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PUBLIC SERVICE  
COMMISSION

August 7, 2009

Via Hand-Delivery

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

Re: PSC Case No. 2009-00106

Dear Mr. Derouen:

Please find enclosed for filing with the Commission in the above-referenced case an original and ten copies of the responses of East Kentucky Power Cooperative, Inc. ("EKPC") to the Second Data Request of Commission Staff, the Initial Requests for Information of the Attorney General ("AG"), and the First Set of Data Requests of the Sierra Club, Kentucky Environmental Foundation and Kentuckians for the Commonwealth (collectively, "Public Interest Groups"), all dated July 24, 2009.

Very truly yours,



David Smart  
General Counsel

Enclosures

Cc: Parties of Record

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

**A REVIEW PURSUANT TO 807 K.A.R. 5:058            )**  
**OF THE 2009 INTEGRATED RESOURCE PLAN    ) CASE NO. 2009-00106**  
**OF EAST KENTUCKY POWER                        )**  
**COOPERATIVE, INC.                                )**

**RESPONSES TO THE FIRST SET OF DATA REQUESTS FROM THE**  
**SIERRA CLUB, KENTUCKY ENVIRONMENTAL FOUNDATION**  
**AND KENTUCKIANS FOR THE COMMONWEALTH (COLLECTIVELY**  
**“PUBLIC INTEREST GROUPS”)**  
**TO EAST KENTUCKY POWER COOPERATIVE, INC.**  
**DATED JULY 24, 2009**



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC CASE NO. 2009-00106  
FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 1**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 1.** Reference page 5-6 of East Kentucky Power Cooperative's (EKPC) 2009 Integrated Resource Plan (IRP). Please provide the workpapers and source documents, including, in electronic text format, all computer input and output files used in the assessment of demand-side management options and DSM programs.

**Response 1.** EKPC's license agreements with software providers are proprietary and prohibit provision to third parties. Also, all relevant source documents associated with the DSM analyses for the 2009 IRP have been provided and are a matter of record with the Commission.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09**

**REQUEST 2**

**RESPONSIBLE PERSON: John F. Farley**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 2.** Reference page 5-6 of EKPC's 2009 IRP. Please provide the workpapers and source documents, including, in electronic txt format, all computer input and output files used or developed during the performance of the Societal Test on DSM programs.

**Response 2.** All relevant source documents have been provided in the DSM Technical Appendix of the 2009 IRP. In particular, Table DSM-9 describes the externalities adder which distinguishes the Societal Test from the Total Resource Cost test.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC CASE NO. 2009-00106  
FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 3**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 3.** Reference page 5-6 of EKPC's 2009 IRP.

**Request 3a.** Please specify whether the \$40 per ton assumed for carbon emissions is in nominal or constant year dollars and, if in constant year dollars, please specify the year.

**Response 3a.** The \$40 per ton assumed for carbon emissions is in nominal year dollars.

**Request 3b.** Provide the workpapers and source documents which formed the basis for the use of the \$40 per ton cost for carbon emissions.

**Response 3b.** All relevant source documents associated with the emissions costs have been provided and are a matter of record with the Commission.

**Request 3c.** Please specify whether the \$40 per ton figure was applied to each ton of carbon emissions or each ton of Carbon Dioxide (CO<sub>2</sub>) emissions.



**Response 3c.** The \$40 per ton figure was applied to each ton of Carbon Dioxide (CO<sub>2</sub>) emissions.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
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FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/2409**

**REQUEST 4**

**RESPONSIBLE PERSON:** Julia J. Tucker

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 4.** Reference page 5-7 of EKPC's 2009 IRP.

**Request 4a.** Specify the production cost model used to evaluate the supply side alternatives in the IRP.

**Response 4a.** Please see page 8-52 of EKPC's 2009 IRP.

**Request 4b.** Provide the assumptions used in the production cost modeling for the "supply side alternatives":

- (1) construction costs
- (2) operating costs
- (3) fuel costs
- (4) operating performance (heat rate, Forced Outage Rate (FOR), Availability)

**Response 4b.** The requested information has been provided in EKPC's 2009 IRP report, more specifically, in Section 8.(2)(c).

**Request 4c.** Specify the demand side options that also were considered as a resource to meet future demand needs and specify:

- (1) the costs assumed for each such demand side option.
- (2) any limit(s) placed on the amounts of each such demand side option that the production cost model could select in any individual year or in any individual scenario.

**Response 4c.** The demand side options that were considered as a resource are described in the 2009 IRP on pages 8-17 through 8-47.

- (1) The costs assumed for each demand side option appear on pages 8-44 and 8-45.
- (2) The participation and impacts by year for each New DSM program appear on pages 8-32 through 8-43.

**Request 4d.** Provide in electronic machine readable format, copies of the input and output files for the production cost modeling performed by or for EKPC for its 2009 IRP. Please include an index that describes each scenario examined that link the individual files to each such scenario. If possible, please provide the output for the top 10 plans generated by the production cost model for each scenario examined.

**Response 4d.** EKPC's license agreements with software providers are proprietary and prohibit provision to third parties.

**Request 4e.** Specify the unit retirements assumed in each scenario examined during the preparation of the 2009 IRP and the year in which each such retirement was assumed to occur.

**Response 4e.**

Please see page 8-50, section 8(4)8.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
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FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 5**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 5.** Reference page 5-8 of EKPC's 2009 IRP.

**Request 5a.** Provide in electronic machine readable format, copies of the input and output files for each of the sensitivities that were performed for the 2009 IRP.

**Response 5a.** EKPC's license agreements with software providers are proprietary and prohibit provision to third parties. Also, all relevant source documents associated with the DSM analyses for the 2009 IRP have been provided in the report and/or the Technical Appendix.

**Request 5b.** Provide the workpapers for the qualitative and quantitative screening performed on the 23 DSM programs as part of the development of the 2009 IRP.

**Response 5b.** All relevant source documents associated with the DSM programs have been provided, as stated in Response 5a. They can be found in the report titled *Demand-Side Management Analysis* which can be found in the Technical Appendix.





**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 6**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 6.** Reference page 5-12 of EKPC's 2009 IRP. Provide the manual for the RTSim model.

