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MAY 23 2013

PUBLIC SERVICE
COMMISSION

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

IN THE MATTER OF:

THE APPLICATION OF KENTUCKY POWER COMPANY FOR:)
(1) A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY)
AUTHORIZING THE TRANSFER TO THE COMPANY OF AN)
UNDIVIDED FIFTY PERCENT INTEREST IN THE MITCHELL)
GENERATING STATION AND ASSOCIATED ASSETS; (2) APPROVAL)
OF THE ASSUMPTION BY KENTUCKY POWER COMPANY OF)
CERTAIN LIABILITIES IN CONNECTION WITH THE TRANSFER OF)
THE MITCHELL GENERATING STATION; (3) DECLARATORY) CASE NO. 2012-00578
RULINGS; (4) DEFERRAL OF COSTS INCURRED IN CONNECTION)
WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR)
ACT AND RELATED REQUIREMENTS; 5) FOR ALL OTHER)
REQUIRED APPROVALS AND RELIEF)

KENTUCKY POWER COMPANY RESPONSES TO
COMMISSION STAFF'S FOURTH SET OF DATA REQUESTS

May 22, 2013

VERIFICATION

The undersigned, Karl R. Bletzacker, being duly sworn, deposes and says he is Director, Fundamental Analysis for American Electric Power, that he has personal knowledge of the matters set forth in the forgoing responses for which he is the identified witness and that the information contained therein is true and correct to the best of his information, knowledge, and belief.

Karl R Bletzacker
Karl R. Bletzacker

STATE OF OHIO)
) CASE NO. 2012-00578
COUNTY OF FRANKLIN)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Karl R. Bletzacker, this the 20 day of May 2013.



Holly M. Charles
Notary Public-State of Ohio
My Commission Expires
March 7, 2016

Holly M. Charles
Notary Public

My Commission Expires: 3/7/16

VERIFICATION

The undersigned, MATTHEW D. FRANSEN being duly sworn, deposes and says he is Director, Strategic Initiatives for American Electric Power, that he has personal knowledge of the matters set forth in the forgoing responses for which he is the identified witness and that the information contained therein is true and correct to the best of his information, knowledge, and belief.

Matthew D. Fransen

MATTHEW D. FRANSEN


STATE OF OHIO)
) CASE NO. 2011-00578
COUNTY OF FRANKLIN)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Matthew D. Fransen, this the 16th day of May 2013.

David C. House

Notary Public

My Comm. Expires: _____



David C. House, Attorney At Law
NOTARY PUBLIC - STATE OF OHIO
My commission has no expiration date
Sec. 147.03 R.C.

VERIFICATION

The undersigned, Scott C. Weaver, being duly sworn, deposes and says he is Managing Director Resource Planning and Operation Analysis for American Electric Power, that he has personal knowledge of the matters set forth in the forgoing responses for which he is the identified witness and that the information contained therein is true and correct to the best of his information, knowledge and belief



Scott C. Weaver

STATE OF OHIO

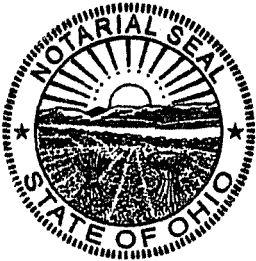
)

) CASE NO. 2012-00578

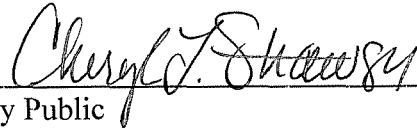
COUNTY OF FRANKLIN

)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Scott C. Weaver, this the 16th day of May 2013.



Cheryl L. Strawser
Notary Public, State of Ohio
My Commission Expires 10-01-2016

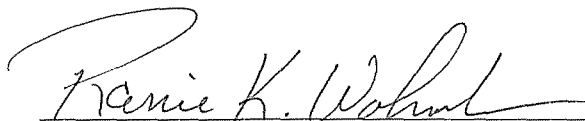


Notary Public

My Commission Expires: October 1, 2016

VERIFICATION

The undersigned, Ranie K. Wohnhas, being duly sworn, deposes and says he is the Managing Director Regulatory and Finance for Kentucky Power, that he has personal knowledge of the matters set forth in the forgoing responses for which he is the identified witness and that the information contained therein is true and correct to the best of his information, knowledge, and belief


Ranie K. Wohnhas

COMMONWEALTH OF KENTUCKY)
) CASE NO. 2012-00578
COUNTY OF FRANKLIN)

Subscribed and sworn to before me, a Notary Public in and before said County and State, by Ranie K. Wohnhas, this the 17th day of May 2013.


