RECEIVED

MAY 02 2013

## PUBLIC SERVICE COMMISSION

### IN THE MATTER OF:

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 RULINGS**; (4) **DEFERRAL OF COSTS INCURRED IN** CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

11. Please refer to page 16, lines 10-17 of Mr. Kollen's testimony. Does KIUC agree that the Company's April 10, 2013 application seeking Commission approval of the Renewable Energy Purchase Agreement for Biomass Energy Resources between ecoPower Generation-Hazard LLC and Kentucky Power Company Kentucky Power Company will promote fuel diversity? If the answer to this data request anything but an unqualified "yes," please provide each fact relied upon by KIUC in failing to answer with an unqualified "yes."

## **AMENDED RESPONSE:**

Object. The Company has not reflected or identified as a resource under consideration any biomass energy resources in its planning analyses in this proceeding and thus, it is not relevant to this proceeding. Without waiving such objection, Mr. Kollen has not reviewed the Company's Application in the referenced proceeding.

#### IN THE MATTER OF:

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 RULINGS**; (4) **DEFERRAL OF COSTS INCURRED IN** CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

- 18. Please refer to page 22, Table 1 of Mr. Hayet's testimony. Please provide the following information with respect to the table:
  - (a) Please identify by publisher, date of publication of publication, and title all supporting documentation and source documents used or reviewed by Mr. Hayet to create the Strategist inputs for KIUC's revised commodity price forecasts (gas, coal, market and ICAP) that were the basis for KIUC's revised results found in Table 1.
  - (b) Please provide, in electronic format if available, the supporting documentation and source documents identified in the response to subpart (a) of this request.
  - (c) Please provide all tools used and step-by-step instructions for the process used to create the revised commodity price forecasts. The instructions should identify the tools, spreadsheets, tabs, and cell locations used.
  - (d) Please provide in electronic format (.SAV or .FSV) all Strategist databases used to create the results found in Tables 1.
  - (e) Please supply all tools used to extract data from Strategist and then enter that data into the spreadsheet(s) used to create Table 1. This could include

#### IN THE MATTER OF:

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** RULINGS; (4) DEFERRAL OF COSTS INCURRED IN CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

templates, spreadsheets, programs, or Strategist Report Agent templates (.TPL files). The requested information should be provided electronically in native format, with formulas intact and visible, and no pasted values.

## AMENDED RESPONSE:

(a) Supporting documents used to create Strategist inputs are included as follows:

Source	File Name
KIUC work papers Data supplied by KPCO	KPCO 1-16 attachment a - FuelAnalysisNotesAndCalculations.xlsx
KIUC work papers Data supplied by KPCO	KPCO 1.17 attachment a.Carb Adj RLIB RDAT Typ Week.xlsx
KIUC work papers Data supplied by KPCO	KPCO 1-18 attachment a - FuelAnalysis.xlsx
KIUC work papers Data supplied by KPCO	KPCO 1-18 attachment b - 2011_09_23 CarbAdj,etc. UPDATE 11_5_12.zHayetMod.KIUC1-33.xlsx
EAI Annual Energy Outlook forecasts Data supplied by KPCO	KPCO 1-18 attachment c - EIA used for revised coal forecast.xlsx

For workpapers associated with the ICAP impairment inputs, see the response to KPCO 1-20a below.

#### IN THE MATTER OF:

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** RULINGS; (4) DEFERRAL OF COSTS INCURRED IN CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

Mr. Hayet is the publisher of the files, and for each file, the date associated with the file is part of the properties of the file.

- (b) See files attached.
- (c) Commodity Forecasts Step by Step process for creation of the forecasts.

### **Gas Commodity Forecast Development Steps:**

The natural gas price forecast development is found in the spreadsheet:

KPCO 1-18 attachment a - FuelAnalysis.xlsx, tab = grphdata

The table between columns C and I and the graph below the table indicates that KPCO's Base Henry Hub ("HH") and Dominion gas price forecasts are nearly identical. EIA Annual Energy Outlook forecasts have been pasted into the worktab betweens columns P and T, and graphs were created using that data and KPCO's HH commodity forecast data. Hayet Figure 1 compares the 2011 EAI Annual Energy Outlook HH Reference forecast to KPCO's HH Base forecast and that graph was included on page 14 of Mr. Hayet's testimony. The graph indicates that EIA's 2011 HH Reference forecast, and the Company's HH Base commodity gas forecast are very close and in fact indicates that the EIA 2011 forecast could substitute as a reasonable proxy for the commodity forecast that the Company derived.

