

COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY UTILITIES	)	
COMPANY FOR CERTIFICATES OF PUBLIC	)	CASE NO.
CONVENIENCE AND NECESSITY AND	)	2011-00161
APPROVAL OF ITS 2011 COMPLIANCE PLAN	)	
FOR RECOVERY BY ENVIRONMENTAL	)	
SURCHARGE	)	

O R D E R

On June 1, 2011, Kentucky Utilities Company (“KU”) filed an application, pursuant to KRS 278.020(1), KRS 278.183, and 807 KAR 5:001, Sections 8 and 9, for a Certificate of Public Convenience and Necessity (“CPCN”) to construct Particulate Matter Control Systems to serve all the generating units at the E. W. Brown Generating Station (“Brown”) and the Ghent Generating Station (“Ghent”).<sup>1</sup> The application also sought approval of an amended compliance plan to allow KU to recover the costs of the new pollution control facilities through its Environmental Surcharge tariff (“2011 Environmental Compliance Plan”). The total capital cost of the proposed new projects contained in the 2011 Environmental Compliance Plan is estimated to be \$1.1 billion.

By letter dated June 14, 2011, the Commission informed KU that its application was deficient for failing to provide the appropriate number of copies concerning certain

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<sup>1</sup> On the same date, KU’s sister company, Louisville Gas and Electric Company (“LG&E”) filed a similar action, which was docketed as 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.

of KU's exhibits and appendices to its pre-filed testimony. KU cured the deficiency on June 16, 2011 and KU's application was accepted for filing as of that date. KRS 278.183(2) imposes a six-month statutory deadline in which the Commission must consider and rule upon the proposed environmental compliance plan. Accordingly, the deadline for the issuance of an order in this matter is December 15, 2011.

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) the Community Action Council for Lexington-Fayette, Bourbon, Harrison, and Nicholas Counties, Inc.; (3) Kentucky Industrial Utility Customers, Inc.; (4) The Kroger Co.; (5) Lexington-Fayette Urban County Government; and (6) Rick Clewett, Raymond Barry, Sierra Club, and Natural Resources Defense Council (collectively "Environmental Intervenors").

On June 28, 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 KU, an opportunity for the filing of intervenor testimony, one round of discovery on intervenor testimony, and an opportunity for KU to file rebuttal testimony. The Commission also scheduled and held public meetings in Henderson, Lexington, and Corbin, Kentucky on September 1, 7, and 8, 2011 respectively, to receive public comments on the environmental compliance plan and associated environmental surcharge requests submitted by KU.

At the request of KU, informal conferences were held at the Commission's offices on November 4 and 7, 2011. On November 10, 2011, the parties to this matter filed a unanimous Settlement Agreement, Stipulation and Recommendation ("Settlement

Agreement”),<sup>2</sup> which is attached to this Order as Appendix A. A public hearing was held on November 9<sup>3</sup> and 10 at the Commission’s offices in Frankfort.

The matter is now before the Commission for a decision. As described on the following pages, the Commission determines that it is in the public interest to approve the Settlement Agreement.

#### KU’s 2011 Environmental Compliance Plan

KU maintains that the proposed environmental projects are required to comply with the federal Clean Air Act as amended, the Cross-State Air Pollution Rule (“CSAPR”) (successor to the proposed Clean Air Transport Rule), the proposed National Emission Standards for Hazardous Air Pollutants (“HAPs Rule”), the Resource Conservation and Recovery Act (“RCRA”), and other environmental requirements that apply to KU facilities used in the production of energy from coal, including the U.S. Environmental Protection Agency’s (“EPA”) proposed regulation concerning the storage of coal combustion residuals (“CCR”).<sup>4</sup>

#### CSAPR

The EPA issued the final CSAPR on July 6, 2011. The rule became effective on October 7, 2011, with the first phase of SO<sub>2</sub> and annual NO<sub>x</sub> compliance requirements

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<sup>2</sup> The Settlement Agreement is a global agreement in which the parties in the instant case and those in Case No. 2011-00162 agreed to a full and unanimous resolution of any and all issues relating to both cases.

<sup>3</sup> At the request of the parties, the formal hearing on November 9, 2011 was adjourned after the taking of public comments in order for the parties to continue their settlement discussions. The parties subsequently conferred to continue their settlement negotiations. Ultimately, the parties were able to arrive at a unanimous settlement of all the issues in this matter.

<sup>4</sup> Application, p. 1.

becoming effective on January 1, 2012. A second, more stringent phase of SO<sub>2</sub> compliance obligations will go into effect on January 1, 2014. The rule's ozone-season NO<sub>x</sub> emission limits will become effective on May 1, 2012.

KU will be allocated a limited number of SO<sub>2</sub> and NO<sub>x</sub> allowances each year under CSAPR. Each allowance entitles the holder to emit one ton of the pollutant covered by the allowance. KU's allowance allocations under CSAPR (as revised on October 6, 2011) are as follows:

- SO<sub>2</sub> (2012) 41,847
- SO<sub>2</sub> (2013) 42,733
- SO<sub>2</sub> (2014-2017) 19,887
- SO<sub>2</sub> (2018) 20,262
- Annual NO<sub>x</sub> (2012-2013) 15,555
- Annual NO<sub>x</sub> (2014+) 14,247

#### HAPs Rule

The HAPs Rule regulates emissions of mercury, particulate matter (as a surrogate for hazardous non-mercury metals), and hydrogen chloride ("HCl"). For coal-fired units designed to burn coal with an energy content of at least 8,300 Btu/lb (which includes all of KU's coal-fired units), the proposed HAPs Rule's mercury emission limit is 1.2 lbs/TBtu. The HAPs Rule's emission limit for total particulate matter from existing electric generating units is 0.030 lb/MMBTu. For HCl, the HAPs Rule's emission limit from existing electric generating units is 0.0020 lb/MMBTu. However, the HAPs Rule allows SO<sub>2</sub> to be measured as a surrogate for directly measuring HCl, and this is the

measure that KU will use. The SO<sub>2</sub> limit as a surrogate for HCl under the HAPs Rule is 0.20 lb/MMBTu.

Although it is expected that the EPA will issue the final HAPs Rule by no later than December 16, 2011, KU asserts that it is prudent for it to act now to ensure timely compliance. KU notes that, barring unprecedented presidential intervention, a maximum of four years is all the time that a utility will have to comply with the HAPs Rule. Because of the tight compliance period, KU states that a delay in obtaining firm contracts to build such pollution control facilities could result in having to pay higher prices for labor and materials as demand for those resources will increase in the scramble to comply with these new stringent air regulations.

### CCR

In June 2010, the EPA issued a notice of proposed rulemaking that proposed different versions of a rule under RCRA to regulate CCR for the first time ever. CCR, often referred to as coal ash, is currently considered exempt waste under an amendment to RCRA. The EPA is considering two possible options for the management of coal ash disposal for public comment (and a sub-option under one of the proposed rules). Under the first proposal, EPA would list CCR as special waste subject to regulation under subtitle C of RCRA, when destined for disposal in landfills or surface impoundments. Under the second proposal, EPA would regulate CCR under subtitle D of RCRA, the section for non-hazardous wastes. Additionally, the EPA has proposed a sub-option under subtitle D, which is also known as "D Prime." The D Prime sub-option permits existing storage facilities to operate until the end of their useful lives,

so that only new landfills and surface impoundments would have to comply with the new subtitle D liner, location, and operational requirements.

KU asserts that the trend of EPA regulation is constantly toward tighter, not looser, regulation of nearly all aspects of coal combustion by-products, whether in the form of air emissions or solid wastes. KU further asserts that the prudent course for its customers is for KU to position itself and its facilities to be able to comply with the final CCR regulation now, particularly, concerning the Brown Main Ash Pond, where stopping the current work to expand the wet pond and converting it to a dry-storage landfill will likely save customers millions of dollars.

Amendment to Project 29 (Brown CCR Storage Landfill)

KU proposes to convert the Brown Main Ash Pond to a dry-storage CCR landfill to comply with the pending regulations by the EPA for long-term storage of CCR.<sup>5</sup> KU maintains that this approach should comply with all of the proposed rules contained in the CCR regulation, regardless of whether EPA ultimately classifies CCR as a hazardous or non-hazardous waste under RCRA. The estimated capital cost for this proposed project is \$58.67 million.

