Goss ▪ Samford PLLC
Attorneys at Law

August 20, 2012

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

Re: PSC Case No. 2012-00149

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 Commission Staff's Second Request for Information, dated August 3, 2012. Also enclosed are an original and ten redacted copies of the responses of EKPC to Sonia McElroy and Sierra Club's Supplemental Requests for Information, dated August 3, 2012, along with EKPC's Petition for Confidential Treatment of Information, which applies to the response to Request 23. One copy of the designated confidential portion of the response is enclosed in a sealed envelope.

Very truly yours,

on behalf of
Mark David Goss

CC: Parties of Record

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2012 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	)))	**CASE NO. 2012-00149**

PETITION FOR CONFIDENTIAL TREATMENT OF INFORMATION

Comes now the petitioner, East Kentucky Power Cooperative, Inc. ("EKPC") and, as grounds for this Petition for Confidential Treatment of Information (the "Petition"), states as follows:

1. This Petition is filed in conjunction with the filing of responses of EKPC to Sonia McElroy and Sierra Club's Supplemental Request for Information in this case, and relates to confidential information contained in the response to Request 23 that is entitled to protection pursuant to 807 KAR 5:001 Section 7 and KRS §61.878 (1)(c) 1, and related sections.

2. The information designated as confidential in the response to Request 23 includes projected fuel costs. Disclosure of this information to utilities, independent power producers and power marketers that compete with EKPC for sales in the bulk power market, would allow such competitors to determine EKPC's power production costs for specific periods of time under various operating conditions and to use such information to potentially underbid EKPC in transactions for the sale of surplus bulk power, which would provide an unfair commercial advantage to competitors of EKPC.

3. Along with this Petition, EKPC has enclosed one copy of the confidential section of its response to Request 23, with the confidential information identified by highlighting or other designation, and 10 copies with the confidential information redacted. The identified confidential information is not known outside of EKPC and is distributed within EKPC only to persons with a need to use it for business purposes. It is entitled to confidential treatment pursuant to 807 KAR 5:001 Section 7 and KRS §61.878(1)(c) 1, for the reasons stated hereinabove, as information which would permit an unfair commercial advantage to competitors of EKPC if disclosed. The subject information is also entitled to protection pursuant to KRS §61.878(1)(c) 2 c, as records generally recognized as confidential or proprietary which are confidentially disclosed to an agency in conjunction with the regulation of a commercial enterprise.

WHEREFORE, EKPC respectfully requests the Public Service Commission to grant confidential treatment to the identified information and deny public disclosure of said information.

Respectfully submitted,

on behalf of MDG

Mark David Goss
Goss Samford, PLLC
2365 Harrodsburg Road
Suite B130
Lexington, KY 40504
Counsel for East Kentucky Power Cooperative, Inc.

CERTIFICATE OF SERVICE

This is to certify that an original and 10 copies of the foregoing Petition for Confidential Treatment of Information in the above-styled case were hand delivered to the office of the Public Service Commission, 211 Sower Boulevard, Frankfort, KY 40601 this 9th day of August, 2012. Further, this is to certify that copies of the foregoing Petition for Confidential Treatment of Information in the above-styled case were transmitted by first-class U.S. mail to: Hon. Jennifer B. Hans, Executive Director, Office of Rate Intervention, Office of the Attorney General, 1024 Capital Center Drive, Suite 200, Frankfort, Kentucky 40601-8204; Hon. Michael L. Kurtz, Boehm, Kurtz and Lowry, 36 East Seventh Street, Suite 1510, Cincinnati, Ohio 45202; Sierra Club Cumberland Chapter, P.O. Box 1268, Lexington, Kentucky 40588; Joe Childers, Joe F. Childers & Associates, 300 Lexington Building, 201 West Short Street, Lexington, Kentucky 40507, Sonia McElroy, 412 Lee Port Road, Milton, Kentucky 40045 and Ms. Kristin Henry Sierra Club, 85 Second Street, 2nd Floor, San Francisco, CA 94105 pursuant to 807 KAR 5:001, Section 7(2)(c).

Counsel for East Kentucky Power Cooperative, Inc.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2012 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	) CASE NO.) 2012-00149

RESPONSES TO SONIA MCELROY AND SIERRA CLUB "MOVANTS" SUPPLEMENTAL REQUESTS FOR INFORMATION TO EAST KENTUCKY POWER COOPERATIVE, INC. DATED AUGUST 3, 2012

EAST KENTUCKY POWER COOPERATIVE, INC.

PSC CASE NO. 2012-00149

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

East Kentucky Power Cooperative, Inc. ("EKPC") hereby submits responses to the information requests of Sonia McElroy and Sierra Club ("Movants") in this case dated August 3, 2012. Each response with its associated supportive reference materials is individually tabbed.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2012 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	))	**CASE NO. 2012-00149**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

David Crews, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to Sonia McElroy and Sierra Club's Supplemental Requests for Information in the above-referenced case dated August 3, 2012, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Subscribed and sworn before me on this 17 day of August, 2012.

Notary Public

MY COMMISSION EXPIRES NOVEMBER 30, 2013
NOTARY ID #409352

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2012 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	))	**CASE NO. 2012-00149**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Scott Drake, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to Sonia McElroy and Sierra Club's Supplemental Requests for Information in the above-referenced case dated August 3, 2012, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Scott Drake

Subscribed and sworn before me on this 28th day of August, 2012.

Notary Public

MY COMMISSION EXPIRES NOVEMBER 30, 2013
NOTARY ID #409352

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2012 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	))	**CASE NO. 2012-00149**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Jamie Bryan Hall, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to Sonia McElroy and Sierra Club's Supplemental Requests for Information in the above-referenced case dated August 3, 2012, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Jamie Bryan Hall

Subscribed and sworn before me on this 20th day of August, 2012.

Notary Public

MY COMMISSION EXPIRES NOVEMBER 30, 2013
NOTARY ID #409352

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2012 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	))	**CASE NO. 2012-00149**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Craig A. Johnson, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to Sonia McElroy and Sierra Club's Supplemental Requests for Information in the above-referenced case dated August 3, 2012, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Craig A. Johnson

Subscribed and sworn before me on this 15 day of August, 2012.

Notary Public

MY COMMISSION EXPIRES NOVEMBER 30, 2013
NOTARY ID #409352

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2012 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	))	**CASE NO. 2012-00149**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Jerry Purvis, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to Sonia McElroy and Sierra Club's Supplemental Requests for Information in the above-referenced case dated August 3, 2012, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Jerry Purvis

Subscribed and sworn before me on this 17th day of August, 2012.

Notary Public

MY COMMISSION EXPIRES NOVEMBER 30, 2013
NOTARY ID #409352

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2012 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	))	**CASE NO. 2012-00149**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Gary G. Stansberry, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to Sonia McElroy and Sierra Club's Supplemental Requests for Information in the above-referenced case dated August 3, 2012, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Gary G. Stansberry

Subscribed and sworn before me on this 20th day of August, 2012.

Notary Public

MY COMMISSION EXPIRES NOVEMBER 30, 2013
NOTARY ID #409352

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2012 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	))	**CASE NO. 2012-00149**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Julia J. Tucker, being duly sworn, states that she has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to Sonia McElroy and Sierra Club's Supplemental Requests for Information in the above-referenced case dated August 3, 2012, and that the matters and things set forth therein are true and accurate to the best of her knowledge, information and belief, formed after reasonable inquiry.

Julia J. Tucker

Subscribed and sworn before me on this 20th day of August, 2012.

Guy M. Wilkey

Notary Public

MY COMMISSION EXPIRES NOVEMBER 30, 2013
NOTARY ID #409352

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 1
RESPONSIBLE PERSON: **Scott Drake**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 1. Refer to your response to Intervenors' Initial Request 9d.

Request 1a. State whether the 27,848 MWh of energy savings identified therein is the cumulative savings over five years or annual savings.

Response 1a. The 27,848 MWh is an annual savings for the year 2017, the 5th year of our 5 year, 50 MW goal.

Request 1b. Explain how the 27,848 MWh of energy savings figure is consistent with the levels of DSM impacts on energy requirements identified on page 15 of the IRP.

Response 1b. The cumulative energy savings for the 5 years is 109,008 MWh. It is a forecasted practical impact savings. The amount shown on page 15 of the IRP is a theoretical savings based on the possible programs for the portfolio at a mature participation level.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 2
RESPONSIBLE PERSON: **Scott Drake and Julie J. Tucker**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 2. Refer to p. 8 of the IRP where you state that "EKPC's experience indicates that the financial investment required to successfully implement DSM programs exceeds the investment assumed in the California tests, principally due to promotional costs incurred to derive awareness, education and adoption in the EKPC service territory". State whether this purported additional investment needed to implement DSM programs in the EKPC service territory in comparison to the investment assumed in the California tests was factored into the evaluation of DSM programs that is incorporated into this IRP. If so, explain how.

Response 2. EKPC cannot specifically identify the additional costs for possible new programs until the programs are designed and implemented. When running the California tests, the best available information regarding these costs is taken into consideration. Most of the time, the best available cost information pertains to mature programs implemented in urban areas. Experience with similar programs shows that actual costs for programs implemented in rural areas can often be greater than those upfront cost estimates.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 3
RESPONSIBLE PERSON: **Jamie Bryan Hall**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 3. Refer to your response to Intervenors' Initial Request 13, Table 7-2 on page 70 of the 2010 Load Forecast and page 44 of the IRP.

Request 3a. Confirm whether Large Commercial Class customers identified in Table 7-2 of the 2010 Load Forecast are equivalent to the Industrial Class referenced on page 44 of the IRP.

Response 3a. Yes, those classes are equivalent.

Request 3b. Confirm that the 2010 Load Forecast projects 4 new Large Commercial Class customers in 2012.

Response 3b. Yes, 4 new large commercial class customers are projected.

Request 3c. Confirm that on page 44 of the IRP, you project 20 new Industrial Class customers in 2012.

Response 3c. Indirectly. Please see EKPC's response to Intervenors' Initial Request 13.

Request 3d. Confirm that for the years 2013 through 2026, the same number of new Large Commercial Class customers is projected in Table 7-2 of the 2010 Load Forecast as are the number of new Industrial Class customers projected on page 44 of the IRP.

Response 3d. Yes, that is correct.

Request 3e. Identify and explain the specific factors that led you to increase the projected number of new customers in 2012 from 4 in Table 7-2 of the 2010 Load Forecast to 20 on page 44 of the IRP.