An additional analysis was performed in the spreadsheet:

#### IN THE MATTER OF:

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 RULINGS**; (4) **DEFERRAL OF COSTS INCURRED IN** CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

KPCO 1-18 attachment b - 2011\_09\_23 CarbAdj,etc. UPDATE 11\_5\_12.zHayetMod.KIUC1-33.xlsx

From the analysis that was performed in that spreadsheet between columns A and AA, additional evidence was developed to prove that there was little difference between KPCO's monthly Henry Hub gas price forecast and its monthly Dominion gas price forecast. Cell K247 indicates the average monthly difference is less than .8% different and cell AA29 indicates that the annual average basis differential between the two forecasts is only .08 \$/MBTU, which again is a very small amount. These analyses prove that the 2011 EAI reference HH forecast not only is a good proxy for KPCO's Base forecast, but also for KPCO's Dominion forecast.

Hayet Figure 2 found in KPCO 1-18 attachment a - FuelAnalysis.xlsx, compares the 2011 EIA reference HH forecast to the most current 2013 EIA reference HH forecast. Based on the relationship of EAI's natural gas forecast to KPCO's forecast, Mr. Hayet computed a ratio of EIA's 2013 forecast to EIA's 2011 forecast, and applied that ratio to the KPCO's gas prices modeled in Strategist (See attachment a, columns V through AH).

### **Market Price Commodity Forecast Development Steps:**

See KPCO 1-16 attachment a - FuelAnalysisNotesAndCalculations.xlsx

#### IN THE MATTER OF:

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 RULINGS**; (4) **DEFERRAL OF COSTS INCURRED IN** CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

The Dominion forecast, swing adder, AEP On-Peak and Off-Peak Gen Hub data was taken from KPCO's Commodity Fuel data response provided in KPSC 1 -29 in the file named:

Price\_Forecast\_Nominal\_FTCA\_CSAPR\_2011\_09\_23.xlsx which was identical to Weaver Exhibit SCW-3.

The graph produced in the attachment a file was developed using the PAST software. (See also response KPSC 1-16 above). The statistical graphs were developed in PAST using the inputs from columns D, I and J and the output from PAST was pasted in to the spreadsheet. The graphs prove there is a nearly a linear relationship between fuel prices and market prices. If a strict linear relationship were observed, an average annual scale factor of 70% could be used to scale KPCO's original market price forecast to derive KIUC's adjusted market price forecast consistent with the EIA 2013 HH natural gas price forecast. For the sake of being conservative, a 77% scale factor was used, which is consistent with the annual average scale factor found in KPCO 1-18 attachment a - FuelAnalysis.xlsx, tab = grphdata, cell V42.

### The spreadsheet:

KPCO 1.17 attachment a.Carb Adj RLIB RDAT Typ Week.xlsx uses the 77% scale factor in tab OrigTypWk near the cell FZ44.

The ultimate forecasts found in tabs RLIB\_P and RLIB\_S were loaded into Strategist and are included in the .SAV files discussed below.

#### IN THE MATTER OF:

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 RULINGS**; (4) **DEFERRAL OF COSTS INCURRED IN** CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

### **Coal Price Commodity Forecast Development Steps:**

Coal Price Calculations are found within:

KPCO 1-18 attachment c - EIA used for revised coal forecast.xlsx

The graph in Hayet Figure 5 was computed from the tab InterRatio&APP Graph. The graph compares Nominal 2011 and 2013 EIA Annual Energy Outlook Minemouth coal prices.

The worktab CAPP-NAPP Ratios was used to compare KPCO's Base coal forecasts to EIA's 2011 forecasts for both CAPP and NAPP (See rows 10 -13). The same worktab was used to develop ratios that were used to adjust KPCO's 2011 coal price forecasts to be consistent with EIA's most current 2013 coal forecast. See columns 37 and 38 for the factors derived for CAPP and NAPP coal. Adjustment factors for Interior coal was derived in the worktab InterRatio&APP Graph (See rows 66 - 69).

