STITES & HARBISON PLLC
ATTORNEYS

421 West Main Street
Post Office Box 634
Frankfort, KY 40602-0634
[502] 223-3477
[502] 223-4124 Fax

July 12, 2019

Mark R. Overstreet
(502) 223-3477
(502) 779-8349 FAX
moverstreet@stites.com

HAND DELIVERY

Gwen R. Pinson
Executive Director
Public Service Commission
211 Sower Boulevard
P.O. Box 615
Frankfort, KY 40602-0615

RECEIVED
JUL 12 2019
PUBLIC SERVICE
COMMISSION

RE: Case No. 2013-00~~413~~430 – Filing In Conformity With The Commission's June 18, 2019 Order

Dear Ms. Pinson:

Enclosed please find and accept for filing the original and ten copies of the formerly confidential material relating to the Company's RFP. The material is no longer confidential because the requested period for confidentiality has expired.

The filed pages retain the yellow highlighting used in connection with the previous confidential filing. The unredacted pages are available to Kentucky Power only in portable document format with the highlighting present. When the Company attempted to remove the highlighting from the unredacted pages the underlying information became illegible or otherwise difficult to read. It thus is necessary to file the pages with the highlighting intact if the formerly confidential material is to be legible.

Contrary to the Company's usual practice, the highlighting on the submitted pages does not reflect confidential information and the filed pages may be placed in the public files without further alteration.

Please do not hesitate to contact me if you have any questions.

Very truly yours,

Mark R. Overstreet

MRO
cc: Nancy Vinsel (without filed pages)

IV. THE 250 MW RFP FOR CAPACITY AND ENERGY

Q. PLEASE BRIEFLY DESCRIBE THE 250 MW RFP FOR CAPACITY AND ENERGY.

A. The Company issued the RFP on March 28, 2013 as part of the process to determine the least-cost, reasonable solution for replacing the impending generation loss resulting from the anticipated retirement of its Big Sandy Unit 1 generation unit. The management and evaluation of this RFP was directed by select AEPSC personnel, who in turn were segregated into two groups – a Development Group and an Evaluation Group. The Development Group, of which I was a participating member, was responsible for the design, development, and management of the overall RFP process, while the Evaluation Group was responsible for evaluating the RFP Proposals and the BS1 Conversion cost as provided by the AEPSC Projects Group (Conversion Group). The Development and Evaluation Groups, and their members, were separate from the Conversion Group and any Affiliate of the Company that may have wished to participate in this RFP. The Company received responses to the RFP on June 11, 2013, the date identified within the RFP as the Proposal Due Date. No affiliate bids were received.

Q. PLEASE DESCRIBE THE PROCESS THROUGH WHICH THE COMPANY NOTIFIED POTENTIAL BIDDERS OF ITS RFP.

A. The Company used a variety of communication channels to notify potentially interested parties that it was issuing the RFP. The Company published the RFP and associated schedule on its website at www.kentuckypower.com/go/rfp. The Company issued a press release which was also posted to its website, as well as providing notice to numerous trade publications regarding the issuance of its RFP. The Company also maintained an

Kentucky Power anticipates requesting an administrative one-year extension for units undertaking retrofit or replacement projects. Absent the conversion project (i.e. if it were to select a market alternative from the RFP), Kentucky Power would be required to retire Big Sandy Unit 1 by April 16, 2015.

Q. WHY IS IT IMPORTANT FOR THE BID PROPOSALS TO MEET ALL OF THE REQUIREMENTS SPECIFIED IN THE RFP?

A. Two of the major reasons the proposals needed to meet all of the requirements specified in the RFP were; (1) so the Company can meet the objective specified in the RFP, and (2) so that the bid proposals could be evaluated on an 'apples to apples' basis.

Q. PLEASE BREIFLY DESCRIBE THE CONFORMING RESPONSES TO THE RFP.

A. Section 4 of the RFP detailed the scope of the product the Company was soliciting through the RFP. Conforming responses to the RFP are those that met the requirements described in RFP. The Company received four Conforming bids from three different parties in response to its solicitation. The Conforming bids included one power purchase agreement, two asset purchase agreements, and a tolling agreement. Confidential **Exhibit JAK-2** provides a summary of the Conforming Bids and Non-Confirming Bids.

