

RECEIVED

AUG 07 2009

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:**

**2009 INTEGRATED RESOURCE PLAN OF EAST  
KENTUCKY POWER COOPERATIVE, INC.**

**) CASE NO.  
) 2009-00106**

**RESPONSES TO COMMISSION STAFF'S SECOND DATA REQUEST  
TO EAST KENTUCKY POWER COOPERATIVE, INC.  
DATED JULY 24, 2009**

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

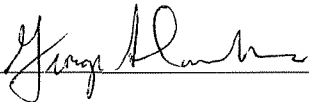
In the Matter of:

2009 INTEGRATED RESOURCE PLAN OF EAST ) CASE NO.  
KENTUCKY POWER COOPERATIVE, INC. ) 2009-00106

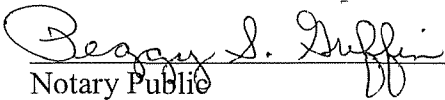
CERTIFICATE

STATE OF KENTUCKY )  
 )  
COUNTY OF CLARK )

George S. Carruba, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff Second Data Request in the above-referenced case dated July 24, 2009, 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 4<sup>th</sup> day of August, 2009.

  
Notary Public

My Commission expires:

December 8, 2009

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

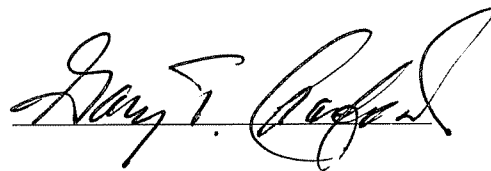
In the Matter of:

2009 INTEGRATED RESOURCE PLAN OF EAST ) CASE NO.  
KENTUCKY POWER COOPERATIVE, INC. ) 2009-00106

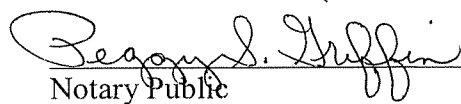
CERTIFICATE

STATE OF KENTUCKY )  
 )  
COUNTY OF CLARK )

Gary T. Crawford, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff Second Data Request in the above-referenced case dated July 24, 2009, 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 4<sup>th</sup> day of August, 2009.

  
Notary Public

My Commission expires:

December 8, 2009

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

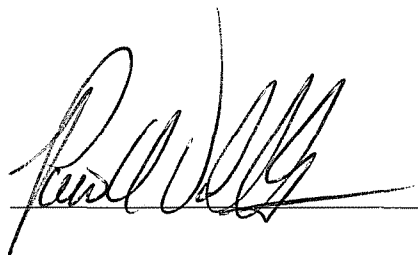
In the Matter of:

2009 INTEGRATED RESOURCE PLAN OF EAST ) CASE NO.  
KENTUCKY POWER COOPERATIVE, INC. ) 2009-00106

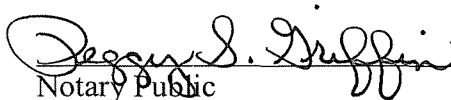
CERTIFICATE

STATE OF KENTUCKY )  
 )  
COUNTY OF CLARK )

Paul A. Dolloff, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff Second Data Request in the above-referenced case dated July 24, 2009, 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 3<sup>rd</sup> day of August, 2009.

  
Notary Public

My Commission expires:

December 8, 2009

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

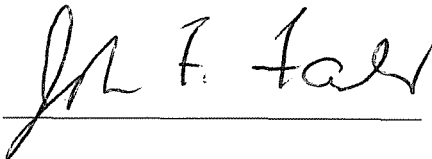
In the Matter of:

2009 INTEGRATED RESOURCE PLAN OF EAST ) CASE NO.  
KENTUCKY POWER COOPERATIVE, INC. ) 2009-00106

CERTIFICATE

STATE OF RHODE ISLAND )  
)  
COUNTY OF PROVIDENCE )

John F. Farley, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff Second Data Request in the above-referenced case dated July 24, 2009, 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 5 day of August, 2009.

  
Notary Public

My Commission expires:

08/08/2013

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

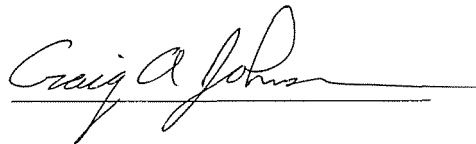
In the Matter of:

2009 INTEGRATED RESOURCE PLAN OF EAST ) CASE NO.  
KENTUCKY POWER COOPERATIVE, INC. ) 2009-00106

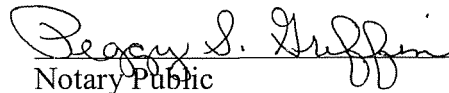
CERTIFICATE

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 the Public Service Commission Staff Second Data Request in the above-referenced case dated July 24, 2009, 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 4<sup>th</sup> day of August, 2009.

  
Notary Public

My Commission expires: December 8, 2009

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2009 INTEGRATED RESOURCE PLAN OF EAST ) CASE NO.  
KENTUCKY POWER COOPERATIVE, INC. ) 2009-00106

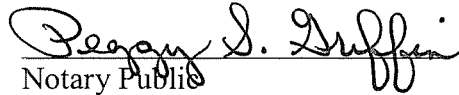
CERTIFICATE

STATE OF KENTUCKY )  
 )  
COUNTY OF CLARK )

James C. Lamb, Jr., being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff Second Data Request in the above-referenced case dated July 24, 2009, 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 4<sup>th</sup> day of August, 2009.

  
Notary Public

My Commission expires:

December 8, 2009



COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2009 INTEGRATED RESOURCE PLAN OF EAST ) CASE NO.  
KENTUCKY POWER COOPERATIVE, INC. ) 2009-00106

CERTIFICATE

STATE OF KENTUCKY )  
 )  
COUNTY OF CLARK )

Isaac S. Scott, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff Second Data Request in the above-referenced case dated July 24, 2009, 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.

Isaac S. Scott

Subscribed and sworn before me on this 4<sup>th</sup> day of August, 2009.