Notary Public

My Commission Expires: January 23, 2017

Kentucky Power Company

REQUEST

Refer to page 9, lines 16-23, of the Rebuttal Testimony of Karl R. Bletzacker ("Bletzacker Rebuttal").

- a. Provide the "indicative elasticity" values based on the EIA AEO 2013 (Early Release). The estimates should be carried to the third decimal place.
- b. Provide the "indicative elasticity" values used in the earlier analysis based on the EIA AEO 2011. The estimates should be carried to the third decimal place.
- c. Discuss any significant differences between the two sets of estimates and their potential impact on the resulting commodity price estimates.

RESPONSE

- a. Please refer to the file named "Case No. 2012-00578 PSC 4-1.xlsx" (blue worksheets) on the enclosed CD.
- b. Please refer to the file named "Case No. 2012-00578 PSC 4-1.xlsx" (red worksheets) on the enclosed CD.
- c. The natural gas "indicative elasticity" for the EIA-AEO 2011 ("Analysis" row 31) reveals average values of 0.1 for the years 2016 - 2026 and 0.56 for the years 2027 - 2035. The natural gas "indicative elasticity" for the EIA-AEO 2013ER reveals average values of 0.1 for the years 2016 - 2026 and 0.23 for the years 2027 - 2040. These values are *inelastic* in that a small percentage increase in consumption will command a larger percentage increase in price. The significant difference between the 2011 and the 2013ER forecasts is the relatively greater elasticity in the period beyond 2026. The EIA-AEO 2011 is more elastic (0.56) than EIA-AEO 2013ER (0.23). The conclusion to be drawn is that the EIA currently views the price of long-term natural gas supply to be relatively more reactive to increases in consumption than in its earlier forecast (such as increases in consumption due to future regulations).

WITNESS: Karl R Bletzacker

Kentucky Power Company

REQUEST

Refer to Exhibit SCW-3 of the Direct Testimony of Scott C. Weaver.

Provide an update to this exhibit based on the commodity price update analysis, as described at page 8, lines 20-22, of the Bletzacker Rebuttal, using the updated analysis based on the EIA 2013 (Early Release) AEO. Include all analysis associated with Kentucky Power's review of updated data.

RESPONSE

Please see Attachment 1 for an update to Exhibit SCW-3 that includes the AEP fundamental analysis modified view of EIA 2013 (Early Release) AEO.

WITNESS: Scott C Weaver

Kentucky Power Company

REQUEST

Refer to Exhibit SCW-3R of the Rebuttal Testimony of Scott C. Weaver (“Weaver Rebuttal”). Provide work papers, in Excel format with formulas intact and unprotected, that includes the source of information costs in the impairment analysis used in used in preparation of Exhibit SCW-3R.

RESPONSE

The requested information can be found in zip files KPSC CONFIDENTIAL 4-3 and KPSC 4-3 on the enclosed CDs.

WITNESS: Ranie K. Wohnhas

Kentucky Power Company

REQUEST

Provide spreadsheets, in Excel format with formulas intact and unprotected, for all data Witness Bletzacker provided to Witness Weaver for use in the analysis in the Weaver Rebuttal.

RESPONSE

Please see the enclosed CD.

WITNESS: Karl R Bletzacker

Kentucky Power Company

REQUEST

Provide any analysis or data collected that reviews the sale of coal plants by other utilities in the last three years in the northeast. Include any cost data, attempts to normalize relative to the Mitchell Plant units, or other data that provides a comparison of the proposed sales prices of the Mitchell Plant units.

