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MAY 14 2012

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COMMISSION

Via Overnight Mail

May 11, 2012

Mr. Jeff Derouen, Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40602

Re: Case No. 2011-00401

Dear Mr. Derouen:

Please find enclosed the original and twelve (12) copies of (PUBLIC VERSION) of the BRIEF OF KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC for filing in the above-referenced docket. I also enclose a copy of the CONFIDENTIAL pages to be filed under seal.

By copy of this letter, all parties listed on the Certificate of Service have been served. Please place this document of file.

Very Truly Yours,

Michael L. Kurtz, Esq.
Kurt J. Boehm, Esq.
Jody M. Kyler, Esq.
BOEHM, KURTZ & LOWRY

MLKkew
Attachment
cc: Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing was served by mailing a true and correct copy via electronic mail (when available) and regular U.S. Mail to all parties on this 11th day of May, 2012

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COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

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IN THE MATTER OF:

THE APPLICATION OF KENTUCKY POWER COMPANY FOR APPROVAL OF ITS 2011 ENVIRONMENTAL COMPLIANCE PLAN, FOR APPROVAL OF ITS AMENDED ENVIRONMENTAL COST RECOVERY SURCHARGE TARIFF, AND FOR THE GRANT OF A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE CONSTRUCTION AND ACQUISITION OF RELATED FACILITIES : **Case No. 2011-00401**

BRIEF OF
KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.
(PUBLIC VERSION)

Kentucky Industrial Utility Customers, Inc. ("KIUC") hereby submits this Brief in support of its recommendations to the Kentucky Public Service Commission ("Commission") in this proceeding. The members of KIUC participating in this action are: Air Liquide Large Industries U.S., LP, Air Products and Chemicals, Inc., AK Steel Corporation, EQT Corporation and Marathon Petroleum Company, LP, and KIUC's recommendations are set forth below.

Respectfully submitted,

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RECOVERY SURCHARGE TARIFF, AND FOR THE GRANT OF A	:	
CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE	:	
CONSTRUCTION AND ACQUISITION OF RELATED FACILITIES	:	

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PUBLIC SERVICE COMMISSION

BRIEF OF
KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.
(PUBLIC VERSION)

BACKGROUND

Kentucky Power Company ("Kentucky Power" or "Company" or "AEP") requests Kentucky Public Service Commission ("Commission") approval of the Big Sandy 2 ("BS2") dry flue gas desulfurization ("DFGD") and related retrofit projects (collectively, "retrofit projects"). This request is the latest in a series of fluctuating plans the Company has made regarding the BS2 unit and compliance with the various federal environmental requirements.

From 2004-2006, during its Phase 1 review process, Kentucky Power studied whether to install a wet flue gas desulfurization unit at the BS2 unit, but ultimately decided to suspend that work in light of changed conditions.[1] Then, in 2007, a Consent Decree was entered into under which Kentucky

[1] Direct Testimony of Ranie K. Wohnhas ("Wohnhas Testimony") at 11:15-19 ("That work was suspended in 2006 because of increases in the estimated cost of the wet FGD system then being investigated, and a decrease in the price spread between low and high sulfur coal.").

Power agreed to install flue gas desulfurization emissions control equipment on the BS2 unit by December 31, 2015, or cease operation of the plant.[2] However, the Company did not restart analytical work connected with its current request for the BS2 retrofit projects until three years after the Consent Decree, in 2010.[3] The same year, Kentucky Power and other AEP subsidiaries gave notice to the Federal Energy Regulatory Commission ("FERC") of their intent to terminate the AEP Interconnection Agreement ("AEP Power Pool") effective January 1, 2014.[4]

In June 2011, after an extensive system-wide review of its generation portfolio, AEP announced plans to retire the BS2 unit by December 31, 2014.[5] AEP executives subsequently made numerous investor presentations reiterating its plan to retire the BS2 unit.[6] In early November 2011, AEP again changed course and reversed its decision to retire the unit, claiming that further study using more "robust" assumptions showed that it was economic to retrofit the unit.[7] Only a month later, on December 5, 2011, the Company filed its Application for Commission approval of the BS2 retrofit projects, shortly after initiating its Phase I review of the BS2 retrofit projects.[8] Prior to the filing of the Application, Kentucky Power conducted a sensitivity study in which considered the possibility that a scrubber on the BS2 unit could operate only 15 years because of additional environmental requirements, not 30 years.[9] This sensitivity study was not included in the Company's Application in this case.

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[2] U.S. District Court for the Southern District of Ohio, Civil Action C2-99-1250 ("Consent Decree"); See Application at 6.
[3] Wohnhas Testimony at 11:19-22.
[4] Application at 3.
[5] Ex. LK-5, "AEP Shares Plans for Compliance with Proposed EPA Regulations," AEP News Release (June 9, 2011).
[6] Ex. LK-6, AEP Barclay's Office Visit Presentation (July 5, 2011) and LK-7, AEP Barclay's Capital CEO Energy-Power Conference Handout (Sept. 8, 2011).
[7] Ex. LK-8, AEP 46th EEI Financial Conference Presentation (Nov. 8, 2011).
[8] KIUC Ex. 7, Company Ex. RLW-1 (outlining the timeline for Phase I).
[9] KIUC Ex. 11.

A month after Kentucky Power filed its Application, AEP held a conference at the Commission in which AEP disclosed its plans for a new Pooling Agreement (the Power Cost Sharing Agreement or "PCSA"), which did not include Ohio Power Company or Columbus Southern Power Company. The new PCSA would include a proposal that Kentucky Power acquire, at net book value (approximately $200 million), 20% of the two Mitchell coal-fired generating units (312 MW) presently owned by Ohio Power Company that are already environmentally-controlled.[10] And in February 2012, AEP made a filing at FERC for approval of the PSCA, which included Kentucky Power's purchase 20% of the two Mitchell units. Though that filing was later withdrawn, AEP anticipates resubmitting another filing in 2012 that will include the purchase of 20% of the Mitchell units.[11]

In April 2012, Commission Staff requested a revised version of the Company's least-cost analysis to reflect the current conditions within the industry, but the Company stated that it could not comply with the Staff's request to re-run its analysis.[12] Accordingly, the current economic impact of the BS2 retrofit projects in light of current conditions is still uncertain.

[10] See Ex. LK-10, AEP Interconnection Agreement (Pool) Termination and Replacement Presentation (Jan. 19, 2012).
[11] KIUC Ex. 8, Company Response to Commission Staff's Fourth Set of Data Requests, Item No. 1.
[12] KIUC Ex. 8.

SUMMARY OF ARGUMENT

The Commission should reject Kentucky Power's request to risk nearly $1 billion of its customers' money on the BS2 retrofit projects, which have not been shown to be reasonable, cost-effective, or required by the public convenience and necessity in accordance with KRS 278.020 and 278.183.

Under Kentucky Power's proposal, customers would be forced to bear all of the risk should the undertaking of the BS2 retrofit projects ultimately prove to be a poor investment decision. And there is a substantial possibility that this may be the case. The Company itself fluctuated regarding whether it would retire the 43-year old BS2 unit as recently as last year. Additionally, only a limited number of options for environmental compliance were analyzed and presented by the Company in this case. No independent evaluator was hired to analyze either the options presented or other available options. Such available options include acquiring the environmentally-compliant 312 MW Mitchell unit for only $200 million, extending the 390 MW Rockport Unit Power Agreements past 2023, building or buying gas combustion turbine peaking units or combined cycle units, implementing enhanced energy efficiency and demand response programs, and purchasing the balance of customer needs through the organized, efficient, and reliable PJM capacity and energy markets. These options could significantly impact the economics of the BS2 retrofit projects. For example, the 702 MW of base load coal generation from Mitchell and Rockport operating at an 85% capacity factor would provide 67% of the 2016 projected energy requirements of retail ratepayers, leaving only 33% to be provided by a combination of gas generation, market purchases, energy efficiency, and demand response.[13] And the market price for energy and capacity is extremely attractive. AEP predicts that it will stay that way for at least the next ten years.

[13] Ex. SCW-1 at 4, 2016 projected energy requirements 7,806,000 MWh. 702 MW x 8,760 hours x 0.85 = 5,227,092 MWh.

The very limited options presented to the Commission are merely those that Kentucky Power pre-selected, perhaps as part of a strategy to justify the capital intensive option upon which it hopes to earn a 16.55% pre-tax return on its equity investment and effectively turn Kentucky Power into an off-system sales machine with attendant merchant generator risk. Of course, Kentucky Power's shareholders would seek to share in profits from off-system sales, thus adding to the requested 16.55% pre-tax return on investment.

Setting Kentucky Power's motives aside, the point remains that critical scenarios, including the future acquisition of the Mitchell units from AEP's Ohio subsidiary, were not modeled and presented to the Commission by the Company. Further, many modeling assumptions used by the Company in its analysis were inconsistent with current conditions. And the Company failed to adequately address the significant uncertainties and risks associated with the BS2 retrofit projects, including the risk of stranded investment and an additional $202 million in present value costs to customers if the BS2 scrubber must be retired after only 15 years of operation.

Kentucky Power's request would protect the Company's shareholders from these substantial risks by allowing accelerated cost recovery. But Kentucky Power's customers would receive no such protection. Thus, the Company is willing to gamble nearly $1 billion of its customers' money while safeguarding the financial interests of its shareholders. The Company's costly gamble would result in a 35.23% total rate increase to its customers, who have already experienced a nearly 90% rate increase since 2003. At the hearing, the Attorney General ("AG") made clear his concern with raising rates on residential customers by approximately $500 per year. And the Company may ask for additional environmental rate increases in the near future.