Gregory S. Duffin  
Notary Public

My Commission expires:

December 8, 2009

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

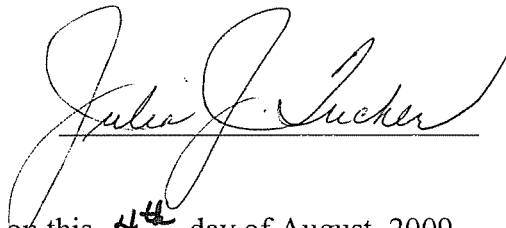
In the Matter of:

2009 INTEGRATED RESOURCE PLAN OF EAST ) CASE NO.  
KENTUCKY POWER COOPERATIVE, INC. ) 2009-00106

CERTIFICATE

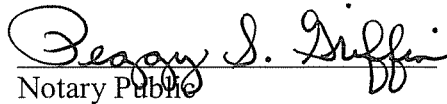
STATE OF KENTUCKY )  
 )  
COUNTY OF CLARK )

Julia J. Tucker, being duly sworn, states that she has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff Second Data Request in the above-referenced case dated July 24, 2009, 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 4<sup>th</sup> day of August, 2009.



Deagan S. Griffin  
Notary Public

My Commission expires:

December 8, 2009

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2009 INTEGRATED RESOURCE PLAN OF EAST ) CASE NO.  
KENTUCKY POWER COOPERATIVE, INC. ) 2009-00106

CERTIFICATE

STATE OF KENTUCKY )  
 )  
COUNTY OF CLARK )

Ann F. Wood, being duly sworn, states that she has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff Second Data Request in the above-referenced case dated July 24, 2009, 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.

*Ann F. Wood*

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Subscribed and sworn before me on this 4<sup>th</sup> day of August, 2009.

*Peggy S. Griffin*  
Notary Public

My Commission expires:

December 8, 2009



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 1**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 1.** Refer to page 5-1 of EKPC's Integrated Resource Plan ("IRP") which indicates that EKPC's peak load in 2008 was 3,051 MW.

**Request 1a.** Confirm whether the 2008 peak load was a summer or winter peak.

**Response 1a.** EKPC's 2008 annual peak in of 3,051 MW occurred in January 2008.

**Request 1b.** Provide EKPC's peak load for the 2008-2009 winter.

**Response 1b.** EKPC's 2008-2009 winter peak was 3,152 MW and occurred in January 2009.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09  
REQUEST 2**

**RESPONSIBLE PERSON: Gary T. Crawford**

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

**Request 2.** Refer to page 5-10 of the IRP, specifically, the reference to Case No. 2008-00472.<sup>1</sup> Provide the timetable, showing the specific steps involved, for completing the Cooper environmental project approved in that case.

**Response 2.** The timetable for completing the Cooper environmental project approved in Case No. 2008-00472 is provided on pages 2 through 8 of this response.

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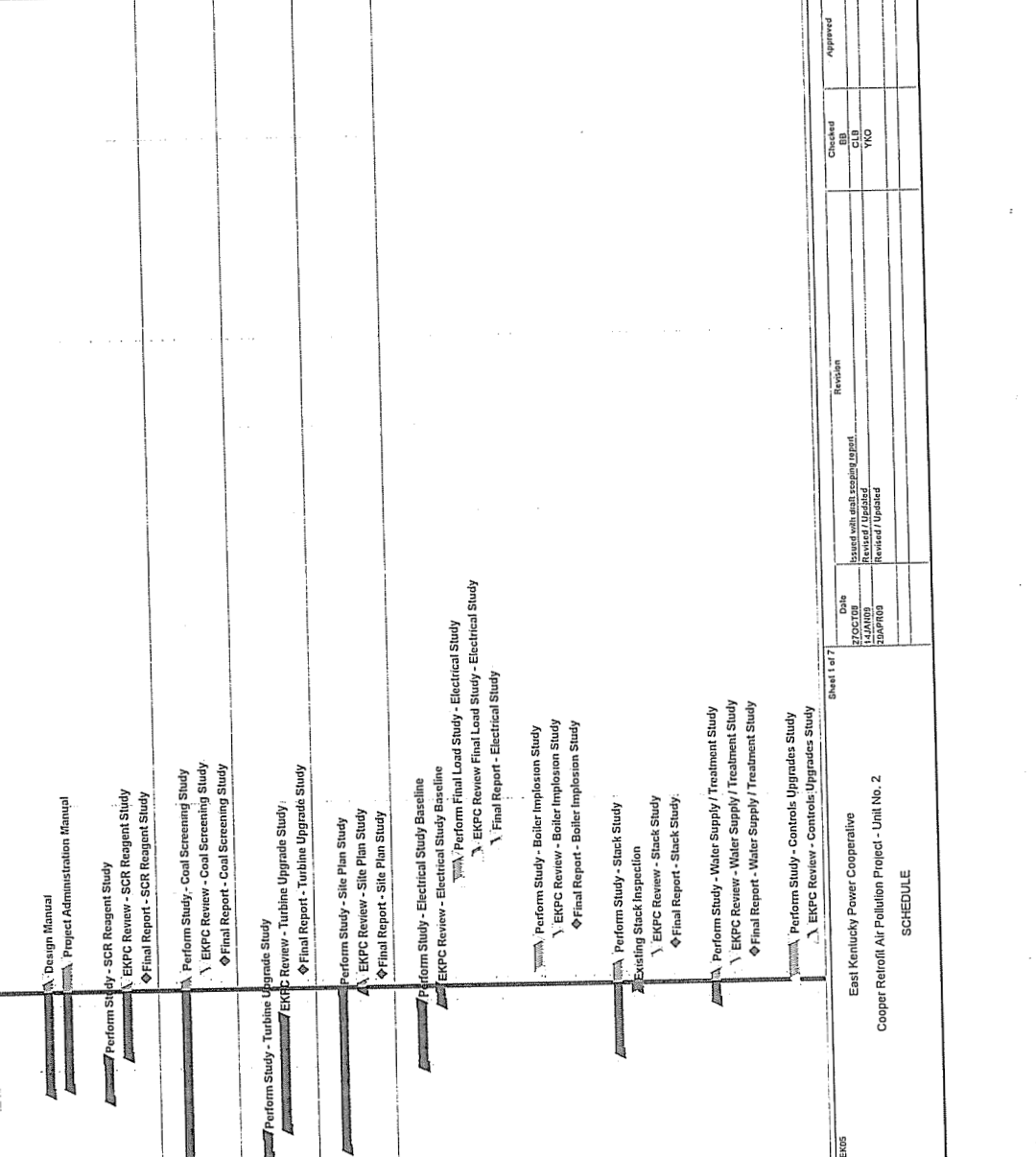
<sup>1</sup> Case No. 2008-00472, The Application of East Kentucky Power Cooperative, Inc. for a Certificate of Public Convenience and Necessity for the Construction of an Air Quality Control System at Cooper Power Station (Ky. PSC May 1, 2009).