**Response 6.** EKPC's license agreements with software providers are proprietary and prohibit provision to third parties.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 7**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 7.** Provide copies of any load and energy sales forecasts prepared by or for EKPC or its member distribution cooperatives since August 2008.

**Response 7.** There have been no load and energy sales forecasts prepared by or for EKPC or its member distribution cooperatives since August 2008.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09**

**REQUEST 8**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 8.** Provide copies of any assessments, prepared by or for EKPC or any of its member distribution cooperatives since January 1, 2006, of the potential for energy efficiency in the areas served by EKPC or any of its member distribution cooperatives

**Response 8.** Energy efficiency assessments are part of the IRP documents filed with the Public Service Commission every three years. These assessments can be found in Sections 8.2 and 8.3 of the 2006 and 2009 IRP reports, as well as in the Technical Appendix.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09**

**REQUEST 9**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 9.** Provide copies of any assessments, prepared by or for EKPC or any of its member distribution cooperatives since January 1, 2006, of the potential for renewable resources (wind, biomass, solar) in or deliverable into the areas served by EKPC or any of its member distribution cooperatives. Include in this any assessment of transmission, including DC transmission, to deliver energy from renewable resources.

**Response 9.** As stated on pages 8-12 and 8-13, EKPC issued an RFP for Renewable Resources in April 2008. Negotiations are continuing with proposing entities; therefore, no final report has been issued at this point.





**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09**

**REQUEST 10**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 10.** Provide the workpapers and source documents for each of the tables included in EKPC's 2009 IRP.

**Response 10.** All relevant source documents have been provided in the 2009 IRP and/or the Technical Appendix.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 11**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 11.** Provide copies of the long term coal and gas fuel price forecasts prepared by or for EKPC since July 1, 2008.

**Response 11.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 12**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 12.** Provide copies of the most recent population and economic projections provided to EKPC by Global Insight.

**Response 12.** Global Insight population and economic projections have been provided in Load Forecast portion of the Technical Appendix of the IRP.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 13**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 13.** Provide EKPC's actual energy sales and monthly peak loads in 2008 and its actual energy sales and monthly peak loads experienced in the first six months of 2009.

**Response 13.** Please see the table below.

| Month     | 2008                      |            | 2009                      |            |
|-----------|---------------------------|------------|---------------------------|------------|
|           | Total Requirements<br>MWh | Peak<br>MW | Total Requirements<br>MWh | Peak<br>MW |
| January   | 1,416,786                 | 3,051      | 1,380,727                 | 3,152      |
| February  | 1,238,478                 | 2,618      | 1,105,634                 | 2,807      |
| March     | 1,142,249                 | 2,305      | 1,002,203                 | 2,634      |
| April     | 896,628                   | 1,991      | 886,472                   | 1,798      |
| May       | 874,523                   | 1,688      | 858,466                   | 1,647      |
| June      | 1,047,448                 | 2,192      | 1,001,045                 | 2,097      |
| July      | 1,106,127                 | 2,243      |                           |            |
| August    | 1,089,104                 | 2,150      |                           |            |
| September | 931,218                   | 2,050      |                           |            |
| October   | 886,548                   | 1,795      |                           |            |
| November  | 1,055,069                 | 2,419      |                           |            |
| December  | 1,263,913                 | 2,841      |                           |            |
| Total     | 12,948,091                |            |                           |            |





**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09**

**REQUEST 14**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 14.** Reference page 8-8 of EKPC's 2009 IRP. Provide the workpapers and source documents for the qualitative and quantitative screening of the 103 new DSM measures for the 2009 IRP.

**Response 14.** All relevant source documents have been provided in the DSM Technical Appendix of the 2009 IRP.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09**

**REQUEST 15**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 15.** Provide an unredacted version of Table 8.(2)(c)-1 at page 8-14 of EKPC's 2009 IRP.

**Response 15.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC CASE NO. 2009-00106  
FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 16**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 16.** Provide the most recent cost estimate and construction schedule for the Smith 1 coal plant.

**Response 16.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09**

**REQUEST 17**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 17.** Provide copies of the most recent Loss of Load Probability (LOLP) or Loss of Load Expectation (LOLE) analyses prepared by or for EKPC or of the reserve margin EKPC should use for planning purposes.

**Response 17.** The most recent reserve margin study for EKPC can be found in the 2006 IRP in section 8.(5)(d) starting on page 8-65.





**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 18**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 18.** Provide copies of the management and consultant presentations at meetings of EKPC's Board since January 1, 2007 which have addressed any of the following subjects:

- a. The proposed Smith 1 coal plant
- b. EKPC's 2009 IRP
- c. The costs of building new coal or natural gas power plants.
- d. The potential for and potential cost impacts of state, regional or federal regulation of greenhouse gas emissions.
- e. The load and energy sales forecasts for EKPC or its member distribution cooperatives.
- f. The costs of wind and other renewable resources.
- g. The cost of and/or the potential for energy efficiency in the service areas of any of EKPC's member distribution cooperatives or customers.
- h. The cost of and/or the potential for renewable resources in the service areas of any of EKPC's member distribution cooperatives or customers.
- i. The necessity to or plans for reducing East Kentucky Power Cooperative's CO<sub>2</sub> and nitrous oxide (N<sub>2</sub>O) emissions.

- j. The need for or the projected cost or schedule of the proposed Smith 1 power plant.

**Response 18.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 19**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 19.** Provide copies of the documents that have been provided to the members of the EKPC Board since January 1, 2007 which have addressed any of the following subjects:

- a. The proposed Smith 1 coal plant
- b. EKPC's 2009 IRP
- c. The costs of building new coal or natural gas power plants.
- d. The potential for and potential cost impacts of state, regional or federal regulation of greenhouse gas emissions.
- e. The load and energy sales forecasts for EKPC or its member distribution cooperatives.
- f. The costs of wind and other renewable resources.
- g. The cost of and/or the potential for energy efficiency in the service areas of any of EKPC's member distribution cooperatives or customers.
- h. The cost of and/or the potential for renewable resources in the service areas of any of EKPC's member distribution cooperatives or customers.
- i. The necessity to or plans for reducing EKPC's CO<sub>2</sub> and N<sub>2</sub>O emissions.