The impoverished residential customers and price-sensitive, energy-intensive industrial customers served by Kentucky Power simply cannot afford a 35.23% rate increase, especially when the

Company's own studies indicate that the BS2 retrofit projects are not the least-cost option. For example, the purchased power option appears to be a reasonable alternative that substantially reduces the rate impact on Kentucky Power's customers, though the purchase option provides no profit margin for AEP's shareholders. The purchased power option results in a net present value benefit of at least $80-$151 million over 30 years and can save customers over $600 million in nominal dollars from 2016-2025 when compared to the BS2 retrofit option. If Big Sandy is retired early in 2030, then the present value savings of Option 4B would be $282-$353 million. Based upon AEP's own studies, the purchased power option would result in an initial rate increase of 10%-12% and will stay low for many years. That 10%-12% increase is probably overstated since the forecast did not account for energy provided by the Mitchell units or the significant decrease in the market price for on-peak energy since the time the forecast was made.

In light of the substantial risks and costs associated with the BS2 retrofit projects, the Commission should not hastily make an expensive and irrevocable decision to approve the projects. It is just too big a risk to gamble on the BS2 retrofit projects and the associated 35.23% rate increase in the hope that, in years 2030-2040, the BS2 retrofit projects will become the economic choice. Instead, the Commission should adopt a more reasonable strategy under which the Commission rejects Kentucky Power's request for approval of the BS2 retrofit projects and initiates a separate proceeding to comprehensively evaluate the available options by which the Company can comply with environmental regulations. Such a proceeding would lead to a more complete analysis of the options available to Kentucky Power while still resulting in a Commission decision by the end of this year. Further, should the Commission not wish to issue a final decision on the BS2 retrofit projects, Kentucky Power could continue its work analyzing those projects while the Commission's independent review takes place on a parallel track.

If, after taking into account the substantial risk and costs associated with the BS2 retrofit projects, the Commission approves those projects, then a number of measures should be taken to mitigate the impact on customers, including: 1) requiring Kentucky Power to use and to maximize the use of short-term debt during the construction period; 2) allocating short-term debt to ECR on CWIP and not on rate base; 3) using mirror CWIP; 4) reducing the amount recovered for existing plant retirements; 5) changing the recovery period to 30 years; and 6) denying recovery of 2004-2006 preliminary investigation costs.

No matter what action the Commission takes on the BS2 retrofit projects, the Commission should adopt the two-step cost allocation methodology recommended by KIUC for both new and existing ECR costs, which is consistent with the principle of cost causation, was approved by the Commission in the recent past, was not opposed by the Company, and furthers economic development in Kentucky. This refined cost allocation method will have no impact on residential customers. Based upon post-hearing data responses, KIUC agrees with the AG that all schools should be included in the residential classification such that the schools are not affected by KIUC's recommendation.

Finally, the Commission should set the allowed return on equity for both new and existing environmental investment at 9.2% to recognize the lower current cost of capital for similar electric utility operations and to account for the low-risk nature of the manner in which environmental construction costs are recovered in Kentucky.

ARGUMENT

I. The Commission Should Reject the Company's Request for a Certificate of Public Convenience and Necessity for the Big Sandy 2 Retrofit Projects Because Those Projects Are Not Reasonable, Cost-Effective, or Required by the Public Convenience and Necessity.

Kentucky Power's request for a Certificate of Public Convenience and Necessity ("CPCN") for the BS2 retrofit projects fails to satisfy the requirements of KRS 278.020 because the public convenience and necessity have not been shown to require the retrofit projects. Additionally, Kentucky Power failed to demonstrate that including the BS2 retrofit projects in its environmental compliance plan and recovering the costs of the BS2 retrofit projects through the ECR surcharge is "reasonable and cost-effective" in accordance with KRS 278.183.

The Commission and Kentucky courts have stated that "[a]pplicants before an administrative agency have the burden of proof."[14] The Company failed to model and present critical scenarios that should be considered by the Commission before approving the collection of nearly $1 billion in capital costs from customers along with the related operating expenses, used modeling assumptions that are inconsistent with current conditions, and did not sufficiently account for significant uncertainties and risks associated with the BS2 retrofit projects. Because the Company failed to provide a comprehensive analysis with sufficient evidence to prove that its request meets the standards set forth in KRS 278.020 and KRS 278.183, Kentucky Power has failed to meet its burden of proof under those statutes.

Accordingly, the Commission should reject the Company's request for CPCN for the BS2 retrofit projects and for recovery of an estimated $940 million (total Company) in capital costs and an

[14] Order, Case No. 2005-00220 (May 19, 2006); Order, Case No. 2005-00057 (Feb. 9, 2007); *Energy Regulatory Commission v. Kentucky Power Company*, Ky. App., 605 S.W. 2d 46, 50 (1980); Order, Case No. 2001-00265 (May 13, 2002).

estimated $119 (total Company) in depreciation and other operating expenses through the ECR surcharge.[15]

A. The Company Failed to Model and Present Critical Scenarios That Could Significantly Impact the Reasonableness, Cost-Effectiveness, and/or Need for the Big Sandy 2 Retrofit Projects.

Kentucky Power failed to model and present critical scenarios that should be considered before the Commission undertakes a nearly $1 billion investment in the BS2 retrofit projects. Importantly, the Company failed to model and present the impact of the Company's acquisition of 312 MW of capacity from the Mitchell units currently owned by AEP's Ohio subsidiary.[16] AEP recently proposed that Kentucky Power purchase, at net book value of approximately $200 million, 20% of two of AEP-Ohio's generating units (312 MW) that are already environmentally-controlled.[17] The net book value of the entire Mitchell power plant is $650 per kW, substantially less than the Company's estimated incremental cost of $1,175 per kW only for the BS2 retrofit projects.[18] However, because Kentucky Power did not present the impact of its acquisition of these less expensive, environmentally-compliant Mitchell units, the Commission is left with insufficient information in this case. The lack of such critical information prevents the Commission from comprehensively assessing the Company's environmental compliance plan, including the BS2 retrofit projects, and renders Kentucky Power's request insufficient to satisfy KRS 278.020 and 278.183.

Though the acquisition of the Mitchell units by Kentucky Power is not an absolute certainty at this time,[19] there is substantial evidence to believe that such an acquisition is very likely to occur. The new PCSA filed by AEP at FERC in February 2012 included a proposal that Kentucky Power acquire 20%

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[15] Application at 8; Direct Testimony and Exhibits of Lane Kollen (March 6, 2012) ("Kollen Testimony") at 3:16-19.
[16] Kollen Testimony at 24:20-22; Video Transcript (May 1, 2012) at 17:44:00-17:44:20.
[17] See Ex. LK-10.
[18] See Ex. LK-9, LK-10 and LK-11.
[19] Company witness Wohnhas testified that the acquisition of the Mitchell units is "still an option." Video Transcript (April 30, 2012) at 12:02:01-12:02:59.

of the two Mitchell units.[20] Though that filing was later withdrawn, Kentucky Power stated that it "anticipates resubmitting another filing at a later time this year that will include the purchase of 20% of the Mitchell Units." [21] And AEP's witness in the Ohio rate proceeding, Phillip Nelson, testified in March 2012 that:

> *Immediately after transferring the assets and liabilities to [AEP Generation Resources Inc], [Appalachian Power Company] will obtain the transferred interest in Unit No. 3 of the Amos generating plant and appurtenant interconnection facilities and related assets and liabilities ([Appalachian Power Company] already owns the remaining interest in Amos Unit No. 3) and an 80% undivided interest in the Mitchell generating plant and appurtenant interconnection facilities and related assets and liabilities (collectively, "Mitchell"), **and Kentucky Power Company (KPCo) will obtain the remaining 20% undivided interest in Mitchell.*** [22]

Another AEP witness in the Ohio rate proceeding, Robert P. Powers, echoed these intentions, stating that "[i]n another separate application with the FERC, certain generating assets, the Mitchell generating plant and Ohio Power Company's share of Unit No. 3 of the Amos generating plant, will be transferred at net book value from the Genco to Appalachian Power Company (APCo) and Kentucky Power Company (KPCo)."[23]

The Commission's approval of the BS2 retrofit projects in combination with the acquisition of the Mitchell units could result in significant risks associated with future environmental regulations and the energy market. If Kentucky Power does ultimately acquire the lower-cost Mitchell units as part of AEP's corporate restructuring and new Pooling Agreement *in addition to* retrofitting the BS2 unit, the Company's generation portfolio will be entirely comprised of base load coal. Increasing the Company's fuel concentration in this manner "increases the risk exposure to future environmental requirements

[20] See Ex. LK-10.
[21] KIUC Ex. 8, Company Response to Commission Staff's Fourth Set of Data Requests, Item No. 1.
[22] Direct Testimony of Phillip J. Nelson in Support of AEP Ohio's Modified Electric Security Plan, PUCO Case No. 11-346-EL-SSO et al. (March 30, 2012) at 5:8-14 (emphasis added).
[23] Direct Testimony of Robert Powers, PUCO Case No. 11-346-EL-SSO *et al.* (March 30, 2012) at 21:20-23.

and results in greater risk to customers. It also results in greater profitability to AEP."[24] Such a strategy is beneficial to AEP by increasing its earnings opportunity compared to the earnings available if a purchased power option like Option 4B is chosen.[25] But retrofitting the BS2 unit is a more costly option and one that foregoes the benefits of fuel diversification as well as generation diversification since no peaking or intermediate units would be included.