RESPONSE

Refer to the Company's response to KIUC 2-29e Attachment 1 and KIUC 2-29e Attachment 2. Confidential treatment is being sought for portions of KIUC 2-29e Attachment 2. Please also refer to the enclosed CD for KPSC 4-5 Attachments 1 and 2.

WITNESS: Matthew D Fransen

Kentucky Power Company

REQUEST

Explain the reason for the Big Sandy 2 Natural Gas Combined Cycle ("NGCC") capital cost estimate of \$1,168/kW versus the Energy Information Administration ("EIA") capital cost estimate of \$917/kW.

RESPONSE

The two estimates are not fairly comparable. The EIA estimate is based on generic, non-site specific data unlike the Company's Big Sandy Unit 2 estimate that uses site-specific information. As stated by EIA:

"Each technology is represented by a generic facility of a specific size and configuration, in a location that does not have unusual constraints or infrastructure requirements. Where possible, costs estimates were based on information derived from actual or planned projects known to the consultant. When this information was not available, the project costs were estimated using costing models that account for the current labor and materials rates necessary to complete the construction of a generic facility as well as consistent assumptions for the contractual relationship between the project owner and the construction contractor."

Source: <http://www.eia.gov/forecasts/capitalcost/>

Kentucky Power Company

By contrast, the capital cost AEP modeled accounts for the design basis, including plant functionality, location, reliability and risk, and are not overstated. The Big Sandy Unit 2 estimate was prepared in accordance to the AACE Class 3 estimate, and the scope of the Big Sandy combined cycle estimate is fully defined and understood. The estimate was prepared in collaboration with Sargent & Lundy (S&L), a leading architectural engineering firm with extensive experience in designing and estimating combined cycle plants. Additionally, S&L worked with Kiewit, a leading power plant construction firm, and internal AEP operations and engineering to ensure all issues associated with this project were understood. Further, the EIA estimate excludes "KPCo capital (work order) overhead allocation" costs included in the Company's estimate. The impact of these overhead costs alone can be measured by comparing the NGCC cost used by Kentucky Power with the Company's \$1,077/kW pre-"KPCo capital (work order) overhead allocation" cost estimate also found in TABLE 3 of Company witness Weaver's direct testimony.

In sum, the Big Sandy Unit 2 NGCC estimate and the EIA NGCC estimate are not reasonably comparable due to the unknown scope of the EIA estimate and the absence from the EIA estimate of "KPCo capital (work order) overhead allocation" costs.

WITNESS: Scott C Weaver

Kentucky Power Company

REQUEST

Provide any analysis regarding the cost of installing an NGCC that could replace some or all of the power proposed in the Mitchell Plant sale. Indicate sites reviewed, technology considered, and comparisons to other units built. Provide data or support from other sources of information such as the Electric Power Research Institute, EIA, the United States Environmental Protection Agency, and/or other suppliers or contractors.

RESPONSE

As part of its unit disposition analyses set forth in this filing, the Company did perform an analysis of an "NGCC" build alternative in the form of its "Option 2" profile which assessed the installation of a new 918-MW (with duct firing) combined cycle unit domiciled at the Big Sandy (i.e., brownfield) site. No such additional analyses--as would pertain to the construction of a non-site specific or 'greenfield' NGCC--were performed as the Company assumed a brownfield location that could utilize the existing acreage/location, transmission interconnection, potable water, certain structures and, ultimately, available trained local workforce would provide cost and other advantages.

WITNESS: Scott C Weaver

Kentucky Power Company

REQUEST

Refer to RKW-Exhibit 4 of the Direct Testimony of Ranie K. Wohnhas.

Kentucky Power estimates that, based on calendar year 2011 sales revenues, its revenue requirement would increase by approximately 8 percent in the first year after it acquires 50 percent of the Mitchell Plant. Using Kentucky Power's 2012 sales revenues, and assuming the acquisition of 50 percent of the Mitchell Plant, provide the percent change in revenue requirement for: a) the first year after the Mitchell acquisition; and b) the first year after Big Sandy 2 is retired.