- j. The need for or the projected cost or schedule of the proposed Smith 1 power plant.

**Response 19.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 20**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 20.** Provide copies of the management, staff and/or consultant presentations at meetings of EKPC's senior management since January 1, 2007 which addressed any of the following subjects:

- a. The proposed Smith 1 coal plant
- b. EKPC's 2009 IRP
- c. The costs of building new coal or natural gas power plants.
- d. The potential for and potential cost impacts of state, regional or federal regulation of greenhouse gas emissions.
- e. The load and energy sales forecasts for EKPC or its member distribution cooperatives.
- f. The costs of wind and other renewable resources.
- g. The cost of and/or the potential for energy efficiency in the service areas of any of EKPC's member distribution cooperatives or customers.
- h. The cost of and/or the potential for renewable resources in the service areas of any of EKPC's member distribution cooperatives or customers.
- i. The necessity to or plans for reducing EKPC's CO<sub>2</sub> and e N<sub>2</sub>O emissions.

- j. The need for or the projected cost or schedule of the proposed Smith 1 power plant.

**Response 20.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.





**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 21**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 21.** Provide copies of any assessments of the potential for and/or the potential cost of making off-system capacity purchases that have been prepared by or for EKPC since January 1, 2008.

**Response 21.** Please see page 8-14 of the IRP document.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 22**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 22.** Provide copies of any assessments of the potential for and/or the potential cost of purchasing existing gas-fired capacity that have been prepared by or for EKPC since January 1, 2008.

**Response 22.** Please see page 8-14 of the IRP document.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 23**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 23.** Specify the funds that have already been spent on equipment and commodities for the proposed Smith 1 power plant and list each of the contracts for the design and construction of that plant that have already been signed by EKPC.

**Response 23.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC CASE NO. 2009-00106  
FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 24**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 24.**

Reference page 8-2 of EKPC's 2009 IRP.

- a. Provide the most current annual update of the MEAGER 2000 study prepared by EKPC.
- b. Provide a copy of the final report for the updated MEAGER study that was submitted to EKPC's Board of Directors.
- c. Provide the slides, handouts, documents and other materials related to the MEAGER study that were presented or submitted to EKPC's Board of Directors.

**Response 24.**

EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.





**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 25**

**RESPONSIBLE PERSON: Julia J. Tucker/James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 25.** The following statement is made at page 5-16 of EKPC's 2009 IRP: "EKPC's objective of the power supply plan is to develop a low cost, reliable plan to serve its Member Systems, while simultaneously mitigating risk."

**Request 25a.** Describe in detail all of the efforts, analyses, studies and assessments that EKPC has undertaken to assess and/or mitigate the risk associated with its proposed power supply plan.

**Response 25a.** The requested analyses are included in the 2009 IRP and discussed throughout the document, specifically in Section 5.(6) on page 5-19.

**Request 25b.** Provide all of the analyses, studies and assessments that EKPC has undertaken to assess and/or mitigate the risk associated with its proposed power supply plan.

**Response 25b.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 26**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 26.** Provide copies of the assessments, studies and analyses of the financial risk(s) associated with the 2009 Plans presented on page 5-9 of EKPC's 2009 IRP.

**Response 26.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 27**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 27.** Provide copies of the assessments, studies and analyses of the impact of the 2009 Plans presented on page 5-9 of EKPC's 2009 on EKPC's customers and the ratepayers of EKPC's member distribution cooperatives.

**Response 27.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 28**

**RESPONSIBLE PERSON: John F. Farley/James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 28.** Reference pages 8-21 to 8-31 of EKPC's 2009 IRP.

**Request 28a.** Please describe the reasons why, in EKPC's opinion, the number(s) of participants in any of the DSM programs listed on these pages will not increase after 2009.

**Response 28a.** The reason why the number of participants and the load impacts of all the existing DSM programs show fixed levels in the IRP is because the impacts of these programs are embedded in the load forecast. Since there are no incremental load impacts projected as incremental DSM in the resource plan, these levels are presented as remaining fixed for the forecast period.

**Request 28b.** Provide copies of any source documents assessments, studies, analyses and the workpapers which form the basis for the conclusion that the number(s) of participants in any of the DSM programs listed on these pages will not increase after 2009.

**Response 28b.** All relevant source documents have been provided in the DSM Technical Appendix of the 2009 IRP.



**Request 28c.** Provide copies of any source documents, assessments, studies, analyses and workpapers which form the basis for the projected “impact on total requirements (MWh),” the “impact on winter peak (MW),” and the “Impact on summer peak” figures presented in the table for each of the current DSM programs.

**Response 28c.** All relevant source documents have been provided in the DSM Technical Appendix of the 2009 IRP.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 29**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 29.** Reference pages 8-32 to 8-43 of EKPC's 2009 IRP. Provide copies of any source documents, assessments, studies, analyses and workpapers which form the basis for each of the following:

- a. the annual numbers of participants in each of the new programs presented on pages 8-32 to 8-43.
- b. the annual "impact on total requirements" of each of the programs presented on pages 8-32 to 8-43.
- c. the annual "impact on winter peak" of each of the programs presented on pages 8-32 to 8-43.
- d. the annual "impact on summer peak" of each of the programs presented on pages 8-32 to 8-43.

**Response 29.** a-d. All relevant documentation has been provided in the DSM Technical Appendix of the 2009 IRP.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 30**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 30.** Reference page 8-1 of EKPC's 2009 IRP. Please explain in detail how EKPC incorporates the risk of greenhouse gas emissions constraints, and the costs of managing CO<sub>2</sub> and N<sub>2</sub>O emissions to comply with those constraints, in its optimization module.

**Response 30.** EKPC included the costs for producing emissions in its production cost analysis. If a unit produced a ton of an emission for each MWh produced and the cost of the emission was \$10 per ton, then \$10 per MWh was added to the dispatch cost of that unit. The model then compares all alternatives for serving the load and dispatches those units based on the best economic decision. The group of alternatives is then compared to develop the best combination of resources.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09**

**REQUEST 31**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 31.** Reference page 8-2 of EKPC's 2009 IRP. Please explain in detail how EKPC incorporates the possible future costs of managing CO2 and N2O emissions to comply with greenhouse gas emissions constraints in its review and analysis of existing electric power plants.