KU has operated ash treatment basins at its Brown generating station for as long as the station has been in service. The original CCR storage plan at Brown included a phased expansion of the Brown Main Ash Pond and a phased construction of the Brown Auxiliary Pond for interim storage of CCR during the Main Ash Pond expansion and for storage of bottom ash once the Main Ash Pond was to be available.

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<sup>5</sup> Direct Testimony of John N. Voyles (“Voyles Direct Testimony”), p. 7.

Environmental cost recovery treatment for the first phase of Brown's on-site storage plan was approved by the Commission on June 20, 2005, as Project 20 in Case No. 2004-00426.<sup>6</sup> Phase I included raising the elevation of the Brown Main Ash Pond to 902 feet and raising the elevation of the Brown Auxiliary Pond to 880 feet. Brown produces three primary CCRs: bottom ash, fly ash, and gypsum. The ash is currently stored in the Brown Auxiliary Pond. The gypsum is currently being used in the expansion of the Brown Auxiliary Pond but will start being stored in the Auxiliary Pond in 2012. The Main Ash Pond was removed from service in September 2008 to facilitate construction of the approved Phase I elevation of 902 feet which was scheduled for completion in 2010. As of June 2010, KU has spent \$53.3 million of the approved \$73.1 million capital expenditure for Phase I.

The second phase was approved as Project 29 in Case No. 2009-00197.<sup>7</sup> Project 29 was part of KU's 2009 Environmental Compliance Plan, which consisted of expanding the Auxiliary Pond to a final elevation of 900 feet and the Main Ash Pond to the next elevation of the multi-phase project to an elevation of 912 feet. The Main Ash Pond was to have approximately six years of projected remaining capacity after

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<sup>6</sup> Case No. 2004-00426, Application of Kentucky Utilities Company for a Certificate of Public Convenience and Necessity to Construct Flue Gas Desulfurization Systems and Approval of its 2004 Compliance Plan and Recovery by Environmental Surcharge (Ky. PSC, June 20, 2005).

<sup>7</sup> Case No. 2009-00197, Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of its 2009 Compliance Plan for Recovery by Environmental Surcharge (Ky. PSC, Dec. 23, 2009).

reaching an elevation of 912 feet in 2012, with subsequent increased elevation as required for the overall 30-year-life design.<sup>8</sup>

On June 21, 2010, KU stopped construction of the Brown Main Ash Pond in light of the EPA issuing a proposed ruling to establish federal guidelines for CCR storage. It was KU's expectation that the Main Ash Pond would not have been in compliance under the proposed CCR regulations. Given the potential new requirements, KU developed new alternatives for dry landfill disposal of Brown's CCR. KU developed and analyzed three CCR storage plan options. The first landfill option stops construction of the Main Ash Pond starter dike immediately, completes expansion of the Auxiliary Pond to 900 feet by 2012, and converts the Main Ash Pond to a dry landfill by 2014. The second option continues the construction of the Main Ash Pond starter dike, continues the expansion of the Auxiliary Pond by 2014, and converts the Main Ash Pond to a landfill by 2016. The third option is to immediately stop all construction of on-site storage facilities and have a contractor haul away all CCR for storage in an offsite commercial landfill. Based on the modeling performed by KU, the least-cost option for the long-term storage needs at Brown is the first option, with an on-site landfill in service by 2014. The present value revenue requirement of the first option is \$23 million lower than the second on-site landfill option and is \$80 million lower than the offsite disposal option.

As proposed, the amendment to Project 29 would consist of accelerating the construction of the Auxiliary Pond to its final Phase II height of 900 feet, continued ash grading within the Main Ash Pond footprint, capping the Main Ash Pond with a flexible synthetic membrane liner, conducting landfill engineering and permitting activities,

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<sup>8</sup> Voyles Direct Testimony, p. 6.



converting all station ash handling systems from wet to dry, and constructing the final phase of the landfill. KU anticipates it will require 2.5 years to perform these activities, including the first phase of the landfill construction, with an expected in-service date of January 2014.<sup>9</sup>

KU asserts that if it does not act soon to convert the Brown Main Ash Pond to a dry-storage landfill, work must resume completing the already-approved phases of the Main Ash Pond expansion so it can be ready to receive additional CCR before the Auxiliary Pond runs out of storage approximately in January 2014. Completing the approved phases of the Main Ash Pond expansion will require an additional capital expenditure of approximately \$10 million, a portion of which would be stranded if the EPA ultimately classifies CCR as a hazardous or solid waste under RCRA and does not grandfather existing ash ponds. KU also estimated that \$6.5 million of the expenditures to date on the Main Ash Pond will be stranded investment due to the conversion to a dry-storage landfill. Moreover, KU points out that converting the Main Ash Pond to a dry-storage landfill after the two currently approved pond expansion phases are complete would have required capital investments ranging from \$30 million to \$40 million more than the \$59 million KU projects will be necessary to convert the pond from its current state.<sup>10</sup>

#### Project 34 (Brown Air Compliance)

In order to address the mercury and particulate emissions reduction requirement contained in the proposed HAPs Rule, KU proposes to construct Particulate Matter

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<sup>9</sup> Id.

<sup>10</sup> Voyles Direct Testimony, p. 8.

Control Systems to serve each of the three Brown units.<sup>11</sup> Each Particulate Matter Control System comprises a pulse-jet fabric filter (“baghouse”) to capture particulate matter, a Powdered Activated Carbon (“PAC”) injection system to capture mercury, a lime injection system to protect the baghouses from the corrosive effects of sulfuric acid mist (“SAM”) and other balance-of-plant support system changes (e.g., ash collection/transport systems and fans).<sup>12</sup> The Particulate Matter Control Systems will be similar to the baghouse installed at Trimble County Unit 2, in which KU and LG&E share ownership, as part of its overall air quality control system.

Project 34 also includes installing SAM mitigation equipment consisting of sorbent injection systems on Brown Units 1 and 2 that are independent of the lime injection systems associated with the baghouses.<sup>13</sup> The SAM mitigation systems for Brown Units 1 and 2 are also necessary to meet the Title V SAM emissions requirement for Brown that arose from an EPA enforcement action.<sup>14</sup>

The total projected capital cost of these facilities at Brown is \$344 million; \$109 million for Unit 1, \$118 million for Unit 2, and \$117 million for Unit 3.<sup>15</sup>

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<sup>11</sup> Direct Testimony of Gary H. Revlett, p. 13.

<sup>12</sup> Voyles Direct Testimony, p. 10.

<sup>13</sup> Voyles Direct Testimony, p. 11.

<sup>14</sup> Id.

<sup>15</sup> Voyles Direct Testimony, p. 17.

### Project 35 (Ghent Air Compliance)

Like the proposed Particulate Matter Control Systems for Brown, KU proposes to construct Particulate Matter Control Systems to serve each of its four Ghent units.<sup>16</sup> KU asserts that these Particulate Matter Control Systems are needed at the Ghent units to address the mercury and particulate emission reduction requirements contained in the proposed HAPs Rule.<sup>17</sup>

Also included in Project 35 is the addition to Ghent Unit 2 of SAM mitigation equipment similar to that installed on Ghent Units 1, 3 and 4, which were approved as Project 24 under KU's 2006 Environmental Compliance Plan.<sup>18</sup> In addition, the SAM mitigation equipment on Ghent Units #1, 3 and 4 will be upgraded to include milling equipment and refinement in injection location and methodology to respond to certain EPA enforcement actions concerning opacity and Prevention of Significant Deterioration rules concerning Ghent.<sup>19</sup>

Lastly, Project 35 includes modifications to various systems at Ghent Units 1, 3 and 4 to expand the operating range of the units at which their existing Selective Catalytic Reduction ("SCR") equipment can function to reduce NO<sub>x</sub> emissions.<sup>20</sup> KU maintains that the proposed modifications would allow the SCRs to operate when the generating units are running at lower load levels than those at which it is currently

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<sup>16</sup> Voyles Direct Testimony, p. 12.

<sup>17</sup> Id.

<sup>18</sup> Voyles Direct Testimony, p. 13.

<sup>19</sup> Id.