Response 3e. Please see EKPC's response to Intervenors' Initial Request 13. EKPC has no additional information.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 4
RESPONSIBLE PERSON: **Julia J. Tucker**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 4. Refer to your response to Intervenors' Initial Request 17 and to the newspaper article titled *EKPC: Rules to be very costly,* which is included as Attachment 1.

Request 4a. Refer to the statement in the newspaper article from EKPC spokesperson Nick Comer that:

> "By 2015, East Kentucky Power Cooperative is going to have to make a decision with Dale Station because of federal regulations," EKPC spokesman Nick Comer said. "As it stands right now, (at) Dale Station, none of the four units there would meet that regulation, and in order to do that we would need to retrofit all four of those units with emissions control equipment. (We're) looking at an investment of certainly tens of millions and maybe more than that."

State whether you still believe that EKPC would need to install emission control equipment on the Dale Station to bring it into compliance with

federal regulations if the plant continues to operate after 2015 or 2016. If not, explain why not. If so:

Request 4a.i. Identify the emission control equipment that would need to be installed.

Response 4a.i. The emission control equipment that would need to be installed to bring Dale Station into environmental compliance is still being evaluated. EKPC has hired a consultant to develop detailed options for retrofitting the Dale units. Those costs will be compared to the offers received from the RFP for Power Supply, which are due on August 30.

Request 4a.ii. Explain how the need to install controls to bring the Dale Station into compliance with federal regulations is consistent with EKPC's response to Sierra Club Initial Request 17c that "all other units capable of emissions controls are suitably equipped."

Response 4a.ii. Only Dale Station and Cooper 1 will require significant capital retrofits to meet the MATS rule. All other EKPC generating units will meet the requirements with some potential minor modifications.

Request 4a.iii. State whether any of the five resource optimization plans identified in Table 8.5(a) on page 162 of the IRP includes the installation of emission control equipment on the Dale Station.

1. If not, explain why not.
2. If so, explain how such controls are included in each of the plans.

Response 4a.iii. 1.) EKPC is still developing the costs associated with retrofitting the Dale Station units to meet the MATS rule. The five referenced plans did not assume a specific amount, design or technology for control retrofits for Dale Station. The plans assumed that EKPC would not spend more on retrofits than what it could spend to construct a new gas unit capable of operating under environmentally compliant baseload conditions. Therefore, as stated in Note 4 of Table 8.(4)(a) on page 165 of the IRP, Dale Station was assumed to be retrofitted or replaced with an environmentally compliant technology. A combined cycle natural gas fired plant was modeled to represent the greatest amount of fixed and variable costs that EKPC would spend to develop an environmentally compliant plan for the generation currently delivered from Dale Station and Cooper 1.

2.) See Response 4.iii.1.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 5
RESPONSIBLE PERSON: **Jerry Purvis**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 5. Refer to your response to Intervenors' Initial Request 22b.

a. Describe the "environmental control strategy" referenced therein.

b. Identify what emission controls would be added to the Cooper or Dale generating units as part of that "environmental control strategy".

c. Produce any document regarding that "environmental control strategy".

d. Explain how, in the event that the U.S. Court of Appeals for the District of Columbia upholds CSAPR, EKPC's "current fleet and environmental control strategy will allow" its fleet to operate within the CSAPR 2014 allowances.

e. Produce any document evaluating how, in the event that the U.S. Court of Appeals for the District of Columbia upholds CSAPR, EKPC can comply with CSAPR.

Response 5a-e. EKPC has installed pollution control equipment on all of its coal-fired units and that equipment operates such that emissions can be controlled to meet existing and future emissions limits. As discussed in previous responses and in detail in the IRP, EKPC is also evaluating potential future additional environmental controls. No future plans have been finalized at this time and no documents can be produced with respect to these plans or EKPC's overall environmental strategy beyond the extensive public information on the emissions from EKPC's units and emissions controls on those units.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 6
RESPONSIBLE PERSON: **Jerry Purvis**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 6. Refer to your response to Intervenors' Initial Request 24.

Request 6a. Identify your basis for contending that "KYDAQ is currently considering whether to revise its Regional Haze SIP." Produce any documents supporting that contention.

Response 6a. On May 30, 2012, EPA finalized a rule that allows the trading programs in the Cross-State Air Pollution Rule (CSAPR) to serve as an alternative to determining source-by-source Best Available Retrofit Technology (BART). This rule provides that states in the CSAPR region can substitute participation in CSAPR for source-specific BART for sulfur dioxide and/or nitrogen oxides emissions from power plants. EPA also finalized a limited disapproval of certain states' plans that previously relied on CAIR to improve visibility and substituted a Federal Implementation Plan (FIP) that relies on CSAPR. Below is a link to EPA's rule.
http://www.epa.gov/airquality/visibility/actions.html

The rule was published in the federal register on June 7, 2012.
http://www.gpo.gov/fdsys/pkg/FR-2012-06-07/pdf/2012-13693.pdf

The rule establishes that Kentucky can satisfy the deficiencies in the Regional Haze SIP discussed below though compliance with CSAPR and fully approves the Kentucky Regional Haze SIP. The rule is effective August 6, 2012.

Request 6b. Produce EKPC's initial and revised BART compliance plans referenced therein.

Response 6b. The full history of the development of Kentucky's BART plan is contained in the final limited approval and disapproval.
http://www.epa.gov/airquality/visibility/actions.html

Sierra Club is well aware of all aspects of this rulemaking and filed comments that are addressed by EPA in the final approval and disapproval.

EAST KENTUCKY POWER COOPERATIVE, INC.
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SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 7
RESPONSIBLE PERSON: **Jerry Purvis**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 7. With regards to each of the following existing or expected environmental regulations, state whether EKPC has since January 1, 2009 evaluated options for bringing any of its coal-fired electric generating units into compliance with proposed or finalized versions of each such regulation. If so, explain the results of such evaluation and produce any documentation of such evaluation.

a. Clean Air Interstate Rule
b. Cross State air Pollution Rule
c. Regional Haze Rule
d. Maximum Achievable Control Technology standards for hazardous air pollutants
e. National Ambient Air Quality Standards
f. Clean Water Act Section 316(a)
g. Clean Water Act Section 316(b)
h. Clean Water Act Effluent Limitation Guidelines
i. Coal Combustion Residuals Rule

Response 7(a-i). Please refer to the prior discussion of these future regulatory requirements in the IRP and previous discovery responses.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 8
RESPONSIBLE PERSON: **Craig A. Johnson**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 8. Refer to your response to Intervenors' Initial Request 26.

a. Explain how EKPC's stated lack of plans to retire any of its units is responsive to each of Initial Requests 26(b) through 26(j).

b. For each of Initial Requests 26(b) through 26(j) provide substantive responses or confirm that EKPC has not evaluated or has no knowledge regarding the issue raised in each request.

Response 8 a-b. This is addressed in the response of East Kentucky Power Cooperative to Motion of Sonia McElroy and Sierra Club to Compel EKPC to Respond to Intervenors Initial Request for Information, filed with the Commission on August 10, 2012.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 9

RESPONSIBLE PERSON: **Craig A. Johnson and Julia J. Tucker**

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

Request 9. Refer to your response to Intervenors' Initial Request 27. State whether EKPC has, since January 1, 2009, evaluated the economics or feasibility of retiring, mothballing, or deactivating any of its coal-fired electric generating units, or of replacing any of those units with other energy resources. If so, produce such evaluation. If not, explain why not.

Response 9. EKPC has not specifically evaluated retirement, mothballing or deactivating any of its existing plants since January 1, 2009. EKPC has issued an RFP for 300 MW of power supply beginning in 2016. Offers to this response will be compared against EKPC's options to retrofit Dale Station and Cooper 1 to meet the MATS rule. Analysis of the offers will include the cost implications of retiring or mothballing those units.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 10
RESPONSIBLE PERSON: **Jamie Bryan Hall**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 10. Refer to your response to Intervenors' Initial Request 29, which asked whether EKPC had prepared preliminary 2012 load forecasts for each member system. Your response stated that such forecasts had not been produced "at the time of its IRP filing" which is not fully responsive to the request. State whether, at the time you are answering this request, EKPC has prepared preliminary 2012 load forecasts for each member system. If so, produce such forecasts.

Response 10. In Case No. 2009-00106, EKPC's 2009 Integrated Resource Plan, Commission staff indicated that "Typically, an IRP is considered a 'snap shot' of a utility's resource plan at a given point in time, which is recognized as being subject to change if the assumptions on which it is based change." EKPC believes that the purpose of this case is to evaluate both its plan and its planning process as of the date of the filing of its integrated resource plan and, therefore, the question of whether EKPC has prepared preliminary 2012 load forecasts for each member system as of any later date is irrelevant to this case.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 11

RESPONSIBLE PERSON: **Jamie Bryan Hall and Gary G. Stansberry**

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

Request 11. Refer to your response to Intervenors' Initial Request 33.

Request 11a. Confirm whether your 2012 IRP incorporates a load forecast that, in turn, uses a price of electricity forecast from 2009.

Response 11a. No, the 2012 IRP incorporates a price forecast from 2010. EKPC notes a correction to its response to Intervenors' Initial Request 33. Please see the price forecast provided on the CD in EKPC's response to the Motion to Compel, filed on August 10, 2012.

Request 11a.i. If not, identify from what year is the price of electricity forecast that was used in the load forecast incorporated in the 2012 IRP.

Response 11a.i. Please see the response to Request 11a.

Request 11a.ii. If so, explain why it is appropriate to use an approximately three-year-old price of electricity forecast in a 2012 IRP.

Response 11a.ii. Please see EKPC's response to the Staff's Initial Data Request 26.

Request 11b. In response to Initial Request 33d, which requested production of the most recent Board approved Twenty Year Financial Forecast, you referred to page 9-1 of the 2009 IRP filing. Page 9-1 of the 2009 IRP does not constitute the Twenty Year Financial Forecast and would appear to predate the 2010 Twenty Year Financial Forecast referenced in your response to Staff Initial Request 22. As such:

i. State whether the 2010 Twenty Year Financial Forecast referenced in your response to Staff Initial Request 22 is the most recent such EKPC financial forecast.

1. If so, produce a complete copy of that document.
2. If not, identify and produce the most recent Twenty Year Financial Forecast.

Response 11b. The 2011 Financial Forecast is the most recent Board approved financial forecast. The financial forecast used for the 2012 IRP and the related future cost to members is an alternate scenario specifically designed for the parameters of the 2012 IRP. Request 33 of Intervenors refers to the"future electricity prices ..." contained in the 2010 Load Forecast. The 2010 Board approved Financial Forecast produces such prices for the 2010 Load Forecast (Staff Initial Request 22). The 2010 Financial Forecast is based on the 2008 Load Forecast.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 12
RESPONSIBLE PERSON: **Jamie Bryan Hall**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 12. Refer to your responses to Intervenors' Initial Requests 31 and 34.