2008 2009 2010 2011  
A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D

| Activity ID | Activity Description                         | Orig Dur | Rem Dur | Early Start | Early Finish |
|-------------|--|----------|---------|-------------|--------------|
| MILESTONES  |  |          |         |             |              |
| MSB001      | Final Phase 1 Scope Document / Cost Estimate | 0        | 0       |             | 27OCT08A     |
| MSB002      | Contract C1310 - FGD System Issued           | 0        | 0       | 02FEB09A    |              |
| MSB002      | Contract C1330 - SCR Issued                  | 0        | 0       | 02FEB09A    |              |

◆ Final Phase 1 Scope Document / Cost Estimate  
◆ Contract C1310 - FGD System Issued  
◆ Contract C1330 - SCR Issued

| Activity ID                           | Activity Description                            | Orig Dur | Rem Dur | Early Start | Early Finish |
|---------------------------------------|---|----------|---------|-------------|--------------|
| <b>Studies</b>                        |   |          |         |             |              |
| <b>Preliminary Engineering</b>        |   |          |         |             |              |
| A00010                                | Design Manual                                   | 120      | 15      | 01DEC08A    | 09MAY09      |
| A00002                                | Project Administration Manual                   | 60       | 30      | 08DEC08A    | 29MAY09      |
| <b>SCR Reagent Study</b>              |   |          |         |             |              |
| A00001                                | Perform Study - SCR Reagent Study               | 40       | 0       | 02NOV08A    | 16JAN09A     |
| A00011                                | EKPC Review - SCR Reagent Study                 | 10       | 10      | 19JAN09A    | 01MAY09      |
| A00021                                | Final Report - SCR Reagent Study                | 0        | 0       |             | 08MAY09      |
| <b>Coal Screening Study</b>           |   |          |         |             |              |
| A00031                                | Perform Study - Coal Screening Study            | 75       | 15      | 25AUG08A    | 08MAY09      |
| A00041                                | EKPC Review - Coal Screening Study              | 10       | 10      | 11MAY09     | 22MAY09      |
| A00051                                | Final Report - Coal Screening Study             | 0        | 0       |             | 29MAY09      |
| <b>Turbine Upgrade Study</b>          |   |          |         |             |              |
| A00061                                | Perform Study - Turbine Upgrade Study           | 20       | 0       | 01SEP08A    | 01OCT08A     |
| A00071                                | EKPC Review - Turbine Upgrade Study             | 30       | 0       | 08OCT08A    | 11MAR09A     |
| A00081                                | Final Report - Turbine Upgrade Study            | 0        | 0       |             | 15MAY09*     |
| <b>Site Plan Study</b>                |   |          |         |             |              |
| A00091                                | Perform Study - Site Plan Study                 | 80       | 0       | 06SEP08A    | 14APR09A     |
| A00101                                | EKPC Review - Site Plan Study                   | 10       | 10      | 15APR09A    | 01MAY09      |
| A00111                                | Final Report - Site Plan Study                  | 0        | 0       |             | 08MAY09      |
| <b>Electrical Study</b>               |   |          |         |             |              |
| A00121                                | Perform Study - Electrical Study Baseline       | 70       | 0       | 28DEC08A    | 26MAR09A     |
| A00131                                | EKPC Review - Electrical Study Baseline         | 10       | 0       | 26MAR09A    | 17APR09A     |
| A00401                                | Perform Final Load Study - Electrical Study     | 25       | 25      | 08SEP09     | 13OCT09      |
| A00411                                | EKPC Review Final Load Study - Electrical Study | 10       | 10      | 14OCT09     | 27OCT09      |
| A00141                                | Final Report - Electrical Study                 | 10       | 10      | 28OCT09     | 10NOV09      |
| <b>Boiler Implosion Study</b>         |   |          |         |             |              |
| A00151                                | Perform Study - Boiler Implosion Study          | 33       | 33      | 06MAY09*    | 19JUN09      |
| A00161                                | EKPC Review - Boiler Implosion Study            | 10       | 10      | 22JUN09     | 03JUL09      |
| A00171                                | Final Report - Boiler Implosion Study           | 0        | 0       |             | 10JUL09      |
| <b>Stack Study</b>                    |   |          |         |             |              |
| A00181                                | Perform Study - Stack Study                     | 25       | 25      | 12JAN09A    | 22MAY09      |
| A00182                                | Existing Stack Inspection                       | 1        | 0       | 12APR09A    | 12APR09A     |
| A00191                                | EKPC Review - Stack Study                       | 10       | 10      | 25MAY09     | 05JUN09      |
| A00201                                | Final Report - Stack Study                      | 0        | 0       |             | 12JUN09      |
| <b>Water Supply / Treatment Study</b> |   |          |         |             |              |
| A00211                                | Perform Study - Water Supply / Treatment Study  | 30       | 15      | 23MAR08A    | 08MAY09      |
| A00221                                | EKPC Review - Water Supply / Treatment Study    | 10       | 10      | 11MAY09     | 22MAY09      |
| A00231                                | Final Report - Water Supply / Treatment Study   | 0        | 0       |             | 29MAY09      |
| <b>Controls Upgrades Study</b>        |   |          |         |             |              |
| A00241                                | Perform Study - Controls Upgrades Study         | 40       | 40      | 20APR09     | 12JUN09      |
| A00251                                | EKPC Review - Controls Upgrades Study           | 10       | 10      | 15JUN09     | 26JUN09      |