V. NON-CONFORMING RESPONSES

Q. PLEASE BRIEFLY DESCRIBE THE NON-CONFORMING RESPONSES TO THE RFP.

A. Non-conforming bids were defined as proposals the Company received that failed to meet one (or more) of the material product specifications outlined in the RFP. The Company received a total of five non-conforming bids from two different companies. The non-conforming bids failed to comply with the requirements primarily as a result of the generating resource being located outside of PJM, and/or the expected delivery date at which the resource could begin supplying the requested Capacity, Energy, and Ancillary Services. Specifically, three of the non-conforming bids were from facilities located within the MISO RTO. Two of the non-conforming proposals were not projected to be available until January 1, 2017 at the earliest, and more importantly, were only in the early stage of development. Thus, even if the RFP had considered proposals from facilities that could begin delivery by June 2016, instead of June 1, 2015, the responses would still have been non-conforming.

Q. **DID THE COMPANY CONTACT BIDDERS WITH NON-CONFORMING BIDS TO RESOLVE ANY BID DEFICIENCIES?**

A. Yes. The Company contacted non-conforming bidders to see if the deficiencies in their bids could be resolved. The Company issued a series of requests for information to those bidders consisting of questions designed to determine whether the aspects of their bids that made them non-conforming could be addressed. In each instance, the bidders were unable to resolve their bid deficiencies via their responses to the requests for information.

Q. **DID THE NON-CONFORMING BIDS FROM FACILITIES LOCATED WITHIN THE MISO RTO HAVE THE NECESSARY TRANSMISSION RIGHTS TO DELIVER ENERGY AND CAPACITY TO KENTUCKY POWER?**

A. No, they did not.

Q. **WAS THE NON-CONFORMING BIDDER PROPOSING FACILITIES LOCATED WITHIN THE MISO RTO ABLE TO IDENTIFY A PLAN FOR**

OBTAINING TRANSMISSION RIGHTS NECESSARY TO DELIEVER ENERGY AND CAPCITY TO KENTUCKY POWER?

A. No. The Company asked specifically about plans for obtaining transmission rights in requests for information. The non-conforming bidder was unable to identify a concrete plan or timeline for obtaining the necessary transmission rights.

Q. WHY DID THE RFP EXCLUDE PROJECTS LOCATED OUTSIDE OF THE PJM FOOTPRINT?

A. In order for a generating unit located outside of the PJM control area to provide Kentucky Power with capacity and energy, it must secure Long Term Firm (LTF) Transmission service from PJM. The process involves multiple studies and typically requires 18-24 months to complete. Once these studies are complete, an estimate for the amount and cost of upgrades would be provided by PJM to the proposed transmission customer quantifying the cost to grant transmission service. Depending on the extent of transmission upgrades required, the additional time required for construction of the interconnection facilities could exceed the original time required for the studies. The process and requirements for requesting LTF Transmission Service from PJM are set forth in PJM Manual 2 and PJM Manual 14A. **Exhibit JAK-3** provides PJM's overview of the process.

In addition to the PJM LTF Transmission Service, a transmission reservation to export the energy from MISO to PJM would also have to be obtained from MISO. The process of securing all of the necessary firm transmission service would add additional steps, cost, and uncertainty to a bid proposal from a resource in MISO. There is no need for

Kentucky Power or its customers to assume such large risks when alternatives, without those risks, are available within PJM.

Q. DOES THE FACT THAT TWO OF THE NON-CONFORMING PROPOSALS WERE AN EXTREMELY EARLY STAGE PROJECT AND FAILED TO MEET THE DELIVERY DATE RAISE SIMILAR CONCERNS?

A. Yes. The uncertainty related to the final cost and in service date of these two early stage development proposals added significant risks to these proposals. Assets that cannot provide energy and capacity to the Company on the delivery date increase the risk to the Company and its customers inherent in purchases in the spot markets. As in the case of the non-conforming MISO proposals, the uncertainties and risks in these proposals prevented them from being a reasonable alternative for the Company.

Q. DID THE COMPANY RECEIVE ANY OTHER PROPOSALS AS PART OF THIS SOLICITATION?

A. Yes. EnerNOC, Inc. (EnerNOC), offered a Commercial and Industrial Demand Response Program (C&I DR Program), as well as an Industrial Energy Efficiency Program (Industrial EE Program). The former provided a qualified commitment to provide 20 MW of demand response over a 5-year term beginning January 1, 2015. The latter was a proposal by which EnerNOC would oversee the recruitment, delivery/implementation and ultimate measurement and verification services for the purposes of introducing energy efficiency activity on behalf of Kentucky Power industrial customers.

Q. WERE THESE OFFERED DEMAND RESPONSE AND ENERGY EFFICIENCY PROGRAMS CONSIDERED FOR PURPOSE OF THE 250 MW RFP ANALYSIS SET FORTH IN CASE NO. 2012-00578?