Request 12a. Confirm whether the 2007 EISA end-use efficiency standards discussed in your response to Request 31 are the only efficiency improvements or "government regulation" efficiency provisions factored into the 2010 Load Forecast.

Response 12a. No, they are not.

Request 12a.i. If not, identify what other efficiency improvements or "government regulation" efficiency provisions were factored into the 2010 Load Forecast.

Response 12a.i. EKPC's 2010 Load Forecast relies on Itron's *2009 Residential Statistically Adjusted End-use (SAE) Spreadsheets*. EKPC has no legal right to redistribute these spreadsheets, but they are based on and consistent with the EIA's *Annual Energy Outlook 2009*, which provides further documentation of the assumptions and is freely available to the public at http://www.eia.gov/oiaf/archive/aeo09/index.html.

Please see pages 7-26 of the report for a discussion of the relevant legislation and regulations.

Request 12b. EKPC did not respond to the portion of Initial Requests 31 and 34 seeking the level of annual energy savings or peak demand reduction from efficiency improvements or "government regulation" efficiency provisions that were assumed in the 2010 Load Forecast. As such, confirm whether EKPC knows those levels. If so, identify them as requested in Initial Requests 31 and 34.

Response 12b. EKPC does not know the level of annual energy savings or peak demand reduction attributable to each specific provision.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
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MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 13
RESPONSIBLE PERSON: **Scott Drake**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 13. Refer to pages 7-10 of the DSM Report found in Technical Appendix Volume 2. Produce in machine readable or txt format the input and output files for the *DSMore* modeling described therein.

Response 13. This information was provided in the form of the assumption sheets (input) and summary sheets (output) for each program in Technical Appendix, Demand Size Management, Volume 2. Exhibit DSM-4 and Exhibit DSM-5 for New programs; and Exhibit DSM-6 for Existing programs.

EAST KENTUCKY POWER COOPERATIVE, INC.

PSC CASE NO. 2012-00149

SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 14

RESPONSIBLE PERSON: **Scott Drake**

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

Request 14. Refer to p. 8 of the DSM Report found in Technical Appendix Volume 2. Identify the natural gas cost by year referenced therein.

Response 14. No fuel switching programs were included in the IRP so natural gas costs were not used.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 15

RESPONSIBLE PERSON: **Julie J. Tucker**

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

Request 15. Refer to your response to Intervenors' Initial Request 40a. Explain how the marginal energy cost of $0.036 per kWh in 2012 was determined. Identify and produce any documents upon which that cost figure is based.

Response 15. The $0.036 per kWh is based on EKPC's tariff: Rates, Rules, and Regulations for Purchasing Electric Power and Energy at Various Locations throughout Kentucky from Qualified Cogeneration and Small Power Production Facilities filed with the Public Service Commission of Kentucky and effective June 1, 2011.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 16
RESPONSIBLE PERSON: **Julie J. Tucker**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 16. Refer to your response to Intervenors' Initial Request 40a. Explain the basis for assuming a compound annual growth rate in marginal energy costs of 4% for the period 2012 through 2026. Identify and produce any documents upon which that growth rate is based.

Response 16. As stated in the response to Request 15, the methodology for determining marginal energy costs is filed in EKPC's QF and Small Power Production Facilities tariff. The tariff only requires five years of data. EKPC simulated the remaining years using that same methodology to determine the compound annual growth rate of 4%.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 17
RESPONSIBLE PERSON: **Julie J. Tucker**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 17. Refer to your response to Intervenors' Initial Request 42.

Request 17a. State whether the assumption that "there are no planned capital investments during the IRP 2012 reporting period" means that the cost of "capital investments for compliance" factored into the evaluation of DSM documented in the DSM Report found in Technical Appendix Volume 2 was zero.

Response 17a. There were no planned capital investments specifically for compliance retrofits used in the analysis. The marginal capacity costs include the cost to construct new gas fired units which would be compliant with all environmental regulations. EKPC would not spend more on retrofits than what it could spend to replace the capacity with new facilities. Therefore, the environmental retrofit cost has been captured within the capital costs for new gas fired facilities.

Request 17b. State whether the evaluation of DSM documented in the DSM Report found in Technical Appendix Volume 2 assumed that any of EKPC's existing coal-fired generating units would be retired, mothballed, deactivated, or otherwise replaced.

i. If so, identify which units and when.

ii. If not, explain why you assumed that all of EKPC's coal units could continue operating without any capital investments for compliance.

Response 17b. Please see the response to Request 4.iii.1.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 18
RESPONSIBLE PERSON: **Scott Drake**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 18. Refer to your response to Intervenors' Initial Request 44. Produce the EPRI DSM technical potential study referenced therein.

Response 18. EKPC's response to the previous Interveners' request is detailed and adequately explains that EKPC utilized the EPRI report as an overall reasonableness sanity check because EKPC could not verify EPRI's assumption and underlying data. Thus, EKPC decided not to utilize the content of the report for evaluating individual programs. However, EKPC has included the EPRI Report on pages 2 through 36 of this response.

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Assessment of Achievable Potential from Energy Efficiency and Demand Response Programs for East Kentucky Power Cooperative

(2010-2025)

1021281

Assessment of Achievable Potential from Energy Efficiency and Demand Response Programs for East Kentucky Power Cooperative

(2010-2025)

1021281

Technical Update, May 2010

EPRI Project Manager

C. Holmes

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Assessment of Achievable Potential from Energy Efficiency and Demand Response Programs for East Kentucky Power Cooperative. EPRI, Palo Alto, CA: 2010. 1021281.

PRODUCT DESCRIPTION

This report documents the results of a study to assess the achievable potential for electricity energy savings and peak demand reductions for East Kentucky Power Cooperative (EKPC) for 2010–2025. The approach involved applying the methodology and technology data developed for the Electric Power Research Institute (EPRI) National Study on the same subject (report 1016987), adapted to the specific market sector characteristics of the EKPC service territory. The efficient technologies and measures considered are commercially available today. The estimation of economic potential assumes that consumers will adopt the most energy-efficient technology that has a benefit/cost ratio greater than one, measured using the Total Resource Cost Test. Estimates of economic potential are adjusted to account for various market barriers and program implementation factors to quantify the energy efficiency potential that can realistically be achieved.

Results and Findings

The results indicate that the realistic achievable energy efficiency potential for all market sectors is 747 GWh for the year 2025, or 8.9% of the EPRI-calculated baseline forecast of 8,404 GWh for 2025. These savings are in addition to the significant reductions in consumption that are expected to result from the improvements in lighting required by the Energy Independence and Security Act of 2007 (EISA). The savings from EISA are expected to reduce the residential energy forecast by 580 GWh by the year 2025. Therefore, the impact of EISA in the residential sector is projected to be nearly as much as the realistic achievable potential of all other energy efficiency measures combined. The winter demand-related savings associated with energy efficiency programs are 47 MW by the year 2025, which represents roughly 1.2% of the projected system winter peak load for that year. The summer demand-related savings associated with energy efficiency programs are 28 MW by the year 2025, which represents roughly 0.9% of the projected system summer peak load for that year. Demand response (DR) programs could reduce winter peak demand by 243 MW and summer peak demand by 93 MW by 2025, although there is some potential for double counting between the peak reductions that could be achieved from energy efficiency programs and the reductions that could be achieved through DR programs.

Challenges and Objectives

Although the potential savings based on customer economics alone are not insignificant, the results presented in this report do not indicate whether specific programs would be cost-effective from EKPC's point of view. Therefore, these results should be considered as a useful starting point for EKPC's planning as it considers a range of potential options for meeting its future energy requirements as cost-effectively as possible. The results should also be useful to EKPC's energy efficiency program managers in designing programs and setting targets for energy and demand savings and for reductions in environmental externalities.

Applications, Value, and Use

This study indicates that the approach used in the EPRI National Study can be adapted to individual utilities to support utility-specific resource planning and energy efficiency program design. The approach is robust and can readily be updated as more efficient technologies and measures emerge.

EPRI Perspective

The EPRI National Study is unique because it is grounded in commercially available efficiencies and costs and reflects the actual participation results achieved by energy efficiency programs. Because the EPRI National Study considered all regions of the country, the approach can be adapted to virtually any U.S. member utility who requests this assistance.

Approach

The goal of this project was to produce EKPC-specific estimates of energy efficiency savings by applying the approach used in the EPRI National Study. The results are based on commercially available technologies and costs using an equipment stock turnover model. The results are detailed and granular, by end use and by technology. This approach makes the results more transparent than those of other studies that employ a macro "top-down" approach, which is highly sensitive to variations in a few key assumptions.

Keywords

Energy efficiency
Demand response
Demand-side management (DSM)
Potential
Forecasting

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1 INTRODUCTION

Like many other utilities, East Kentucky Power Cooperative (EKPC) is exploring the potential of more efficient electric technologies to help meet the future electricity needs of their member systems, and in helping to reduce carbon emissions. Their baseline forecast is that electricity consumption will grow at an EPRI-calculated compound annual growth rate of 1.9% between 2010 and 2025.

In October of 2009, EKPC engaged EPRI to apply the methodology developed for its national energy efficiency study[1] (the EPRI National Study) to their member systems' service territories. This report documents how the methodology and technology data developed for the National Study were adapted to the EKPC service territory, and the energy efficiency and demand response potential estimates that resulted from that work.

This report will not repeat the detailed descriptions of the technologies, data sources, and methodology that are contained in the National Study. Rather, this report should be viewed as a companion document to the National Study which will highlight EKPC-specific information and results.

EKPC serves 16 distribution cooperatives who, in turn, serve approximately 511,000 retail customers across 87 counties in Kentucky.

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[1] *Assessment of Achievable Potential from Energy Efficiency and Demand Response Programs in the U.S.: (2010-2030).* EPRI, Palo Alto, CA: 2009. 1016987.

2
APPROACH FOR ENERGY EFFICIENCY ANALYSIS

Overall Approach

The overall approach is illustrated in Figure 2-1. It is the same approach used in the National Study, with the exception that EKPC-specific data were substituted for the National Study data whenever EKPC data were available.