Ultimately, the updated coal forecasts were developed in the worktab: UpdatedCoalForecast

KPCO's original coal prices that had been pasted into Strategist were copied in cells A6 through F35 for the Big Sandy, Mitchell and Rockport coal types. Mr. Hayet applied a CAPP scale

#### IN THE MATTER OF:

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 RULINGS**; (4) **DEFERRAL OF COSTS INCURRED IN** CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

factor to adjust the Big Sandy coal type, a NAPP scale factor to adjust the Mitchell coal type, and an interior scale factor to adjust the Rockport coal type. The adjusted coal prices that were input into Strategist are found in cells AD to AI 35.

### **ICAP Capacity Market Prices**

For a discussion of the development of ICAP Capacity Market Prices, see the response to KPCO 1-20 c below.

Additional information regarding the data incorporated in each run is included in Tables 1, 2 and 3 in Mr. Hayet's testimony.

Revisions to Tables 1, 2 and 3 have been made to adjust ICAP revenues as discussed in Mr. Hayet's Amended Testimony filed May 1, 2013. These revisions were made to reduce the ICAP revenues associated with the Mitchell units, between January 1, 2014 and May 31, 2015. See the file ResultsAnalysis1.4.29.13.Final2.xlsx containing the revisions to Tables 1, 2, and 3. No changes were made to the Strategist runs or the NPV files previously provided associated with Tables 1, 2 or 3.

(d) .SAV and .REP files for all Strategist runs that were referenced in Mr. Hayet's Testimony in Table 1 are listed in the following table. The .SAV and .REP files are found within the folder KPCO 1-18/Strat Results/Table1. NPV files are also being supplied in the same folder. Additional information regarding the runs is included in the table found in Mr. Hayet's

#### IN THE MATTER OF:

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 RULINGS**; (4) **DEFERRAL OF COSTS INCURRED IN** CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

testimony. Note that KPCO Case 6 is not being provided as it was part of the files supplied by KPCO.

Row m Taible i	Strategist Naming Convention for ,SAV and .REP files	NPV Files Naming Convention
1	KPCO Case 6	KPCO Case 6
2	Run11R15	Run11R15.NPV.xls
3	Run11R15	Run11R15 revICAP NPV xls
4	Run11R9	Run11R9.NPV.xls
5	Run11R12	Run11R12.NPV.xls
6	Run11R12	Run11R12.revICAP.NPV.xls

(e) Data were extracted from Strategist by directly copying the outputs and pasting them into the appropriate NPV files.

#### IN THE MATTER OF:

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 RULINGS: (4) DEFERRAL OF COSTS INCURRED IN** CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

- 19. Please refer to page 25, Table 2 of Mr. Hayet's testimony. Please provide the following information with respect to the table:
  - (a) Please identify by publisher, date of publication of publication, and title all supporting documentation and source documents used or reviewed by Mr. Hayet to create the Strategist inputs for KIUC's revised commodity price forecasts (gas, coal, market and ICAP) that were the basis for KIUC's revised results found in Table 2.
  - (b) Please provide, in electronic format if available, the supporting documentation and source documents identified in the response to subpart (a) of this request.
  - (c) Please provide all tools used and step-by-step instructions for the process used to create the revised commodity price forecasts. The instructions should identify the tools, spreadsheets, tabs, and cell locations used.
  - (d) Please provide in electronic format (.SAV or .FSV) all Strategist databases used to create the results found in Tables 2.
  - (e) Please supply all tools used to extract data from Strategist and then enter that data into the spreadsheet(s) used to create Table 2. This could include

#### IN THE MATTER OF:

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** RULINGS: (4) DEFERRAL OF COSTS INCURRED IN CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

templates, spreadsheets, programs, or Strategist Report Agent templates (.TPL files). The requested information should be provided electronically in native format, with formulas intact and visible, and no pasted values.

### AMENDED RESPONSE:

- (a) Please refer to the response to KPCO 1-18a.
- (b) Please refer to the response to KPCO 1-18b.
- (c) Please refer to the response to KPCO 1-18c.
- (d) .SAV and .REP files for all strategist runs that were referenced in Mr. Hayet's Testimony in Table 2 are listed in the following table. The .SAV and .REP files are found within the folder KPCO 1-18/Strat Results/Table 2. NPV files are also being supplied in the same folder. Additional information regarding the runs is included in the table found in Mr. Hayet's testimony. Note that KPCO Case 6 is not being provided as it was part of the files supplied by KPCO.