<sup>20</sup> Voyles Direct Testimony, p. 12.

possible to run the SCRs.<sup>21</sup> Expanded operating ranges at high levels of NO<sub>x</sub> reduction from the SCR when generating units are operating at lower load levels will consume fewer of the NO<sub>x</sub> allowances created by CSAPR.<sup>22</sup> The proposed modifications will provide additional margin against the NO<sub>x</sub> tonnage caps in the EPA regulations, thus deferring the need for additional SCR installations and supporting least-cost compliance with CSAPR, which imposes stricter NO<sub>x</sub> emissions requirements on KU.<sup>23</sup>

The total projected capital cost of these proposed facilities at Ghent is \$691 million; \$157 million for Unit 1, \$165 million for Unit 2, \$191 million for Unit 3, and \$178 million for Unit 4.<sup>24</sup>

KU asserts that baghouses, such as the ones proposed in this matter, can consistently achieve particulate matter emissions of less than 0.03 lb/MMBtu (the HAPS Rule's particulate matter emission limit) on a continuous basis, and will remove lime injection reagents, SAM and mercury-laden PAC, among other particulates, to levels required by the regulations.<sup>25</sup> Coupled with baghouses, the PAC injection systems will be able to meet the proposed HAPs Rule's mercury emission limit of 1.2 lbs/MMBTu on a continuous basis.<sup>26</sup>

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<sup>21</sup> Id.

<sup>22</sup> Voyles Direct Testimony, p. 19.

<sup>23</sup> Id.

<sup>24</sup> Voyles Direct Testimony, p. 17.

<sup>25</sup> Voyles Direct Testimony, p. 14.

<sup>26</sup> Voyles Direct Testimony, p. 16.

KU also proposes to install additional SAM-mitigating reagent injection systems that inject Trona or hydrated lime to remove SO<sub>3</sub> from the flue gas stream of each of Brown Units 1 and 2 and Ghent Unit 2, as well as to upgrade the existing SAM mitigation facilities at Ghent 1, 3, and 4.<sup>27</sup> KU informs that burning high-sulfur, lower-cost coal can increase a generating unit's SAM emissions.<sup>28</sup> The use of sorbent injection, therefore, can reduce SAM emissions on a continuing basis, mitigating the visible blue plume formation (and corresponding high opacity) from the chimney.<sup>29</sup>

#### KU's Air Compliance Analysis and Methodology

In May 2010, KU retained Black and Veatch, an engineering firm, to assist in providing conceptual engineering and developing construction cost estimates for the least-cost option for installing emission controls at each of KU's generation units to comply with expected future regulatory requirements. KU provided Black and Veatch with all of the emission control facilities cost and performance data used in the analyses. KU, with the assistance of Black and Veatch, arrived at various suites of environmental control facilities to be placed on each of the company's units. Appendix B contains a chart summarizing KU's proposed environmental control facilities and their projected costs of operation through 2020.

KU worked with Black and Veatch through two phases of initial engineering to develop unit-by-unit compliance options. Where compliance is not measured on a unit-by-unit basis (CSAPR and HAPs Rule), KU conducted an analysis to demonstrate the

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<sup>27</sup> Id.

<sup>28</sup> Id.

<sup>29</sup> Id.

need for emission controls on a station- or system-wide basis. Once that was accomplished, KU performed an analysis to determine if all of the compliance equipment would be necessary to achieve compliance with the applicable air regulations. The results of that analysis were used by KU to pare down and refine the compliance equipment to be included in each project and ultimately to determine, for each generating unit, whether it would be more cost-effective to install the pollution control facilities or to retire the unit and buy replacement capacity by comparing the revenue requirement for installing controls to the revenue requirements of retiring and replacing capacity. The revenue requirement is reduced to a present value in 2011 dollars ("PVRR") and based on a 30-year study period (2011-2040).

Under the installation of controls scenario, KU considered the capital and fixed operating and maintenance costs of the controls as well as the associated impact on total system production costs. Under the retirement scenario, KU considered the capital and fixed operating and maintenance savings associated with retiring a unit, the costs of either installing and operating replacement capacity or purchasing capacity, and the overall impact of the modified generation portfolio on system production costs.

As a result of its engineering and modeling processes, KU states that its 2011 Environmental Compliance Plan reflects a cost-effective means of complying with the applicable air regulations. Specifically, KU's 2011 Environmental Compliance Plan includes installing additional environmental controls on its Brown and Ghent coal units. The joint analysis submitted by KU and LG&E on November 3, 2011, in response to a Commission Staff information request, demonstrates that, under 11 of the 15 sensitivity

scenarios that were modeled, the KU and LG&E 2011 Environmental Compliance Plans produced the lowest PVRR.<sup>30</sup>

### Settlement Agreement

As a result of the November informal conferences, KU filed a unanimous Settlement Agreement which it characterized as addressing all matters at issue in this proceeding and representing a fair, just, and reasonable resolution of all the issues in this proceeding.

The major provisions of the Settlement Agreement, which is attached hereto and incorporated herein as Appendix A, are as follows:

1. All parties to the case, except the Environmental Intervenors, stipulate and support the approval of KU's 2011 Environmental Cost Recovery Plan, as amended, as reasonable and cost-effective under KRS 278.183 and the issuance of CPCNs for the projects included therein. The Environmental Intervenors do not support KU's plans for Ghent, but they agree to not challenge the reasonableness or cost-effectiveness of KU's Compliance Plan or the requested CPCNs.

2. KU agrees to amend its application to withdraw the portion of Project No. 34 in KU's 2011 Environmental Compliance Plan concerning the proposed "Particulate Matter Control System," defined as a pulse-jet fabric filter or "baghouse" to capture particulate matter, a Powdered Activated Carbon injection system to capture mercury, a lime injection system to protect the baghouses from the corrosive effects of SAM and other balance-of-plant support system changes such as ash collection and transport

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<sup>30</sup> The scenarios under which the KU and LG&E proposed environmental plans did not produce the lowest PVRR included estimates of CO<sub>2</sub> prices, the addition of SCR devices on all units not already equipped with an SCR, or a combination thereof.

systems and fans, to serve each of Brown Units 1 and 2, except the SAM mitigation equipment consisting of sorbent injection systems on Brown Units 1 and 2 that are independent of the lime injection systems associated with the baghouses.

3. KU agrees to withdraw the portion of its application requesting a CPCN to permit the construction of a Particulate Matter Control System to serve Brown Units 1 and 2.

4. KU agrees that, in any applications filed under KRS 278.020 or KRS 278.183 seeking a CPCN to permit the construction of a Particulate Matter Control System to serve Brown Units 1 and 2 or approval of cost recovery for such equipment and related costs through the Environmental Cost Recovery ("ECR") mechanism, it will not ask the Commission to issue an order granting the requested relief before January 1, 2014, and will not file such request before July 1, 2013, unless finalized changes in the proposed utility Maximum Achievable Control Technology (or MACT) rules, further finalized ambient air quality standards, or other regulations finalized after the date of the Settlement Agreement establishes new environmental requirements for Brown Units 1 and 2.

5. KU will seek to increase its short-term borrowing limit to \$500 million, subject to approval by the Federal Energy Regulatory Commission.

6. KU will use short-term debt as the first form of financing for capital projects.

7. KU will evaluate the cost-effectiveness, reasonableness, and feasibility of issuing tax-exempt pollution control bonds in connection with long-term debt financings.



8. In the six-month and two-year review proceedings under KRS 278.183(3), KU will calculate the short-term debt rate using average daily balances and daily interest rates, and will calculate the long-term debt rate using daily balances and daily interest rates in connection with the ECR true-up calculations for the actual weighted average cost of capital.

9. The return on equity to be used for all projects and items contained in KU's 2009, 2006, and 2005 Environmental Compliance Plans shall remain at the current level of 10.63 percent unless prospectively changed by a future Commission order.

10. The return on equity to be used for all projects and items contained in KU's 2011 Environmental Compliance Plan shall be 10.10 percent unless prospectively changed by a future Commission order.

11. The total amount of ECR revenue to be collected from each of the following KU rate classes will be determined on the current total revenue methodology, which uses total utility revenues to allocate revenues between rate classes; RS Residential Service, VFD Volunteer Fire Department Service, AES All Electric School, ST. LT. Street Lighting Service, P.O. LT. Private Outdoor Lighting, LE Lighting Energy Service, TE Traffic Energy Service, DSK Dark Sky Friendly, and LEV Low Emission Vehicle Service.