East Kentucky Power Cooperative  
Cooper Retrofit Air Pollution Project - Unit No. 2  
SCHEDULE

Sheet 1 of 7

Date: 27OCT09, 14JAN09, 20APR09  
Revised/Updated: 20APR09

Checked by: BB, CLB, YKO  
Approved: [Signature]

11AUG08  
30APR09  
30APR09 09:23

Start Date  
Finish Date  
Data Date  
Run Date

Progress Bar  
Critical Activity

© Primavera Systems, Inc.





| Activity ID  | Activity Description                               | Orig Dur | Rem Dur | Early Start | Early Finish |
|--|--|----------|---------|-------------|--------------|
| <b>Contract 1230 - Air Preheater</b>   |  |          |         |             |              |
| BMP1230-05   | Specification Preparation - Air Preheater          | 30       | 30      | 19MAY09     | 29JUN09      |
| BMP1230-10   | Proposal Period - Air Preheater                    | 30       | 30      | 30JUN09     | 10AUG09      |
| BMP1230-15   | Proposal Evaluation - Air Preheater                | 25       | 25      | 11AUG09     | 14SEP09      |
| BMP1230-20   | Award Contract - Air Preheater                     | 0        | 0       |             | 13OCT09      |
| BMP1230-25   | Review Vendor Drvgs - Air Preheater                | 90       | 90      | 11NOV09     | 18MAR10      |
| BMP1230-35   | Manuf & Deliver Equipment - Air Preheater          | 260      | 260     | 12MAY10     | 10MAY11      |
| BMP1230-95   | Contract Closeout - Air Preheater                  | 10       | 10      | 09JUL12     | 20JUL12      |
| <b>Contract 1310 - CF6 Dry FGD System</b>  |  |          |         |             |              |
| BMP1310-05   | Specification Preparation - FGD                    | 122      | 0       | 28OCT08A    | 20FEB09A     |
| BMP1310-10   | Proposal Period - FGD                              | 41       | 0       | 23FEB09A    | 20APR09A     |
| BMP1310-15   | Proposal Evaluation - FGD                          | 46       | 46      | 20APR09     | 22JUN09      |
| BMP1310-20   | Award Contract - FGD                               | 0        | 0       |             | 14JUL09      |
| BMP1310-25   | Design Engineering - FGD                           | 305      | 305     | 12AUG09     | 14OCT10      |
| BMP1310-30   | Procurement and Fabrication - FGD                  | 300      | 300     | 15JAN10     | 10MAR11      |
| BMP1310-31   | Del Complete-FGD - Str Steel, Grating, Stairs      | 0        | 0       |             | 13OCT10*     |
| BMP1310-32   | Del Complete-FGD - Absorbent Vessl & Inlet Duct    | 0        | 0       |             | 05NOV10*     |
| BMP1310-33   | Del Complete-FGD - Fabric Filter                   | 0        | 0       |             | 05NOV10*     |
| BMP1310-34   | Del Complete-FGD - Lime System Silos               | 0        | 0       |             | 05NOV10*     |
| BMP1310-38   | Del Complete-FGD - Piping, Specials, & Instrum     | 0        | 0       |             | 18MAR11*     |
| BMP1310-39   | Del Complete-FGD - Roofing/Siding Material         | 0        | 0       |             | 01JUL11*     |
| BMP1310-40   | Del Complete-FGD - All Other Material & Equip      | 0        | 0       |             | 05AUG11*     |
| BMP1310-41   | Del Complete-FGD - Fabric Filter Bag Material      | 0        | 0       |             | 28OCT11*     |
| BMP1310-45   | Del Complete-FGD - Lime System Equipment           | 0        | 0       |             | 24DEC11*     |
| BMP1310-36   | Del Complete-FGD - Waste Product Sys Equipment     | 0        | 0       |             | 24DEC11*     |
| BMP1310-37   | Del Complete-FGD - Process Water Equipment         | 0        | 0       |             | 24DEC11*     |
| BMC1310-95   | Contract Closeout - FGD                            | 10       | 10      | 06SEP12     | 19SEP12      |
| <b>Contract 1330 - Selective Catalytic Reduction</b>   |  |          |         |             |              |
| BMP1330-05   | Specification Preparation - SCR                    | 100      | 0       | 27NOV08A    | 20FEB09A     |
| BMP1330-10   | Proposal Period - SCR                              | 41       | 0       | 23FEB09A    | 20APR09A     |
| BMP1330-15   | Proposal Evaluation - SCR                          | 46       | 46      | 20APR09     | 22JUN09      |
| BMP1330-20   | Award Contract - SCR                               | 0        | 0       |             | 14JUL09      |
| BMP1330-25   | Design Engineering - SCR                           | 175      | 175     | 12AUG09     | 15APR10      |
| BMP1330-30   | Procurement and Fabrication - SCR                  | 220      | 220     | 11NOV09     | 16SEP10      |
| BMP1330-31   | Del Complete-SCR - Str Steel, Grating, Stairs      | 0        | 0       |             | 13OCT10*     |
| BMP1330-33   | Del Complete-SCR - Ammonia Storage & Supply Eq     | 0        | 0       |             | 22NOV10*     |
| BMP1330-34   | Del Complete-SCR - Ammonia Vapor & Inlet Equip     | 0        | 0       |             | 22NOV10*     |
| BMP1330-35   | Del Complete-SCR - SCR Reactor & Inlet Ductwork    | 0        | 0       |             | 03DEC10*     |
| BMP1330-36   | Del Complete-SCR - Piping, Specials, & Instrum     | 0        | 0       |             | 11MAR11*     |
| BMP1330-37   | Del Complete-SCR - All Other Material & Equip      | 0        | 0       |             | 03JUN11*     |
| BMP1330-95   | Contract Closeout - SCR                            | 10       | 10      | 06SEP12     | 20OCT11*     |
| <b>Contract 2640 - Waste Product Handling</b>  |  |          |         |             |              |
| BMP2640-05   | Specification Prep - Waste Product Handling        | 20       | 20      | 11MAY09     | 06JUN09      |
| BMP2640-10   | Proposal Period - Waste Product Handling           | 20       | 20      | 08JUN09     | 03JUL09      |
| BMP2640-15   | Proposal Evaluation - Waste Product Handling       | 20       | 20      | 06JUL09     | 31JUL09      |
| BMP2640-20   | Award Contract - Waste Product Handling            | 0        | 0       |             | 08SEP09      |
| BMP2640-25   | Review Vendor Drvgs - Waste Product Handling       | 30       | 30      | 14OCT09     | 24NOV09      |
| BMP2640-35   | Manuf & Deliver Equipment - Waste Product Handling | 220      | 220     | 25NOV09     | 30SEP10      |
| BMP2640-95   | Contract Closeout - Waste Product Handling         | 10       | 10      | 09JUL12     | 20JUL12      |
| <b>Contract 4520 - Structural Steel</b>  |  |          |         |             |              |
| BMP4520-05   | Specification Preparation - Structural Steel       | 40       | 40      | 27JAN10     | 23MAR10      |
| BMP4520-10   | Proposal Period - Structural Steel                 | 20       | 20      | 20MAR10     | 20APR10      |
| <p>                     11AUG08<br/>                     30APR10<br/>                     20APR09<br/>                     30APR09 08:25<br/>                     Progress Bar<br/>                     Critical Activity                 </p> |  |          |         |             |              |
| <p>                     Start Date<br/>                     Finish Date<br/>                     Date Date<br/>                     Run Date                 </p>  |  |          |         |             |              |