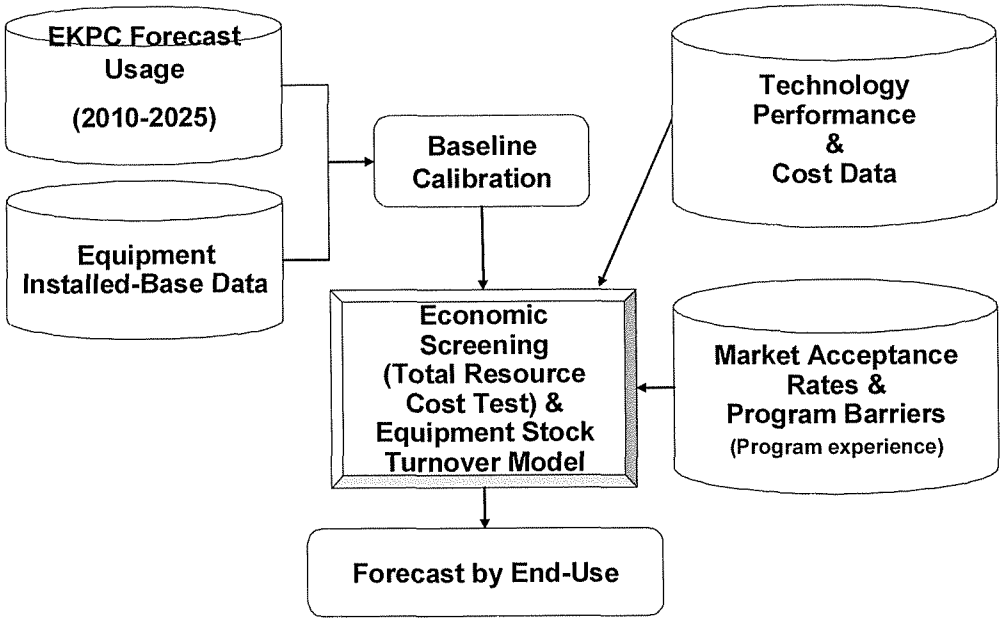

Figure 2-1
Overall Analysis Approach

EKPC provided baseline forecast data (kWh and kW) for 2009 through 2028. They also provided appliance saturation data for the residential sector based on surveys they have conducted over a number years. Where needed, EPRI used secondary data or the equipment share data that were developed for the Southern Region in the national study.

Technology and measure cost and performance data were from EPRI databases supplemented by building simulations and other analysis, and by EKPC data where available. Energy measures considered for the residential sector in this study are shown in Table 2-1.

Table 2-1
Residential Sector Energy Efficiency Measures

Room AC	Storm Doors (Heating)
Central AC	External Shades
Heat Pumps	Ceiling Insulation
Lighting - Linear Fluorescent	Ceiling Insulation (Heating)
Lighting - Compact Fluorescent	Foundation Insulation
Water Heating	Foundation Insulation (Heating)
Dishwashers	Wall Insulation
Dishwashers (DHW)	Wall Insulation (Heating)
Clothes Washers	Reflective Roof
Clothes Washers (DHW)	Windows
Clothes Dryers	Windows (Heating)
Refrigerators	Faucet Aerators
Freezers	Pipe Insulation
Cooking	Low-Flow Showerheads
Color TV	AC Maintenance
Personal Computers	HP Maintenance
Furnace Fans	Duct Repair
Attic Fan	Duct Repair (Heating)
Ceiling Fan	Infiltration Control
Whole-House Fan	Infiltration Control (Heating)
Duct Insulation	Combined Washer/Dryer
Duct Insulation (Heating)	In-home Feedback Monitor
Programmable Thermostat	Dehumidifier
Programmable Thermostat (Heating)	Reduce Standby Wattage

Notes: AC = air conditioning; DHW = domestic hot water; HP = heat pump.

Market acceptance ratios and program implementation factors were taken from the EPRI National Study, but were reviewed by EKPC program managers to ensure that they were consistent with EKPC and Members' experience in implementing such programs in the past.

Definitions of Potential

Consistent with the National Study, four definitions of potential were used in this study[2].

- **Technical Potential** represents the savings due to energy efficiency and demand response programs that would result if all homes and businesses adopted the most efficient, commercially available technologies and measures, *regardless of cost*. Replacement is assumed to occur at the end of their useful lives by the most efficient option available. Technical potential does not take into account the cost-effectiveness of the measures, or any market barriers.
- **Economic Potential** represents the savings due to programs that would result if all homes and businesses adopted the most energy-efficient cost-effective commercially available measures. The economic test applied is a variation on the *Total Resource Cost (TRC) Test*, which compares the incremental cost of the measure relative to the society's baseline option, and to the projected bill savings over the life of the measure. Economic potential does not take into account any market barriers to adoption. Economic potential assumes that most efficient option that passes the economic screen is adopted. For the EKPC study, EKPC projected electricity prices were used in the calculation of economic potential.
- **Maximum Achievable Potential (MAP)** takes into account those barriers that limit customer participation, even under a scenario that assumes customers have perfect information, that utilities offer incentives equal to the incremental cost of energy efficient measures above baseline measures, and that utilities implement programs with high marketing and administrative costs. These barriers can include perceived or real quality differences, aesthetics, customer inertia, or customer preferences for product attributes other than energy efficiency. MAP is estimated by applying market acceptance rates (MARs) to the economic potential savings from each measure. The MARs developed in the EPRI National Study were used in the EKPC study, after a review by EKPC program managers and staff.
- **Realistic Achievable Potential (RAP)**, unlike the other potential estimates, represents a forecast of likely customer behavior. It takes into account existing market, financial, political and regulatory barriers that are likely to limit the amount of savings that might be achieved through energy-efficiency and demand-response programs. For example, utilities do not have unlimited budgets for program implementation. There can be regional differences in attitudes toward energy efficiency and its value as a resource. Market barriers can include imperfect information. RAP is calculated by applying a program implementation factor (PIF) to the MAP for each measure. The program implementation factors were developed by taking into account recent utility experience with such programs and their reported savings. The PIF factors developed for the National Study were reviewed with the EKPC program managers and staff and applied to the EKPC MAP estimates.

Hierarchy of Data Sources

Table 2-2 illustrates the data hierarchy that was applied in this study. If EKPC data were available, they were used. In some cases, EKPC data were available, but had to be adjusted slightly, sometimes constant values were assumed, or the EKPC data might have been

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[2] EPRI National Study, p. xiii-xiv.

extrapolated from related information. If EKPC-specific data were unavailable, data for the South Census region from the EPRI National Study were used.

Table 2-2
Hierarchy of Data Sources

Hierarchy Level	Data Source
1	EKPC Provided Data
2	Interpolated/Extrapolated EKPC Data
3	South Census/EPRI National Study

Segmentation Analysis

Figure 2-2 illustrates how the analysis was segmented. Estimates of potential were developed at the EKPC system level for the residential sector, then by end-use, and by measure. (Residential space cooling is used to illustrate the different levels of analysis in Figure 2-2.)

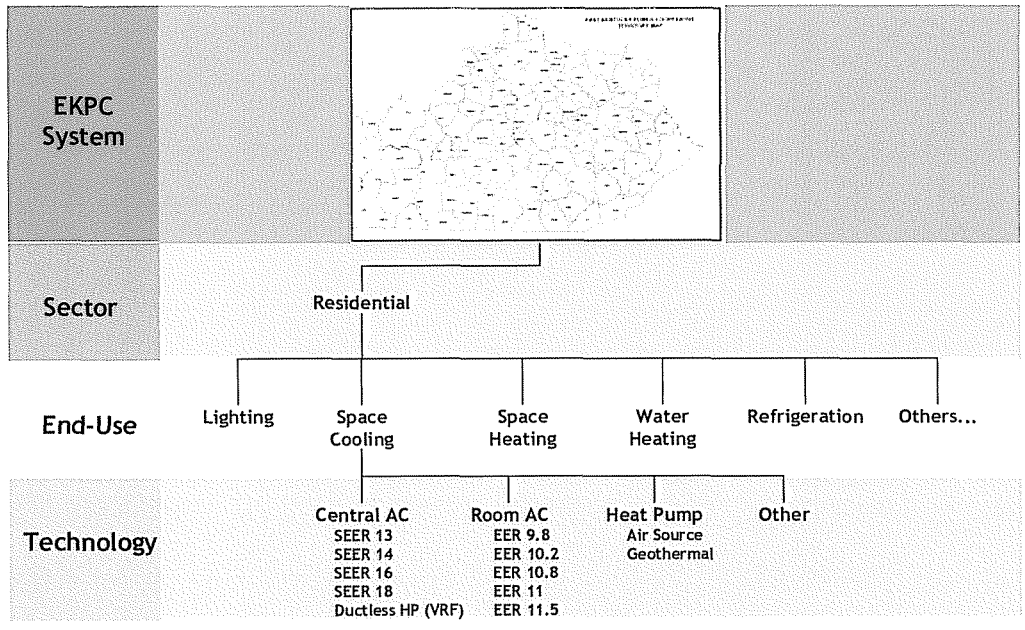

Figure 2-2
Segmentation of Analysis – by End-Use and Measure

EKPC provided historic electricity sales data, as well as forecasts of sales to the year 2028. These forecasts excluded projected impacts from EKPC's own demand-side management programs, and provided the baseline for assessing the energy efficiency and demand response potential within their service territory.

Residential Sector

The model used for the residential sector in the EPRI National Study is a stock turnover model. In all four measures of potential, equipment is assumed to be replaced when it is at the end of its useful life. The model does not assume early retirements based on economics.

Baseline Estimation

Age Distribution of End Uses

A first step in this analysis was to develop historical end-use age distribution data, based on EKPC data on household counts and appliance saturation rates from saturation studies that went back to 1991.[3] The goal was to get to a realistic age distribution of each measure for the year 2010, the starting point for the analysis. The steps were as follows:

1. Begin with total household counts and residential appliances from the saturation survey for 1991.
2. Define initial age distribution "bins" based on EKPC survey data or South census region data, and the turnover rate from each bin to the next. Apply the turnover rate for each year between 1991 and 2010. Any increase in the saturation rate of a given end-use was added to the "new" category, and aged through time as outlined above. (For example, if the saturation rate of room air conditioners increased from 10% to 12%, the 2% increase was assigned to the "new" age bin.)
3. The age distribution of appliances for 1987 that resulted from this analysis was used as the starting age distribution of appliances.

The result of this analytical step was to produce an initial age distribution of appliances for the year 2010, the starting year for the energy potential analysis.

Weather Analysis

The EPRI National Study used weather data for Birmingham, Alabama to represent the unit energy consumption (UECs) for weather-sensitive loads such as heat pumps and central air conditioners. For the EKPC study, EPRI undertook a detailed analysis using Lexington, Kentucky weather data to determine seasonal end-use consumption based on the UECs provided by EKPC. EnergyGauge, a software tool which uses the DOE-2 engineering model, was used to generate 8760 consumption data by end use for a typical EKPC home. Peak summer and winter demands were also calculated for each end use based on the results from EnergyGauge.