12. The calculation of the ECR factor for rate classes GS General Service, PS Power Service, TODS Time-of-Day Secondary Service, TODP Time-of-Day Primary Service, RTS Retail Transmission Service, FLS Fluctuating Load Service, and special contracts will be based on non-fuel revenues, rather than total revenues as previously utilized for all rate classes.

13. With respect to the change in revenue allocation referenced above in paragraph No. 12, KU will propose to adopt that change in its pending environmental surcharge two-year review case, and the impact of implementing that change will be reviewed and addressed, if appropriate, by KU in KU's two subsequent environmental surcharge two-year reviews or ECR compliance plan proceedings.

14. KU's and LG&E's shareholders will make two additional annual contributions totaling \$500,000 to the companies' Home Energy Assistance ("HEA") programs, consisting of a shareholder contribution of \$250,000 in each of 2011 and 2012. These contributions will be split evenly between the KU and LG&E HEA Programs.

15. Effective January 1, 2012, KU's HEA charge will increase from 15 cents to 16 cents, and will remain at the 16-cent level until the next change in KU's base rates.

#### Legal Standards

##### CPCN

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.<sup>31</sup> To obtain a CPCN, the utility must demonstrate a need for such facilities and an absence of wasteful duplication.<sup>32</sup>

"Need" requires:

a showing of a substantial inadequacy of existing service involving a consumer market sufficiently large to make it

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<sup>31</sup> KRS 278.020(1).

<sup>32</sup> *Kentucky Utilities Co. v. Pub. Serv. Comm'n*, 252 S.W.2d 885 (Ky. 1952).

economically feasible for the new system or facility to be constructed and operated.

. . . [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.<sup>33</sup>

“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.”<sup>34</sup> 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 alternatives has been performed.<sup>35</sup> Selection of a proposal that ultimately costs more than an alternative does not necessarily result in wasteful duplication.<sup>36</sup> All relevant factors must be balanced.<sup>37</sup>

#### Environmental Cost Recovery Mechanism

KRS 278.183(1), commonly known as the Environmental Surcharge Statute provides, in pertinent part, as follows:

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<sup>33</sup> Id. at 890.

<sup>34</sup> Id.

<sup>35</sup> 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).

<sup>36</sup> See *Kentucky Utilities Co. v. Pub. Serv. Comm’n*, 390 S.W.2d 168, 175 (Ky. 1965). See also Case No. 2005-00089, The Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity to Construct a 138 kV Transmission Line in Rowan County, Kentucky (Ky. PSC, Aug. 19, 2005).

<sup>37</sup> Case No. 2005-00089, Order dated August 19, 2005, at 6.

Notwithstanding any other provision of this chapter, effective January 1, 1993, a utility shall be entitled to the current recovery of its costs of complying with the Federal Clean Air Act as amended and those federal, state, or local environmental requirements which apply to coal combustion wastes and by-products from facilities utilized for production of energy from coal in accordance with the utility's compliance plan as designated in subsection (2) of this section. These costs shall include a reasonable return on construction and other capital expenditures and reasonable operating expenses for any plant, equipment, property, facility, or other action to be used to comply with applicable environmental requirements set forth in this section. Operating expenses include all costs of operating and maintaining environmental facilities, income taxes, property taxes, other applicable taxes and depreciation expenses as these expenses relate to compliance with the environmental requirements set forth in this section.

The Environmental Surcharge Statute allows a utility to recover its qualifying environmental costs through a rate-making procedure which is an alternative to the filing of a general rate case under KRS 278.190. The Environmental Surcharge Statute specifies: (1) the categories of costs that can be recovered by surcharge; (2) the procedures which must be followed by a utility to obtain approval of its environmental plan and surcharge; (3) the procedures and evidentiary standard to be applied by the Commission in reviewing applications for approval of an environmental plan and rate charge; and (4) the mandatory filing requirements and periodic reviews of an approved surcharge. The Commission must consider the plan and the proposed rate surcharge, and approve them if it finds the plan and rate surcharge to be reasonable and cost-effective.

#### FINDINGS

The evidentiary record developed in this case is massive, consisting of hundreds of thousands of pages of documents, many filed in paper format; but those too

voluminous for paper filing were submitted on compact discs. Numerous economic modeling runs were performed and filed by the parties in support of their respective positions. Having thoroughly reviewed the extensive evidentiary record, the Settlement Agreement, and being otherwise sufficiently advised, the Commission has made an independent analysis to determine the reasonableness of the Settlement Agreement. Our analysis is based on the current emission levels at KU's generating units, the future levels of emission reductions needed to be in compliance with EPA regulations, and the modeling results of the present value costs to construct and operate environmental retrofits to KU's existing generation versus retiring coal-fired generation and either constructing and operating gas-fired generation or purchasing capacity. Additionally, we reviewed KU's proposed Amendment to Project 29 regarding the CCR storage facilities at Brown. Based on the Commission's analysis of the record, we find that the provisions of the Settlement Agreement, when viewed in total, represent the most reasonable and cost-effective course of action for KU to meet its environmental obligations under the EPA regulations under consideration in this case.

The Commission also finds that the Settlement Agreement represents diverse interests and divergent points of view. We note that the intervenors in this proceeding represent a broad cross section of KU's customer base, including residential, commercial and industrial concerns, government, low- and fixed-income individuals, and environmental organizations. Indeed, given the sheer magnitude and significance of this matter, driven by the increased stringent federal air emission standards made more urgent by the short compliance time frame, the Commission retained an external consultant as authorized in environmental surcharge cases of this type under the

provisions of KRS 278.183(4). The consultant assisted Commission Staff in propounding requests for information and developing the evidentiary record now before us in this case.

The Commission is very encouraged by the scope and breadth of the terms of the Settlement Agreement and we compliment the parties to this matter on the results they were able to achieve. We find that the Settlement Agreement represents a reasonable resolution to the issues surrounding KU's proposed 2011 Environmental Compliance Plan and should be approved. While the Commission finds that the Settlement Agreement should be approved, we believe the evidence of record requires that we specifically address several additional issues.

#### Revenue Allocation

The first of these issues is the change in revenue allocation for GS – General Service class customers, many having relatively low electric usage. While this change was agreed to by all parties, we note the wisdom of the provision in the Settlement Agreement requiring the impact of this change in revenue allocation be addressed by KU in its next two two-year Environmental Surcharge review cases. KU has also reserved the right to present recommended changes to this new allocation methodology, if appropriate, after consultation with affected customer representatives, and the Commission also intends to monitor the impact of this change.

#### Brown Ash Pond

In KU's 2009 Environmental Compliance Plan, the Commission approved, by Order entered December 23, 2009, the expansion of the existing Main Ash Pond at the Brown Station. That project was estimated to cost \$24.9 million and be completed in

2012. Upon our approval, KU immediately commenced construction, but most of the work was suspended in June 2010 due to EPA's issuance of its proposed CCR regulation.<sup>38</sup> KU now estimates that approximately \$6.5 million of its expenditures on expanding the Main Ash Pond will be stranded due to the need to convert the pond to a landfill.<sup>39</sup> The specific expenditures on the expansion of the Main Ash Pond, and the timing of those expenditures, are issues that are appropriate for review in KU's next two-year Environmental Surcharge review proceeding.<sup>40</sup>

#### Construction Monitoring

The environmental construction projects being approved by this Order are estimated to cost just over \$800 million after eliminating the proposed Particulate Matter Control System to serve Brown Units 1 and 2, as agreed to by all parties. These projects are very significant in size, scope, and, particularly, cost. The projects will be constructed almost simultaneously on multiple generating units at two different generating stations. While KU has committed to solicit bids for all aspects of each project that exceeds \$25,000,<sup>41</sup> the Commission believes that it is necessary and

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<sup>38</sup> Volyes Direct Testimony, p. 6.

<sup>39</sup> Volyes Direct Testimony, Exhibit 4, p. 3.