2008 2009 2010 2011 2012  
 A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D A

Specification Preparation - Air Preheater  
 Proposal Period - Air Preheater  
 Proposal Evaluation - Air Preheater  
 Award Contract - Air Preheater  
 Review Vendor Drvgs - Air Preheater  
 Manuf & Deliver Equipment - Air Preheater  
 Contract Closeout - Air Preheater

Specification Preparation - FGD  
 Proposal Period - FGD  
 Proposal Evaluation - FGD  
 Award Contract - FGD  
 Design Engineering - FGD  
 Procurement and Fabrication - FGD  
 Del Complete-FGD - Str Steel, Grating, Stairs  
 Del Complete-FGD - Absorbent Vessl & Inlet Duct  
 Del Complete-FGD - Fabric Filter  
 Del Complete-FGD - Lime System Silos  
 Del Complete-FGD - Piping, Specials, & Instrum  
 Del Complete-FGD - Roofing/Siding Material  
 Del Complete-FGD - All Other Material & Equip  
 Del Complete-FGD - Fabric Filter/Bag Material  
 Del Complete-FGD - Lime System Equipment  
 Del Complete-FGD - Waste Product Sys Equipment  
 Del Complete-FGD - Process Water Equipment  
 Contract Closeout - FGD

Specification Preparation - SCR  
 Proposal Period - SCR  
 Proposal Evaluation - SCR  
 Award Contract - SCR  
 Design Engineering - SCR  
 Procurement and Fabrication - SCR  
 Del Complete-SCR - Str Steel, Grating, Stairs  
 Del Complete-SCR - Ammonia Storage & Supply Eq  
 Del Complete-SCR - Ammonia Vapor & Inlet Equip  
 Del Complete-SCR - SCR Reactor & Inlet Ductwork  
 Del Complete-SCR - Piping, Specials, & Instrum  
 Del Complete-SCR - All Other Material & Equip  
 Contract Closeout - SCR

Specification Prep - Waste Product Handling  
 Proposal Period - Waste Product Handling  
 Proposal Evaluation - Waste Product Handling  
 Award Contract - Waste Product Handling  
 Review Vendor Drvgs - Waste Product Handling  
 Manuf & Deliver Equipment - Waste Product Handling  
 Contract Closeout - Waste Product Handling

Specification Preparation - Structural Steel  
 Proposal Period - Structural Steel

|      |         |                                    |         |     |          |
|------|---------|------------------------------------|---------|-----|----------|
| Date | 27OCT08 | Revised with draft response report | Checked | BB  | Approved |
| Date | 20APR09 | Final Review                       | Checked | CLB |          |
| Date | 20APR09 | Final Review / Updated             | Checked | YKO |          |