**Response 31.** The same logic that was described in the response to Request 30 applies to this response. The cost of compliance per emission unit is included in the analysis such that the most economic choice can be determined including all emission costs.





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REQUEST 32**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 32.** Reference pages 8-3, and 8-61 of EKPC's 2009 IRP. Please summarize EKPC's current understanding of the availability and cost of technology to reduce and manage or control the emissions of CO<sub>2</sub> and N<sub>2</sub>O in existing and in new coal-fired electric power plants.

**Response 32.** The N<sub>2</sub>O emissions are part of the NO<sub>x</sub> family and are being controlled at EKPC plants with a combination of SCRs and low NO<sub>x</sub> burners. EKPC is not aware of any technology that is currently mature and commercially available to control the emissions of CO<sub>2</sub> from coal-fired electric power plants. As stated on page 8-3, EKPC is participating in research efforts regarding carbon capture.



## EAST KENTUCKY POWER COOPERATIVE, INC.

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## FIRST DATA REQUEST RESPONSE

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## REQUEST 33

RESPONSIBLE PERSON: Julia J. Tucker

COMPANY: East Kentucky Power Cooperative, Inc.

**Request 33.** Reference the list of federal energy standards that will be implemented during the time frame covered by the 2009 IRP. Please explain if your energy and demand projections take into account each new federal energy standards, and if so, explain how each of these standards was taking into account.

| Product   | Date Standard Required |
|---|------------------------|
| Supermarket Refrigeration                                 | January 2009           |
| Ranges, Ovens, & Microwave Ovens                          | March 2009             |
| Linear Fluorescent Lamps & Incandescent Reflector Lamps   | June 2009              |
| Commercial HVAC Equipment                                 | July 2009              |
| Beverage Vending Machines                                 | August 2009            |
| Commercial Clothes Washers                                | January 2010           |
| Small Electric Motors                                     | February 2010          |
| Residential Water Heaters, Pool Heaters, & Direct Heaters | March 2010             |
| Residential Refrigerators & Freezers                      | December 2010          |
| Clothes Dryers  | June 2011              |
| Room Air Conditioners                                     | June 2011              |
| Residential Central Air Conditioners & Heat Pumps         | June 2011              |
| Fluorescent Lamp Ballasts                                 | June 2011              |
| Battery Chargers & External Power Supplies                | July 2011              |
| Residential Clothes Washers                               | December 2011          |

**Response 33.** All relevant source documents with respect to the DSM, including energy efficient standards, have been provided in the DSM Technical Appendix of the 2009 IRP and throughout the 2009 IRP document, as well as discussed in the Load Forecast part of the Technical Appendix.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 34**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 34.** Please explain if your energy and demand projections take into account the phasing out of incandescent light bulbs currently required by federal law starting in 2012 and, and if so, explain how it was taken into account.

**Response 34.** The appliance efficiency data is based upon Energy Information Administration (EIA) projections. All relevant data has been provided in the Load Forecast portion of the Technical Appendix.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 35**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 35.** Please explain the basis for assuming that Gallatin Steel will not make any efficiency improvements and sales to Gallatin Steel will not decrease during the period covered by the 2009 IRP.

**Response 35.** EKPC has not assumed that Gallatin Steel will make or will not make efficiency improvements.





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**REQUEST 36**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 36.** Please state if Gallatin Steel sells steel to auto manufactures. If it does, please explain why you believe more stringent fuel standards will not result in decreased energy and demand from Gallatin Steel.

**Response 36.** EKPC does not know who Gallatin Steel's customers are.



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**REQUEST 37**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 37.** Please explain what role, if any, Solar Photovoltaic (PV) and Solar Hot Water played in the 2009 IRP.

**Response 37.** Neither played a role in the 2009 IRP.



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REQUEST 38**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 38.** Please explain what sources of information, if any, used to determine the future cost of Solar PV.

**Response 38.** This is not applicable. Please see the response to Request 37.



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**REQUEST 39**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 39.** Please explain what congestion mitigation fees EKPC has paid in the past five years.

**Response 39.** EKPC requests clarification on the definition of "mitigation fees." EKPC is unable to respond without such clarification.





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**REQUEST 40**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 40.** Reference page 5-3 of the 2009 IRP. Also reference page 5-5 which shows that your forecast for your energy requirements in 2020 decreased between 2004 and 2008 by 2,273,498 mwh per year. Please explain why you still believe you need Smith 1 if your forecast for energy sales has decreased since 2006 and 2004. In your answer please state if you agree that this 2,274,498 mwh decrease is approximately the same amount of energy that Smith 1 will produce on an annual net basis. Also in your answer, please make sure that you clearly identify when you are addressing meeting future peak demand needs and when you are addressing meeting future energy needs.

**Response 40.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 41**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 41.** Please explain why Smith 1 is a lower cost alternative than three LM100 combustion turbines that EKPC had planned to build at the Smith Plant but subsequently decided not to install.

**Response 41.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 42**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 42.** Please explain how your energy and demand forecasts take into account price elasticity in light of your past and future price increases.

**Response 42.** When reviewing the history of EKPC, periods of high prices have tended to dampen electricity use, and periods of low prices have led to an increase in electricity use. EKPC's forecast models recognize the impact that price elasticity has on usage. EKPC and its member systems work jointly to prepare retail price forecasts for use in the electric load projections. Once retail price forecasts are prepared, the impacts on electricity use are made via price elasticity. EKPC employs price forecasts and price elasticity for all class sales. Peak demand and energy are positively correlated, which means that peak demand reflects the impact of price changes. It should be noted that electric price elasticity is not confined to only price increases. The concept of elasticity refers to a price change in either direction, down or up. As electric price declines, electricity use increases.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 43**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 43.** Please explain your assumptions for coal availability to meet EKPC's projection coal consumption needs in 2018 and 2025 and the basis for these assumptions.