<sup>40</sup> See John Volyes 2009 KU and LG&E ECR hearing testimony re: potential impact on the prudence of LG&E and KU's 2009 Environmental Compliance Plans if EPA declares CCR to be hazardous, November 3, 2009 Video Transcript at 11:02 a.m.-11:14 a.m., Case Nos. 2009-00197, Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of its 2009 Compliance Plan for Recovery by Environmental Surcharge (Ky. PSC, Dec. 23, 2009) and 2009-00198, Application of Louisville Gas and Electric Company for a Certificate of Public Convenience and Necessity and Approval of its 2009 Compliance Plan for Recovery by Environmental Surcharge (Ky. PSC, Dec. 23, 2009).

<sup>41</sup> Volyes Direct Testimony, p. 25.

appropriate to monitor the status and progress of the construction of the projects approved herein. The scope of our monitoring is currently anticipated to encompass, in general, all phases of the projects, including KU's management plans, engineering processes, procurement plans, construction, startup, commissioning, in-service verification, and closeout. The Commission intends to perform this monitoring with the assistance of the external consultant that was retained in this case. The costs of monitoring are expected to be relatively minimal in comparison to the costs of the projects, with the costs of monitoring being recoverable by KU through its Environmental Surcharge. KU will be required to file quarterly reports detailing, among other items, the results of bidding procedures, the status of construction, adherence to budgets, adherence to timelines, advance notice of any construction impacts on system reliability, and significant change orders. The exact content of these reports will be determined in the near future.

#### Environmental Surcharge Monthly Reports

Pursuant to the terms of the Settlement Agreement, KU filed revised formats for its monthly Environmental Surcharge Reports. The revised reporting formats will be filed by KU each month and are necessary to reflect the new projects approved herein, as well as the revised revenue allocation agreed to by the parties. Although these revised forms are reasonable, the Commission finds that an additional modification should be made to explicitly reflect the cost of monitoring as discussed above.

#### Consumer and Commission Concerns

In granting our approval of KU's Environmental Surcharge Plan, we recognize that the level of capital expenditures is extremely high, and that these capital costs, plus



the related operation and maintenance expenses, will result in very significant annual increases in customer rates over the next four years and those increases will be included in customer rates over the life of the new environmental facilities. The Commission acknowledges the large number of customer letters and petitions filed in opposition to KU's Environmental Compliance Plan and the resulting rate increases. We have carefully considered these numerous written and verbal comments from KU's customers concerning the significant impact on KU's rates. However, the record of evidence demonstrates that KU has selected the least costly options for meeting its environmental requirements. Further, the Commission notes that the General Assembly, in enacting KRS 278.183(1), has made it very clear that an electric utility such as KU has the right to the current recovery by environmental surcharge of its reasonable and prudent costs for complying with the Federal Clean Air Act as amended, as well as those federal, state, or local environmental regulations applicable to coal combustion wastes and by-products from facilities utilized for production of energy from coal.

The large number of customers registering opposition to KU's application and future rate increases is but one indication of the sluggish economy in the Commonwealth. Due to the relatively high level of unemployment in Kentucky, the Commission will expect KU, as well as its contractors and subcontractors, to hire a local work force to the extent possible when undergoing construction of the environmental projects approved herein.

### Revisions to Environmental Requirements

One of the issues raised in this case was whether KU should be authorized to proceed at this time with its proposed environmental projects even though EPA's HAPs Rule is not yet final and even though KU may be required to comply with new or revised environmental rules in the future. KU affirmatively addressed this issue with respect to the HAPs Rule by committing to promptly notify the Commission in the event that a future revision in that rule impacts an approved environmental project. In addition, KU acknowledged that it "will not use such authority [as granted in this case] to make imprudent investments."<sup>42</sup> In an effort to help ensure that all environmental investments are prudent, the Commission finds that KU should promptly file notice of either a change in an existing environmental requirement or the finalization of a new requirement, along with an analysis of the impacts on facilities in service and under construction.

### Outstanding Motions

#### KU's Motion to Conform Application to the Terms of the Settlement Agreement

To properly reflect the terms of the Settlement Agreement with respect to the deletion of the Particulate Matter Control System at Brown Units 1 and 2, KU filed a formal motion to amend its application for approval of its 2011 Environmental Compliance Plan and the issuance of CPCNs. As noted above, KU has agreed to amend its plan by withdrawing the portion of Project 34 relating to Brown Units 1 and 2 and will not refile for approval of that portion of the project prior to July 1, 2013, subject to certain conditions specified in the Settlement Agreement. The Commission finds this amendment to be reasonable and appropriate, and we will grant our approval.

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<sup>42</sup> Voyles Rebuttal Testimony, p. 3-4.

Environmental Intervenors' Motion to File Corrected Testimony and Substitute Witness

On November 3, 2011, the Environmental Intervenors filed a motion to allow the filing of corrections to their previously filed direct testimony of William Steinhurst, and to allow James Richard Hornby to adopt Mr. Steinhurst's testimony due to his unavailability at the scheduled hearing. Also attached to that motion was the corrected direct testimony of another of their witnesses, Dr. Jeremy Fisher. KU filed a response objecting to this filing of corrected testimonies, claiming it is untimely, it improperly characterizes new testimony as corrections, and it fails to include the Strategist input and output files supporting the corrections. The Environmental Intervenors have now moved to withdraw the corrected testimony of Dr. Jeremy Fisher, noting that all parties have entered into a Settlement Agreement. Having considered the motion, the Commission finds that the corrections to Mr. Steinhurst's testimony should be accepted, the adoption of his testimony should be denied as moot due to the Settlement Agreement, and the corrections to Dr. Fisher's testimony should be withdrawn.

IT IS THEREFORE ORDERED that:

1. KU is granted CPCNs to construct the proposed Particulate Matter Control Systems at Brown Unit 3 and at Ghent Units 1, 2, 3, and 4.
2. KU's 2011 Amended Environmental Compliance Plan, consisting of an amendment to Project 29, Amended Project 34, and Project 35, is approved.
3. The proposed revisions to Rate Schedule ECR are approved.
4. The proposed revisions and additions to KU's monthly ES forms are approved as modified in the findings above, with the effective date of the revisions approved as requested.

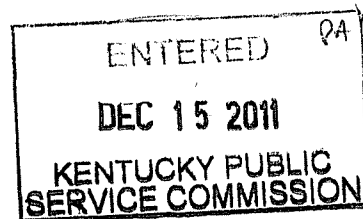
5. The Settlement, attached hereto and incorporated herein as Appendix A, is approved in its entirety.

6. Within 10 days of the date of this Order, KU shall file with the Commission revised tariff sheets setting out Rate Schedule ECR as approved herein and reflecting that it was approved pursuant to this Order.

7. KU shall promptly file with the Commission a notice and supporting analysis in the event that a new or revised environmental requirement impacts any facility in service or under construction.

8. Any documents filed in the future pursuant to ordering paragraph 7 herein shall reference this case number and shall be retained in the utility's general correspondence files.

By the Commission



ATTEST:

  
Executive Director

APPENDIX A

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE  
COMMISSION IN CASE NO. 2011-00161 DATED **DEC 15 2011**

## SETTLEMENT AGREEMENT, STIPULATION, AND RECOMMENDATION

This Settlement Agreement, Stipulation, and Recommendation (“Settlement Agreement”) is entered into this 9th day of November 2011 by and between Kentucky Utilities Company (“KU”); Louisville Gas and Electric Company (“LG&E”) (collectively, the “Companies”); Kentucky Industrial Utility Customers, Inc. (“KIUC”); Attorney General for the Commonwealth of Kentucky, by and through his office of Rate Intervention (“AG”); Community Action Council for Lexington-Fayette, Bourbon, Harrison and Nicholas Counties, Inc. (“CAC”); Lexington-Fayette Urban County Government (“LFUCG”); The Kroger Co. (“Kroger”); Metropolitan Housing Coalition (“MHC”); United States Department of Defense and Other Federal Executive Agencies (“DOD/FEA”); and Rick Clewett, Raymond Berry, Drew Foley, Janet Overman, Gregg Wagner, Sierra Club and the Natural Resources Defense Council (“Environmental Group”) (collectively, the “Intervenors”) in the proceedings involving KU and LG&E, which proceedings are the subject of this Settlement Agreement as set forth below:

### WITNESSETH:

**WHEREAS**, KU filed on June 1, 2011, with the Kentucky Public Service Commission (“Commission”) its Application and Testimony in *The Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2011 Compliance Plan for Recovery by Environmental Surcharge*, and the Commission has established Case No. 2011-00161 to review KU’s application;

**WHEREAS**, LG&E filed on June 1, 2011, with the Commission its Application and Testimony in *The Application of Louisville Gas and Electric Company for a Certificates of Public Convenience and Necessity and Approval of Its 2011 Compliance Plan for Recovery by Environmental Surcharge*, and the Commission has established Case No. 2011-00162 to review LG&E’s application;

**WHEREAS**, the Commission issued deficiency letters to LG&E and KU concerning their applications on June 14, 2011, which deficiencies LG&E and KU subsequently cured, and the Commission, by Order dated June 21, 2011, accepted the applications as filed on June 16, 2011;

**WHEREAS**, KIUC filed petitions to intervene in both proceedings on May 18, 2011, and was granted intervention by the Commission in both proceedings on May 23, 2011;

**WHEREAS**, AG filed petitions to intervene in both proceedings on May 25, 2011, and was granted intervention by the Commission in both proceedings on June 3, 2011;

**WHEREAS**, CAC filed a petition to intervene in only Case No. 2011-00161 on June 3, 2011, and was granted intervention by the Commission on June 16, 2011;

**WHEREAS**, LFUCG filed a petition to intervene in only Case No. 2011-00161 on June 8, 2011, and was granted intervention by the Commission on June 16, 2011;

**WHEREAS**, Kroger filed petitions to intervene in both proceedings on June 14, 2011, and was granted intervention by the Commission in both proceedings on June 16, 2011;

**WHEREAS**, MHC filed a petition to intervene in only Case No. 2011-00162 on June 15, 2011, and was granted intervention by the Commission in both proceedings on June 23, 2011;

**WHEREAS**, Rick Clewett, Raymond Berry, Sierra Club, and the Natural Resources Defense Council filed a petition to intervene in Case No. 2011-00161 on June 16, 2011, and were granted intervention by the Commission on July 27, 2011; and Drew Foley, Janet Overman, Gregg Wagner, Sierra Club, and the Natural Resources Defense Council filed a petition to intervene in Case No. 2011-00162 on June 16, 2011, and were granted intervention by the Commission on July 27, 2011;

**WHEREAS**, DOD/FEA filed a petition to intervene in only Case No. 2011-00162 on July 6, 2011, and was granted intervention by the Commission on July 15, 2011;

**WHEREAS**, an informal conference for the purpose of reviewing the status of the case and discussing the possible settlement of issues, attended in person or by phone by representatives of the Intervenors, the Commission Staff, and the Companies, took place on November 4, 7, and 9, 2011, at the offices of the Commission;

**WHEREAS**, the Companies and the Intervenors hereto desire to settle issues pending before the Commission in the above-referenced proceedings;

**WHEREAS**, the adoption of this Settlement Agreement will eliminate the need for the Commission and the parties to expend significant resources litigating these proceedings, and eliminate the possibility of, and any need for, rehearing or appeals of the Commission's final orders herein;

**WHEREAS**, the Intervenors and the Companies agree that this Settlement Agreement, viewed in its entirety, is a fair, just, and reasonable resolution of all the issues in the above-referenced proceedings;

**WHEREAS**, it is understood by the parties hereto that this Settlement Agreement is subject to the approval of the Commission insofar as it constitutes an agreement by the parties to the proceedings for settlement; and

**WHEREAS**, it is the position of the parties hereto that this Settlement Agreement is supported by sufficient and adequate data and information, and should be approved by the Commission.

**NOW, THEREFORE**, for and in consideration of the premises and conditions set forth herein, the parties hereto stipulate and agree as follows:



**SECTION 1. Overall Recommendation.** The parties to this Settlement Agreement recommend the Commission approve the respective applications of LG&E and KU in the above-captioned cases filed on June 1, 2011 (accepted for filing on June 16, 2011), and grant the relief requested therein as amended by the terms of this Settlement Agreement, and as more specifically stated below, by entering orders on or before December 16, 2011, approving LG&E's and KU's applications in their entirety except as described in the following Sections.

**SECTION 1.01** All parties to this agreement except the Environmental Intervenors stipulate and support KU's 2011 Environmental Cost Recovery ("ECR") Compliance Plan, as amended herein, and LG&E's 2011 ECR Compliance Plan as reasonable and cost-effective for purposes of KRS 278.183; parties recommend the Compliance Plans be approved and Certificates of Public Convenience and Necessity ("CPCNs") for requested projects in KU's application, as amended, and LG&E's application be granted; and ECR surcharge recovery of the costs for the 2011 ECR Compliance Plans, as amended by the terms of this Settlement Agreement, be approved.

**SECTION 1.02** Environmental Intervenors do not support KU's plans to retrofit the Ghent power plant, and LG&E's plans to retrofit the Mill Creek and Trimble power plant; however, Environmental Intervenors agree not to challenge the reasonableness or cost-effectiveness for purposes of KRS 278.183 of KU's ECR Compliance Plan, as amended, and LG&E's Compliance Plan or CPCNs for requested projects in KU's application, as amended and LG&E's application, or ECR surcharge recovery of the costs for the 2011 ECR Compliance plans, as modified by the terms of this settlement. The Environmental Intervenors' main motivation for not opposing the

CPCNs and the Companies' 2011 ECR Compliance Plans is to support their low-income housing advocate allies.

**SECTION 2. Removing E.W. Brown Units 1 and 2 from the KU 2011 ECR Compliance Plan and Withdrawing KU's Related Request for a Certificate of Public Convenience and Necessity.**

**SECTION 2.01** KU agrees to withdraw from its application the portion of Project No. 34 in KU's 2011 ECR Compliance Plan concerning the proposed "Particulate Matter Control System," defined as a pulse-jet fabric filter or "baghouse" to capture particulate matter, a Powdered Activated Carbon injection system to capture mercury, a lime injection system to protect the baghouses from the corrosive effects of sulfuric acid mist ("SAM") and other balance-of-plant support system changes such as ash collection and transport systems and fans, to serve each of Brown Units 1 and 2, except the SAM mitigation equipment consisting of sorbent injection systems on Brown Units 1 and 2 that are independent of the lime injection systems associated with the baghouses. The SAM mitigation systems for Brown Units 1 and 2 are necessary to meet the Title V SAM emissions requirement for Brown that arose from a U.S. Environmental Protection Agency ("EPA") enforcement action.

**SECTION 2.02** KU agrees to withdraw the portion of its application requesting a CPCN to permit the construction of a Particulate Matter Control System to serve Brown Units 1 and 2.

**SECTION 2.03** The foregoing notwithstanding, KU will continue to dispatch, operate, and maintain Brown Units 1 and 2 as part of its generation fleet as long

as, and to the extent to which, it is reasonable and cost-effective to do so while complying with all applicable environmental regulations.

**SECTION 2.04** KU further agrees that, in any applications filed under KRS 278.020 or KRS 278.183 seeking a CPCN to permit the construction of a Particulate Matter Control System to serve Brown units 1 and 2 or approval of cost recovery for such equipment and related costs through the ECR mechanism, it will not ask the Commission to issue an order granting the requested relief before January 1, 2014, and will not file such request before July 1, 2013, unless finalized changes in the proposed utility MACT rules, future finalized ambient air quality standards, or other regulations finalized after the date of this agreement establish new environmental requirements for Brown Units 1 or 2. The parties acknowledge that KU projects that it would need two years from the date of Commission approval to complete the construction of the retrofit project.

**SECTION 2.05** Nothing contained herein shall prohibit any party to this agreement from seeking to intervene in any future proceeding or challenge any application filed by the Companies for the retrofitting of Brown Units 1 and 2, except that the recovery of additional costs resulting from the delay in deciding whether to retrofit Brown Units 1 and 2, including, but not limited to, fuel costs, purchase power, and construction costs, will not be challenged by any party to this Settlement Agreement. Subject to the foregoing restriction, any other challenge to such an application may include the argument that the cost of retrofitting the units is not reasonable or cost effective pursuant to KRS Chapter 278.

### **SECTION 3. Financing**

**SECTION 3.01** Each of KU and LG&E will seek to increase its short-term borrowing limit to \$500 million, subject to approval by the Federal Energy Regulatory Commission ("FERC").