Row in Table 2	Strategist Naming Convention for .SAV and .REP files	NPV Files Naming Convention
1	KPCO Case 6	KPCO Case 6
2	Run11R37	Run11R37.NPV.xls

#### IN THE MATTER OF:

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 RULINGS**; (4) DEFERRAL OF COSTS INCURRED IN CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

3	Run11R37	Run11R37.NPV.ICAP.xls
4	Run11R9	Run11R9.NPV.xls
5	Run11R38	Run11R38.NPV.xIs
6	Run11R38	Run11R38.NPV.ICAP.xls

Revisions to Tables 1, 2 and 3 have been made to adjust ICAP revenues as discussed in Mr. Hayet's Amended Testimony filed May 1, 2013. These revisions were made to reduce the ICAP revenues associated with the Mitchell units, between January 1, 2014 and May 31, 2015. See the file ResultsAnalysis1.4.29.13.Final2.xlsx containing the revisions to Tables 1, 2, and 3. No changes were made to the Strategist runs or the NPV files previously provided associated with Tables 1, 2 or 3.

(e) Data were extracted from Strategist by directly copying the outputs and pasting them into the appropriate NPV files.

### IN THE MATTER OF:

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 RULINGS**; (4) **DEFERRAL OF COSTS INCURRED IN** CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

- 20. Please refer to page 27, Table 3 of Mr. Hayet's testimony. Please provide the following information with respect to the table:
  - (a) Please identify by publisher, date of publication of publication, and title all supporting documentation and source documents used or reviewed by Mr. Hayet to create the Strategist inputs for KIUC's revised commodity price forecasts (gas, coal, market and ICAP) that were the basis for KIUC's revised results found in Table 3.
  - (b) Please provide, in electronic format if available, the supporting documentation and source documents identified in the response to subpart (a) of this request.
  - (c) Please provide all tools used and step-by-step instructions for the process used to create the revised commodity price forecasts. The instructions should identify the tools, spreadsheets, tabs, and cell locations used.
  - (d) Please provide in electronic format (.SAV or .FSV) all Strategist databases used to create the results found in Tables 3.
  - (e) Please supply all tools used to extract data from Strategist and then enter that data into the spreadsheet(s) used to create Table 3. This could include

#### IN THE MATTER OF:

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 RULINGS**; (4) **DEFERRAL OF COSTS INCURRED IN** CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

templates, spreadsheets, programs, or Strategist Report Agent templates (.TPL files). The requested information should be provided electronically in native format, with formulas intact and visible, and no pasted values.

### **AMENDED RESPONSE:**

(a) The files that were used to develop assumptions for the cases included in Table 3 are as follows:

Source	File Name
KIUC – work papers Data supplied by KPCO	KPCO 1-20 attachment a - Mitchell-ImpairmentAnalysis.xlsx
KIUC – work papers	KPCO 1-20 attachment b - CarbonAdjusted RLIB_RDAT Typ Week. Impairment.xlsx
KIUC – work papers	KPCO 1-20 attachment c - ML12 Transfer STRAT INPUT
(Data supplied by KPCO)	DATA4.OrigModel.Impair Results.xls

- (b) The documents described in 1-20a are found in the folder named KPCO 1-20.
- (c) The following provides Step by Step instructions for the creation of commodity assumptions used in the cases found in Table 3.

#### IN THE MATTER OF:

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 RULINGS; (4) DEFERRAL OF COSTS INCURRED IN** CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

### **Gas Commodity Forecast:**

KPCO base commodity forecast

### **Coal Commodity Forecast**

KPCO's base commodity coal forecast was used for all fuels except for Mitchell. The coal forecast for Mitchell was derived from the generation cost information that was supplied in the Company's Impairment Analysis (KPCO response to KIUC 2-55). The file:

KPCO 1-20 attachment a - Mitchell-ImpairmentAnalysis.xlsx

contains the analyses Mr. Hayet used to develop the coal price inputs used in Strategist. The worktabs in the spreadsheet identified as Mitchell 1 and Mitchell 2 were the source of the information used in Mr. Hayet's study. For convenience in entering Mitchell data, Mr. Hayet combined the Impairment Study's fuel cost and variable O&M, and a heat rate adjustment into a single fuel cost input for the Mitchell units. Separate inputs were derived for the Mitchell 1 and Mitchell 1 and 2 fuel costs. Since variable O&M was entered as part of the fuel cost input, Mr. Hayet set the variable O&M for Mitchell 1 and 2 to zero. See the fuel and Var O&M row number 50 in the Mitchell 1 and Mitchell 2 tabs, and see columns A through Z in the Inputs tab. See also the Heat Rate Notes tab concerning the heat rate adjustment.