A. No they were not. For purposes of that exercise, the first (C&I DR Program) offer was considered non-conforming because of the conditions established by EnerNOC in its proposal as follows:

> "In terms of the minimum capacity commitment, EnerNOC is ready to commit to 20 MW if Kentucky Power has no other interruptible program offered to commercial or industrial customers. If Kentucky Power does have such a competing offer, EnerNOC could still commit to 20 MW, but we would ask for a limited time period to confirm in the marketplace that we could fulfill that commitment." [1]

The Company has an *existing* Tariff C.S.-I.R.P which provides certain customers with the opportunity to nominate load to be interrupted. This existing Kentucky Power tariff triggers the condition set out in the EnerNOC offer as quoted above. As a result, the EnerNOC C&I DR Program cannot be considered a firm offer as required by the RFP. Moreover, the limited size of the potential 20 MW offered is not material to the Company's 250 MW solicited resource need—nor relevant to the size and scope of the Mitchell Transfer—and, hence, it would not have reasonably changed the instant analysis being requested by the Commission in any event.

As it pertains to the Industrial EE Program, no specific estimates were provided by EnerNOC as part of its proposal detailing the ultimate energy efficiency levels and attendant program costs. While Kentucky Power may explore such future opportunities

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[1] (Confidential) "EnerNOC Utility Solutions response to American Electric Power Service Corporation Up to 250 MW of Long-term Capacity and Energy": Dated June 11, 2016; pgs. 6 and 7.

with EnerNOC, by virtue of these vagaries, the program itself was clearly non-conforming to the terms set forth in the 250 MW RFP.

Q. FOLLOWING THE COMMISSION'S OCTOBER 7, 2013 ORDER APPROVING, WITH FOUR MODIFICATIONS ACCEPTED BY THE COMPANY, THE STIPULATION AND SETTLEMENT AGREEMENT AMONG KENTUCKY POWER, KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC. AND SIERRA CLUB ("STIPULATION") IN CASE NO. 2012-00578 DID THE COMPANY ENTER INTO FURTHER NEGOTIATIONS WITH THE CONFORMING BIDDERS?

A. No. Paragraph 13 of the Stipulation as approved by the Commission required the Company to "exercise its option to terminate its March 28, 2013 Request for Proposals." On November 19, 2013, the Company notified the Bidders that it had exercised its option to terminate the RFP.

VI. RISKS ASSOCIATED WITH PROCEEDING WITH A MARKET ALTERNATIVE

Q. ARE THERE ANY RISKS WITH A MARKET ALTERNATIVE?

A. Yes, there are several risks that should be considered when evaluating a market alternative such as those provided in response to the 250 MW RFP. First, pursuing a market alternative introduces counterparty risk. Second, a market alternative introduces additional risk regarding the maintenance and unit condition of the facility supporting the purchase. And finally, there are jurisdictional considerations associated with a market alternative.

Q. PLEASE DESCRIBE SOME OF THE COUNTERPARTY RISKS ASSOCIATED WITH A MARKET ALTERNATIVE.

CONFIDENTIAL & BUSINESS-SENSITIVE INFORMATION

Conforming Proposals

Proposal Number	Bidder (Project Name)	Location	COD Year	PJM Asset?	Amount (MW)	Technology	Delivery to PJM-BS1 Pnode?	Proposal Type	Base Term (Start Date)	Key Commercial Terms	Proposal Conforming?
1	LS Power (Riverside)	Zelda, KY	2001	Yes	250 MW	Natural Gas Simple-Cycle Combustion Turbines (Peaking Duty Cycle) (total Facility size - 858 MW (PJM rating))	Yes	Power Purchase Agreement (PPA)	15 yr. (6/1/2015)	Capacity Rate = $3.25 kW-month, fixed and flat for Term Reactive Power = ~$0.50/kW-month Fixed O&M = $0.50/kW-month escalated annually Fuel Energy = Contract Energy x Fuel Index Price x Guaranteed Heat Rate - Fuel Index Price = Platts Gas Daily Tennessee LA 500 Leg Midpoint x 102% plus $0.20/MMBtu - Guaranteed Heat Rate = 10.8 MMBtu/MWh at full load condition Start Charge Rate = $8,750 per turbine per start escalated annually	Yes
2	Tenaska (Big Sandy Peaker)	Kenova, WV	2001	Yes	300 MW	Natural Gas Simple-Cycle Aero-Derivative CTs (Peaking Duty Cycle) (total Facility size - 300 MW (PJM))	Yes	Asset Purchase Agreement (APA)	n/a (5/31/2015)	$115.5 M (@ $385/kW)	Yes
3	Tenaska (Big Sandy Peaker)	Kenova, WV	2001	Yes	300 MW	Natural Gas Simple-Cycle Aero-Derivative CTs (Peaking Duty Cycle) (total Facility size - 300 MW (PJM))	Yes	Tolling Agreement (TA)	15 yr. (6/1/2015)	Capacity Charge = $3.85/kw-month, fixed and flat for Term Heat Rate - 10,525 Btu/kWh at full load condition Variable O&M = $4.50 / MWh, with 1% annual escalation Fuel Cost: KPCo shall purchase and supply the required fuel	Yes
4	AES (Dayton Power & Light) (East Bend Unit 2)	Rabbit Hash, KY	1981	Yes	186 MW (31% share)	Pulverized Coal-fired, Controlled (total Facility size - 579 MW (PJM))	Yes	Asset Purchase Agreement (APA)	n/a (6/1/2015)	$13.345 M (@ $72/kW)	Yes