**SECTION 3.02** KU and LG&E will use short term debt as the first form of financing for capital projects. The Companies expect to allow their short-term debt balances to accumulate to approximately \$250 million at each company, at which time first mortgage bonds would be issued in a minimum size of \$250 million. Market conditions may accelerate or delay the timing of the long-term debt issuances or increase the size of such issuances.

**SECTION 3.03** KU and LG&E will evaluate the cost-effectiveness, reasonableness, and feasibility of issuing tax-exempt pollution control bonds in connection with long-term debt financings.

**SECTION 3.04** In the six-month and two-year review proceedings under KRS 278.183(3), KU and LG&E will calculate the short-term debt rate using average daily balances and daily interest rates, and will calculate the long-term debt rate using daily balances and daily interest rates in connection with the ECR true-up calculations for the actual weighted average cost of capital.

### **SECTION 4. Return on Equity**

**SECTION 4.01** The return on equity to be used concerning all projects and items contained in KU's and LG&E's 2009, 2006, and 2005 ECR Compliance Plans, the costs of which KU and LG&E currently recover through their respective ECR

mechanisms, shall remain at the current level of 10.63% unless prospectively changed by a future Commission order.

**SECTION 4.02** The return on equity to be used concerning all projects and items contained in KU's and LG&E's 2011 ECR Compliance Plans, the costs of which KU and LG&E will recover through their respective ECR mechanisms, shall be 10.10% unless prospectively changed by a future Commission order.

**SECTION 4.03** The parties acknowledge the Commission's jurisdiction under KRS Chapter 278 to regulate the Companies' rates and service. The parties further acknowledge the AG's statutory right pursuant to KRS 367.150 to act as an advocate for customers in proceedings before the Commission, including the right to file a rate complaint pursuant to KRS 278.260.

## **SECTION 5. Revenue Allocation**

**SECTION 5.01** Each utility's current ECR revenue allocation methodology, which uses total utility revenues to allocate ECR revenues between rate classes, will continue to be used as modified by the two-step methodology described in Section 5.

**SECTION 5.02** Each utility's total ECR revenues to be collected will be allocated between each rate class on a total-revenues basis.

**SECTION 5.03** The total amount of ECR revenues to be collected from each of following LG&E rate classes will be determined on a total-revenues basis: RS Residential Service, VFD Volunteer Fire Department Service, LS Lighting Service, RLS Restricted Lighting Service, LE Lighting Energy Service, TE Traffic Energy Service,

DSK Dark Sky Friendly, LEV Low Emission Vehicle Service, and RRP Residential Responsive Pricing Service. The total amount of ECR revenues to be collected from each of following KU rate classes will be determined on a total-revenues basis: RS Residential Service, VFD Volunteer Fire Department Service, AES All Electric School, ST. LT. Street Lighting Service, P.O. LT. Private Outdoor Lighting, LE Lighting Energy Service, TE Traffic Energy Service, DSK Dark Sky Friendly, and LEV Low Emission Vehicle Service.

**SECTION 5.04** Each utility's total ECR revenues from the remaining rate classes will be reallocated from the remaining rate schedules on the basis of non-fuel revenues (i.e., total revenues less fuel revenues). For purposes of Section 5.04, the ECR revenues allocated in the second step of the allocation process will be reallocated among the following LG&E rate classes on the basis of non-fuel revenues: GS General Service, PS Power Service, ITODS Industrial Time-of-Day Secondary Service, CTODS Commercial Time-of-Day Secondary Service, ITODP Industrial Time-of-Day Primary Service, CTODP Commercial Time-of-Day Primary Service, RTS Retail Transmission Service, FLS Fluctuating Load Service, GRP General Responsive Pricing Service, and special contracts. For purposes of Section 5.04, the ECR revenues allocated in the second step of the allocation process will be reallocated among the following KU rate classes on the basis of non-fuel revenues: GS General Service, PS Power Service, TODS Time-of-Day Secondary Service, TODP Time-of-Day Primary Service, RTS Retail Transmission Service, FLS Fluctuating Load Service, and special contracts.

**SECTION 5.05** Each utility will use the two-step ECR revenue allocation methodology described in Sections 5.01 through 5.04 unless prospectively changed by

future Commission orders. Each utility shall address the impact of this change in revenue allocation in the next two future environmental surcharge two-year reviews or ECR compliance plan proceedings and, if appropriate, present recommendations after consulting with the AG, KIUC, Kroger, and DOD/FEA.

**SECTION 5.06** If the Commission approves this Settlement Agreement, the Companies will forthwith submit evidence in Case Nos. 2011-00231 and 2011-00232 to effectuate the roll-in at issue in those proceedings consistent with Sections 5.01-5.04 of this Settlement Agreement, and will request that the Commission issue orders granting the appropriate relief by January 31, 2012. The Companies will continue to use the existing total revenue allocation methodology in the Companies' monthly ECR filings until the Commission issues orders in Case Nos. 2011-00231 and 2011-00232 to effectuate the base-rate roll-ins described above. The purpose of this provision is to effectuate the base-rate roll-ins consistent with the methodology contained in Sections 5.01-5.04.

#### **SECTION 6. Low-Income Items**

**SECTION 6.01** KU's and LG&E's shareholders will make two additional annual contributions totaling \$500,000 to the Companies' Home Energy Assistance ("HEA") programs, consisting of a shareholder contribution of \$250,000 in each of 2011 and 2012. These contributions will be split evenly between the KU and LG&E HEA Programs.

**SECTION 6.02** Effective January 1, 2012, the Companies' HEA charges will increase from 15 cents to 16 cents, and will remain at the 16-cent level until the next change in the Companies' base rates. The Companies estimate this 1-cent HEA charge

increase will produce \$115,000 of additional HEA funds each year. The proceeds resulting from this increase will be allocated consistent with LG&E's and KU's existing HEA Programs. Nothing in this Settlement Agreement precludes any party from seeking the continuation or expansion of the HEA Programs in any future proceeding.

**SECTION 6.03** The applications of LG&E and KU in these cases contain evidence supporting their positions that they are obligated to comply with the pending and impending regulations of the Environmental Protection Agency. The Attorney General cannot state, suggest, infer, or otherwise imply that LG&E and KU should fail to comply with the Environmental Protection Agency's regulations, which have been duly enacted after public participation in the rule-making process, regardless of any argument that the regulations are flawed or unfair.

## **SECTION 7. Miscellaneous Provisions**

**SECTION 7.01** Each party waives all cross-examination of the other parties' witnesses unless the Commission disapproves this Agreement, and each party further stipulates and recommends that the Notice of Intent, Notice, Application, testimony, pleadings, and responses to data requests filed in this proceeding be admitted into the record. The parties stipulate that after the date of this Settlement Agreement they will not otherwise contest the Companies' proposals, as modified by this Settlement Agreement, in the hearing of the above-referenced proceedings regarding the subject matter of the Settlement Agreement, and that they will refrain from cross-examination of the Companies' witnesses during the hearing, except insofar as such cross-examination is in support of the Settlement Agreement.



**SECTION 7.02** The signatories hereto agree that making this Settlement Agreement shall not be deemed in any respect to constitute an admission by any party hereto that any computation, formula, allegation, assertion, or contention made by any other party in these proceedings is true or valid.

**SECTION 7.03** The signatories hereto agree that the foregoing stipulations and agreements represent a fair, just, and reasonable resolution of the issues addressed herein and request the Commission to approve the Settlement Agreement.

**SECTION 7.04** The signatories hereto agree that, following the execution of this Settlement Agreement, the signatories shall cause the Settlement Agreement to be filed with the Commission by November 10, 2011, together with a request to the Commission for consideration and approval of this Settlement Agreement.

**SECTION 7.05** The signatories hereto agree that this Settlement Agreement is subject to the acceptance of and approval by the Kentucky Public Service Commission. The signatories hereto further agree to act in good faith and to use their best efforts to recommend to the Commission that this Settlement Agreement be accepted and approved.

**SECTION 7.06** The signatories hereto agree that if the Commission does not accept and approve this Settlement Agreement in its entirety, then: (a) this Settlement Agreement shall be void and withdrawn by the parties hereto from further consideration by the Commission and none of the parties shall be bound by any of the provisions herein, provided that no party is precluded from advocating any position contained in this Settlement Agreement; and (b) neither the terms of this Settlement Agreement nor any

matters raised during the settlement negotiations shall be binding on any of the signatories to this Settlement Agreement or be construed against any of the signatories.