**Response 43.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.





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**REQUEST 44**

**RESPONSIBLE PERSON:**           **Julia J. Tucker/James C. Lamb, Jr.**

**COMPANY:**                       **East Kentucky Power Cooperative, Inc.**

**Request 44.**  
2009 IRP:

Please explain how each of the following were considered in the

- a) Ohio's Renewable Portfolio Standard.
- b) The Regional Greenhouse Gas Initiative (RGGI)
- c) Potential National Renewable Portfolio Standard
- d) Revised version of the Clean Air Interstate Rule
- e) Revised Maximum Achievable Control Technology (MACT) standard for Electric Generating Units (EGUs)
- f) 2006 PM<sub>2.5</sub> National Ambient Air Quality Standard (NAAQS) and its implementation regulations
- g) 2008 Ozone NAAQS and its implementation regulations
- h) 2010 NO<sub>x</sub> NAAQS and its implementation regulations
- i) 2010 SO<sub>x</sub> NAAQS and its implementation regulations
- j) 2010 NO<sub>x</sub> and SO<sub>x</sub> secondary NAAQS and their implementing regulations
- k) Revised New Source Performance Standards Subparts Y and OOO
- l) Potential regulation of coal combustion waste as a hazardous waste
- m) Regulation of new and existing sources under Clean Water Act Section 316(b).

**Response 44.** a-c. EKPC modeled its system and the projected operating environment given current conditions in the State of Kentucky. Scenarios were modeled attempting to simulate what might happen with environmental regulations. Specific Renewable Portfolio Standards and Initiatives were not modeled explicitly.

d-j. EKPC modeled its system and the projected operating environment given current conditions in the State of Kentucky. Scenarios were modeled attempting to simulate what might happen with environmental regulations. Costs were added to the restricted emissions and reflected via the economic analysis.

k-m. EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 45**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 45.** Please explain what EKPC's plans are with regard to burning waste tires or tire derived fuel at EKPC's CFB units. Please include a description of any contracts EKPC has in this regard.

**Response 45.** EKPC views tire derived fuel (tdf) as a source of fuel for its CFB generators – plans are to utilize tdf, subject to price, availability, quality, deliverability, supply reliability, and applicable environmental regulations. EKPC does not have any contracts in place relating to burning tire derived fuel.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 46**

**RESPONSIBLE PERSON:** James C. Lamb, Jr.

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 46.** Please explain what EKPC's plans are with regard to burning biomass at any EKPC unit. Please include a description of any contracts EKPC has in this regard.

**Response 46.** Two of Spurlock Station's generating units feature circulating fluidized bed technology that allow them to burn a wide range of fuels, such as biomass, including switchgrass and wood. EKPC's Smith CFB #1 unit at Smith Station in Clark County will also feature this technology.

EKPC is part of a four-year pilot project with the University of Kentucky's College of Agriculture and local farmers. The pilot study is evaluating the feasibility of using switchgrass, which is native to Kentucky, as fuel for power plants. This pilot project has potential to grow in regards to tons produced and length of project term. In December 2008, EKPC mixed about 70 tons of processed switchgrass into the coal feedstock of the first clean-coal unit built at Spurlock Station, Gilbert Unit 3. In late 2009, EKPC is planning to conduct another test with approximately 300 tons of switchgrass.

EKPC has commissioned a fuel study to be conducted by an independent consultant, Liberty Green Renewables, to study the supply and demand of woody biomass for the CFB units at Spurlock Station. The intent of this study is to determine the availability of,

and cost for, delivery of woody biomass to Spurlock to meet a portion of is annual fuel needs. This study is ongoing.

EKPC does not have any commitments, such as contracts, at this time.





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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 47**

**RESPONSIBLE PERSON:**           **Julia J. Tucker**

**COMPANY:**                       **East Kentucky Power Cooperative, Inc.**

**Request 47.**           Reference page 5-5 of the 2009 IRP. Please explain why EKPC's forecast for 2020 energy requirement have decreased by over 11 percent between 2004 and 2008.

**Response 47.**           While EKPC's forecast models have not changed between 2004 and 2008, the exogenous driver variables have. When the 2004 load forecast was being prepared, forecast drivers were projecting a relatively strong economy for the EKPC service area. For example, employment projections in 2004 were nearly 15% higher than the 10 year projections developed by Global Insight for EKPC in 2008. In 2004, the manufacturing sector was believed to be relatively healthy in Kentucky. The current severe recession led to EKPC's long-term forecast developed in 2008 to be more modest than previous forecasts.

As EKPC prepared its 2008 long-term load forecast, the impact of the current day housing market was known, and the forecast reflected a more moderate view of housing.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 48**

**RESPONSIBLE PERSON: John F. Farley**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 48.** Please explain if the 2009 IRP considered the cost saving to its distribution cooperatives' distribution system capital improvements and operating and maintenance in evaluating the cost effectiveness of DSM programs. If so, please provide this analysis.

**Response 48.** The IRP did not consider the cost saving to distribution cooperatives in capital improvements or operating and maintenance in evaluating the cost effectiveness of DSM programs.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 49**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 49.** Reference page 5-7 of the 2009 IRP. Please state where is the well defined and justified base load needs in 2013 that are referenced. Please provide specific documents and page numbers.

**Response 49.** EKPC defined and justified its base load needs in PSC Case No. 2006-00564, prior to the Kentucky Public Service Commission issuing an order for EKPC to retain its Certificate of Public Convenience and Necessity for the Smith No.1 coal fired unit.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 50**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 50.** Reference page 5-11 of the 2009 IRP. Please explain why you believe EKPC's region will experience a 0.7 percent population growth but EKPC's distribution cooperatives will experience a 1.5% percent population growth.

**Response 50.** As stated on page 5-11 of the IRP document, according to the load forecast, EKPC's member systems will add approximately 165,000 residential customers by 2028. This represents an increase of 1.5 percent per year. A 1.5 percent increase in customers does not equate to a 1.5 percent population growth.





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REQUEST 51**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 51.** Reference page 5-12 of the 2009 IRP. Please provide the documents in which Navigant communicated or reported the results of its review of the referenced assumptions.

**Response 51.** Under the terms of EKPC's agreement with Navigant Consulting, Inc. ("Navigant"), no part of Navigant's presentation may be circulated, quoted, or reproduced for distribution outside of these organizations without prior, written approval from Navigant.



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REQUEST 52**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 52.** Reference page 5-13 of the 2009 IRP. It was predicted that total energy requirements would increase by 2% for residential and 3.3% for commercial and industrial in 2008. Please provide the actual 2008 numbers and the current projections for 2009. Please explain how the actual 2008 numbers and the current projections for 2009 change the projections for 2013 and 2023.