Non-Conforming Proposals

Proposal Number	Bidder (Project Name)	Location	COD Year	PJM Asset?	Amount (MW)	Technology	Delivery to PJM-BS1 Pnode?	Proposal Type	Base Term (Start Date)	Key Commercial Terms	Proposal Conforming?
5	Big Rivers Electric Corp (Wilson Station: Unit 1)	Centertown, KY	1984	No	417 (or 250 MW share)	Pulverized Coal-fired, Partially-Controlled [1] (total Facility size - 417 MW)	No (MISO)	Asset Purchase Agreement (APA)	n/a (6/1/2015)	$500.0 M (100% unit) (@ $1,199/kW)	No[2]
6	Big Rivers Electric Corp (Coleman Station: Units 1-3)	Hawesville, KY	1970	No	443 (or 250 MW share)	Pulverized Coal-fired, Partially-Controlled [1] (total Facility size - 485 MW)	No (MISO)	Asset Purchase Agreement (APA)	n/a (6/1/2015)	$200.0 M (100% units) (@ $451/kW)	No[2]
7	Big Rivers Electric Corp (Wilson Station: Unit 1)	Centertown, KY	1984	No	250 MW	Pulverized Coal-fired, Partially-Controlled [1] (total Facility size - 417 MW)	No (MISO)	Tolling Agreement (TA)	15 yr. negotiable	Capacity Charge = $7.50/kW-mo., 2015-2018; $11.50/kW-mo., 2019-Term Heat Rate - 10,525 Btu/kWh at full load condition Variable O&M = $2.70 / MWh, w/ annual escalation @ CPI-U Fuel Cost: KPCo shall purchase and supply the Ill-Basin coal (11.5k BTU, 6#)	No[2]
8	Khanjee Holding (proposed facility, not built)	near Zelda, KY	n/a	Yes	250 MW	Natural Gas Combined Cycle (total Facility size 808 MW)	unknown	Power Purchase Agreement (PPA)	20 yr. (1/1/2017)	Capacity Charge = $8.43/kW-mo. (2017), escalated annual @ 2% ($9.83/kWmo. levelized, 20-year, defining any annual price escalation) Heat Rate - 6,800 Btu/kWh at full load condition, w/ $1/Mwh penalty post failure Variable O&M = $0.64 / MWh (levelized, 20-year, defining any price escalation) Energy Cost: $48.72/Mwh (levelized, 20-year, defining any price escalation) Startup Payment: $25,000 per CT start-up	No[3]
9	Khanjee Holding (proposed facility, not built)	near Zelda, KY	n/a	Yes	250 MW	Natural Gas Combined Cycle (total Facility size 808 MW)	unknown	Tolling Agreement (TA)	20 yr. (1/1/2017)	*(same as PPA, with exception that KPCo shall purchase and supply fuel)*	No[3]

Note 1: Units are not currently compliant with U.S. EPA Mercury and Air Toxics Standards (MATS) rulemaking by 2015. Big Rivers is in the process of installing both Dry Sorbent Injection ("DSI") and Activated Carbon Injection ("ACI") technology to be in conformance.
Note 2: Proposal is non-conforming primarily due to it not being a PJM Resource as asset is interconnected to MISO with no known or identified approaches for obtaining firm transmission to both MISO-PJM seam, then within PJM to required POD.
Note 3: Proposal is non-conforming due to not having a completed PJM Feasibility Study; 20 year (vs. 15-Year) Term length, Unsatisfactory 2017 commercial start date, new-build construction risk, etc.

2012-00578, approved by the Commission on October 7, 2013, the Company has exercised its right to terminate the 250 MW RFP. However, the analysis of the bids submitted in response to the 250 MW RFP *remains a valuable benchmark* for the economic analysis of the Big Sandy Unit 1 natural gas conversion project.