RESPONSE

- a. Please refer to the Company's response to AG 2-12 for a comparison of 2012 under current rates and a "backcast" of the revenue requirement had Kentucky Power owned half of Mitchell and the AEP Interconnection Agreement had not been in effect during this period. This analysis also shows certain adjustments using historical average prices and capacity factors. While this analysis does not include specific 2014 projections, many of the Mitchell cost components shown in the 2012 analysis are anticipated to be fairly constant as evidenced by their stability in comparing the Company's response to AG 2-12 for 2012 with RKW-Exhibit 4 which is based upon 2011 data.

The Company is preparing its upcoming base rate filing, which will include the impacts of items discussed above and other items (generation-, transmission- and distribution-related) that will impact base rates and clauses.

- b. The requested analysis has not been performed because this analysis would be heavily assumption driven on the specific rate treatment of the remaining Big Sandy 2 plant balance, which will be determined in future rate cases. This final disposition of Big Sandy 2 following its retirement is a separate issue from the Company's proposal to add Mitchell because it would exist regardless of the generation option proposed as an alternative to Big Sandy 2.

WITNESS: Ranie K Wohnhas

Kentucky Power Company

REQUEST

Refer to Exhibit LPM-2 of the Direct Testimony of Lila P. Munsey in Case No. 2011-00401.¹ Kentucky Power estimated that, based on the Kentucky Jurisdictional Revenues for the 12 months ending August 2011, its revenue requirement would increase by approximately 31 percent in the first year that the Big Sandy 2 Dry Flue-Gas Desulfurization ("Scrubber") is placed into service.

- a. State whether, and if so where, this exhibit reflects the lower cost for fuel at Big Sandy 2 due to the installation of a Scrubber, and provide the amount of reduction in fuel cost.
- b. Explain whether the level of fuel revenues reflected on line 16, titled "KY Jurisdiction 12-month Revenue (Exhibit LPM - 5, L 13, C3)," is the actual level of fuel revenues for the 12 months ended August 2011.
- c. Provide an update of the Scrubber costs based on actual 12-months ended 2012 Kentucky jurisdictional revenue kWh sales.

¹ Case No. 2011-00401, 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 (Ky. PSC May 31, 2012).

RESPONSE

- a. Exhibit LPM-2 does not reflect the lower cost for fuel at Big Sandy 2 due to the installation of a Scrubber. Please refer to the Attachment to this response (KPCo Response to Commission Staff April 30, 2012 Hearing Data Request 2) for additional details.
- b. Yes.
- c. Updated Scrubber costs as filed in Witness Weaver's direct testimony, page 22, Table 3, of \$948 million plus AFUDC of \$114 million were included in the recalculation, for a total Big Sandy 2 DFGD retrofit cost of \$1,062 million. The revenues were updated from a twelve-month ended test year of August 2011 to a twelve-month ended test year of December 2012. The change in the overall percentage increased from the 31.20% (as filed) to 39.65%.

WITNESS: Ranie K Wohnhas

KPSC Case No. 2011-00401
Commission Staff Data Requests
April 30, 2012 Hearing
Item No. 2
Page 1 of 3
Filed with the PSC on May 8, 2012

Kentucky Power Company

REQUEST

Please provide the current prices of 1.7 lbs SO₂/MMBTU coal and 4.5 lbs SO₂/MMBTU coal and calculate the difference between the two. Using Big Sandy Unit 2's consumption of coal in 2010, and current prices for 1.7 lbs SO₂/MMBTU coal and 4.5 lbs SO₂/MMBTU coal, please calculate the difference in the cost of coal consumed in Big Sandy Unit 2 would have been if it had been able to burn 4.5 lbs. SO₂/MMBTU coal during 2010.

RESPONSE

The installation of a scrubber will allow KPCo to expand the sulfur range of fuel purchased for Big Sandy Unit 2. Two potential fuel combinations with the scrubber installation are either to purchase a 4.5 lb sulfur coal that could be consumed with no blending, or purchase and blend high sulfur (7.5 lb SO₂) and low sulfur (1.7 lb SO₂) coal to achieve a 4.5 lb sulfur coal mixture. Regardless of the fuel purchased, it must meet the other operational parameters and constraints of the unit. The following calculation shows the costs of each approach, based on the current market projections for 2013. KPCo would evaluate all of the fuel options available and make purchase decisions based on providing fuel at the lowest reasonable cost.