**Response 52.** Please note that EKPC's load forecast is not a prediction of the future. Rather, it is a projection of future electricity use, which EKPC then uses as a basis for its resource plan. EKPC's planning forecast remains the forecast used in this IRP. EKPC believes that the load forecast presented in this IRP is reasonable.

Actual 2008 numbers are presented in Table 1 of 7.(2)(b) on page 7-2 of the 2009 IRP document and the 2009 forecasts are provided on page 5-13 of the IRP 2009. EKPC completes an official load forecast every 2 years as required by Rural Utilities Service. The most recent forecast was completed in July of 2008 and no updates have been required or prepared since that time.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 53**

**RESPONSIBLE PERSON: Darrin W. Adams**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 53.** Please explain why the 2009 IRP does not change its projection of future transmission losses through 2028 in light of the new federal efficiency standard for transformers.

**Response 53.** The federal efficiency standard for transformers applies to low-voltage distribution transformers, i.e. pole and pad-mount. Distribution utilities are not required to replace all of their existing transformer fleet with high-efficiency units by a certain date, but all transformers manufactured after January 1, 2010 must meet certain minimum efficiencies. Distribution transformer losses should begin decreasing after this date due to replacements as necessary. Those reduced losses will show up as demand savings on the distribution system. EKPC's total losses will reduce as a result but its percentage loss factor will not change based on this standard.



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**REQUEST 54**

**RESPONSIBLE PERSON:** Julia J. Tucker

**COMPANY:** East Kentucky Power Cooperative, Inc.

**Request 54.** Reference page 5-16 of the 2009 IRP. Please explain why winter capacity drops from 3130 MW to 2720 MW from 2009 to 2010 and from 2685 MW in 2011 to 2675 in 2012.

**Response 54.** The referenced table's column heading is "Existing Resources"; the numbers include resources that were existing as of January 1, 2009 and reflect any changes to those resources. The decrease from 3,130 MW in 2009 to 2,720 MW in 2010 reflects the expiration of seasonal power purchase contracts needed because EKPC remains generation deficient. Spurlock 4 capacity has not been added to the 2,720 MW total since it was not operational as of January 1, 2009. From 2010 to 2011 there is a decrease of 35 MW in the winter capacity resources, which reflects the Greenup Hydro contract expiration on December 31, 2010. The 10 MW decrease in resources from 2011 to 2012 is the expected impact of adding the air quality control system on Cooper 2.





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REQUEST 55**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 55.** With regard to supply side resources, please explain how the 2009 IRP considers supercritical pulverized coal (PC) units, ultra supercritical PC units, Integrated Gasification Combined Cycle units as well as co-generation and biomass fired CFBs. Please explain how the 2009 IRP considers combined cycle combustion turbines operating as a baseload resource with a long term natural gas contract. If this was considered, please explain whether GE H class combustion turbines were considered. Please explain what was the price of natural gas that you assumed for the long term contract. Please explain how the 2009 IRP considered LMS 100 combustion turbines operating as intermediate load resources.

**Response 55.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 56**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 56.** Reference Table 1 at 2009 IRP page 7-2. Please explain what the difference is between “transmission loss” and “loss” and between EKPC Office use and Office Use.

**Response 56.** ‘Office Use’ refers to the sum of the energy used for the member system office buildings, if served by EKPC. ‘EKPC Office Use’ is the energy consumption at EKPC facilities if served by EKPC. Similarly, ‘% Loss’ represents the total distribution losses of the member systems. ‘Transmission Loss’ refers to energy loss from the generator busbar to the distribution substation.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 57**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 57.** Please explain the basis for your projections for per residential customers' electricity consumption from 2009 to 2028.

**Response 57.** A detailed discussion as to how EKPC develops its forecast of residential energy use per residential customer is discussed in Section 6 of the 2008 Load Forecast, which has been provided in the Load Forecast portion of the 2009 IRP Technical Appendix.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 58**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 58.** In calculating the 500,000 MWH saving from appliance improvements, please provide the per appliance consumption figures that were used for each appliance.

**Response 58.** The appliance efficiency data is based upon Energy Information Administration (EIA) projections. All relevant data has been provided in the Load Forecast portion of the Technical Appendix.





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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 59**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 59.** Please compare the 75% new homes with electric heat and 85% new homes with electric hot water to the current percentage of homes in your service territory with electric heat and electric hot water.

**Response 59.** Fifty-eight percent (58%) of all homes use electric heat as their main source of home heating, and 87% of all homes have an electric water heater.



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**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 60**

**RESPONSIBLE PERSON: Jeffrey E. Hohman**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 60.** Please list all DSM or energy efficiency programs that have discontinued in the past 5 years.

**Response 60.** EKPC has discontinued one program since 2004 and that is the water heater rebate. This is due to the fact that water heaters have become much more energy efficient and there is no need to incent those purchases.



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**REQUEST 61**

**RESPONSIBLE PERSON: John F. Farley**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 61.** Please explain why each of the following programs did not pass the qualitative assessment for DSM?

**Residential**

Low flow showerhead with faucet aerator & pipe insulation  
Solar water heater  
Room AC exchange & recycle program  
ENERGY STAR Dishwashers  
Refrigerator/Freezer Recycling  
Remove old second refrigerators  
Removed old second freezers  
ENERGY STAR Freezers  
ENERGY STAR Home electronics  
ENERGY STAR Windows  
ENERGY STAR Dehumidifiers  
Heat pump dryer  
Efficient pool pump  
Well water pump  
High efficiency outdoor lighting  
LED lighting  
Inclining block rates  
Passive Solar (new construction)  
Photovoltaics (customer sited)  
Wind turbine (customer sited)

**Commercial**

High efficiency HVAC motors  
Time of use rates  
Combined heat & power  
Stand-by generation program  
Day lighting  
Solar hot water  
Photovoltaics  
Wind turbine

**Industrial/Other**

Computer and electronics sector  
Combined heat and power  
Other onsite generation (conventional)  
Photovoltaics  
Wind turbine  
LED Traffic signals

**Response 61.** These programs did not receive a high enough score to pass. Please see response to Commission Staff's Second Data Request, Request 17, for individual qualitative screening results for the DSM measures.