### **Market Energy Prices:**

Market energy prices were also derived from:

#### IN THE MATTER OF:

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** RULINGS; (4) DEFERRAL OF COSTS INCURRED IN CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

KPCO 1-20 attachment a - Mitchell-ImpairmentAnalysis.xlsx

See row 18 in the Mitchell 1 and 2 worktabs, and the MarketPrices worktab. A scale factor was derived at cell P24 in the Market Prices worktab that was used to create a revised market price forecast. The revised market price forecast was created in the file:

KPCO 1-20 Attachment b - CarbonAdjusted RLIB RDAT Typ Week. Impairment.xlsx

The scale factor was used in tab OrigTypWk at cell GH44, and it resulted in the creation of new hourly market energy cost inputs in worktabs RLIB\_P, and RLIB\_S. Those inputs were entered into the appropriate Strategist database. New emergency energy costs are found in tab RDAT\_P beginning at cell L19.

### **Market Capacity Prices:**

Market capacity prices were also derived from:

KPCO 1-20 attachment a - Mitchell-ImpairmentAnalysis.xlsx

See row 18 in the Mitchell 1 and Mitchell 2 worktabs, and the MarketPrices worktab. The inputs to the NPV spreadsheet used for the Market Capacity costs are found beginning at cell D28.

### Other Inputs:

Fixed O&M and Capital Expenditures were also derived from:

KPCO 1-20 attachment a - Mitchell-ImpairmentAnalysis.xlsx

#### IN THE MATTER OF:

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** RULINGS; (4) DEFERRAL OF COSTS INCURRED IN CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

See rows 29 and 33 in the Mitchell 1 and 2 worktabs, columns AB - AF in the Inputs worktab, and the entire FixedCosts worktab.

The file:

KPCO 1-20 attachment c - ML12 Transfer STRAT INPUT DATA4.OrigModel.Impair Results.xls

was used to develop the revenue requirement inputs that were loaded into Strategist in the Fixed Costs (\$000/YR) input.

(d) .SAV and .REP files for all strategist runs that were referenced in Mr. Hayet's Testimony in Table 3 are listed in the following table. The .SAV and .REP files are found within the folder KPCO 1-18/Strat Results/Table 3. NPV files are also being supplied in the same folder. Additional information regarding the runs is included in the table found in Mr. Hayet's testimony.

Row in Unitle 3	Strategist Naming Convention for .SAV and .REP files	NPV Files Naming Convention
1	Run11R20	Run11R20 NPV.xls
2	Run11R20a	Run11R20a.NPV.xls

Revisions to Tables 1, 2 and 3 have been made to adjust ICAP revenues as discussed in Mr. Hayet's Amended Testimony filed May 1, 2013. These revisions were made to reduce the ICAP revenues associated with the Mitchell units, between January 1, 2014 and May 31, 2015. See

#### IN THE MATTER OF:

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** RULINGS; (4) DEFERRAL OF COSTS INCURRED IN CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

the file ResultsAnalysis1.4.29.13.Final2.xlsx containing the revisions to Tables 1, 2, and 3. No changes were made to the Strategist runs or the NPV files previously provided associated with Tables 1, 2 or 3.

(e) Data were extracted from Strategist by directly copying the outputs and pasting them into the appropriate NPV files.

#### IN THE MATTER OF:

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** RULINGS; (4) DEFERRAL OF COSTS INCURRED IN CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

- 27. Please refer to page 29, lines 6-16 of Mr. Hayet's testimony. There, Mr. Hayet testifies that "there would be a savings of approximately \$27 million if Mitchell were delayed until June 2015. With respect to the identified testimony, please provide the following:
- (a) Please provide in electronic format all Strategist databases (.SAV or .FSV), supporting input assumption documents, input tools (whether Strategist or otherwise) used in the analysis referred to in the identified testimony.
- (b) Please provide all Strategist reporting tools (e.g. Report Agent TPL files) and any other spreadsheets used to create and summarize the results referred to in the identified testimony. The requested information should be provided electronically in native format, with formulas intact and visible, and no pasted values.