Retrofitting the BS2 unit in addition to acquiring the Mitchell units would also lead to additional risk to the Company as a market seller since the Company would become a very energy long merchant generator. [redacted] Ironically, Company witness Weaver noted that:

> *"...the very worst possible futures for the Big Sandy Retrofit (Option #1) would be characterized by high fuel and (CO_2) emission prices, but low power prices. But according to the analysis of the historical values of risk factors that underlies this study, such futures have essentially no chance of occurring. Any possible future with higher fuel prices would essentially always have higher power prices."*[26]

Thus, the worst case scenario under the Company's plan would occur if it were a merchant generator and there were low market prices for power and high commodity prices. This is exactly where prices currently stand: low market prices and high coal prices.[27] Additionally, if Kentucky Power remains energy long by retrofitting BS2, Kentucky customers could end up subsidizing customers outside of the state.[28] This could occur through AEP's proposed Power Cost Sharing Agreement, under

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[24] Kollen Testimony at 26:9-13.
[25] Kollen Testimony at 26:14-21.
[26] Ex. SCW-1 at 12.
[27] KIUC Ex. 10, 12, and 13; Wohnhas Testimony at 11:2.
[28] Kollen Testimony at 27:3-9.

which Kentucky Power would have to sell power at below-market rates to the other AEP subsidiary companies in other states.

The purchase of the Mitchell units is a critical scenario that should have been modeled and submitted by the Company in its direct case. KIUC witness Kollen testified "[t]he failure to study any scenarios where Kentucky Power would acquire 312 MW of Mitchell renders the Company's analysis unreliable and flawed."[31] In addition to the scenario where Kentucky Power purchases the Mitchell units, there are other important scenarios that have not been modeled and presented by the Company in this case. Kentucky Power did not study a scenario where the Company acquired the natural gas-fired capacity owned by Riverside Generating Company, LLC.[32] And Kentucky Power refused to study a scenario that reflected the continuation of currently lower natural gas prices.[33]

Additionally, unlike the Kentucky Utilities Company/Louisville Gas & Electric Company CPCN case recently decided by the Commission, no Request for Proposal was issued by the Company.[34] Thus, no independent evaluation of available options was presented to the Commission. And a range of options are available, including acquiring the environmentally-compliant 312 MW Mitchell unit for only $200 million, extending the 390 MW Rockport Unit Power Agreements past 2023, building or buying gas combustion turbine peaking units or combined cycle units, implementing enhanced energy efficiency and demand response programs, and purchasing the balance of customer needs through the organized, efficient, and reliable PJM capacity and energy markets. These options may have a significant impact on the economics of the BS2 retrofit projects. For example, the 702 MW of base

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[31] Kollen Testimony at 24:22-25:2.
[32] Kollen Testimony at 25:13-14.
[33] Kollen Testimony at 25:21-26:3, Ex. LK-12.
[34] Order, *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 Simply Cycle Combustion Turbine Facilities from Bluegrass Generation Company, LLC in LaGrange, Kentucky*, Case No. 2011-00375, (May 3, 2012) at 7; Video Transcript (April 30, 2012) at 2:53:22-2:54:25.

load coal generation from Mitchell and Rockport operating at an 85% capacity factor would provide 67% of the 2016 projected energy requirements of retail ratepayers, leaving only 33% to be provided by a combination of gas generation and market purchases.[35] Accordingly, the Commission should not make a nearly $1 billion risk without a comprehensive review of the available options.

The Company's failure to provide a comprehensive review of the available options by which the Company could comply with environmental regulations renders the Company's case insufficient to satisfy the requirements of KRS 278.020 and KRS 278.183.

B. The Company's Modeling Assumptions are Inconsistent with Current Conditions.

The modeling assumptions made by the Company in analyzing its chosen planning scenarios are inconsistent with current conditions and therefore, do not provide sufficient evidence that the Company's request for the BS2 retrofit projects satisfies the requirements of KRS 278.020 and KRS 278.183. For example, the Company overstated natural gas prices compared to the current Henry Hub prices.[36] Depending on the scenario examined, the current forward natural gas prices for 2016 are between 23%-63% lower than the numbers used in the Company's analysis.[37] Other pricing assumptions used by the Company in its Strategist analysis are also inconsistent with current market prices and price forecasts. The Company overstated future on-peak energy prices.[38] Depending on the scenario examined, future on-peak forward market prices for 2015 are between 19%-46% lower than when the Company's analysis was performed. The CO_2 pricing assumptions used by Kentucky Power also may be understated based upon the evidence of record, falling significantly below the pricing

[35] Ex. SCW-1 at 4, 2016 projected energy requirements 7,806,000 MWh. 702 MW x 8,760 hours x 0.85 = 5,227,092 MWh.
[36] Compare KIUC Ex. 9 (Company Ex. SCW-2 at 2) and KIUC Ex. 10.
[37] Video Transcript (May 1, 2012) at 20:40:24-20:42:40.
[38] Compare KIUC Ex. 9 (Company Ex. SCW-2 at 2) and KIUC Ex. 13.

forecasts of other utilities across the country.[39] Even though Commission Staff requested a revised version of the Company's least-cost analysis to reflect the current conditions within the industry, the Company refused Staff's request.[40] Therefore, the modeling conducted by the Company was done on the basis of assumptions inconsistent with the current market conditions.

Other modeling assumptions made by the Company were inaccurate or incomplete. For example, Kentucky Power assumed that the 390 MW Rockport contracts would be extended through 2040, even though those contracts expire around 2023.[41] Additionally, Kentucky Power acknowledges that the share of off-system sales given to shareholders was not accounted for properly in their modeling.[42] Plus, the Company failed to model any demolition and removal costs associated with planned boiler modifications.[43] The actual amount of those demolition and removal costs is still not on the record. Regardless of the amount, these additional costs were not considered in the Company's analysis.

Another important error in the Company's analysis is its assumption that retail electricity demand will be exactly the same under any scenario. That assumption cannot be true. If the BS2 retrofit projects and associated 35.23% rate increase is approved, customer demand is very likely to be lower compared to a scenario under which customers are only subject to the 10%-12% rate increase under Option 4B. AEP's assumption to the contrary is flawed and its modeling is therefore unreliable. In addition, if Kentucky Power's residential or business customers stop purchasing electricity from the Company or use less electricity because the 35.23% increase, the remaining customers will be subject to a greater rate increase since the Company's costs will be spread among fewer customers. Such a

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[39] Sierra Club Ex. 22.
[40] KIUC Ex. 8, Company Response to Commission Staff's Fourth Set of Data Requests, Item No. 1.
[41] Video Transcript (May 1, 2012) at 17:51:00-17:51:30; Application at 4.
[42] Rebuttal Testimony of Scott C. Weaver ("Weaver Rebuttal") at 16:8-9.
[43] Rebuttal Testimony of Ranie Wohnhas at 5:16-6:2.

reduction in customer usage stemming from the 35.23% increase would also raise the Company's exposure as a merchant generator since the Company would have more energy available for off-system sales.

C. The Company Failed to Promptly Address Environmental Issues Surrounding Big Sandy 2 and Now Requests that the Commission Make a Hasty, Irrevocable Decision in the Midst of Significant Uncertainties and Substantial Risk Associated with the Big Sandy 2 Retrofit Projects.

After years of neglecting to address the 2007 Consent Decree regarding Big Sandy units 1 and 2 at the Commission,[44] Kentucky Power now seeks to quickly rush through a suggested solution on the basis of flawed and insufficient analysis. The Commission should reject Kentucky Power's delayed request since significant uncertainties and risk still surround the BS2 retrofit projects.

Kentucky Power's parent company, AEP, itself waivered regarding whether retiring BS2 is the best option to undertake, as recently as last year.[45] In June 2011, AEP publicly announced that it would retire the Big Sandy 2 plant by Dec. 31, 2014.[46] Yet later that same year, AEP reversed course.[47] Kentucky Power filed its request for the BS2 retrofit projects at the Commission in December of 2011. AEP has not even settled on a final resource plan for the Company yet.[48] Accordingly, there is serious doubt as to whether proceeding with the BS2 retrofits at this time is the proper course of action.

The Company itself has not yet made a final decision regarding whether it will ultimately proceed with the BS2 retrofit projects. The Company filed its Application in this case in December of 2011, during the early stages of the Company's Phase I evaluation of the BS2 retrofit projects.[49] Phase I is not yet complete. Therefore, the Company itself has not even decided whether to proceed to

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[44] Consent Decree; See Application at 5-6.
[45] Kollen Testimony at 22:3-18 (referring to Ex. LK-5, LK-6, LK-7, and LK-8).
[46] Ex. LK-5, "AEP Shares Plans for Compliance with Proposed EPA Regulations," AEP News Release (June 9, 2011).
[47] Ex. LK-8.
[48] Kollen Testimony at 21:9-12.
[49] KIUC Ex. 7, Company Ex. RLW-1.

Phase IIa on the BS2 retrofit projects.[50] In April 2004-2006, the Company conducted Phase I on a wet scrubber, but ultimately decided to cancel the project at the end of Phase I.[51] The same decision may be made with regard to the BS2 retrofit projects involved in this case. The Commission should not approve nearly $1 billion on projects when the Company is only in the early stages of review of those projects.