| Activity ID   | Activity Description                         | Orig Dur | Rem Dur | Early Start | Early Finish | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|--|----------|---------|-------------|--------------|------|------|------|------|------|
| BMP5320-25  | Review Vendor Drvgs - VFD's                  | 90       | 90      | 05JUN10     | 12OCT10      |      |      |      |      |      |
| BMP5320-35  | Manuf & Deliver Equipment - VFD's            | 260      | 260     | 11AUG10     | 10AUG11      |      |      |      |      |      |
| BMP5320-95  | Contract Closeout - VFD's                    | 10       | 10      | 05JUL12*    | 20JUL12      |      |      |      |      |      |
| <b>Contract 6110 - DCS Modifications</b>                  |  |          |         |             |              |      |      |      |      |      |
| BMP6110-05  | Specification Preparation - DCS Mods         | 50       | 50      | 09SEP09     | 17NOV09      |      |      |      |      |      |
| BMP6110-07  | Preliminary IO                               | 0        | 0       |             | 30OCT09*     |      |      |      |      |      |
| BMP6110-10  | Proposal Period - DCS Mods                   | 25       | 25      | 18NOV09     | 22DEC09      |      |      |      |      |      |
| BMP6110-15  | Proposal Evaluation - DCS Mods               | 20       | 20      | 23DEC09     | 21JAN10      |      |      |      |      |      |
| BMP6110-20  | Award Contract - DCS Mods                    | 0        | 0       |             | 09MAR10      |      |      |      |      |      |
| BMP6110-40  | Design/Programming/FAT - DCS Mods            | 220      | 220     | 10MAR10     | 11JAN11      |      |      |      |      |      |
| BMP6110-25  | Review Vendor Drvgs - DCS Mods               | 80       | 80      | 14APR10     | 03AUG10      |      |      |      |      |      |
| BMP6110-27  | Hard IO Freeze                               | 0        | 0       |             | 03MAY10*     |      |      |      |      |      |
| BMP6110-29  | Software Freeze                              | 0        | 0       |             | 01OCT10*     |      |      |      |      |      |
| BMP6110-45  | Ship DCS Cabinets To PCM Vendor              | 15       | 15      | 12JAN11     | 01FEB11      |      |      |      |      |      |
| BMP6110-35  | Deliver Equipment - DCS Mods                 | 60       | 60      | 12JAN11     | 05APR11      |      |      |      |      |      |
| BMP6110-95  | Contract Closeout - DCS Mods                 | 10       | 10      | 08MAY12     | 08JUN12      |      |      |      |      |      |
| <b>Contract 6310 - CEM System</b>                         |  |          |         |             |              |      |      |      |      |      |
| BMP6310-05  | Specification Preparation - CEMS             | 25       | 25      | 12FEB10     | 18MAR10      |      |      |      |      |      |
| BMP6310-10  | Proposal Period - CEMS                       | 20       | 20      | 19MAR10     | 15APR10      |      |      |      |      |      |
| BMP6310-15  | Proposal Evaluation - CEMS                   | 20       | 20      | 16APR10     | 13MAY10      |      |      |      |      |      |
| BMP6310-20  | Award Contract - CEMS                        | 0        | 0       |             | 08JUN10      |      |      |      |      |      |
| BMP6310-25  | Review Vendor Drvgs - CEMS                   | 20       | 20      | 14JUL10     | 10AUG10      |      |      |      |      |      |
| BMP6310-35  | Manuf & Deliver Equipment - CEMS             | 130      | 130     | 18MAY11     | 16NOV11      |      |      |      |      |      |
| BMP6310-95  | Contract Closeout - CEMS                     | 10       | 10      | 07MAY12     | 18MAY12      |      |      |      |      |      |
| <b>Contract 1350 - Boiler Modifications</b>               |  |          |         |             |              |      |      |      |      |      |
| BMP1350-05  | Specification Preparation - Boiler Mods      | 60       | 60      | 05MAY10     | 27JUL10      |      |      |      |      |      |
| BMP1350-10  | Proposal Period - Boiler Mods                | 20       | 20      | 28JUL10     | 24AUG10      |      |      |      |      |      |
| BMP1350-15  | Proposal Evaluation - Boiler Mods            | 20       | 20      | 25AUG10     | 21SEP10      |      |      |      |      |      |
| BMP1350-20  | Award Contract - Boiler Mods                 | 0        | 0       |             | 12OCT10*     |      |      |      |      |      |
| BMP1350-25  | Design Engineering - Boiler Mods             | 60       | 60      | 13OCT10     | 04JAN11      |      |      |      |      |      |
| BMP1350-35  | Manuf & Deliver Equipment - Boiler Mods      | 265      | 265     | 05JAN11     | 11JAN12      |      |      |      |      |      |
| BMP1350-95  | Contract Closeout - Boiler Mods              | 10       | 10      | 10MAY12     | 23MAY12      |      |      |      |      |      |
| <b>Contract 8110 - Site Preparation &amp; Foundations</b> |  |          |         |             |              |      |      |      |      |      |
| BMP8110-05  | Specification Preparation - Site Prep & Fdns | 110      | 110     | 24SEP09     | 26FEB10      |      |      |      |      |      |
| BMP8110-10  | Proposal Period - Site Prep & Fdns           | 33       | 33      | 01MAR10     | 14APR10      |      |      |      |      |      |
| BMP8110-15  | Proposal Evaluation - Site Prep & Fdns       | 22       | 22      | 15APR10     | 14MAY10      |      |      |      |      |      |
| BMP8110-20  | Award Contract - Site Prep & Fdns            | 0        | 0       |             | 08JUN10      |      |      |      |      |      |
| BMP8110-01  | Contractor Mobilize - Site Prep & Fdns       | 10       | 10      | 09JUN10     | 22JUN10      |      |      |      |      |      |
| BMP8110-40  | Vendor Prepare Drvgs - Site Prep & Fdns      | 40       | 40      | 09JUN10     | 03AUG10      |      |      |      |      |      |
| BMP8110-30  | Review Vendor Drvgs - Site Prep & Fdns       | 80       | 80      | 04AUG10     | 23NOV10      |      |      |      |      |      |
| BMP8110-95  | Contract Closeout - Site Prep & Fdns         | 10       | 10      | 20JUN11     | 01JUL11      |      |      |      |      |      |
| <b>Contract 8320 - Mechanical Construction</b>            |  |          |         |             |              |      |      |      |      |      |
| BMP8320-05  | Specification Preparation - Mechanical Const | 100      | 100     | 07DEC09     | 27APR10      |      |      |      |      |      |
| BMP8320-10  | Proposal Period - Mechanical Const           | 30       | 30      | 28APR10     | 08JUN10      |      |      |      |      |      |
| BMP8320-20  | Proposal Evaluation - Mechanical Const       | 20       | 20      | 09JUN10     | 06JUL10      |      |      |      |      |      |
| BMP8320-25  | Award Contract - Mechanical Const            | 0        | 0       |             | 10AUG10      |      |      |      |      |      |
| BMP8320-40  | Vendor Prepare Drvgs - Mechanical Const      | 40       | 40      | 11AUG10     | 05OCT10      |      |      |      |      |      |
| BMP8320-30  | Review Vendor Drvgs - Mechanical Const       | 80       | 80      | 05JAN11     | 26APR11      |      |      |      |      |      |
| BMP8320-95  | Contract Closeout - Mechanical Const         | 10       | 10      | 21JUN12     | 05JUL12      |      |      |      |      |      |
| <b>Contract 8410 - Electrical Construction</b>            |  |          |         |             |              |      |      |      |      |      |
| BMP8410-05  | Specification Preparation - Electrical Const | 50       | 50      | 07JUL10     | 14SEP10      |      |      |      |      |      |
| BMP8410-10  | Proposal Period - Electrical Const           | 30       | 30      | 15SEP10     | 26OCT10      |      |      |      |      |      |
| BMP8410-15  | Proposal Evaluation - Electrical Const       | 20       | 20      | 27OCT10     | 23NOV10      |      |      |      |      |      |
| BMP8410-20  | Award Contract - Electrical Const            | 0        | 0       |             | 01JUL11      |      |      |      |      |      |
| BMP8410-40  | Vendor Prepare Drvgs - Electrical Const      | 40       | 40      | 01JUL11     | 14SEP11      |      |      |      |      |      |
| BMP8410-30  | Review Vendor Drvgs - Electrical Const       | 80       | 80      | 15SEP11     | 26OCT11      |      |      |      |      |      |
| BMP8410-95  | Contract Closeout - Electrical Const         | 10       | 10      | 27OCT11     | 23NOV11      |      |      |      |      |      |