**SECTION 7.07** If the Commission issues an order adopting this Settlement Agreement in its entirety and without additional conditions, each of the parties agrees that it shall file neither an application for rehearing with the Commission, nor an appeal to the Franklin Circuit Court with respect to such order.

**SECTION 7.08** The signatories hereto agree that this Settlement Agreement shall inure to the benefit of, and be binding upon, the parties hereto and their successors and assigns.

**SECTION 7.09** The signatories hereto agree that this Settlement Agreement constitutes the complete agreement and understanding among the parties hereto, and any and all oral statements, representations, or agreements made prior hereto or contemporaneously herewith shall be null and void and shall be deemed to have been merged into this Settlement Agreement.

**SECTION 7.10** The signatories hereto agree that, for the purpose of this Settlement Agreement only, the terms of the Settlement Agreement are based upon the independent analysis of the parties to reflect a fair, just, and reasonable resolution of the issues herein and are the product of compromise and negotiation.

**SECTION 7.11** The signatories hereto agree that neither the Settlement Agreement nor any of the terms shall be admissible in any court or commission except insofar as such court or commission is addressing litigation or an administrative action arising out of the implementation of the terms herein or the approval of this Settlement

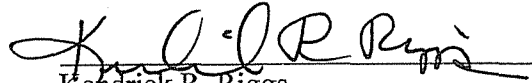
Agreement. This Settlement Agreement shall not have any precedential value in this or any other jurisdiction.

**SECTION 7.12** The signatories hereto warrant that they have informed, advised, and consulted with the respective parties hereto in regard to the contents and significance of this Settlement Agreement and, based upon the foregoing, are authorized to execute this Settlement Agreement on behalf of the parties hereto.

**SECTION 7.13** The signatories hereto agree that this Settlement Agreement is a product of negotiation among all parties hereto, and no provision of this Settlement Agreement shall be strictly construed in favor of or against any party.

**SECTION 7.14** The signatories hereto agree that this Settlement Agreement may be executed in multiple counterparts.

IN WITNESS WHEREOF, the parties have hereunto affixed their signatures:

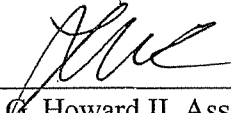


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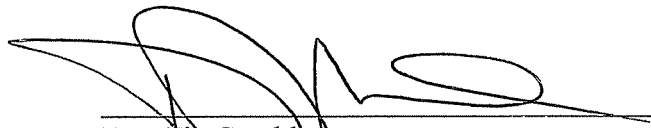
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A handwritten signature in black ink, appearing to read "David C. Brown", is written over a horizontal line.

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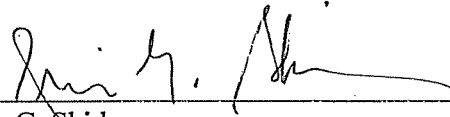
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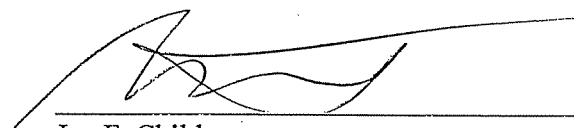
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APPENDIX B

APPENDIX TO AN ORDER OF THE KENTUCKY PUBLIC SERVICE  
COMMISSION IN CASE NO. 2011-00161 DATED **DEC 15 2011**

**KENTUCKY UTILITIES COMPANY**  
2011 ENVIRONMENTAL COMPLIANCE PLAN

Project	Air Pollutant or Waste/By-Product To Be Controlled	Control Facility	Generating Station	Environmental Regulation / Regulatory Requirement*	Environmental Permit*	Actual or Scheduled Completion	Actual (A) or Estimated (E) Projected Capital Cost (\$Million)
29 Amended	Fly & Bottom Ash, Gypsum	Coal Combustion Residual Storage Landfill (conversion from wet to dry storage)	Brown Station	EPA CCR Regulations	Division of Waste Mgmt - Landfill Permit	2014	\$58.67 (E)
34	NO <sub>x</sub> , SO <sub>3</sub> , Hg and Particulate	Baghouse with Powdered Activated Carbon Injection (shared Units 1 & 2, Unit 3); Sulfuric Acid Mist Mitigation (Units 1 and 2)	Brown Unit 1	Clean Air Act (1990), PSD Rules, EPA Consent Decree, and HAPS	Title V Permit	2014	\$109.22 (E)
			Brown Unit 2			2014	\$117.65 (E)
			Brown Unit 3			2015	\$116.92 (E)
35	NO <sub>x</sub> , SO <sub>3</sub> , Hg and Particulate	Baghouse with Powdered Activated Carbon Injection (All Units), SCR Turn-Down (Unit 1, 3, 4), Sulfuric Acid Mist Mitigation (All Units)	Ghent Unit 1	Clean Air Act (1990), HAPS, CATR, KRS Chapter 224, PSD Rules	Title V Permit	2014	\$164.21 (E)
			Ghent Unit 2			2012-2014	\$164.55 (E)
			Ghent Unit 3			2013-2015	\$198.01 (E)
			Ghent Unit 4			2014-2015	\$184.76 (E)
							<u>\$1,113.99</u>

\* Sponsored by Witness Revlett

**KENTUCKY UTILITIES COMPANY**  
2011 ENVIRONMENTAL COMPLIANCE PLAN

Project	Air Pollutant or Waste/By-Product To Be Controlled	Control Facility	Generating Station	Estimated Annual Operations and Maintenance Costs (Through 2020)									
				2012	2013	2014	2015	2016	2017	2018	2019	2020	
29 Amended	Fly & Bottom Ash, Gypsum	Coal Combustion Residual Storage Landfill (conversion from wet to dry storage)	Brown Station	\$ -	\$ -	\$ 2,813,772	\$ 2,898,185	\$ 2,985,131	\$ 3,074,685	\$ 3,166,925	\$ 3,261,933	\$ 3,359,791	
34	NO <sub>x</sub> , SO <sub>2</sub> , Hg and Particulate	Baghouse with Powdered Activated Carbon Injection (shared Units 1 & 2, Unit 3); Sulfuric Acid Mist Mitigation (Units 1 and 2)	Brown Unit 1	\$ -	\$ -	\$ 2,483,343	\$ 4,809,135	\$ 4,905,317	\$ 5,003,424	\$ 5,103,492	\$ 5,205,562	\$ 5,309,673	
			Brown Unit 2	\$ -	\$ -	\$ 5,052,836	\$ 6,871,856	\$ 7,009,293	\$ 7,149,479	\$ 7,292,469	\$ 7,438,318	\$ 7,587,085	
			Brown Unit 3	\$ -	\$ -	\$ -	\$ 4,687,119	\$ 7,171,292	\$ 7,314,718	\$ 7,461,012	\$ 7,610,232	\$ 7,762,437	
35	NO <sub>x</sub> , SO <sub>2</sub> , Hg and Particulate	Baghouse with Powdered Activated Carbon Injection (All Units), SCR Turn-Down (Unit 1, 3, 4), Sulfuric Acid Mist Mitigation (All Units)	Ghent Unit 1	\$ -	\$ 2,730,914	\$ 12,899,794	\$ 17,179,567	\$ 17,523,158	\$ 17,873,621	\$ 18,231,093	\$ 18,595,715	\$ 18,967,630	
			Ghent Unit 2	\$ 8,692	\$ 1,276,696	\$ 2,183,254	\$ 12,112,005	\$ 12,354,245	\$ 12,601,330	\$ 12,853,356	\$ 13,110,424	\$ 13,372,632	
			Ghent Unit 3	\$ -	\$ 642,953	\$ 4,721,847	\$ 6,363,418	\$ 17,537,222	\$ 17,887,966	\$ 18,245,725	\$ 18,610,640	\$ 18,982,853	
			Ghent Unit 4	\$ -	\$ 3,578,918	\$ 5,256,715	\$ 5,848,876	\$ 17,391,503	\$ 17,739,333	\$ 18,094,120	\$ 18,456,002	\$ 18,825,122	

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