Economic Screen – Total Resource Cost Test

Data developed for the EPRI National Study were used to estimate for each efficiency measure:

- kWh impacts
- kW impacts
- incremental costs relative to baseline measures

---

[3] EKPC provided the results of residential appliance saturation surveys conducted every two or three years since 1991.

- measure lifetime

With these inputs and EKPC's avoided costs, an economic screen known as the Total Resource Cost Test was estimated over the life of the measure. Basically the screen is a benefit/cost (B/C) ratio, calculated by comparing the present worth of the avoided power supply costs to the incremental measure cost. The formula for calculating this test is as follows:

$$\sum_{i=1}^{t}\left(\frac{\text{Avoided Power Supply Costs}}{(1+r)^{i}}\right)\Bigg/\sum_{i=1}^{t}\left(\frac{\text{Incremental Measure Cost}}{(1+r)^{i}}\right)$$

Where:

i = year in which costs or savings are incurred by the participating customer

t = life of measure

r = discount rate (5% real discount rate is assumed)

If the B/C ratio is $\geq$ 1.0, the measure is assumed to be economic. The most energy-efficient measure with a B/C ratio $\geq$ 1.0 is assumed to be adopted.

3
DEMAND RESPONSE POTENTIAL ANALYSIS

The potential for demand response reduction was also estimated in the EPRI National Study[4]. However, potentials were estimated at a much higher level of aggregation than for energy efficiency potential. Programs were broadly characterized by their general approach to reducing load. Then the likelihood of participation by a representative customer was estimated, taking into account market and administrative barriers.

Demand response programs are grouped first by sector and applicable end use:

- Residential sector: direct load control for air conditioning, direct load control for electric heating, direct load control for water heating, and dynamic pricing programs (time-of-use, critical-peak pricing, real-time pricing, and peak time rebates);

These program types fall into three primary categories – direct load control, event-based voluntary shed, and response to price signals.

Data and Assumptions

EKPC-Supplied Data

EKPC provided:

- EKPC system peak demand for 2010
- Each end-use wholesale (residential, general service, manufacturing, etc.) class's percentage of total GWh sales for 2010
- Estimated residential coincident peak loads (consistent with their estimated baseline energy usage)
- Hourly system load data for 2010

EPRI National Study

Estimates from the National Study that were used in this analysis include the estimated technical potential for DR programs in the U.S., end-use share contributions to class peak for the Southern region, and Market Acceptance Ratios for different program types.

Methodology

Developing a Baseline

EPRI used the 2010 EKPC system peak demand as the baseline for the demand response potential analysis. The EKPC system load factor (the ratio of average demand to peak demand) was calculated from the 2010 hourly system load data. EPRI then:

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[4] See EPRI National Study, pp. 2-28 through 2-30.

- Calculated the average out-year peak demand based on the energy forecast times the 2010 average system load factor.
- Apportioned the system peak demand to each end-use wholesale class's percentage of GWh sales. (This assumption implies that all classes have the same load shape. Thus, the residential class's relative contribution to peak demand is understated, and the industrial class's relative contribution to peak demand is overstated.)

Note that there is a potential for double-counting the demand response reduction potential if both energy efficiency programs and demand response programs are implemented. Energy efficiency programs will also reduce system peak to the extent that the end use is coincident with the system peak. To the extent that EE programs reduce peak load, it will lower the remaining peak that is the basis for demand response programs.

Definitions of Potentials[5]

EPRI has developed measures of potential similar to those for energy efficiency measures, with the exception of economic potential. The programs considered in the analysis are assumed to be cost-effective for both the utility and the participating customer, and the predicted acceptance is encompassed in the maximum achievable potential. The measures of potential for demand response are defined as follows in the EPRI National Study:

- Technical Potential – Complete penetration of DR programs among eligible customers, assuming load shed comparable to highest performing customers under existing programs.
- Maximum Achievable Potential – Technical potential adjusted to include market penetration, accounting for perceived market barriers.
- Realistic Achievable Potential – Maximum achievable potential adjusted to reflect regulatory and administrative barriers.

Estimation of DR Potential for EKPC

EPRI estimated the demand response potential for EKPC by applying data and assumptions from the National Study (including estimates of technical potential by program type, engineering analysis and program MAR factors) to EKPC's customer characteristics.

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[5] See EPRI National Study, pp. 2-28 through 2-30.

4
BASELINE ENERGY FORECAST

Residential Sector

Calibration of EKPC Forecast to the EPRI Baseline Forecast

As outlined in Section 2, the first step in the analysis is to develop a baseline forecast against which energy efficiency potential can be estimated. EKPC's forecast of total residential electric sales is shown in Figure 4-1. Over the period 2010 to 2025, residential sales are calculated to grow at a compound annual growth rate of 1.9%.

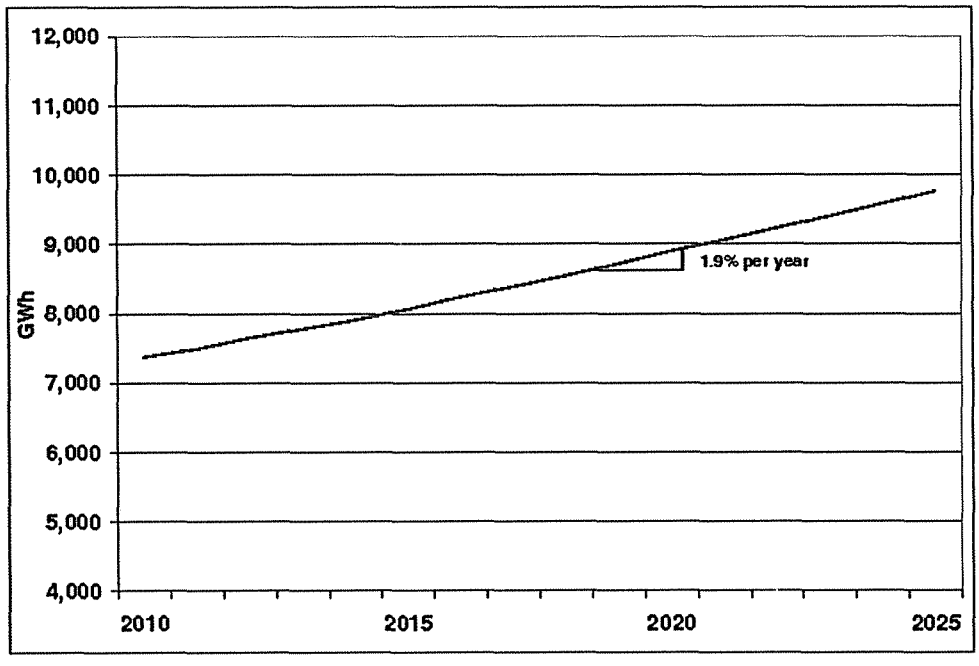

Figure 4-1
EKPC Projected Residential Electricity Consumption, 2010-2025

To estimate energy efficiency potential, it was then necessary to estimate how much each end-use contributed to the growth in aggregate residential consumption. The procedures for developing those estimates were outlined in Section 2. Using EKPC-provided end-use surveys and unit energy consumption (UEC) data, EPRI developed a baseline forecast using its residential stock turnover model. The EPRI baseline forecast was then compared to the EKPC forecast to determine whether the overall model accuracy would be acceptable. The results are shown in Table 4-1.

Table 4-1
EPRI Baseline Forecast of Residential Electricity Sales Compared to the EKPC Forecast of Residential Electricity Sales, 2010-2025

	2010	2015	2020	2025
EPRI Forecast Using Stock Turnover Model				
Residential Total (MWh)	7,341,904	7,821,131	8,292,490	8,984,525
EKPC Forecast				
Residential Total (MWh)	7,374,611	8,059,377	8,899,636	9,760,214
% Difference	**0.4%**	**3.0%**	**6.8%**	**7.9%**

Note: EKPC Forecast is from EKPC February 2010 (No DSM).

The results indicate that the stock turnover model produced annual forecast results that were within 0.4 to 7.9% of the EKPC forecast. Thus the approach can produce results that are reasonable for the energy efficiency potential analysis.

Estimating the Impact of EISA on the EKPC Baseline Forecast

EKPC uses econometric models to forecast electricity demand by sector. This type of modeling is standard practice in the industry because it enables forecasting based on economic variables that are known to affect electricity consumption (overall economic activity, input prices, income growth, etc.). One distinction of the approach, however, is that it is designed to take explicit account of mandated changes in the efficiency of heating, cooling and water heating via projected improvements from EIA. Most notable to this study is the potential impact of the Energy Independence and Security Act (EISA) of 2007 which mandates higher efficiencies for lighting technologies.

Since the EISA impacts are expected to be large, the EPRI team estimated the impact of EISA on EKPC's forecast of residential sales so that it could be taken into account explicitly and separately. There were three steps involved in this process:

1. The EPRI stock turnover model was used to produce an EKPC baseline forecast, ***excluding*** the effects of EISA. (The results of that step and its calibration to the EKPC - provided forecast were shown in Table 4-1.)
2. The EPRI stock turnover model was used again to produce an EKPC baseline forecast, ***including*** the effects of EISA.
3. The forecast including EISA was subtracted from the forecast excluding EISA to isolate the EISA impact. The differences were then subtracted from the forecast provided by EKPC, to produce an EKPC -provided, EISA-adjusted forecast. The results for the residential sector are summarized in Table 4-2 and shown graphically in Figure 4-2.