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REQUEST 62**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 62.** Please explain if EKPC is still evaluating any of the 7 wind proposals for out of state wind generation that EKPC received. Please also explain if any of these was the lowest priced option.

**Request 62.** EKPC continues to look at wind proposals. Obtaining a firm transmission path into the EKPC system continues to be an issue with such proposals. EKPC has entered into confidentiality agreements with all bidders and is not at liberty to reveal the requested details.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 63**

**RESPONSIBLE PERSON: John F. Farley**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 63.** Please explain why the 2009 IRP assumes that EKPC will be running a CFL light bulb program after incandescent light bulbs are banned in the U.S. after 2014.

**Response 63.** The program in question is the Residential Efficient Lighting with Retailers program. This program continues to have incremental energy and demand savings through 2015, and incremental participants through 2018. The savings per participant are derived from the difference between the kWh usage of two incandescent light bulbs and the kWh usage of two compact fluorescent light bulbs.

Presumably, this question makes reference to Section 321 of the Energy Independence and Security Act of 2007. Please note that the statement in this request about incandescent light bulbs being banned is incorrect. The section is not a product ban, but rather an efficiency standard. In practical terms, the section requires all general-purpose light bulbs use approximately 25-30% less energy for the same light output than current incandescent bulbs by 2012 to 2014. The phase-in starts with 100-watt bulbs in 2012 and ends with 40-watt bulbs in 2014.

Compact fluorescent light bulbs on average use 70% less energy than their incandescent equivalent. Therefore there is still savings potential associated with compact fluorescent technology that exceeds the standards set by the Energy Independence and Security Act of 2007.

It is anticipated that the Efficient Residential Lighting Program could be modified starting in 2012 to target more light bulbs per participant, and more efficient lighting technologies that will be available on the market at that time, in order to preserve the savings per new participant through the end of the program in 2018.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 64**

**RESPONSIBLE PERSON: John F. Farley**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 64.** Please explain why the commercial load control for A/C program cannot go above 6000 participants?

**Response 64.** The 6,000 participants in the commercial load control for A/C program is the projected participation, not an upper limit. It is based on an aggressive goal of recruiting 20% of the eligible market in a five year period. Presumably, if customer acceptance indicated that this program could exceed its target for participation, EKPC would welcome having more than 6,000 participants, unless the overall level of load control had reached its limit, meaning that further peak clipping would in effect create a new peak later in the day because of the demand payback when appliances are no longer controlled.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 65**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 65.** Reference page 8-49 of the 2009 IRP. Please explain if the “emission-free” 200 MW power purchase agreement (PPA) is from wind generation, nuclear generation or some other generation source.

**Response 65.** The emission-free 200 MW power purchase agreement is assumed to be a baseload block of energy that would be sold to EKPC for a given price and delivered to the EKPC system on a scheduled basis. No operating characteristics were assigned to the product so it could be produced by any number of generating technologies. The assumption is that a third party is taking the operating risk and EKPC is purchasing a guaranteed output at a negotiated price and no emission outputs are assigned to EKPC.





**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 66**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 66.** Reference page 8-49 of the 2009 IRP. Please explain what would be the economic consequence of moving the intermediary/peaking capacity additions planned for 2019 and 2020 up to 2012 and moving the additional baseload 278 MW planned for 2014 to 2020.

**Response 66.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 67**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 67.** Reference page 8-49 of the 2009 IRP. Please explain if EKPC currently plans to have 278 MW of additional baseload capacity on line in 2014 or whether that date has slipped.

**Response 67.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 68**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 68.** Please explain whether the 2009 IRP process included Smith 1 in the planning model as a given or was it a variable that could change.

**Response 68.** EKPC declines to respond to this data request, as it does not address issues that impact rates or service of EKPC, such as energy efficiency, demand-side management and renewable energy.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 69**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 69.** Reference page 8-73 of the 2009 IRP. Please provide details of the Cooper Retrofit project mentioned including what activities will be undertaken as part of this retrofit project and what the costs will be.

**Response 69.** Details of the Cooper Retrofit project can be found in PSC Case No. 2008-00472.





**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 70**

**RESPONSIBLE PERSON: Jerry B. Purvis**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 70.** Please explain why the 2009 IRP lists Dale 1 and 2 as 23 MW when they are greater than 25 MW each.

**Response 70.** The gross MW rating is what the generator actually produces. Station service is the metered amount of electricity used by the power plant. The difference between gross MW and station service is the net MW rating. The net MW amount reflects the amount of power placed on the grid. Dale 1 and 2 both have net MW ratings of 23 MW.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 71**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 71.** Reference page 8-117 of the 2009 IRP. The 2009 IRP claims the heat rate for the combustion turbines Smith 9 & 10 is between 9331 and 10045 btu/kwh. However, GE claims the heat rate for LMS 100 combustion turbines like the ones used at Smith 9 and 10 have heat rates of 6800 to 7200 btu/kwh. See GE Energy New High Efficiency Simple Cycle Gas Turbine – GE's LMS100™ at 10 available at [http://www.geenergy.com/prod\\_serv/products/tech\\_docs/en/downloads/ger4222a.pdf](http://www.geenergy.com/prod_serv/products/tech_docs/en/downloads/ger4222a.pdf). Please explain the reasons for the higher heat rates assumed by EKPC.

**Response 71.** EKPC modeled heat rate curves provided by GE for its units. The data on page 8-117 reflects the expected average heat rate of the units for the year. The heat rate is highly dependent on how much the units are run and ambient air conditions. The units are expected to be highly efficient at full load; however, start up and shut down periods drive the heat rates up because of lower efficiencies during those cycles.



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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 72**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 72.** Reference page 8-1 of the 2009 IRP. The 2009 IRP assumes that future combustion turbines would have a heat rate of over 12,000 btu/kwh. Please explain the basis for this assumption and the implications this assumption has for resource selection and selection of capacity factors.

**Response 72.** The 2009 IRP does not assume that future combustion turbines will have a heat rate of over 12,000 btu/kWh and there is no reference on page 8-1 of the 2009 IRP that indicates it has. GE LMS100 and GE7EA combustion turbines have been modeled in the 2009 IRP based on GE's expected heat rates at various load levels. Heat rate is not a static number. It varies by a multitude of variables.