| Activity ID | Activity Description                    | Orig Dur | Rem Dur | Early Start | Early Finish | 2008 | 2009 | 2010 | 2011 | 2012 |
|-------------|---|----------|---------|-------------|--------------|------|------|------|------|------|
| BMP8410-15  | Proposal Evaluation - Electrical Const  | 20       | 20      | 27OCT10     | 23NOV10      |      |      |      |      |      |
| BMP8410-20  | Award Contract - Electrical Const       | 0        | 0       |             | 01JUL11      |      |      |      |      |      |
| BMP8410-40  | Vendor Prepare Drvgs - Electrical Const | 40       | 40      | 01JUL11     | 14SEP11      |      |      |      |      |      |
| BMP8410-30  | Review Vendor Drvgs - Electrical Const  | 80       | 80      | 15SEP11     | 26OCT11      |      |      |      |      |      |
| BMP8410-95  | Contract Closeout - Electrical Const    | 10       | 10      | 27OCT11     | 23NOV11      |      |      |      |      |      |

Start Date: 11AUG09  
 Finish Date: 30APR13  
 Issue Date: 30APR09  
 Issue By: 30APR09 08:29

Esai Kentucky Power Cooperative  
 Cooper Retiroff Air Pollution Project - Unit No. 2

Sheet 5 of 7  
 Drawn by: [Name]  
 Checked by: [Name]  
 Approved by: [Name]

ES05  
 Early Bar  
 Progress Bar  
 Critical Activity

Manuf & Deliver Equipment - VFD's  
 Contract Closeout - VFD's

Manuf & Deliver Equipment - VFD's  
 Contract Closeout - VFD's

Manuf & Deliver Equipment - VFD's  
 Contract Closeout - VFD's

Manuf & Deliver Equipment - VFD's  
 Contract Closeout - VFD's

Manuf & Deliver Equipment - VFD's  
 Contract Closeout - VFD's

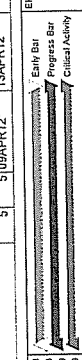
Manuf & Deliver Equipment - VFD's  
 Contract Closeout - VFD's