Table 4-2
Impact of EISA Lighting Requirements on EKPC's Baseline Residential Energy Forecast, 2010-2025

	2010	2015	2020	2025
1. Baseline (Calculated)	7,341,904	7,641,981	7,760,184	8,404,328
2. Baseline (Calculated - w/o EISA)	7,341,904	7,809,256	8,263,190	8,937,222
3. EISA Impacts (1) – (2)	0	179,151	532,306	580,197
4. Baseline (EKPC Provided)	7,374,611	8,059,377	8,899,636	9,760,214
4. Baseline (EKPC Provided) - EISA adjusted	7,374,611	7,880,226	8,367,330	9,180,017
5. EISA Impacts - % of EKPC Baseline	0%	2%	6%	6%

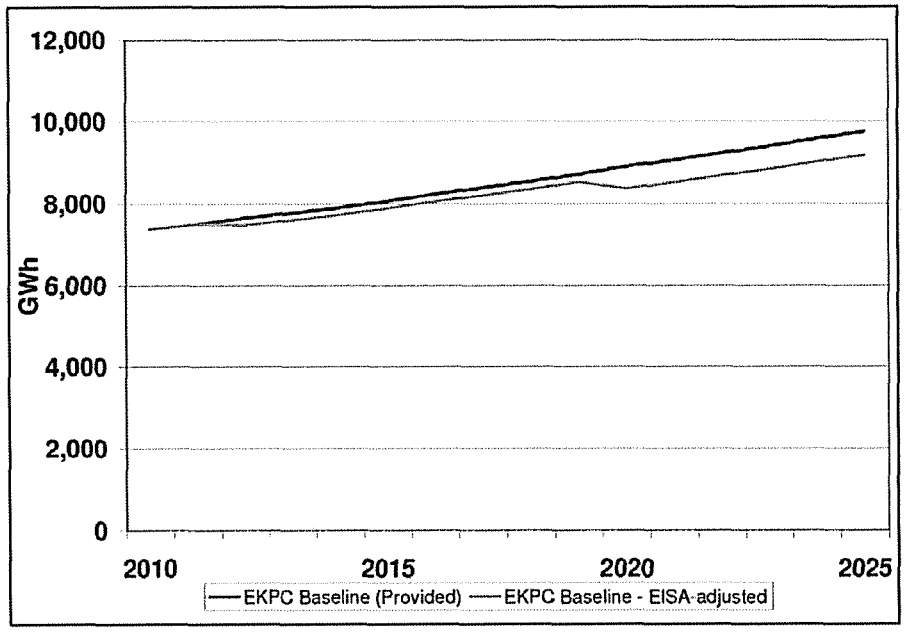

Figure 4-2
EKPC Residential Baseline Forecast, with and without an Adjustment for EISA Lighting Requirements

The results show that EISA is expected to have a substantial impact, reducing the residential baseline by 6% in 2025. These effects need to be taken into account separately to accurately estimate the savings that can be attributed to utility energy efficiency programs.

Forecast Residential Consumption by End Use

Residential electricity consumption by end-use for 2010 and projected for 2025 is shown in Table 4-3. Unlike the baseline in Figure 4-1, this baseline forecast ***does*** reflect the efficiency gains expected from EISA: the end-use share of consumption for lighting is projected to decline from 10% in 2010 to 4% in 2025. Overall shares of energy consumed for other end uses are relatively stable, except that share of consumption used for "other uses" is projected to increase by about 35% (from 17% in 2010 to 23% of total consumption in 2025). This category is dominated by "plug loads" which include a wide variety of miscellaneous devices which can be small in terms of energy draw but are growing in share. It also includes entertainment and communication services, both of which are likely to increase in market saturation and energy intensity (plasma TVs are one notable example). In this study, "other" end uses were modeled as a fixed share of total consumption that is growing over time, based on the forecasts from EIA's 2008 Annual Energy Outlook.

Table 4-3
EKPC Residential Electricity Consumption by End-Use, MWh and % of Total, 2010 and 2025

	2010		2025	
	GWh	%	GWh	%
Electric Heating	2,076,720	28%	2,196,547	26%
Other Heat	0	0%	0	0%
Central AC	494,849	7%	530,844	6%
Room AC	208,969	3%	255,976	3%
Water Heating	1,348,632	18%	1,610,683	19%
Refrigerators	261,229	4%	293,393	3%
Cooking	111,502	2%	141,985	2%
Clothes Dryers	406,610	6%	521,324	6%
Freezers	132,555	2%	149,428	2%
Lighting	711,561	10%	368,356	4%
Clothes Washers	33,771	0%	43,205	1%
Dishwashers	23,170	0%	29,340	0%
Color TV (Standard/LCD)	135,143	2%	219,851	3%
Personal Computers	117,236	2%	146,626	2%
Furnace Fans	0	0%	0	0%
Other Uses	1,279,957	17%	1,896,770	23%
Total (Calculated – EISA-adjusted)	**7,341,904**	**100%**	**8,404,328**	**100%**

NOTE: 2010 data are based on saturation levels resulting from the 2007 End-Use Survey. 2025 data are projected as part of this study. Percentages may not add due to rounding.

5
REALISTIC ACHIEVABLE ENERGY EFFICIENCY POTENTIAL

Total

The realistic achievable energy efficiency potential for all sectors, by year is shown in Table 5-1. Based on technologies that are commercially available today, and assuming that equipment is replaced at the end of its useful life with the most energy-efficient measure that has a positive benefit/cost ratio, EPRI estimates that total electricity consumption can be reduced by 8.9% by the year 2025, relative to the calculated EISA-adjusted baseline forecast. Potential winter peak coincident demand savings are estimated to be 1.2% in 2025, with summer peak demand savings of 0.9%. Since EKPC is a winter-peaking system the winter peak demand savings are higher than those achievable in summer.

Table 5-1
Summary of EKPC Realistic Achievable Potential, 2010 – 2025, Total Savings and as a Percent of Each Sector's Calculated Baseline EISA-Adjusted Forecast

	2010	2015	2020	2025
Energy				
Baseline (MWh)	7,341,904	7,641,981	7,760,184	8,404,328
Realistic Achievable (MWh)	0	160,267	359,466	746,951
Potential %	0%	2.1%	4.6%	8.9%
Winter Peak Demand				
Baseline (MW)	3,046	3,368	3,703	4,075
Realistic Achievable (MW)	0	23	30	47
Potential %	0%	0.7%	0.8%	1.2%
Summer Peak Demand				
Baseline (MW)	2,450	2,698	2,961	3,253
Realistic Achievable (MW)	0	11	12	28
Potential %	0%	0.4%	0.4%	0.9%

Energy

The realistic achievable potential for energy savings in the residential sector, by end use and year, is shown in Table 5-2. Note that electricity used for lighting is expected to decline by 580 GWh relative to the baseline forecast for 2025 due to improved lighting efficiencies mandated by EISA. That reduction – which is more than the total remaining residential RAP in 2025 – has already been taken out of the calculated baseline. Other end uses with substantial efficiency opportunities include space heating and water heating, as well as lighting (beyond the effects of EISA).

Table 5-2
Residential Realistic Achievable Energy Efficiency Potential, 2010-2025
By End Use (MWh and Percent of the Total Potential for 2025)

	2010	2015	2020	2025	
	MWh				%
Electric Heating	0	38,784	237,932	530,416	71.0%
Other Heat	0	0	0	0	0.0%
Central AC	0	2,280	12,109	29,994	4.0%
Room AC	0	3,890	11,768	21,020	2.8%
Water Heating	0	10,277	41,561	79,539	10.6%
Refrigerators	0	6,360	15,775	26,658	3.6%
Cooking	0	0	0	0	0.0%
Clothes Dryers	0	0	0	0	0.0%
Freezers	0	2,080	5,177	8,884	1.2%
Lighting (Additional Impacts)	0	95,918	32,878	46,365	6.2%
Clothes Washers	0	0	0	0	0.0%
Dishwashers	0	679	2,265	4,074	0.5%
Color TV (Standard/LCD)	0	0	0	0	0.0%
Personal Computers	0	0	0	0	0.0%
Furnace Fans	0	0	0	0	0.0%
Other Uses	0	0	0	0	0.0%
Total RAP Potential	**0**	**160,267**	**359,466**	**746,951**	**100.0%**

Figure 5-1 illustrates the contribution of various end uses to the total realistic achievable potential for energy savings in the year 2025.

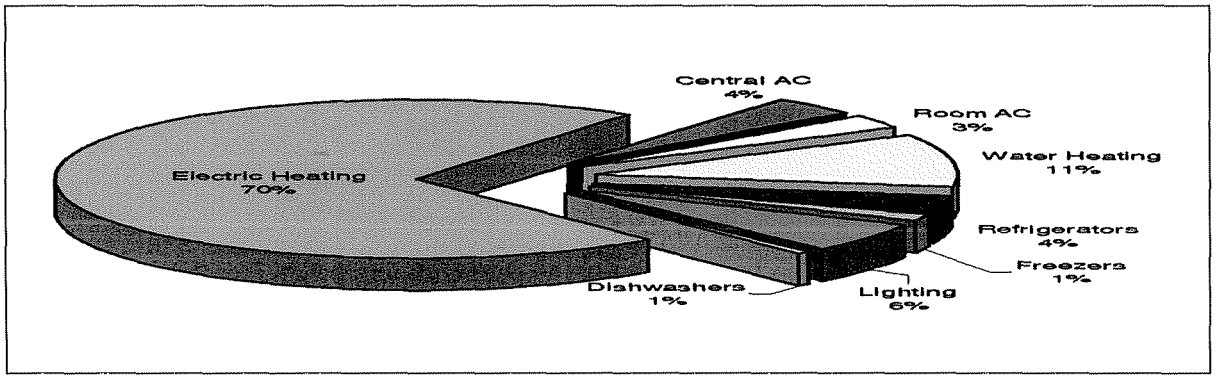

Figure 5-1
Residential Realistic Achievable Energy Efficiency Potential, Energy Savings by End Use, % of Total RAP for 2025

Winter Peak Demand

Table 5-3 shows the winter peak load reduction impacts (kW) associated with each end use. The greatest peak load impacts will come from improvements in space heating (57%), the second largest from lighting (19%) and third is water heating (17%). In total, the residential energy efficiency measures are estimated to have a peak load reduction impact of 47,104 kW by the year 2025, relative to the calculated, EISA-adjusted baseline forecast.

Table 5-3
Residential Realistic Achievable EE Potential – Winter Peak Load Impacts 2010-2025
By End-Use, (kW Reduction and Percent of Total Reduction for 2025)

	2010	2015	2020	2025	
	kW				%
Electric Heating	0	3,490	18,589	27,027	57.4%
Other Heat	0	0	0	0	0.0%
Central AC	0	0	0	0	0.0%
Room AC	0	0	0	0	0.0%
Water Heating	0	549	3,301	7,986	17.0%
Refrigerators	0	366	1,105	2,403	5.1%
Cooking	0	0	0	0	0.0%
Clothes Dryers	0	0	0	0	0.0%
Freezers	0	61	218	561	1.2%
Lighting (Additional Impacts)	0	18,631	6,386	9,006	19.1%
Clothes Washers	0	0	0	0	0.0%
Dishwashers	0	15	52	122	0.3%
Color TV (Standard/LCD)	0	0	0	0	0.0%
Personal Computers	0	0	0	0	0.0%
Furnace Fans	0	0	0	0	0.0%
Other Uses	0	0	0	0	0.0%
Total RAP Potential	**0**	**23,112**	**29,651**	**47,104**	**100.0%**

Figure 5-2 illustrates the contribution of various end uses to the total realistic achievable potential for winter peak load reductions in the year 2025.