### **AMENDED RESPONSE:**

(a) This run was based on KIUC's preferred case, which included KIUC's gas, market and emergency energy prices based on the 2013 EIA AEO gas forecast. See the response to KPCO 1-18a above for the steps performed to develop these data assumptions. KIUC's preferred case also includes Big Sandy 1 converted to natural gas in 2015. In addition see the following workpaper, which was used to develop the fixed cost inputs to Strategist for the Mitchell units, to account for the acquisition delay from January 1, 2014

#### IN THE MATTER OF:

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** RULINGS; (4) DEFERRAL OF COSTS INCURRED IN CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

to June 1, 2015:

Source	File Name
KIUC – work papers	KPCO 1-27 attachment a - ML12 Transfer STRAT INPUT DATA4 Delay Model xls
Data supplied by KPCO	

The .SAV and .REP files for the Strategist run that was made associated with the Delay Scenario are listed in the following table. An NPV files is also being supplied.

Strategist Naming Convention for .SAV and .REP files	NPV Files Naming Convention
Run11R40	Run11R40 NPV xls

Revisions to the delay scenario have been made to adjust ICAP revenues as discussed in Mr. Hayet's Amended Testimony filed May 1, 2013. These revisions were made to reduce the ICAP revenues associated with the Mitchell units, between January 1, 2014 and May 31, 2015. In the Delay Scenario a further change to the ICAP revenue was made to account for the fact that ICAP revenue should begin June 1, 2015. Since in the Delay scenario, Mitchell was transferred beginning June 1, 2015, Strategist assumed the units were not part of the installed capacity calculation in that year, and therefore, no ICAP revenues were associated with the Mitchell units in 2015. An adjustment was made to include Mitchell ICAP revenue in the delay case between June and December 2015.

#### IN THE MATTER OF:

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** RULINGS; (4) DEFERRAL OF COSTS INCURRED IN CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

Additional corrections were made to the delay scenario analysis. These corrections reduced the benefit associated with the delay scenario from what Mr. Hayet had previously reported in his April 1, 2015 testimony.

The following changes had to be made to the capital revenue requirements calculated associated with the Mitchell units.

Revised: KPCO 1-27 attachment a - ML12 Transfer STRAT INPUT DATA4.Delay.Model.xls

to

KPCO 1-27 attachment a - ML12 Transfer STRAT INPUT DATA4.Delay.Model.Corrected.xls

#### Changes:

- 1. Worktab=Template Capital Input, cell M4, added Capital Cost found on worktab Mitchell 1, Columns C and D.
- 2. Worktab=Template Capital Input, cell L13, moved 7/12 outside of parenthesis.
- 3. Worktab = Template Capital Input, cell L38, revised formula to calculate partial year revenue requirement.

#### IN THE MATTER OF:

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** RULINGS; (4) DEFERRAL OF COSTS INCURRED IN CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

- 4. Worktab= Mitchell 1, computed new values for Mitchell 1 and Mitchell 2, and then results pasted into colums O through AW.
- 5. Computed an adjustment by subtracting previous revenue requirements from corrected revenue requirements, see column AY.

Revised: Run11R40.NPV.xls

to

Run11R40.NPV corrected.xls

#### Changes:

- 1. Worktab=KPCo, cells I12 through I41. Included adjustment from above (KPCO 1-27 attachment a ML12 Transfer STRAT INPUT DATA4.Delay.Model.Corrected.xls).
- 2. Worktab=KPCo, cell I16. Made an additional adjustment in 2015. Since Mitchell 1 and 2 started up June 1, 2015 in KIUC's delay scenario, Strategist in outputting the Mitchell 1 and 2 fixed costs, made an adjustment to scale the fixed costs for 7/12 months worth of operation.

#### IN THE MATTER OF:

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 RULINGS**; (4) **DEFERRAL OF COSTS INCURRED IN** CONNECTION WITH THE COMPANY'S EFFORTS TO MEET FEDERAL CLEAN AIR ACT AND RELATED REQUIREMENTS; AND (5) ALL OTHER REQUIRED APPROVALS AND RELIEF

Case No. 2012-00578

## KIUC'S AMENDED RESPONSES TO KENTUCKY POWER COMPANY'S FIRST REQUEST FOR INFORMATION

However, the Mitchell 1 and 2 fixed costs that had been entered into Strategist had already been scaled for the partial year operation. In essence, the scaling had been performed twice. This adjustment corrected this.

See the following files for file ResultsAnalysis1.4.29.13.Final2.xlsx containing the revisions to the delay scenario. No changes were made to the Strategist runs previously provided.

(b) Data were extracted from Strategist by directly copying the outputs and pasting them into the NPV file.