The coal prices used are from SNL Energy's, April 30, 2012 Weekly Coal Report, as such market data would most closely represent the historical KPCo procurement practice.

The prices as published on a per ton basis for the third and fourth quarters of 2012, as well calendar year 2013 are shown in Table 1 below. In reviewing the comparisons, it should be understood that Q3 2012 and Q4 2012 coal price data represent values that are closer to spot market purchases, whereas the calendar year 2013 price is more representative of a price that may be seen in response to a longer-term solicitation. In addition, Q3 and Q4 2012 coal market prices are affected by a current lack of market activity by many coal consumers. This has driven current coal prices below levels that are expected to be seen in future years.

Table 1

KPSC Case No. 2011-00401
Commission Staff Data Requests
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Coal Region	BTU/lb	lb SO ₂ /MM BTU	Q3 2012	Q4 2012	Calendar Year 2013 Price
CAPP	12,500	1.5	\$59.30	\$61.60	\$68.00
Pittsburg Seam	13,000	4	\$58.00	\$58.25	\$58.60
NAPP	12,500	7.5	\$48.25	\$48.50	\$48.75

A comparison of the 2010 actual fuel cost and the market data presented above is included in Table 2 on page 3 of this response.

KPSC Case No. 2011-00401
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Savings Based on Q3 2012 SNL Pricing	\$147,993,394	Calculated 2010 Big Sandy Unit 2 Coal Cost as Calculated in KPSC H-1
	\$126,186,354	Coal Cost Based on a 4 lb SO ₂ /MMBTU Pittsburg Seam Coal
	\$21,807,039	Estimated Fuel Savings Based on Pittsburg Seam Coal
	15%	Percentage Estimated Savings Over 2010 CAPP Cost
	\$121,674,104	Coal Cost Based on a 50:50 Blend of CAPP and NAPP Coals
	\$26,319,289	Estimated Savings based on 50:50 CAPP:NAPP Blend
	18%	Percentage Estimated Savings Over 2010 CAPP Cost
Savings Based on Q4 2012 SNL Pricing	\$147,993,394	Calculated 2010 Big Sandy Unit 2 Coal Cost as Calculated in KPSC H-1
	\$126,730,261	Coal Cost Based on a 4 lb SO ₂ /MMBTU Pittsburg Seam Coal
	\$21,263,133	Estimated Fuel Savings Based on Pittsburg Seam Coal
	14%	Percentage Estimated Savings Over 2010 CAPP Cost
	\$124,558,985	Coal Cost Based on a 50:50 Blend of CAPP and NAPP Coals
	\$23,434,408	Estimated Savings based on 50:50 CAPP:NAPP Blend
	16%	Percentage Estimated Savings Over 2010 CAPP Cost
Savings Based on Calendar Year 2013 SNL Pricing	\$147,993,394	Calculated 2010 Big Sandy Unit 2 Coal Cost as Calculated in KPSC H-1
	\$127,491,730	Coal Cost Based on a 4 lb SO ₂ /MMBTU Pittsburg Seam Coal
	\$20,501,663	Estimated Fuel Savings Based on Pittsburg Seam Coal
	14%	Percentage Estimated Savings Over 2010 CAPP Cost
	\$132,082,303	Coal Cost Based on a 50:50 Blend of CAPP and NAPP Coals
	\$15,911,091	Estimated Savings based on 50:50 CAPP:NAPP Blend
	11%	Percentage Estimated Savings Over 2010 CAPP Cost

It must be further noted that applying forward looking coal prices to historical consumption requires many assumptions, including:

- The 2010 Unit 2 Fuel Cost includes coal and transportation.
- The cost projections for the market are for coal only and do not include transportation (including such costs would reduce the above stated savings).
- The cost savings is solely based on the cost of the fuel and does not take into account other costs that might be associated with a scrubber, such as the cost of chemicals.
- The current coal market for 2013 is different from the market that existed in 2010 and the market when such fuel purchases are executed for KPCo will also be different.

WITNESS: Ranie K Wohnhas