The Company has also made timing assumptions with regard to receiving air permits that may not ultimately be issued as planned.[52] It could take up to 18 months for the Company to receive an air permit,[53] but the application time line assumes approval in 12 months. An 18 month approval would postpone the time before the Company can start construction of the BS2 retrofit projects. The actual in-service date could be six months later than the Company's projected June 2016 date. Even assuming that Kentucky Power's proposed timeline aligns with reality, the BS2 units will still have to remain idle from the end of 2015 through the middle of 2016.[54]

Additional uncertainty exists for AEP due to changing commodity and market prices, the shifting regulatory status of AEP's generation assets, the voluntary termination of the AEP Interconnection Agreement, and federal directives regarding environmental compliance.[55] Such uncertainties may increase the risk of the BS2 retrofit projects ultimately leading to stranded investments. The Company itself recognized that there is a risk that, even if the BS2 retrofit projects are approved, the BS2 unit itself may be retired early. Kentucky Power stated that "[w]ith the increasingly stringent and ever changing position of the EPA and its rule making, the Company believes that it is a *medium risk* that future EPA rules would result in stranded investment in the DFGD in the absence of a 15-year

[50] Direct Testimony of Robert L. Walton ("Walton Testimony") at 4:15-5:1; 6:7-9.
[51] Walton Testimony at 22:2-23:1.
[52] See KIUC Ex. 7.
[53] Direct Testimony of John M. McManus at 17:3-12; Video Transcript (May 1, 2012) at 11:16:12-11:16:55.
[54] See KIUC Ex. 7.
[55] Kollen Testimony at 20:15-21:7.

depreciation period."[56] The Company expressed the belief that "it is appropriate to assume there is risk of future environmental regulations that could cause operation of the Big Sandy Unit 2 not to be economically feasible in the future."[57] In fact, Kentucky Power conducted a sensitivity study which indicates that, if the BS2 units only have a 15 year operating life after the requested retrofits, there could be a present value detriment to customers of $202 million.[58] Though the Company acts to safeguard the financial interests of its shareholders from this risk by requesting a 15-year depreciation period for the BS2 retrofit projects,[59] Kentucky Power's customers would not be similarly safeguarded should the BS2 unit be retired in 2030.

The Commission should not make an expensive and irrevocable decision to approve the BS2 retrofit projects on the basis of such inconclusive support and in the face of such substantial uncertainty and risk. Kentucky Power has failed to adequately address the substantial risk associated with the BS2 retrofit projects in this proceeding. Because Kentucky Power's request fails to meet the standards set forth in KRS 278.183 and KRS 278.020, the Commission should reject the BS2 retrofit projects.

D. The Substantial Risks and Costs Associated with the Big Sandy 2 Retrofit Projects Outweigh Other Factors the Commission May Consider in this Proceeding.

The Commission's approval of Kentucky Power's requested BS2 retrofit projects would unnecessarily worsen the financial burden already placed upon the Company's customers. The total increase to customers resulting from the Company's proposal is 35.23%, or 5.84% more than the

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[56] Sierra Club Ex. 3, Company Response to Commission Staff's First Set of Data Requests, Item No. 91 (emphasis added).
[57] Sierra Club Ex. 7, Company Response to Sierra Club Supplemental Set of Data Requests, Item No. 16; See also Sierra Club Ex. 6, Company Response to Sierra Club's Initial Set of Data Requests, Item No. 17 ("The Company is not proposing a period other than the 15 years since it does not believe it is appropriate to assume an absence of any material risk of future environmental regulations.").
[58] KIUC Ex. 11.
[59] Direct Testimony of Lila P. Munsey at 12:1-14; Wohnhas Testimony at 14:9-15:5.

increase calculated by Kentucky Power.[60] The Company's customers have already experienced a nearly 90% rate increase since 2003.[61] The Commission should not unnecessarily increase the burden on Kentucky Power's residential customers, who are already located in impoverished counties of the Commonwealth.[62] Nor should the national and global competitiveness of Eastern Kentucky's energy-intensive manufacturers be further weakened by huge and avoidable rate increases.

In addition to the significant costs already mentioned, the Company will likely seek recovery of other environmental compliance costs over the next 5 to 7 years, such as costs to retrofit the Rockport units. Such costs would increase Kentucky Power's revenue requirement by another 10 to 15%.[63] KIUC witness Kollen testified that "...the effects of these ECR and base rate increases are staggering and may exceed 50% or more over the next 5 to 7 years."[64] Considering the sheer magnitude of the coming rate increases, it is critical that the Commission carefully consider the financial impact of its decision on Kentucky Power's customers.

The Commission must balance the substantial rate increase and risk associated with the BS2 retrofit projects against the potential impact of rejecting the BS2 retrofit option. Though the Company cites socioeconomic impacts, such as the loss of jobs and severance taxes, as a factor informing and reinforcing its request to undertake the BS2 retrofit projects, the Company's socioeconomic impact numbers were largely based upon information provided by the Committee to Save the Big Sandy Power Plant ("Committee").[65] These numbers were not independently verified by the Company and, as became evident at the hearing, at least a portion of the information provided by the Committee was

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[60] Kollen Testimony at 9:1-7.
[61] KIUC Ex. 1; Video Transcript (April 30, 2012) at 11:26:06-11:28:02.
[62] Attorney General Ex. 2.
[63] Kollen Testimony at 9:9-16.
[64] Kollen Testimony at 9:21-10-2.
[65] Company Response to Commission's First Set of Data Requests, Item No. 83; Video Transcript (April 30, 2012) at 11:33:45-11:34:43.

inaccurate.[66] Therefore, there is reason to doubt the veracity of the socioeconomic impact numbers cited by the Company.

Further, the Company's logic that the BS2 retrofit projects would result in the injection of $165 million per year into the local economy through continued coal purchases of the same amount is circular and, therefore, flawed. That $165 million is being taken from the very Kentucky customers, through the fuel adjustment clause, that the Company claims to be benefitted.[67] Thus, the economic impact is merely a net wash. Under Kentucky Power's economic reasoning, it would be good for the local economy and ratepayers if the fuel adjustment clause doubled and the coal suppliers got paid twice as much. That is obviously not true. Fuel costs are a zero sum game. If coal suppliers get paid more, then consumers are charged more and there is no benefit. All else equal, KIUC supports the use of local coal. But all else is not equal. The 35.23% BS2 rate hike verses the 10%-12% purchased power increase demonstrates that.

Further, the actual impact of rejecting the BS2 retrofit projects on total sales of Kentucky coal may be relatively minimal. The BS2 unit uses about 1.5 million tons of Eastern Kentucky coal annually, which represents roughly 70% of the coal used to operate the plant.[68] The other 30% of the coal used to operate the BS2 unit comes from West Virginia.[69] Total Eastern Kentucky coal production in 2009 was approximately 73.7 million tons.[70] Thus, the BS2 unit only used about 2% of the total coal produced in Eastern Kentucky.[71] Further, the Company noted that the approval of the BS2 retrofit projects could result in either more *or less* Kentucky coal being purchased depending on future

[66] Video Transcript (April 30, 2012) at 11:34:44-11:36:16. See Company Response to Commission's First Set of Data Requests, Item No. 83, Attachment (incorrectly stating that "The Big Sandy plant burns about 2.5 million tons per year of coal, almost all mined in East Kentucky (a little comes from West Virginia).").
[67] Wohnhas Testimony at 8:17-21; Video Transcript (April 30, 2012) at 11:29:22-11:31:15.
[68] Post-Hearing Corrected Company Response to Sierra Club's Initial Set of Data Requests, Item No. 16.
[69] Post-Hearing Corrected Company Response to Sierra Club's Initial Set of Data Requests, Item No. 16.
[70] KIUC Ex. 3 ("Kentucky Coal Facts").
[71] Video Transcript (April 30, 2012) at 11:38:05-11:40:24.

prices.[72] Even if the BS2 unit was not retrofitted, that 2% of Kentucky coal used by the BS2 unit could be sold elsewhere, preserving any jobs associated with that coal production.[73] Accordingly, the impact of rejection of the Company's request on total sales of Kentucky coal as well as Kentucky jobs may be relatively minimal.

E. The Company's Own Studies Demonstrate that the Big Sandy 2 Retrofits Are Not the Least-Cost Option for Complying with Relevant Environmental Mandates.

The Company's own studies expose the fact that the BS2 retrofit projects are not the least-cost means by which Kentucky Power can comply with environmental requirements. Those studies indicate that at least one valid, less expensive option is to retire BS2 at the end of 2015 and purchase energy and capacity from the organized markets in the PJM Interconnection, L.L.C. ("PJM") for 10 years. KIUC emphasizes that, while the ten-year purchased power option is superior to the BS2 retrofit projects, that option still may not be the best plan. The best plan could very well include the acquisition of the 312 MW of environmentally-compliant Mitchell for $200 million, extension of the Rockport contracts past 2023 (these two base load resources will provide approximately 67% of native load energy requirements), supplemented with a combination of natural gas (CT and/or combined cycle) and purchased power resources, plus energy efficiency and demand response. This is why the Commission should independently open an investigation to determine the most reasonable and cost-effective plan.