Q. **WHAT WERE THE RESPONSES TO THE COMPANY'S 250 MW RFP SOLICITATION?**

A. Estimated cost and performance profiles associated with the Big Sandy Unit 1 gas conversion option were received for modeling purposes on June 7, 2013. As further described in the direct testimony of Company Witness Karrasch, on June 11, 2013, AEPSC, as agent for Kentucky Power, received a total of nine (9) supply-side offers from a total of five (5) non-affiliate companies. As he further described, the responses to the 250 MW RFP consisted of four (4) offers that conformed to the Company's bid specifications, and five (5) offers that were deemed to be non-conforming.

Q. **WOULD YOU BRIEFLY IDENTIFY AND DESCRIBE THE NATURE OF THE CONFORMING OFFERS THAT WERE FURTHER EVALUATED BY THE COMPANY?**

A. Yes. Kentucky Power received four conforming bids consisting of offers from three facilities, or portions thereof:

- LS Power - (Riverside-Natural Gas Combustion Turbines; located in Zelda, KY)
  250 MW Purchase Power Agreement (15-Yr. "PPA") effective June 1, 2015
- Tenaska (Big Sandy Peaker-Natural Gas Combustion Turbines; located in Kenova, WV)...
  - 300 MW Asset Purchase Agreement (APA) effective May 31, 2015, *or*
  - 300 MW Tolling Agreement (15-Yr. "TA") effective June 1, 2015
- AES-Dayton Power & Light ("DPL") (East Bend Unit 2-Pulverized Coal; located in Rabbit Hash, KY)
  186 MW APA (31% partial ownership) effective June 1, 2015

Q. WERE OTHER, NON-CONFORMING OFFERS CONSIDERED WHEN ANALYZING THE 250 MW RFP SOLICITATION?

A. No. The 5 non-conforming offers summarized by Company Witness Karrasch were excluded from further analysis in accordance with the requirements and instructions of the 250 MW RFP. As described by Mr. Karrasch, they were also excluded to ensure that the responses could be compared to the Big Sandy Unit 1 gas conversion option and to permit the Company to respond to the Commission's May 28, 2013, Order in Case No. 2012-00578 in a meaningful fashion. Mr. Karrasch's testimony provides further information on why the excluded supply-side proposals were non-conforming, and the bases for the 250 MW RFP requirements that were not met by the excluded proposals.

Q. HOW WERE THE COSTS AND PERFORMANCE PARAMETERS OF THE 250 MW RFP BIDS DEVELOPED FOR USE IN THE STRATEGIST® MODELING?

A. The 250 MW RFP bid analysis involved extracting and assembling the pricing and performance characteristics submitted for each conforming proposal, by the respective bidding parties. As Company Witness Karrasch describes, to the extent that issues arose that required clarification from the non-affiliate bidders, requests for additional information were made by the Company's representative to the designated contact person for each of the respective responding companies. This clarification process occurred within the period June 11 through June 21, 2013.

Q. DID THE COMPANY REFRESH THE INFORMATION CONTAINED IN THE CONFORMING PROPOSALS?

of carbon dioxide emitted from all fossil generating sources beginning in the year 2022.[10]

A. BIG SANDY UNIT 1 EVALUATION SUMMARY

Q. WHAT WERE THE RESULTS OF THE BIG SANDY UNIT 1 MODELING ANALYSIS?

A. Exhibit SCW-1 offers a tabular summarization and comparison of the long-term modeling results for the three Kentucky Power disposition options/sub-options for Big Sandy Unit 1 identified on TABLE 1. As also previously described in this testimony these modeling results represent relative cost analyses, meaning they are compared to each other to determine the least-cost alternative outcomes. Given that, Exhibit SCW-1 reflects the relative cost/benefit of the Big Sandy Unit 1 gas conversion (Option #1) versus both a (PJM) market substitution alternative (Option #2A), as well as the results of the Company's 250 MW RFP (Option #2B). It establishes that the optimum Kentucky Power long-term alternative would be one that would include the conversion of Big Sandy Unit 1 as a natural-gas fired steam unit. Option #1 is a least-cost option over the long-term study period analyzed. It is lower than Option #2A by $134 million. Further, it varies from the 250 MW RFP offers evaluated (Option #2B) by a range of $<17> -to- $128 million.