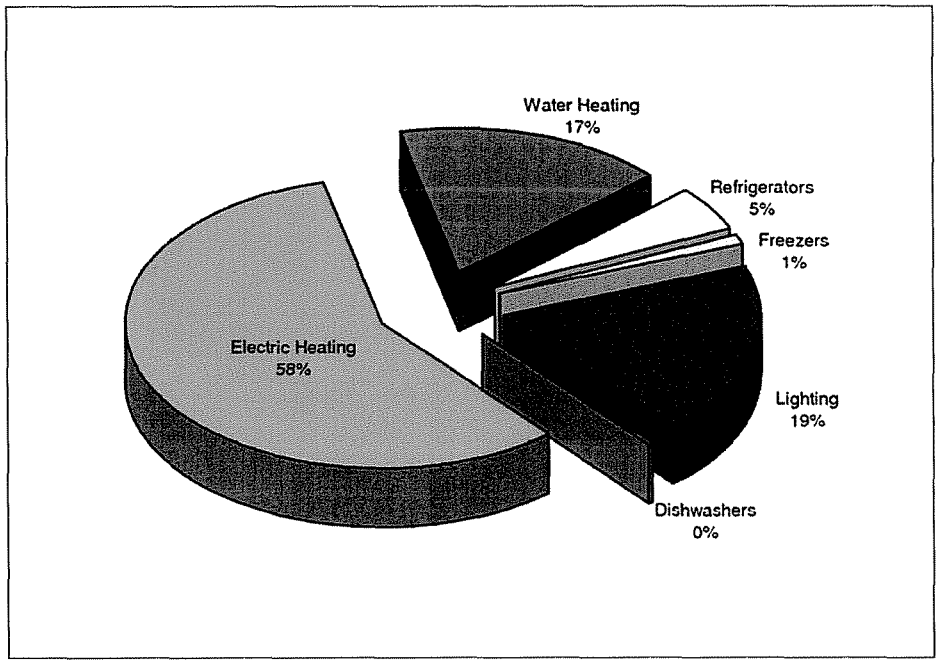

Figure 5-2
Residential Realistic Achievable Energy Efficiency Potential, Winter Peak Demand by End Use, % of Total RAP for 2025

Summer Peak Demand

The realistic achievable potential for summer peak load reduction (kW), by end use and year, is shown in Table 5-4. The greatest peak load impacts will come from improvements in space cooling (46%), the second largest from lighting (16%) and third is water heating (16%). In total, the residential energy efficiency measures are estimated to have a peak load reduction impact of 28,026 kW by the year 2025, relative to the calculated, EISA-adjusted baseline forecast.

Table 5-4
***Residential Realistic Achievable EE Potential* – Summer Peak Load Impacts 2010-2025**
By End-Use, (kW Reduction and Percent of Total Reduction for 2025)

	2010	2015	2020	2025	
	kW				%
Electric Heating	0	0	0	0	0.0%
Other Heat	0	0	0	0	0.0%
Central AC	0	511	3,820	12,859	45.9%
Room AC	0	212	699	1,718	6.1%
Water Heating	0	307	1,849	4,472	16.0%
Refrigerators	0	549	1,658	3,604	12.9%
Cooking	0	0	0	0	0.0%
Clothes Dryers	0	0	0	0	0.0%
Freezers	0	81	291	748	2.7%
Lighting (Additional Impacts)	0	9,315	3,193	4,503	16.1%
Clothes Washers	0	0	0	0	0.0%
Dishwashers	0	15	52	122	0.4%
Color TV (Standard/LCD)	0	0	0	0	0.0%
Personal Computers	0	0	0	0	0.0%
Furnace Fans	0	0	0	0	0.0%
Other Uses	0	0	0	0	0.0%
Total RAP Potential	**0**	**10,992**	**11,562**	**28,026**	**100.0%**

Figure 5-3 illustrates the contribution of various end uses to the total realistic achievable potential for summer peak load reductions in the year 2025.

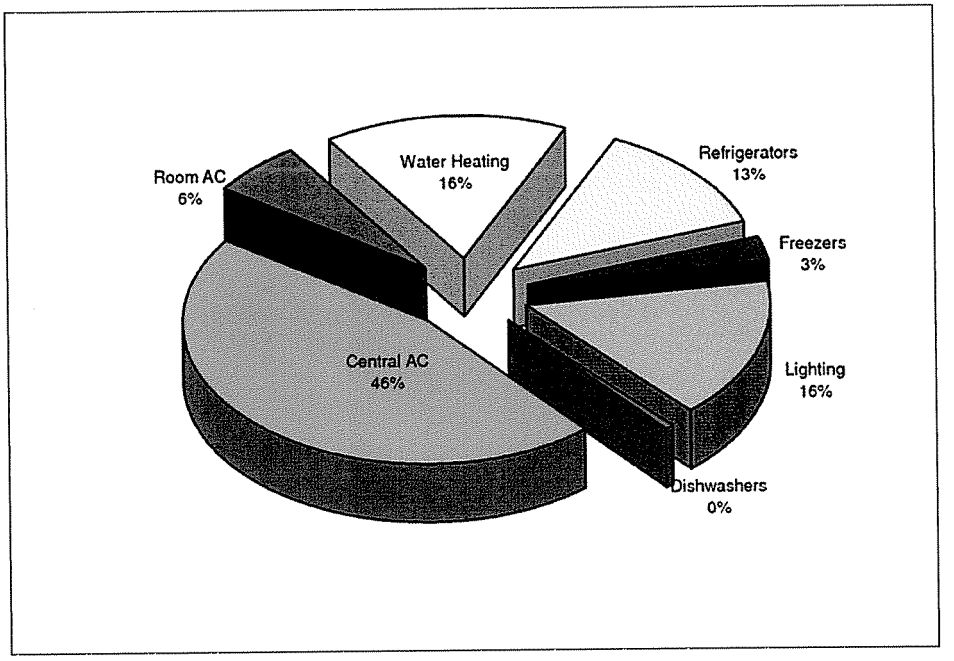

Figure 5-3
Residential Realistic Achievable Energy Efficiency Potential, Summer Peak Demand by End Use, % of Total RAP for 2025

6
DEMAND RESPONSE POTENTIAL

Realistic Achievable Potential

The estimated realistic achievable potential of demand response (DR) programs to reduce system winter peak is shown in Table 6-1. In the residential sector, DR programs have the potential to reduce winter system peak by 6% relative to the baseline for 2025. Price response programs have the highest potential for winter demand reductions accounting for 49% of the realistic achievable potential in 2025.

Table 6-1
Realistic Achievable Potential of Demand Response Programs, Winter Peak Demand Reductions by Program Type

Demand Reductions by Sector and Measure Type	2010	2015	2020	2025
Winter Peak Demand Reductions (MW)				
Residential				
Direct Control Load Management-Electric Heat	36	79	84	91
Direct Control Load Management-Water Heating	18	29	31	33
Price Response Programs (TOU, CPP, RTP)	31	68	109	118
Total Residential	**85**	**175**	**224**	**243**
Percent of Baseline Peak Demand	3%	5%	6%	6%

The estimated realistic achievable potential of DR programs to reduce system summer peak is shown in Table 6-2. In aggregate, DR programs have the potential to reduce system peak by 3% relative to the baseline for 2025. Again price response programs have the highest potential for summer demand reductions accounting for 54% of the realistic achievable summer demand reduction potential in 2025.

Table 6-2
Realistic Achievable Potential of Demand Response Programs, Summer Peak Demand Reductions by Program Type

Demand Reductions by Sector and Measure-Type	2010	2015	2020	2025
Summer Peak Demand Reductions (MW)				
Residential				
Direct Control Load Management-Central AC	9	20	22	24
Direct Control Load Management-Water Heating	10	16	17	19
Price Response Programs (TOU, CPP, RTP)	13	29	46	50
Total Residential	**33**	**65**	**86**	**93**
Percent of Baseline Peak Demand	1%	2%	3%	3%

Table 6-3 summarizes the winter peak load MW reduction potential associated with energy efficiency programs as well as those associated with DR programs. Note that there is the potential for double counting of peak reduction impacts if both energy efficiency and demand response programs are implemented.

Table 6-3
Summary of Peak Load Reduction Impacts from Energy Efficiency and Demand Response Programs, Winter Impacts by Year

	2010	2015	2020	2025
Realistic Achievable Potential from Energy Efficiency (MW)	0	23	30	47
Realistic Achievable Potential from Demand Response Programs (MW)	85	175	224	243
Total EKPC Winter Peak Load Reduction, from EE and DR Programs (MW)	**85**	**198**	**254**	**290**

Table 6-4 summarizes the summer peak load MW reduction potential associated with energy efficiency programs as well as those associated with DR programs. Note that there is the potential for double counting of peak reduction impacts if both energy efficiency and demand response programs are implemented. In both cases the peak load reductions for the summer are less than potential reductions in winter peak demand due to the fact that EKPC is a winter-peaking utility.

Table 6-4
Summary of Peak Load Reduction Impacts from Energy Efficiency and Demand Response Programs, Summer Impacts by Year

	2010	2015	2020	2025
Realistic Achievable Potential from Energy Efficiency (MW)	0	11	12	28
Realistic Achievable Potential from Demand Response Programs (MW)	33	65	86	93
Total EKPC Summer Peak Load Reduction, from EE and DR Programs (MW)	**33**	**76**	**98**	**121**

7
CONCLUSION

This report documents the results of a study to assess the achievable potential for electric energy savings and peak demand reductions for East Kentucky Power Cooperative (EKPC) for the years 2010 through 2025. The approach involved applying the methodology and technology data developed for the EPRI National Study on the same subject, adapted to the specific characteristics of EKPC's service territory.

The efficient technologies and measures considered are commercially available today. The estimation of economic potential assumes that consumers will adopt the most energy-efficient technology that has a benefit/cost ratio greater than one, using the Total Resource Cost Test. Estimates of economic potential are adjusted to account for various market barriers and program implementation factors to the energy efficiency potential that can realistically be achieved.

The results indicate that the realistic achievable energy efficiency potential for all market sectors is 747 GWh for the year 2025, or 8.9% of the EPRI-calculated baseline forecast of 8,404 GWh for 2025. These savings are in addition to the significant reductions in consumption that are expected to result from the improvements in lighting that are required by the Energy Independence and Security Act of 2007 (EISA). The savings from EISA are expected to reduce the residential energy forecast by 580 GWh by the year 2025. Thus, the impact of EISA alone is projected to be nearly as large as the realistic achievable potential of all the other energy efficiency measures combined. The winter demand-related savings associated with energy efficiency programs are 47 MW by the year 2025, which represents roughly 1.2% of the projected system winter peak load for that year. The summer demand-related savings associated with energy efficiency programs are 28 MW by the year 2025, which represents roughly 0.9% of the projected system summer peak load for that year. Demand response programs could reduce winter peak demand by roughly 243 MW and summer peak demand by 93 MW by 2025, although there is some potential for double counting between the peak reductions that could be achieved from energy efficiency programs and the reductions that could be achieved through DR programs.