In considering its options for complying with environmental mandates, Kentucky Power ran two purchased power scenarios in addition to the BS2 retrofit analysis.[74] Under one of these alternative scenarios, Option 4B, Kentucky Power would retire BS2 at the end of 2015 and would use energy and capacity purchased through PJM for ten years, until replacement natural gas-fired combined cycle

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[72] Post-Hearing Corrected Company Response to Sierra Club's Initial Set of Data Requests, Item No. 16.
[73] Video Transcript (April 30, 2012) at 11:41:33-11:42:17.
[74] Direct Testimony of Scott C. Weaver ("Weaver Testimony") at 12:3-12.

capacity was constructed in 2025.[75] Option 4B is the least-cost option on a cumulative net present value basis over 30 years. Compared to the BS2 retrofit projects, Option 4B resulted in an approximately $80-$151 million net present value benefit over a 30 year study period, depending on the pricing method used.[76] And that benefit would increase to approximately $282-$353 million if the BS2 unit ultimately had only a 15 year operating life.[77] Further, using Option 4B rather than the BS2 retrofit projects, the 2016 rate increase to the Company's customers would be reduced from 35.23% to between approximately 10-12%.[78]

The annual impacts of Option 4B from 2016 to 2025 result in significant savings compared to the BS2 retrofit projects. KIUC witness Kollen used the annual revenue requirements under the BS2 retrofit option and Option 4B to compute the annual and cumulative savings of using Option 4B from 2016-25.[79] Using actual declining annual revenue requirements rather than the levelized carrying cost methodology used by the Company,[80] Mr. Kollen found that the retirement of BS2 in 2015 will save customers between $474 million to $785 million (total Company) over the ten year period 2016-2025.[81] And these savings may be even greater since the Company's gas price projections "are on the high side compared to other publicly available forecasts."[82] Further, since the Company's analysis was done, the market price of on-peak energy has fallen dramatically, making the purchase option even more economic for consumers.

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[75] Weaver Testimony at 12:10-12.

[76] See Company Response to Commission's Staff's First Set of Data Requests, Item No. 48, Attachment 1 (quantifying approx. $47 million net present value savings for Option 4B) and Kollen Testimony, corrections to page 11 (quantifying net present value savings if the Company's share of off-system sales margins is removed).

[77] KIUC Ex. 11 ($80 million + $202 million or $151 million + $202 million).

[78] Kollen Testimony at 17:19-21.

[79] Kollen Testimony at 13:1-17:12.

[80] Mr. Kollen explained that "[t]he levelized approach understates the actual annual revenue requirements in the early years and overstates them in the latter years." Kollen Testimony at 16:20-17:1.

[81] Kollen Testimony at 17:8-19.

[82] Kollen Testimony at 19:1-20:5.

Even Company witness Weaver's rebuttal testimony indicates that customers would receive substantial savings using the purchased power option from 2016-2025, saving approximately $588.5 million, as shown below.

Weaver Rebuttal Table 1

	(1) Big Sandy 2 Retrofit (Option #1)	(2) Market Replacement to 2025 (Option #4B)	(3) = (1) – (2) Savings from Market Purchases	Cumul Savings from Purchases
NOMINAL ($000)				
2016	621,065	509,433	111,632	111,632
2017	563,763	500,781	62,982	174,615
2018	569,255	489,883	79,372	253,986
2019	580,129	512,944	67,185	321,172
2020	580,242	523,156	57,086	378,258
2021	598,301	548,927	49,374	427,631
2022	713,673	648,370	65,303	492,934
2023	743,111	677,380	65,730	558,665
2024	753,290	699,595	53,695	612,359
2025	781,919	805,776	(23,856)	**588,503**

Adjusting for actual declining annual revenue requirements rather than a levelized carrying cost, KIUC witness Kollen calculated an additional $43 million in savings to customers over the first ten years.[83] Adding witness Kollen's $43 million figure to witness Weaver's $588 million figure, the total savings to customers of adopting the purchased power option from 2016-25 would be approximately $631 million (nominal). And again, given the reduction in on-peak market prices because of the

[83] Kollen Testimony at 17:8-12.

dramatic decline in natural gas prices, the savings from the purchased power option could be even greater.

The Company advocates for the BS2 retrofit option rather than the less expensive purchased power option, claiming that the purchased power option is risky.[84] To the contrary, becoming a 100% base load coal merchant generator as a result of the BS2 retrofit projects is the much riskier option. Even if the market option has risk over the course of 30 years, that option is much less expensive through 2025 than other options under any set of assumptions in this case.[85]

It is sensible that Kentucky Power would protest the use of the less expensive purchased power option. As described in a November 2011 presentation by AEP President and CEO, the Company's main areas of strategic focus include return on equity optimization as well as "[e]arnings and dividend growth."[86] That presentation notes that AEP can "[g]row rate base and earnings through adding environmental controls."[87] In this case, the Company has asked for a 16.55% pre-tax return on equity (10.50% after-tax).[88] If the Commission were to require Kentucky Power to use the purchased power option, there would be no opportunity for the Company to earn the return on equity.[89] Additionally, the purchased power options would prevent Kentucky Power from increasing its off-system sales earnings. Therefore, the adoption of the purchased power option is contrary to AEP's objective of increasing its earnings through environmental rate base additions.

In light of the availability of a less expensive option that could result in substantial savings for customers, the BS2 retrofit projects fail to satisfy the requirements of KRS 278.020 and KRS 278.183. In order to approve Kentucky Power's request for a CPCN, the Commission must find that "public

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[84] Weaver Testimony at 38:8-13.
[85] Video Transcript (April 30, 2012) at 15:41:59-15:42:38.
[86] KIUC Ex. 5 at 4.
[87] KIUC Ex. 5 at 6.
[88] Kollen Testimony at 48:14-20; Wohnhas Testimony at 17:18-18:9.
[89] Video Transcript (April 30, 2012) at 11:52:00-11:52:13.

convenience and necessity require" the BS2 retrofit projects. Because at least one valid, less expensive purchased power option is available, the BS2 retrofit projects are not required for public convenience and necessity. Additionally, in light of the significant savings that could be achieved by exercising the purchased power option instead, the BS2 retrofit projects are not "reasonable and cost-effective" consistent with the requirements of KRS 278.183. Therefore, the Commission should reject Kentucky Power's request for a CPCN for the BS2 retrofit projects and should conduct a comprehensive study of the available options by which the Company could comply with relevant environmental mandates.

F. The Commission Should Institute a Separate Proceeding to Address the Company's Least-Cost Option for Environmental Compliance.

If the Commission is not yet prepared to make a final decision with respect to the BS2 unit, there are still multiple reasons for the Commission to reject the Company's present request and to institute a separate proceeding to comprehensively evaluate the available options by which the Company can comply with environmental regulations. In this event, the Commission could still keep the BS2 retrofit option open by allowing Kentucky Power to continue its current Phase I work on analyzing the BS2 retrofit projects. KIUC would not object to Kentucky Power's recovery of the costs to continue its study of the BS2 retrofit projects. But the Commission should also institute a separate proceeding to comprehensively review all available options to the Company, which could occur in parallel with the Company's own review of the BS2 retrofit projects.

KIUC witness Kollen discusses many of the advantages of postponing such a decision:

> *First, it preserves the Commission's flexibility to comprehensively study the Company's resource portfolio and work cooperatively with the Company and intervenors to ensure that these resources are adequate to meet customer requirements at the least cost. Second, it substantially mitigates the cost to customers of the Company's environmental compliance. Third, it avoids the risk associated with the huge upfront investment for the BS2 retrofit projects. Fourth, it preserves the opportunity for fuel diversity and diversity among baseload, intermediate and peaking capacity if the Company must supply its own*

generation reserves under a new AEP Power Cost Sharing Agreement. Fifth, it preserves the flexibility to pursue lower cost options, including the acquisition of Mitchell coal-fired capacity and local gas-fired capacity.[90]

Substantial risk exists regarding the proper course of action for the Company to undertake to comply with relevant environmental mandates. In light of this substantial risk, the Commission should not hastily make a costly, irrevocable decision to proceed with the BS2 retrofit projects. Instead, it is reasonable for the Commission to either reject the BS2 retrofit projects at this time or defer ruling, and to institute a separate proceeding to consider all available options by which the Company can comply with environmental regulations.

It is not unreasonable to slightly delay a final determination on which option the Company should adopt to comply with environmental regulations. The Commission should preserve its flexibility to comprehensively explore available options. It is not unusual to "mothball" a unit for a period in light of environmental regulations. Other utilities, such as Consumers Energy, NRG Energy, and the Tennessee Valley Authority sought a similar course of action.[91] Further, AEP itself had announced plans to idle two coal-fueled generating units in Oklahoma for a year or two.[92] And even under the Company's projected timeline, the BS2 unit will be idled for 5 months in 2016. Therefore, if the Commission does not wish to make a permanent decision regarding the BS2 unit at this time, the Commission should still institute a separate proceeding to comprehensively explore the Company's options for complying with relevant environmental regulations.

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[90] Kollen Testimony at 18:10-20.

[91] "Consumers Energy Scraps Plans for New Coal Plant, To Mothball 7 More"," MITechNews.com, *available at* http://mitechnews.com/articles.asp?id=13916; "NRG Considers Mothballing N.Y. Coal Plant on Concerns It Is 'Uneconomic." POWER (March 22, 2012), *available at* http://www.powermag.com/POWERnews/4483.html; "TVA to Idle Nine Coal-fired Units" (Aug. 24, 2010), *available at* http://www.tva.com/news/releases/julsep10/coal_plants.html.

[92] Ex. LK-5.

II. If the Commission Approves the Big Sandy 2 Retrofit Projects, the Commission Should Take Measures to Minimize the Impact on Ratepayers.

If, after taking into account the substantial risks and costs associated with the BS2 retrofit projects, the Commission still approves the Company's request, the Commission should mitigate the impact of the BS2 retrofit projects. To do so, the Commission should: 1) require Kentucky Power to use and to maximize the use of short-term debt during the construction period; 2) allocate short-term debt to ECR on CWIP and not on rate base; 3) use mirror CWIP; 4) reduce the amount recovered for existing plant retirements; 5) change the recovery period to 30 years; and 6) deny recovery of 2004-2006 preliminary investigation costs.