Q. THE MODELING SUGGESTS THAT THE BIG SANDY UNIT 1 GAS CONVERSION (OPTION #1) IS MORE COSTLY THAN ONE OF THE

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[10] *See* pages 11 and 12 of the direct testimony of Company Witness Bletzacker in Case No. 2012-00578 for a discussion of how the amount and timing of this assumed "carbon tax" was established for such modeling purposes. See also pages 16 and 17 of the supplemental testimony of Company Witness Munczinski and the hearing testimony of Company Witness McManus in Case No. 2012-00578 for a discussion of how the 2022 carbon tax start date comports with the President's recent directive to the EPA regarding regulation of GHG for existing sources.

CONFORMING OFFERS BY APPROXIMATELY $17 MILLION. IS THE DIFFERENCE BETWEEN THE TWO OPTIONS MATERIAL?

A. No it is not. As further described later in this testimony, a previous analysis from Case No. 2012-00578 indicated that the Big Sandy Unit 1 gas conversion option was "only slightly (~$4 million) less expensive" than the 15-year peaking capacity Tenaska TA;[11] but that there were other "qualitative" factors which would provide additional relative value to the Big Sandy Unit 1 gas conversion solution.[12] Under the modeling for this case, the cost of the 15-year Tenaska TA is approximately $17 million—over the long-term study period modeled—below the Big Sandy Unit 1 gas conversion option.

As with the $ 4 million CPW *favorable* variance in the prior modeling from Case No. 2012-00578, a $17 million unfavorable variance is not material from the perspective of such long-term economic modeling. As a percentage of the 'total' CPW over the long-term (through 2040) study period, a $17 million relative variance is equal to less than *three-tenths of one percent* (0.3%) of Kentucky Power's overall study period CPW of costs.[13] In short, the difference is within the margin of error of the modeling, and thus qualifies as a least-cost alternative.

Q. **DOES THE CHANGE IN IN-SERVICE DATE FOR THE BIG SANDY UNIT 1 CONVERSION HAVE ANY MATERIAL IMPACT ON THE ANALYSIS?**

A. No. The Strategist® analysis performed for this case continued to assume a June 1, 2015 in-service date for the Big Sandy Unit 1 natural gas conversion. This was done to ensure an "apples to apples" comparison with 250 MW RFP-based market

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[11] *See* supplemental testimony of S.C. Weaver in Case No. 2012-00578; pg. 8.
[12] *ibid*; pgs. 8-9.
[13] $16.8 million / $5,947 million (Option #1 total CPW) = 0.002825

alternatives. To now shift this conversion project in-service date to the anticipated "mid-May 2016" date as described by Company Witness Walton would unfairly bias the relative results of Option #1 *versus* the RFP offers—which had each assumed a June 2015 start date—inasmuch as the Big Sandy Unit 1-related economics would be advantaged by virtue of the prospect of operating for nearly an additional year as a lower-cost, coal-fired unit. Moreover, the additional year of lower cost, coal-fired operation is *only* available under the MATS Rule if Big Sandy Unit 1 is to be converted in this fashion.

Q. WHAT OTHER FACTORS ASSOCIATED WITH THESE MODELING RESULTS SHOULD BE RECOGNIZED?

A. When viewed from an "annual" CPW perspective, the relative CPW differences between the Big Sandy Unit 1 Gas Conversion and the 15-year Tenaska TA are initially even less pronounced. As shown on a chart at the bottom of (Confidential) Exhibit SCW-1A, the CPW of the Unit 1 gas conversion is only approximately $2.8 million more costly as of the year 2020, and still less than $10 million ($9.4 million) more costly as of the year 2025.

Note further on (Confidential) Exhibit SCW-1A that if one were to exclude the value of "ICAP Revenue" (col. B), then the Option #1 Big Sandy gas conversion option would continue to be least-cost versus all alternative options, including the 15-year Tenaska TA. However, when considering the incremental capacity value potentially afforded by the *300* MW 15-year Tenaska TA versus the smaller, approximately 268 MW Big Sandy Unit 1 gas conversion, incremental CPW capacity value of over $27 million is recognized (col. E). In other words, if capacity value from the currently price-volatile PJM-RPM capacity market construct were not considered, the Option #1 CPW of costs would be over $10 million *below* that of the 15-year Tenaska TA. Thus, excluding such potentially volatile PJM capacity value, the Big Sandy Unit 1 conversion would be less costly than each of the conforming offers received under this modeling (col. D).

Q. WHAT ADDITIONAL ADVANTAGES WOULD THIS CAPACITY AND ENERGY PRESERVATION AT BIG SANDY OFFER KENTUCKY POWER AND ITS CUSTOMERS?

A. It would naturally increase the relative "mix" of natural gas into Kentucky Power's generating portfolio. As described in the testimony of Company Witness Wohnhas, after Big Sandy Unit 1 is converted, that natural gas-sourced capacity mix would equate to nearly 18 percent.[14] With that, it would then offer a physical hedge against the prospect of any lower-than-forecasted natural gas and attendant PJM energy prices.

