should develop additional DSM programs targeting the commercial

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[60] Rebuttal Testimony of David S. Sinclair ("Sinclair Rebuttal Testimony"), pp. 6-7.

[61] *See* Sinclair Rebuttal Testimony, Rebuttal Appendix A.

[62] ICF Report, p. 9, 75.

sector.[63] Although the ICF Report noted that the Joint Applicants continued to offer cost-effective programs, their DSM portfolio could improve its cost-effectiveness through additional commercial programs.[64] Accordingly, the Commission will direct the Joint Applicants to commission a potential or market characterization study as recommended in the ICF Report. We do, however, want to take this opportunity to recognize that the ICF Report indicated that the Joint Applicants' DSM portfolio contained many elements of best practices, including cost effectiveness, broad targeting, and flexible design.[65] We strongly encourage the Joint Applicants to continue with this approach and to leverage their corporate relationship with PPL Corporation to garner additional best practices that can be adopted.

As to Environmental Intervenors' argument that the Joint Applicants' RFP process produced a limited "array of renewable energy resource proposals," the Commission finds the Joint Applicants' RFP process to be reasonable. The RFP was sufficiently comprehensive and the six-week deadline provided reasonable notice to potential energy suppliers to produce a complete and comprehensive response. The Commission further finds that the evidence supports the Joint Applicants' proposal as being least-cost even when compared to a scenario which assumes Environmental

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[63] *Id.*

[64] ICF Report, p. 75.

[65] The Commission further acknowledges that the Joint Applicants proposed, and received approval for, a significant expansion of their DSM portfolio, totaling $263.8 million over a seven-year period. Joint Applicants' expanded DSM portfolio contains DSM and energy efficiency programs that were found to be cost-effective and broad based. *See* Case No. 2011-00134.

Intervenors' robust DSM position and purchasing the largest quantity of wind achievable from the RFP options.

With respect to Environmental Intervenors' argument that the Joint Applicants' modeling was skewed in favor of natural gas units due to the zero cost assigned to potential greenhouse gas regulations, the Commission finds such an assumption to be reasonable given the circumstances in the matter at hand. As the Joint Applicants point out, the EPA issued proposed New Source Performance Standards ("NSPS") on March 27, 2012, for new fossil-fueled power plants.[66] The proposed standard would apply a CO_2 emission limit of 1,000 lb/MWh to new generating units that do not have permits and start construction within 12 months of the proposal.[67] Joint Applicants' proposed facilities would not be affected by the proposed regulation because the Bluegrass Generation facilities are existing generating units and CR 7 is projected to have a CO_2 emission rate of about 800 lb/MWh. If the proposed NSPS is indicative of potential future greenhouse gas regulation, the cost-effectiveness of the proposed CR 7 and the Bluegrass Generation facilities would not be impacted. Given the specific type of generation technologies proposed in this matter, the Commission finds that the modeling of a carbon price would not have altered the outcome of this case. Moreover, although they contend that the Joint Applicants should consider a diverse portfolio of generation mix, Environmental Intervenors readily admit that natural gas should be a part of that generation mix if it is determined that natural gas represents the least cost

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[66] Joint Applicants' Post-Hearing Brief, p. 25.

[67] *Id.*

alternative. The Commission is of the opinion that the natural gas facilities proposed herein are the least cost alternative.

SITE COMPATIBILITY CERTIFICATE

Joint Applicants indicate that there are good operational reasons to place the proposed CR 7 unit at Cane Run: (1) there is existing electrical transmission that the proposed CR 7 will be able to use; (2) using the existing Cane Run site, where 563 MW of existing coal-fired generation will be retired, will allow CR 7 to effectively "net out" of the Prevention of Significant Deterioration air permitting process that would be required if CR 7 were placed at the Joint Applicants' Brown Generating Station; and (3) having a geographical diversity of gas-fired generating units increases the overall reliability of the Joint Applicants' generating fleet by minimizing the impact of possible natural gas delivery disruption at a particular site. More significantly, the Joint Applicants' Site Assessment Report indicates that the Cane Run site was designed to accommodate additional generating units and that the addition of CR 7, while retiring the existing coal units, would not cause a negative impact to local property values, unduly increase traffic or noise, or materially change the visual impacts of the facility from current conditions.

The Commission finds that the Joint Applicants have satisfied the requirements of KRS 278.216 for the issuance of a Site Compatibility Certificate for CR 7.

IT IS THEREFORE ORDERED that:

1. Joint Applicants are granted a CPCN to construct a new 640 MW natural gas combined cycle combustion turbine unit at the Cane Run station and to purchase from Bluegrass Generation the natural gas simple cycle generation facilities, which include three turbines with a combined capacity of 495 MW in LaGrange, Kentucky.

2. Within 30 days of the completion of the construction of CR 7, Joint Applicants shall file with the Commission the actual cost of the construction.

3. Joint Applicants are granted a Site Compatibility Certificate to construct CR 7 at the Cane Run Station site in Louisville, Kentucky.

4. Within three months of the issuance of this Order, Joint Applicants shall commission a potential or market characterization study as recommended in the ICF Report.

5. Joint Applicants shall file with the Commission the potential or market characterization study within 30 days of the date it is completed and finalized.

6. Any documents filed in the future pursuant to ordering paragraphs 2 and 5 herein shall reference this case number and shall be retained in the utility's general correspondence file.

By the Commission

ENTERED
MAY 03 2012
KENTUCKY PUBLIC
SERVICE COMMISSION

ATTEST:

Executive Director

Honorable Joe F Childers
Attorney at Law
201 West Short Street
Suite 310
Lexington, KENTUCKY 40507

Edward George Zuger, III
Zuger Law Office PLLC
P.O. Box 728
Corbin, KENTUCKY 40702

Lawrence W Cook
Assistant Attorney General
Office of the Attorney General Utility & Rate
1024 Capital Center Drive
Suite 200
Frankfort, KENTUCKY 40601-8204

Kristin Henry
Staff Attorney
Sierra Club
85 Second Street
San Francisco, CALIFORNIA 94105

Honorable Lindsey W Ingram, III
Attorney at Law
STOLL KEENON OGDEN PLLC
300 West Vine Street
Suite 2100
Lexington, KENTUCKY 40507-1801

Honorable Michael L Kurtz
Attorney at Law
Boehm, Kurtz & Lowry
36 East Seventh Street
Suite 1510
Cincinnati, OHIO 45202

Honorable Kendrick R Riggs
Attorney at Law
Stoll Keenon Ogden, PLLC
2000 PNC Plaza
500 W Jefferson Street
Louisville, KENTUCKY 40202-2828

Honorable Allyson K Sturgeon
Senior Corporate Attorney
LG&E and KU Energy LLC
220 West Main Street
Louisville, KENTUCKY 40202