A. The Commission Should Require the Company to Maximize the Use of Extremely Low Cost Short-Term Debt During the Construction Period.

The Company's proposal does not include the use of short-term debt for construction, and instead reflects the use of only long-term debt and common equity to finance the BS2 retrofit projects.[93] This is likely because the use of short-term does not contribute to the Company's earnings.[94] But requiring the use of very low cost short-term debt to finance the construction costs of the BS2 retrofit projects will mitigate the financial burden of Kentucky Power's proposals on customers.

The use of short-term debt is particularly beneficial when short-term term interest rates are significantly lower than the utility's overall rate of return. This is presently the case. As of February 28, 2012, the interest rates for commercial paper were 0.12% to 0.16% for maturities of 30 days to 90 days.[95] The Company's proposed overall rate of return is 8.03%.[96] Customers will save $115 million

[93] Kollen Testimony at 28:16-20.
[94] Kollen Testimony at 31:1-9.
[95] Kollen Testimony at 29:9-11 (referring to Feb. 28, 2012 issue of the *Wall Street Journal*).

using a commercial paper rate of 0.25% compared using the rate of return proposed by the Company, if the CWIP in rate base approach is adopted and all of the construction costs are financed with short term debt during the construction period.[97] If only half of the construction costs are financed with short-term debt during the construction period, customers will save $53 million.[98]

Using low-cost short-term debt mitigates the rate impact of the BS2 retrofit projects on the Company's customers, regardless of the financing approach (CWIP in rate base or AFUDC) ultimately adopted by the Commission.[99] The Company currently has access to $250 million of short-term debt through the existing AEP Money Pool, and could increase this amount, as Louisville Gas & Electric Company and Kentucky Utilities Company have done in the past.[100] Accordingly, to mitigate the rate impact of the BS2 retrofit projects on customers, the Commission should require the Company to maximize the use of extremely low cost short-term debt during the construction period.

B. The Commission Should Allocate Short-Term Debt to ECR on CWIP and Not on Rate Base.

The present computation of the rate of return does not properly allocate short-term debt to the ECR revenue requirement. By assuming that the same rate of return applies for base rates and for the ECR, the computation improperly assumes that short-term debt is proportionally used to finance plant which is already built and plan under construction.[101] But short-term debt is generally not used to finance plant which is already in-service.[102] In fact, Kentucky Power itself has not borrowed any

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[96] Kollen Testimony at 29:11-13. The 8.03% rate of return is equivalent to 10.69% when the equity component of the return is grossed-up for income taxes.
[97] Kollen Testimony at 31:11-17.
[98] Kollen Testimony at 31:17-20 (referring to LK-15).
[99] Kollen Testimony at 29:14-17 ("[t]he use of lower cost short-term debt financing not only reduces the rate of return applied to rate base investment if the CWIP in rate base approach is adopted, it also reduces the AFUDC included in CWIP that is subsequently recovered if the AFUDC approach is adopted").
[100] Kollen Testimony at 29:21-30:13.
[101] Kollen Testimony at 32:4-15.
[102] Kollen Testimony at 11-15.

short-term debt since July 2010.[103] By understating the short-term debt used to finance ECR projects during construction, the computation also overstates the rate of return and the recovery through the ECR compared to the actual costs of financing these projects.[104]

The ECR rate of return should be modified to refine the allocation of short-term debt based on construction work-in-progress ("CWIP") rather than capitalization/rate base amounts. The Commission should adjust the Company's overall rate of return to reflect the specific ECR allocation of short-term debt based on ECR CWIP divided by total Company CWIP. To refine the computation, the Commission must first remove the actual short-term debt, if any, from the total Company capitalization amounts and compute the long-term debt and common equity ratios without any short-term debt. Then, the Commission must compute the amount of short-term debt that should be allocated to the ECR based on the percentage of ECR CWIP compared to total Company CWIP. Next, the Commission must subtract the short-term debt allocated to the ECR from the ECR rate base investment, and then multiply the remaining rate base investment times the long-term debt and common equity ratios computed in the first step. Finally, the Commission must compute the ECR rate of return using the capitalization amounts computed in the previous step and the authorized cost of each capitalization component, including any ECR-specific return on equity.[105] By conducting the computation using this process, the Commission can accurately reflect the reality that short-term debt is primarily used to finance construction, not plant in-service.

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[103] Kollen Testimony at 32:13-15 (referring to Company response to KIUC 1-6).
[104] Kollen Testimony at 32:1-6.
[105] Kollen Testimony at 34:3-21.

C. The Commission Should Use Mirror CWIP to Mitigate the Impact of the Rate Increase on Customers.

The primary differences between the AFUDC approach proposed by Kentucky Power and the CWIP in rate base approach are the timing and magnitude of the rate increases.[106] Witness Kollen explained that "the CWIP in rate base approach results in a series of earlier rate increases than the AFUDC approach, but mitigates the peak rate increase once the assets are placed in-service."[107] If the Commission does not correct the misallocation of short-term debt in the ECR rate of return discussed above, customers will pay more on a net present value basis from the CWIP in rate base approach compared to the AFUDC approach. AFUDC would be less expensive on a present value basis because FERC accounting properly requires that short-term debt be assigned first to construction, whereas this Commission's current approach to CWIP does not. If the short-term debt error embedded in this Commission's current CWIP method is corrected, both approaches generally result in the same economic result.[108]

If the Commission ultimately adopts the CWIP in rate base approach in this proceeding, as it typically does for the ECR, then the Commission should adopt a form of CWIP known as "mirror CWIP." The use of the mirror CWIP approach can significantly mitigate the costs of the BS2 retrofit projects for the Company's customers. Under the mirror CWIP approach, the Commission would allow CWIP in rate base during the construction period. However, the Company still would capitalize AFUDC and add it to the CWIP, but would concurrently create a regulatory liability, commonly referred to as contra-AFUDC, for the exact same amount. The AFUDC and contra-AFUDC would net to zero and the CWIP would be the same as if no AFUDC had been accrued. The Commission then could use this contra-AFUDC regulatory liability to reduce and levelize the revenue requirements of the assets once they are

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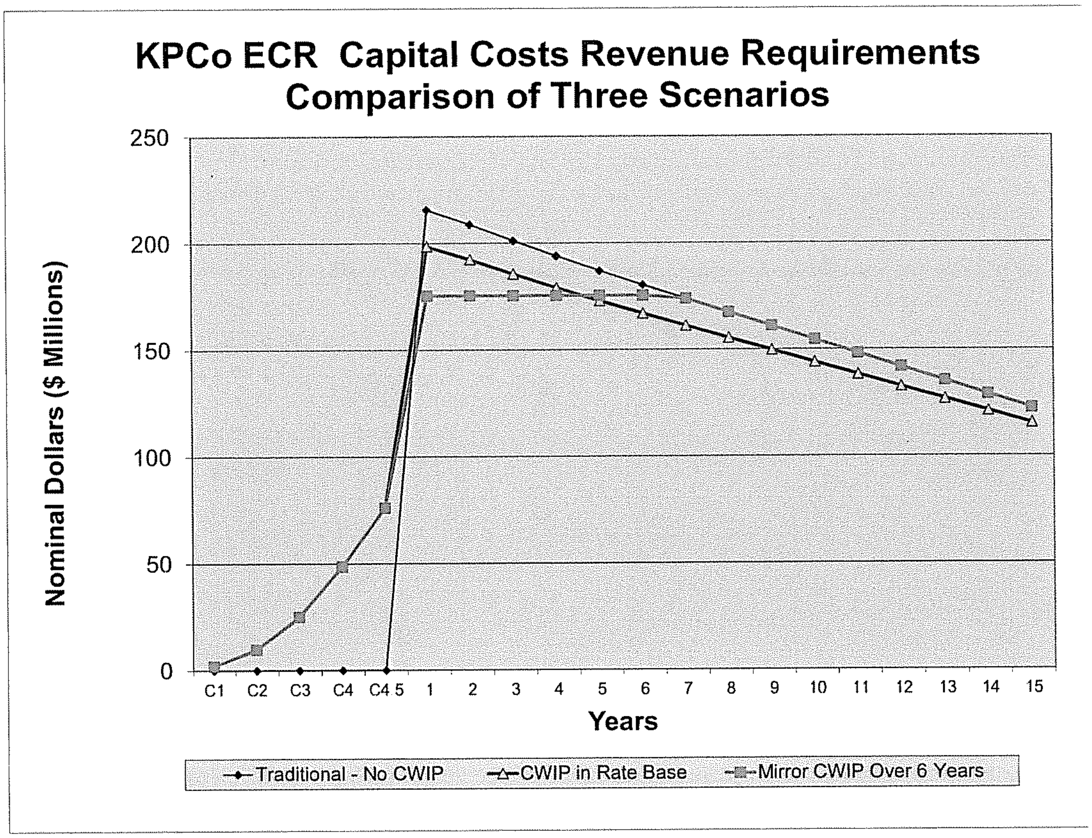
[106] Kollen Testimony at 35:11-14.
[107] Kollen Testimony at 36:11-15.
[108] Kollen Testimony at 37:2-8.

placed in-service by amortizing the regulatory liability in amounts that will achieve this objective. This amortization commonly is structured so that it occurs over approximately the same number of years as the recoveries from ratepayers during construction, hence the term "mirror" CWIP.[109] Witness Kollen prepared an illustration of the mirror CWIP approach:



If the Commission adopts the CWIP in rate base approach, then the Commission should use the mirror CWIP approach, which is "a powerful regulatory tool to mitigate the peak effect on customers" and which does not result in harm to the Company.[110]

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[109] Kollen Testimony at 38:12-39:2.
[110] Kollen Testimony at 40:1-8.