Q. ARE THERE OTHER NON-MODELED, OR "QUALITATIVE" FACTORS THAT WOULD ALSO SUGGEST THAT THE BIG SANDY UNIT I GAS CONVERSION IS THE SUPERIOR OPTION TO FILL THIS APPROXIMATE 250 MW CAPACITY AND ENERGY TRANCHE?

A. Yes. As also described by Company Witness Karrasch, factors such as Company ownership and asset control (versus potential performance risk associated with receiving power and energy via a purchase power arrangement) also represents a relative qualitative benefit that was not considered in this comparative 250 MW RFP economic evaluation, but would further validate that the Big Sandy Unit 1 gas conversion option is the best alternative.

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[14] 268 MW / (268 MW + 780 MW [50% share of Mitchell 1&2] + 393 MW [Rockport 1&2 purchase] + 58.5 MW ecoPower PPA) = 17.9%

long-term Big Sandy Unit 1 (and Unit 2) disposition plan. First, as summarized on the second line of data found on Exhibit SCW-2, the relative CPW economic cost of the option which, instead of selecting a Big Sandy Unit 1 gas conversion, assumed an approximate 250 MW incremental purchase of capacity and energy from the Fundamentals-forecasted *PJM* market for as long as 10 years (Option #2A) is +$195 million.

Q. PLEASE OFFER FURTHER ELABORATION ON THESE RESULTS SUMMARIZED ON EXHIBIT SCW-2.

A. Focusing further on (Confidential) Exhibit SCW-2A, detail is also offered identifying the relative study period CPW cost differences between a Kentucky Power resource portfolio that would include the Big Sandy Unit 1 gas conversion (Option #1) versus each of the 4 conforming non-affiliate proposals received via the March 28th 250 MW RFP. Again, although recognized as being only slightly (~$4 million) less expensive than the alternative 15-year "peaking capacity" Tenaska TA offer listed, and thus within the margin of error of the modeling performed, the Big Sandy Unit 1 gas conversion option was found to be less costly than all 4 conforming non-affiliate proposals.

Q. WHY IS THERE A SLIGHT CHANGE IN THE 250 MW RFP MODELING RESULTS OFFERED IN THIS CASE FROM THOSE PREPARED AS PART OF CASE NO. 2012-00578?

A. The non-material changes in modeled CPW results derive from changes in two of the key inputs to the Strategist® model that occurred subsequent to the issuance of supplemental testimony in Case No. 2012-00578.

Kentucky Company

Big Sandy Unit 1 Disposition Analysis -- CONFIDENTIAL Summary *

Cumulative Present Worth (CPW) of Modeled Revenue Requirements, 28-Year Study Period (2013-2040), Expressed in 2013$

OPTION	($000) OPTION Description	(A) KPCo Revenue Requirement (Excl. ICAP)	Less: (B) ICAP Revenue / <Cost>	= (C)=(A)-(B) KPCo Revenue Requirement, Net	(D) KPCo Revenue Requirement (Ex. ICAP) v. Option #1	Less: (E) ICAP Revenue / <Cost> v. Option #1	= (F)=(D)-(E) KPCo Revenue Requirement, Net v. Option #1
#1	Big Sandy 1 Natural Gas Conversion (7/2015)	6,127,071	179,467	5,947,603	-	-	-
#2A	Big Sandy 1 Retirement (6/2015), w/ (PJM) Market Replacement	6,156,422	75,222	6,081,201	29,351	(104,246)	133,597
	Relative % Change						*2.25%*
#2B	Big Sandy 1 Retirement (6/2015), w/ (250 MW RFP) Market Replacement via the following (mutually-exclusive) CONFORMING OFFERS received in response to the 250 MW RFP:						
1	LS Power - Riverside CT (250 MW) Purch Power Agreement	6,127,670	173,809	5,953,861	599	(5,659)	6,258
2	Tenaska - Big Sandy CT (300 MW-Full) Asset Purchase Agreement	6,280,329	207,123	6,073,206	153,258	27,655	125,603
3	Tenaska - Big Sandy CT (300 MW) Tolling Agreement	6,137,843	207,123	5,930,721	10,772	27,655	(16,883)
4	DPL - East Bend Unit 2 Coal-Fired (186 MW-Partial) Asset Purch Agrmnt	6,189,103	113,596	6,075,508	62,032	(65,872)	127,904

* Note: ALL analyses include, as part of Kentucky Power's nearer-term resource portfolio:

- o Continuation of 393 MW Rockport Purchase;
- o 50% Mitchell Transfer eff: 1/2014
- o Retirement of BS Unit 2 eff: 6/2015;
- o 58.5 MW ecoPower Hazard, LLC biomass renewable energy purchase eff: 1/2017; and
- o DSM assumptions per Exhibit SCW-1; Table 1-2 Case No. 2012-00578

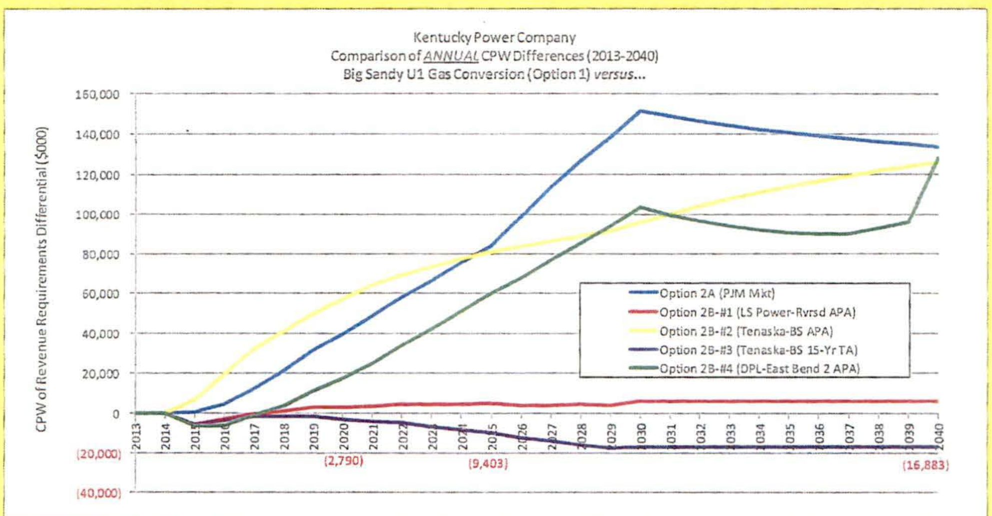

Exhibit SCW-1A
CONFIDENTIAL

ORIGINAL RESULTS REPRODUCED FROM CASE NO. 2012-00578

CONFIDENTIAL & BUSINESS SENSITIVE

Kentucky Power Company

Big Sandy Unit 1 Disposition Analysis -- CONFIDENTIAL Summary *

Cumulative Present Worth (CPW) of Modeled Revenue Requirements, 28-Year Study Period (2013-2040), Expressed in 2013$

OPTION	($000) OPTION Description	(A) KPCo Revenue Requirement (Excl. ICAP)	(B) ICAP Revenue / <Cost>	(C)=(A)-(B) KPCo Revenue Requirement, Net	(D) KPCo Revenue Requirement (Ex. ICAP) v. Option #1	(E) ICAP Revenue / <Cost> v. Option #1	(F)=(D)-(E) KPCo Revenue Requirement, Net v. Option #1
#1	Big Sandy 1 Natural Gas Conversion (7/2015)	6,261,339	59,448	6,201,891	-	-	-
#2A	Big Sandy 1 Retirement (6/2015), w/ (PJM) Market Replacement	6,355,890	(40,824)	6,396,713	94,550	(100,272)	194,822
#2B	Big Sandy 1 Retirement (6/2015), w/ (250 MW RFP) Market Replacement via the following (mutually-exclusive) CONFORMING OFFERS received in response to the 250 MW RFP:						
1	LS Power - Riverside CT (250 MW) Purch Power Agreement	6,291,658	52,865	6,238,793	30,319	(6,583)	36,902
2	Tenaska - Big Sandy CT (300 MW-Full) Asset Purchase Agreement	6,428,355	93,796	6,334,559	167,016	34,348	132,668
3	Tenaska - Big Sandy CT (300 MW) Tolling Agreement	6,299,925	93,796	6,206,129	38,586	34,348	4,237
4	DPL - East Bend Unit 2 Coal-Fired (186 MW-Partial) Asset Purch Agrmnt	6,484,245	94,573	6,389,673	222,906	35,125	187,781

* Note: In addition, ALL offer-specific analyses include, as part of Kentucky Power's nearer-term resource portfolio:

- o Continuation of 393 MW Rockport Purchase;
- o 50% Mitchell Transfer eff: 1/2014
- o Retirement of BS Unit 2 eff: 6/2015; and
- o DSM assumptions per Exhibit SCW-1; Table 1-2 Case No. 2012-00578

Exhibit SCW-2A (CONFIDENTIAL)