The results are based on commercially available technologies and costs using an equipment stock turnover model. The results are detailed and granular, by residential end-use and technology. This overall approach makes the results more transparent than other studies which employ a macro "top-down" approach which are highly sensitive to variations in a few key assumptions.

Although the potential savings based on customer economics alone are not insignificant, the results here do not indicate whether specific programs would be cost-effective from EKPC's point of view. Thus, these results should be considered as a useful starting point for EKPC's planning as they assess a range of potential options for meeting future energy requirements as cost-effectively as possible. The results should also be useful to EKPC's energy efficiency program managers in designing EE programs and setting targets for energy and demand savings, as well as reductions in environmental externalities.

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EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00149
SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 19
RESPONSIBLE PERSON: **Julia J. Tucker**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 19. Refer to your response to Intervenors' Initial Request 47. Explain why EKPC did not perform any sensitivity analyses as part of its 2012 IRP.

Response 19. EKPC's modeling methodology is described in Section 8.4 "Supply Side Optimization and Modeling" on page 158 of the IRP.

> "The RTSim model uses a Monte Carlo simulation to capture the statistical variations of unit forced outages and deratings, load uncertainty, market price uncertainty, and fuel price uncertainty. Monte Carlo simulation requires repeated simulations (iterations) of the time period analyzed to simulate system operation under different outcomes of unit forced outages and deratings, load uncertainty, market price uncertainty, and fuel price uncertainty. The production cost model is simulating the actual operation of the power system in supplying the projected customer loads using a statistical range of inputs."

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REQUEST 20
RESPONSIBLE PERSON: **Julia J. Tucker**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 20. Refer to pages 63 through 65 of the IRP.

a. Explain why no data is presented for after the year 2015 for Cooper Unit 1 or any of the Dale units.

b. If the explanation includes that EKPC assumed such units would be retired, mothballed, deactivated, or otherwise replaced after 2015, explain why such assumption was made and how that assumption was factored into the IRP.

Response 20a-b. Please see the response to Request 4.iii.1.

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REQUEST 21
RESPONSIBLE PERSON: **Julia J. Tucker**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 21. Refer to pages 63 through 66 of the IRP. Explain how the fuel price projections for the coal-fired generating units listed therein were determined, and identify and produce any documents upon which those prices were based.

Response 21. ACES Power Marketing provides fuel cost projections to EKPC.

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REQUEST 22

RESPONSIBLE PERSON: **Julia J. Tucker**

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

Request 22. Refer to pages 66 through 72 of the IRP. Explain how the fuel price projections for the natural gas units listed therein were determined, and identify and produce any documents upon which those prices were based.

Response 22. ACES Power Marketing provides fuel cost projections to EKPC.

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REQUEST 23
RESPONSIBLE PERSON: **Jamie Bryan Hall and Julia J. Tucker**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 23. Refer to your response to Intervenors' Initial Request 50.

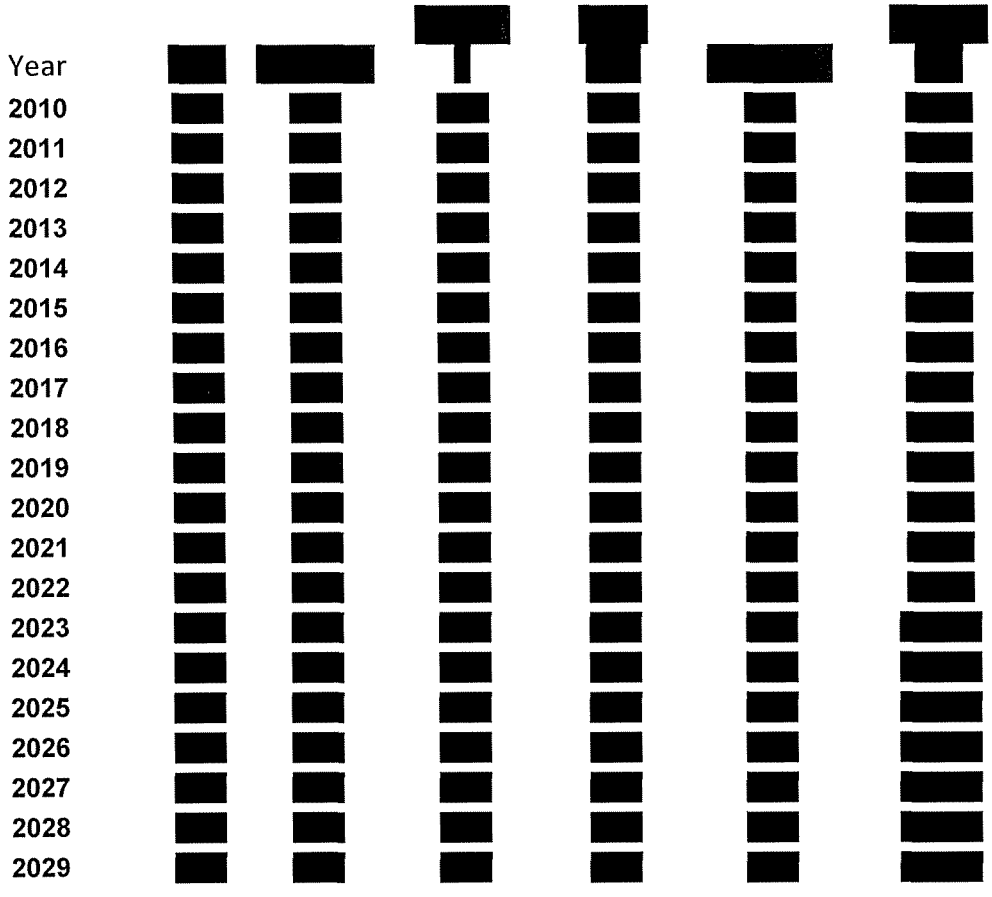
Request 23a. Identify the "assumptions about fuel prices" that were embedded in the retail rate to the consumer as part of the 2010 and 2011 Load Forecasts. Include in your response the specific prices of natural gas and coal that were assumed.

Response 23a. Please see the chart on page 2 of this response.

Request 23b. Explain how the load forecast would change if it had used the fuel cost data used in the 2012 IRP, rather than the data used in the 2010 and 2011 Load Forecasts.

Response 23b. The fuel prices used in the 2012 IRP are lower than those from the 2010 load forecast. The lower fuel costs would result in lower retail rates which tend to drive more usage resulting in a higher load forecast.

REDACTED



Prices are in $/mmbtu

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REQUEST 24
RESPONSIBLE PERSON: **David Crews**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 24. Refer to your response to Staff Initial Request 1b.

Request 24a. Explain why "many EKPC Existing DSM Programs are not currently performing at that theoretical maturity level."

Response 24a. Due to cost control efforts at EKPC, EKPC believes participant incentive levels for some programs are too low to drive participation levels to a mature level as compared to similar programs at other utilities.

Request 24b. Produce any analyses or evaluations of the performance of EKPC's existing DSM programs.

Response 24b. No program by program formal analysis has been completed.

Request 24c. Produce any analyses or evaluations of ways to improve the performance of such programs.

Response 24c. The DSM Steering Committee, as noted in the IRP, has identified incentive levels as a factor to improve participation levels.

Request 24d. Identify and explain any steps that EKPC is taking to improve the performance of any of its existing DSM programs.

Response 24d. EKPC and its Owner-Members plan to revise incentive levels for several programs offered in 2013. Also, a new localized marketing strategy for 2013 is being developed to promote the new DSM incentives.

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MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 25
RESPONSIBLE PERSON: **David Crews**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 25. State whether EKPC has made any calculations of the potential impact that bidding of efficiency resources into the PJM base residual auctions or supplemental auctions may have on either the market clearing price for capacity and/or the magnitude of bill savings that its customers would realize from lowering market clearing prices.

a. If so, please provide EKPC's estimates of the potential impact on both market clearing prices and customer bills.

Response 25. In its 2012 IRP, EKPC did not assume integration into the PJM Interconnection, LLC, as this integration has not been approved by the Commission.

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MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 26

RESPONSIBLE PERSON: **David Crews**

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

Request 26. State whether you factored the ability to bid energy efficiency resources into PJM base residual or supplemental auctions into your evaluation of the level of DSM that EKPC plans to pursue.

a. If so, explain how that ability to bid was factored in.

b. If not, explain why not.

Response 26. Please see the response to Request 25.

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REQUEST 27
RESPONSIBLE PERSON: **David Crews**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 27. Explain in detail all assumptions, purpose, and reasoning behind any plans to bid or not bid energy efficiency resources into future PJM base residual and supplemental auctions.

Response 27. Please see the response to Request 25.

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MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 28
RESPONSIBLE PERSON: **David Crews**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 28. Produce any documents you created or consulted regarding EKPC's participation in future PJM base residual auctions and supplemental auctions, including any and all calculations, notes, or correspondence reflecting your assumptions, purpose, and reasoning behind a decision to bid or not bid energy efficiency into the PJM auctions.

Response 28. Please see the response to Request 25.

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MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 29
RESPONSIBLE PERSON: **David Crews**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 29. Describe all circumstances under which EKPC would not bid at least some energy efficiency resources into the PJM auctions.

Response 29. Please see the response to Request 25.

EAST KENTUCKY POWER COOPERATIVE, INC.
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SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 30
RESPONSIBLE PERSON: **David Crews**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 30. Does EKPC believe that any of the savings that its energy efficiency programs will achieve would not be eligible to be bid into future PJM auctions? If so, explain why.

Response 30. Please see the response to Request 25.

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SUPPLEMENTAL REQUEST FOR INFORMATION RESPONSE

MOVANTS' SUPPLEMENTAL REQUESTS FOR INFORMATION DATED 08/03/12

REQUEST 31
RESPONSIBLE PERSON: **David Crews**
COMPANY: **East Kentucky Power Cooperative, Inc.**

Request 31. Regarding previous Base Residual Auctions ("BRAs"):

a. Identify any previous BRA in which EKPC has participated;

b. Identify the amount of energy efficiency and peak demand savings bid into each auction;

c. Summarize the outcome of each auction with regard to EKPC's participation as described in letter b.

Response 31a-c. Please see the response to Request 25.