D. The Commission Should Reduce the Recovery of BS2 Retrofit Projects for Existing Plant Retirements.

The Commission should direct Kentucky Power to quantify both the rate base and operating expense amounts that must be reduced to reflect the retirements of existing plant and then should reduce the ECR revenue requirement to reflect the effect of these retirements. Kentucky Power intends to retire the existing BS2 electrostatic precipitator and to substantially modify its existing boiler and related plant, which may results in retirements.[111] Though the Company denies that retirements will take place in conjunction with the boiler modifications, it is logical that replacement of low NOX burners will require retirement and removal of existing low NOX burners.[112] Yet Kentucky Power has not proposed any reductions to the ECR recovery to reflect these retirements. This is contrary to Commission precedent.

Additionally, the Company claims that it has not quantified the demolition costs to dismantle, remove, and dispose of the retired plant.[113] The Company claims that it did not include these demolition costs in the $940 million cost estimate. However, they still will be incurred and were not considered in the Company's economic analyses. Assuming that the Company is correct and that it did not include these demolition costs in the $940 million cost estimate, then the costs will be recoverable through base rates. If the Company is not correct, then these costs should not be included in the $940 million and should not be recovered through the environmental surcharge. To ensure that there is no uncertainty as to the recovery of these costs through the environmental surcharge, the Commission should direct Kentucky Power to separate the demolition and removal costs for existing plant from the costs of the BS2 retrofit projects when accounting for its costs so that the demolition costs are charged

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[111] Kollen Testimony at 41:4-6 (referring to Ex. LK-16).
[112] See LK-17.
[113] See LK-18.

to existing plant depreciation reserve, in accordance with accounting requirements.[114] This will ensure that the demolition costs are not charged to the CWIP for the BS2 retrofit projects and therefore, are not recovered through the ECR revenue requirement.

E. The Commission Should Change the Recovery Period for the Costs of the BS2 Retrofit Projects to 30 Years Rather than 15 Years.

The Commission should adopt a depreciation rate of 3.33% to reflect a 30 year service life. Kentucky Power proposes a 15 year recovery period in this proceeding. But its recommendation is based solely on a "concern of recovery" and is not founded upon any study or analysis.[115] Instead, the Commission should adopt a depreciation rate based upon the expected service life of the assets being depreciated, consistent with fundamental concepts underlying depreciation as well as the FERC USOA definition of depreciation expense.[116] The use of a longer recovery period or a lower depreciation rate reduces costs to customers.[117] Therefore, the Commission should adopt a depreciation rate of 3.33% to reflect a 30 year service life.

F. The Commission Should Deny Recovery of 2004-2006 Preliminary Investigation Costs.

The Commission should reject Kentucky Power's request for recovery of preliminary investigation costs that were incurred in 2004 to 2006, except for the cost of land. The Company recorded and deferred $15.212 million of these costs, including $0.630 million in land purchase costs, in 2004 to 2006 without Commission authorization to do so.[118] The Commission should deny recovery of the preliminary investigation costs because recovery would constitute impermissible retroactive

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[114] Kollen Testimony at 44:13-18.
[115] See LK-19.
[116] Kollen Testimony at 45:19-46:5. The FERC USOA defines depreciation expense as the systematic rational allocation of the asset's costs over its estimated service life. Id. at 46:1-3. Additionally, the matching principle provides that costs of assets should be allocated to the customers that use those assets.
[117] Kollen Testimony at 46:7-13.
[118] Kollen Testimony at 47:1-17 (referring to Ex. LK-23).

ratemaking. The Commission has recently denied recovery of unauthorized deferrals on a similar basis in Case Nos. 2010-00523 and 2011-00036.[119] Likewise, the Commission should deny recovery of the preliminary investigations costs in this proceeding, except for the land purchase costs which probably should have been booked either to a plant account or to plant held for future use rather than to a regulatory asset.

III. The Commission Should Adopt A Cost Allocation Methodology That Is Consistent With Cost-Based Rates and Facilitates Economic Development in Kentucky.

The Commission should adopt the two-step cost allocation methodology recommended by KIUC for both new and existing ECR costs. KIUC's methodology is consistent with the principle of cost causation, has been approved by the Commission in the recent past, and furthers economic development in Kentucky. Kentucky Power did not object to KIUC's cost allocation proposal in its rebuttal testimony. KIUC's cost allocation proposal will have no effect on residential consumers. Based upon post-hearing data responses, KIUC agrees with the AG's recommendation that all schools be included with the residential class so that there will be no impact on the schools as a result of KIUC's proposal.

Kentucky Power proposes a cost allocation methodology under which a uniform retail ECR recovery factor will be applied to each customer's total bill. Such a methodology results in a disproportionate amount of costs being allocated to high load factor business customers. This is because high load factor customers have a larger amount of fuel charges on their monthly bill compared to lower load factor customers. Because the ECR recovery factor will be applied to a

[119] See July 14, 2011 Order in Case No. 2010-00523 and November 17, 2011 Order in Case No. 2011-00036.

customer's total bill, including fuel charges, high load factor customers will be assigned a disproportionate amount of ECR charges than lower load factor customers.[120]

Kentucky Power's methodology is inconsistent with the principle of cost causation. Kentucky Power's base rate case class cost of service study considers ECR costs associated with a return on environmental investment, depreciation, and fixed O&M expenses to be demand-related. Such costs are assigned on a 12 coincident peak demand basis, not on the basis of kwh energy usage.[121] Approximately 77% of the ECR revenue requirement is comprised of fixed costs, unrelated to fuel usage.[122] KIUC witness Stephen J. Baron testified that "[b]ecause the majority of ECR revenue requirements are fixed costs that are unrelated to energy use of the level of [Kentucky Power's] fuel expenses, it is not reasonable to apply the ECR recovery factor to customers on the basis of the level of fuel expenses charged in their electric bills."[123] Allocating such fixed costs on the basis of energy usage is contrary to the principle of cost causation.

Further, Kentucky Power's proposal would adversely impact economic development in Kentucky. The magnitude of the increase requested by Kentucky Power in this case is substantial, resulting in an approximately 35.23% increase in retail electric bills.[124] And that increase does not include other increases for fuel costs, generation resources, distribution cost increases and transmission costs.[125] Using Kentucky Power's proposed cost allocation methodology to recover this substantial revenue requirement "is particularly detrimental to high load factor manufacturing customer[s]."[126] Those customers are critical to Kentucky's economy, providing substantial

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[120] Direct Testimony and Exhibits of Stephen J. Baron on Behalf of the Kentucky Industrial Utility Customers, Inc. (March 2012)("Baron Testimony") at 7:15-8:12.
[121] Baron Testimony at 8:14-19.
[122] Baron Testimony at 10:9-11:1 (Table 1).
[123] Baron Testimony at 8:22-9:3.
[124] Baron Testimony at 16:1-4.
[125] Baron Testimony at 16:4-6.
[126] Baron Testimony at 16:7-9.

employment in the state.[127] The adoption of a cost allocation methodology that places a disproportionate amount of costs on high load factor customers unnecessarily reduces the competitiveness of those customers on both a national and international level.[128]

Instead, the Commission should adopt the two-step cost allocation methodology proposed by KIUC. Under KIUC's recommended methodology, the first step is to allocate the ECR revenue requirement between residential and all-non-residential rate classes on the basis of Kentucky Power's existing "total revenue" methodology.[129] Schools would be included with residential rate classes for purposes of the first step of the analysis. The second step is to allocate the residential/school portion of the ECR revenue requirement among residential/school customers and the non-residential portion of the ECR revenue requirement among non-residential customers.[130] Under this step, the residential/school portion of the revenue requirement is allocated among residential/school customers using an ECR recovery factor calculated in the same manner proposed by Kentucky Power in this case. However, the non-residential/school portion of the revenue requirement is allocated among business customers using an ECR recovery factor calculated on the basis of "non-fuel base revenues."[131] An example of the ECR recovery factors and allocations under KIUC's methodology is provided in revised Baron Exhibits SJB-3 and SJB-4.[132] Notably, KIUC's proposed methodology does not impact residential or school customers, but instead only impacts the business rate classes.

There are multiple advantages to the Commission's adoption of KIUC's cost allocation proposal for new and existing ECR costs. KIUC's proposal is more consistent with principles of cost causation than the methodology proposed by Kentucky Power because "[a] non-fuel base revenue allocation

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127 Baron Testimony at 16:12-13.
128 Baron Testimony at 16:13-16.
129 Baron Testimony at 9:10-16.
130 Baron Testimony at 9:13-20.
131 Baron Testimony at 9:13-20.
132 See attached, revised based upon post-hearing discovery responses (Attachment 1).

method is more consistent with the underlying fixed cost composition of ECR costs."[133] By excluding fuel expenses from the revenues used to determine ECR cost allocation among business customers, KIUC's methodology better reflects the fixed nature of the ECR costs and the responsibility of various classes of non-residential customers for those costs. Further, because KIUC's allocation methodology does not place a disproportionate cost burden on high load factor manufacturing customers, KIUC's proposal is better for economic development in Kentucky.