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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 73**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 73.** Reference page 8-120 of the 2009 IRP. Please explain that basis for stating that EKPC will need 17,914.81 gwh but will generate and buy at total of 23,083.92 gwh.

**Response 73.** The line on Table 8.(4)(b)-1 showing Coal generation in GWh was incorrect in the EKPC 2009 IRP report. A corrected table is attached.



Table 8.(3)(d)-1

|                              | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017  | 2018  | 2019  | 2020   | 2021  | 2022  | 2023  |
|------------------------------|------|------|------|------|------|------|------|------|-------|-------|-------|--------|-------|-------|-------|
| Non-Utility Generation (GWh) |      |      |      |      |      |      |      |      |       |       |       |        |       |       |       |
| Non-Utility Generation       | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0     | 0      | 0     | 0     | 0     |
| Renewables*                  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 262.8 | 262.8 | 262.8 | 263.52 | 262.8 | 262.8 | 262.8 |

\* Generation from landfill gas to energy projects are included in the response to 8.(3)(b) and 8.(4)(c).

Table 8.(4)(b)-1

|   | 2009      | 2010      | 2011      | 2012      | 2013      | 2014      | 2015      | 2016      | 2017      | 2018      | 2019      | 2020      | 2021      | 2022      | 2023      |
|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Forecast Energy Requirements (GWh) (as modeled) | 13,927.28 | 14,081.13 | 14,256.87 | 14,607.50 | 14,908.32 | 14,941.54 | 15,290.62 | 15,543.82 | 15,797.79 | 16,171.10 | 16,356.37 | 16,794.60 | 17,199.37 | 17,505.65 | 17,914.81 |
| Generation (GWh)                                |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| Coal  | 12,132.25 | 12,294.03 | 12,754.81 | 12,783.21 | 13,131.67 | 13,746.99 | 14,005.41 | 14,194.69 | 14,124.48 | 14,362.11 | 14,451.88 | 14,679.84 | 13,900.25 | 14,173.07 | 15,140.49 |
| Natural Gas                                     | 697.7     | 609.8     | 637.4     | 676.2     | 688.3     | 400.6     | 468.6     | 509.6     | 541.7     | 629.8     | 641.7     | 700.1     | 477.3     | 509.6     | 355.7     |
| Landfill Gas                                    | 139.2     | 139.1     | 139.1     | 139.5     | 139.1     | 139.1     | 139.1     | 139.5     | 139.1     | 139.1     | 139.1     | 139.5     | 139.1     | 139.0     | 138.9     |
| Total   | 12,969.14 | 13,042.89 | 13,531.36 | 13,598.87 | 13,959.00 | 14,286.72 | 14,613.17 | 14,843.75 | 14,805.32 | 15,131.02 | 15,232.68 | 15,519.46 | 14,516.58 | 14,821.75 | 15,635.11 |
| Purchases (GWh)                                 |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| Firm Purchases-SEPA                             | 257.0     | 253.1     | 259.2     | 262.3     | 258.5     | 256.9     | 259.4     | 255.9     | 258.6     | 257.6     | 258.3     | 259.7     | 257.4     | 256.2     | 254.0     |
| Firm Purchases-Other Utilities                  | 302.0     | 633.2     | 332.8     | 337.6     | 331.2     | 329.6     | 414.0     | 422.0     | 418.0     | 416.0     | 414.0     | 418.0     | 2166.0    | 2168.0    | 2170.0    |
| Firm Purchases-Non-Utilities                    | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 0         | 262.8     | 262.8     | 262.8     | 263.52    | 262.8     | 262.8     | 262.8     |
| Total   | 559.0     | 886.3     | 592.0     | 599.9     | 589.7     | 586.5     | 673.4     | 677.9     | 939.4     | 936.4     | 935.1     | 941.2     | 2686.2    | 2687.0    | 2686.8    |



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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09**

**REQUEST 74**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 74.** Please describe in detail the responses to the Request for Proposals (RFP) for renewable energy that EKPC received including type of generation, location of generation, location of point of delivery of the electricity, type of arrangement (i.e. PPA, ownership of asset etc) cost of electricity in kwh, capacity offered if any.

**Response 74.** As stated on pages 8-12 and 8-13, EKPC issued an RFP for Renewable Resources in April 2008. Negotiations are continuing with proposing entities; therefore, no final report has been issued at this point. EKPC has entered into confidentiality agreements with all bidders and is not at liberty to reveal the requested details.



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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 75**

**RESPONSIBLE PERSON: Julia J. Tucker**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 75.** Please explain how the 2009 IRP considered reducing demand and energy requirements through upgrades in efficiency of distribution cooperatives' distribution systems such as increased efficiency in transformers.

**Response 75.** As part of the load forecast process, EKPC meets with the CEO and staff of each member system. The purpose of this meeting is to review key assumptions, and for each distribution cooperative to discuss their service area. Included in this meeting is a discussion of any planned distribution cooperative system upgrades and subsequent impacts on loads and losses. These discussions are incorporated into each member system's forecast, and therefore, are embedded in the EKPC total forecast.



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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 76**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 76.** Please provide a copy of all documents reviewed in answering these data requests which have not previously been provided.

**Response 76.** All relevant documents reviewed in answering these data requests have been provided.





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**FIRST DATA REQUEST RESPONSE**

**PUBLIC INTEREST GROUPS' FIRST DATA REQUEST DATED 07/24/09  
REQUEST 77**

**RESPONSIBLE PERSON: James C. Lamb, Jr.**

**COMPANY: East Kentucky Power Cooperative, Inc.**

**Request 77.** For each data request, please state the name and position of who was involved in providing the answer.

**Response 77.** Each response to the data request includes the name of the individual responsible for providing the response. The individuals responding to this data request and their positions are as follows:

Darrin W. Adams – Manager, Transmission Planning

John F. Farley – President, John Farley Consulting LLC

Jeffry E. Hohman – Manager, Marketing Services

James C. Lamb, Jr. – Senior Vice President, Power Supply

Julia J. Tucker – Director, Power Supply