The Commission has previously approved KIUC's recommended two-step approach to allocating ECR costs. Recently, the Commission approved a settlement in the Kentucky Utilities Company/Louisville Gas & Electric Company ECR cases, Case Nos. 2011-161 and 2011-162.[134] The settlement included a cost allocation methodology that incorporates nearly the same two-step framework recommended by KIUC in this case.[135] Thus, the Commission's adoption of a similar framework in the present case is consistent with recent Commission precedent. The Commission has found KIUC's recommended cost allocation methodology reasonable in the past. The Commission should likewise find KIUC's methodology reasonable in the present case.

[133] Baron Testimony at 11:7-8.
[134] Commission Order (Dec. 15, 2011) at 27-28.
[135] See Settlement (Nov. 10, 2011) at Section 5.

IV. The Commission Should Allow a Return on Equity of 9.2% On New And Existing Environmental Investment.

In requesting an after-tax return on equity of 10.50% (a pre-tax return on equity of 16.55%),[136] Kentucky Power significantly overstates the current cost of common equity for integrated electric utility operations similar in risk to the Company and also fails to account for the low-risk nature of the ECR surcharge. The Commission should not make the same errors. Rather, if the Commission uses an overall return to calculate Kentucky Power's ECR surcharge, the Commission should set the allowed return at 9.2% to recognize the lower current cost of capital for similar electric utility operations and to account for the low-risk nature of the manner in which environmental construction costs are recovered in Kentucky.

If the Commission uses an overall return to calculate Kentucky Power's ECR surcharge, then the Commission should recognize that the current cost of equity capital is below 10.50%.[137] As KIUC witness Hill testified, the current economic environmental "is more benign than it was prior to the financial crisis – capital costs are lower – and, thus, more favorable for capital intensive industries like utilities."[138] Additionally, "due to the moderate pace of the economy and relatively low core inflation, capital costs are low and are expected to remain low until the economy shows more rapid growth, at which time interest rates and capital costs are expected to increase moderately."[139]

The current cost of equity capital for electric utility firms of similar risk to Kentucky Power falls in a range of 9.00% to 9.75%. To determine this range, Mr. Hill conducted a series of equity capital

[136] Application at 13; Kollen Testimony at 48-49.
[137] Direct Testimony of Stephen G. Hill (March 16, 2012) ("Hill Testimony")
[138] Hill Testimony at 15:19-21.
[139] Hill Testimony at 18:3-6.

cost analyses for a selected sample group of electric utility companies similar in risk to Kentucky Power. The results of his analyses are summarized in the following table:[140]

Table II
Equity Cost Estimates

METHOD	Electric Utility Companies
DCF	9.55%
CAPM	7.81%/8.32%
MEPR	8.54%/8.81%
MTB	9.32%/9.35%

Averaging the lowest and highest results of all the analyses produces an equity cost range of 8.56% to 8.82%, with a midpoint of 8.69%. After analyzing this numbers in light of relevant factors, including the consideration that the next interest rate move by the Federal Reserve will probably be upward, Mr. Hill testified that his best estimate of the cost of equity capital for a company like Kentucky Power, facing similar risks as the sample group, ranges from 9.00% to 9.75%, with a mid-point of 9.375%.[141] Because of the low-risk nature of the ECR surcharge, Mr. Hill stated that using the lower end of this range, 9.0%-9.375% is reasonable.[142] The mid-point of this lower range is 9.1875%, rounded to 9.2%, which is the return on equity recommended by Mr. Hill in this proceeding.[143]

Applying a 9.2% equity costs to Kentucky Power's requested capital structure, which the Commission should use, and embedded cost rates indicates overall capital costs of 7.41%. Allowing a 9.2% return on equity portion of their investment in environmental plant, the Company has greater opportunity to earn an amount of net income on that plant that is approximately 2.87 times greater

[140] Hill Testimony at 46:11-22.
[141] Hill Testimony at 47:6-10.
[142] Hill Testimony at 47:11-15.
[143] Hill Testimony at 47:15-20.

than the interest costs incurred.[144] This level of interest coverage exceeds Kentucky Power's average interest coverage over the 2008-2020 period, 2.13 times, according to data available in the Company's 2010 Annual Report published on AEP's website.[145] A 9.2% return on equity is reasonable for the Company in addition to being appropriate given the currently lower cost of capital and the low-risk nature of the ECR surcharge. Further, the effect of witness Hill's recommendation is a rate reduction of $6.786 million, or 1.19%, in the initial increase for the operating month of June 2016 when the BS2 retrofit projects are projected to be in-service.[146] Therefore, the Commission should set the allowed return at 9.2% to recognize the lower current cost of capital for similar electric utility operations and to account for the low-risk nature of the manner in which environmental construction costs are recovered in Kentucky.

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[144] Hill Testimony at 50:14-16.
[145] Hill Testimony at 6:3-6.
[146] Ex. LK-24.

CONCLUSION

WHEREFORE, for the reasons stated above, KIUC respectfully requests that the Commission reject Kentucky Power's request for approval of the BS2 retrofit projects.

Respectfully submitted,

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May 11, 2012

ATTACHMENT 1

Kentucky Power Company
KIUC Proposed Non-Residential Rate Class Allocation - As Revised to Include Schools with the Residential Class

	Current Methodology									
2011 Total	Revenue Subject to ECR	Adjusted Revenue Subject to ECR	ECR Cost Allocation	Less Fuel in Base Rates	Less Fuel Adj.	Less Sys. Sales Revenue	Less DSM Revenue	Less Capacity Chg. Revenue	Less Other Revenue	Non-Fuel Base Revenue
Residential Service (RS)	230,950,528	232,347,387	40.79%							
Schools	18,340,141	18,451,068								
Subtotal - Res + Schools	**249,290,669**	**250,798,455**	**44.03%**							
Small General Service (SGS)	17,262,686	17,367,096	3.05%	(4,014,825)	71,962	64,707	(20,921)	(137,124)	26	13,330,921
Medium General Service (MGS)	53,754,906	54,080,032	9.49%	(14,794,430)	280,278	267,588	(79,172)	(505,329)	(297)	39,248,670
Large General Service (LGS)	52,130,755	52,446,058	9.21%	(16,962,445)	308,660	314,360	(68,641)	(579,387)	249	35,458,854
Quantity Power (QP)	54,602,914	54,933,169	9.64%	(23,873,377)	453,934	450,184	(27,943)	(815,394)	-	31,120,573
Commerical & Industrial Power - Time of Day (CIPTOD)	130,052,142	130,838,737	22.97%	(71,091,013)	1,779,087	1,260,605	-	(1,669,652)	-	61,117,765
Municipal Waterworks (MW)	422,895	425,453	0.07%	(139,549)	2,688	2,376	(727)	(4,767)	22	285,496
Outdoor Lighting (OL)	7,374,113	7,418,714	1.30%	(1,186,596)	28,494	20,412	-	(40,269)	(38)	6,240,716
Street Lighting (SL)	1,277,803	1,285,532	0.23%	(238,344)	5,686	4,588	-	(8,141)	-	1,049,320
Non-Residential-Excl SchoolsTotal	**316,878,214**	**318,794,790**	**55.97%**	(132,300,578)	2,930,788	2,384,820	(197,404)	(3,760,062)	(37)	187,852,316
Total	**566,168,883**	**569,593,245**	**100.00%**							

* Uniform adjustment to reconcile revenues to KPCo Exhibit LPM-5

Table 2

Development of KIUC Proposed ECR Factors - Revised With Residential+Schools

		Allocated ECR Revenue Req.	Revenues Subject To ECR	ECR Factor
Total Environmental Revenue Requirements	$ 167,996,245			
Residential + Schools Allocation	44.03%	$ 73,970,678	$ 250,798,455	29.49%
Non-Residential Allocation*	55.97%	$ 94,025,567	$ 187,852,316	50.05%

* Applied to Non-Fuel Base Revenues

Kentucky Power Company
KIUC Proposed Non-Residential Rate Class Allocation - As Revised to Include Schools with the Residential Class

	Non-Fuel Base Revenue	KIUC Proposed Allocation	Allocation of Proposed ECR Revenue Req.	KIUC Percent Increase	KPCo Proposed Cost Allocation	KIUC vs. KPCo Method: $ Difference [col (2) less col (3)]	KIUC vs. KPCo Method: Pecent of Revenues
	(1)	(2)	(3)		(4)	(4)	(5)
Small General Service (SGS)	13,330,921	7.10%	6,672,515	38.42%	5,122,264	1,550,251	9.0%
Medium General Service (MGS)	39,248,670	20.89%	19,645,105	36.33%	15,950,404	3,694,701	6.9%
Large General Service (LGS)	35,458,854	18.88%	17,748,191	33.84%	15,468,478	2,279,713	4.4%
Quantity Power (QP)	31,120,573	16.57%	15,576,755	28.36%	16,202,029	(625,274)	-1.1%
Commerical & Industrial Power - Time of Day (CIPTOD)	61,117,765	32.54%	30,591,225	23.38%	38,589,672	(7,998,447)	-6.2%
Municipal Waterworks (MW)	285,496	0.15%	142,899	33.59%	125,483	17,416	4.1%
Outdoor Lighting (OL)	6,240,716	3.32%	3,123,661	42.11%	2,188,081	935,580	12.7%
Street Lighting (SL)	1,049,320	0.56%	525,216	40.86%	379,156	146,060	11.4%
Non-Residential Total	187,852,316	100%	94,025,567	29.49%	94,025,567	-	-