Manuf & Deliver Equipment - VFD's  
 Contract Closeout - VFD's

| Activity ID   | Activity Description                                   | Orig Dur | Rem Dur | Early Start | Early Finish | 2009 | 2010 | 2011 | 2012 |
|---|--|----------|---------|-------------|--------------|------|------|------|------|
| BMP8410-20  | Award Contract - Electrical Const                      | 0        | 0       | 14DEC10     | 08FEB11      |      |      |      |      |
| BMP8410-40  | Vendor Prepare Drvgs - Electrical Const                | 40       | 40      | 15DEC10     | 08FEB11      |      |      |      |      |
| BMP8410-30  | Review Vendor Drvgs - Electrical Const                 | 80       | 80      | 12JAN11     | 03MAY11      |      |      |      |      |
| BMP8410-35  | Contract Closeout - Electrical Const                   | 10       | 10      | 17MAY12     | 30MAY12      |      |      |      |      |
| <b>Contract 9050A - Geophysical Survey</b>                |  |          |         |             |              |      |      |      |      |
| BMP905A-05  | Specification Preparation - Geophysical Survey         | 40       | 15      | 16MAR09A    | 08MAY09      |      |      |      |      |
| BMP905A-10  | Proposal Period - Geophysical Survey                   | 9        | 9       | 11MAY09     | 21MAY09      |      |      |      |      |
| BMP905A-15  | Proposal Evaluation - Geophysical Survey               | 5        | 5       | 22MAY09     | 28MAY09      |      |      |      |      |
| BMP905A-20  | Award Contract - Geophysical Survey                    | 0        | 0       |             | 04JUN09      |      |      |      |      |
| BMP905A-25  | Geophysical Survey - Field Work (Contractor)           | 16       | 16      | 19JUN09     | 10JUL09      |      |      |      |      |
| BMP905A-26  | Geophysical Survey - Issue Drift Rpt (Contractor)      | 0        | 0       |             | 24JUL09      |      |      |      |      |
| BMP905A-27  | Geophysical Survey - Rev Rpt by BMCD/EKPC              | 10       | 10      | 27JUL09     | 07AUG09      |      |      |      |      |
| BMP905A-28  | Geophysical Survey - Final Report                      | 0        | 0       |             | 21AUG09      |      |      |      |      |
| BMP905A-35  | Contract Closeout - Geophysical Survey                 | 10       | 10      | 21SEP09     | 02OCT09      |      |      |      |      |
| <b>Contract 9050B - Geotechnical Investigation</b>        |  |          |         |             |              |      |      |      |      |
| BMP905B-05  | Specification Preparation - Geotechnical Investigation | 40       | 15      | 16MAR09A    | 08MAY09      |      |      |      |      |
| BMP905B-10  | Proposal Period - Geotechnical Investigation           | 11       | 11      | 03AUG09     | 17AUG09      |      |      |      |      |
| BMP905B-15  | Proposal Evaluation - Geotechnical Investigation       | 5        | 5       | 18AUG09     | 24AUG09      |      |      |      |      |
| BMP905B-20  | Award Contract - Geotechnical Investigation            | 0        | 0       |             | 31AUG09      |      |      |      |      |
| BMP905B-25  | Geotech Investig - Field Work (Contractor)             | 16       | 16      | 15SEP09     | 06OCT09      |      |      |      |      |
| BMP905B-26  | Geotech Investig - Issue Drift Rpt (Contractor)        | 0        | 0       |             | 20OCT09      |      |      |      |      |
| BMP905B-27  | Geotech Investig - Rev Rpt by BMCD/EKPC                | 0        | 0       | 21OCT09     | 30OCT09      |      |      |      |      |
| BMP905B-28  | Geotech Investig - Final Report                        | 0        | 0       |             | 13NOV09      |      |      |      |      |
| BMP905B-35  | Contract Closeout - Geotechnical Investigation         | 10       | 10      | 13JAN10     | 26JAN10      |      |      |      |      |
| <b>Contract 1350 - Boiler Modifications</b>               |  |          |         |             |              |      |      |      |      |
| BMC1350-40  | Install Boiler Mods                                    | 35       | 35      | 18FEB12     | 23MAR12      |      |      |      |      |
| <b>Contract 8110 - Site Preparation &amp; Foundations</b> |  |          |         |             |              |      |      |      |      |
| BMC8110-05  | Civil / Underground Construction                       | 110      | 110     | 23JUN10     | 23NOV10      |      |      |      |      |
| BMC8110-10  | Foundation Construction                                | 132      | 132     | 15SEP10     | 17MAR11      |      |      |      |      |
| <b>Contract 8320 - Mechanical Construction</b>            |  |          |         |             |              |      |      |      |      |
| BMC8320-35  | Mobilize - Mechanical Const                            | 20       | 20      | 25AUG10     | 21SEP10      |      |      |      |      |
| BMC8320-45  | Structural Steel Installation - FGD                    | 100      | 100     | 17JAN11     | 03JUN11      |      |      |      |      |
| BMC8320-55  | Install Expt - Mechanical Const                        | 250      | 250     | 19JAN11     | 18JUN12      |      |      |      |      |
| BMC8320-10  | Install BOP Piping - Mechanical Const                  | 250      | 250     | 02FEB11     | 01FEB12      |      |      |      |      |
| BMC8320-50  | Reactor and Fabric Filter Installation                 | 110      | 110     | 16MAR11     | 17AUG11      |      |      |      |      |
| BMC8320-70  | Install Fans   | 60       | 60      | 22MAR11     | 13JUN11      |      |      |      |      |
| BMC8320-60  | Erect SCR Steel  | 120      | 120     | 25MAY11     | 09NOV11      |      |      |      |      |
| BMC8320-65  | Piping and Instrument Installation - FGD               | 135      | 135     | 25AUG11     | 29FEB12      |      |      |      |      |
| BMC8320-15  | Ductwork & Duct Support SII Installation - FGD         | 20       | 20      | 12JAN12     | 06FEB12      |      |      |      |      |
| BMC8320-17  | SCR Installation                                       | 60       | 60      | 19JAN12     | 11APR12      |      |      |      |      |
| <b>Contract 8410 - Electrical Construction</b>            |  |          |         |             |              |      |      |      |      |
| BMC8410-10  | Install BOP Electrical - Electrical Const              | 250      | 250     | 09MAR11     | 07MAR12      |      |      |      |      |
| BMC8410-42  | Install Isophase Mods                                  | 21       | 21      | 12MAR11     | 01APR11      |      |      |      |      |
| BMC8410-45  | Install DCS  | 85       | 85      | 04MAY11     | 31AUG11      |      |      |      |      |
| BMC8410-55  | Electrical Installation - FGD                          | 176      | 176     | 10MAY11     | 11JAN12      |      |      |      |      |
| BMC8410-40  | Install CEMS   | 60       | 60      | 17NOV11     | 08FEB12      |      |      |      |      |
| BMC8410-75  | Electrical Installation - SCR                          | 40       | 40      | 01MAR12     | 25APR12      |      |      |      |      |

**Startup & Testing**

| Activity ID | Activity Description | Orig Dur | Rem Dur | Early Start | Early Finish |
|-------------|----------------------|----------|---------|-------------|--------------|
| 0030        | Ductwork Tie-ins     | 5        | 5       | 05APR12     | 13APR12      |



Start Date: 11AUG08  
 Finish Date: 30APR13  
 Data Date: 30APR09 09:25  
 Run Date: 30APR09 09:25

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2009 A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D A

2010 A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D A

2011 A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D A

2012 A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D A

2013 A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D A

| Date     | By  | Reason            | Checked | Approved |
|----------|-----|-------------------|---------|----------|
| 20090920 | YAO | Revised / Updated | YAO     |          |
| 20091005 | YAO | Revised / Updated | YAO     |          |
| 20091025 | YAO | Revised / Updated | YAO     |          |

Sheet 6 of 7  
 East Kentucky Power Cooperative  
 Cooper Retrofit Air Pollution Project - Unit No. 2  
 SCHEDULE

| Activity ID                                   | Activity Description                            | Orig Dur | Rem Dur | Early Start | Early Finish | CD Date - FGD System In Service           |
|---|---|----------|---------|-------------|--------------|---|
| 0025  | CD Date - FGD System In Service                 | 0        | 0       |             | 30JUN12*     |   |
| Contract 1310 - CFB Dry FGD System            |   |          |         |             |              |   |
| BMC1310-90                                    | Substantial Completion - FGD                    | 0        | 0       |             | 30JUN12*     | Substantial Completion - FGD              |
| Contract 1330 - Selective Catalytic Reduction |   |          |         |             |              |   |
| BMC1330-90                                    | Substantial Completion - SCR                    | 0        | 0       |             | 30JUN12*     | Substantial Completion - SCR              |
| Contract 1350 - Boiler Modifications          |   |          |         |             |              |   |
| BMS1350-05                                    | Startup & Commissioning - Boiler Mods           | 20       | 20      | 24MAR12     | 12APR12      | Startup & Commissioning - Boiler Mods     |
| Contract 8320 - Mechanical Construction       |   |          |         |             |              |   |
| BMS8320-05                                    | Startup & Commissioning - Mechanical Const      | 120      | 120     | 10NOV11     | 25APR12      | Substantial Completion - Mechanical Const |
| BMC8320-90                                    | Substantial Completion - Mechanical Const       | 0        | 0       |             | 01FEB12      | Substantial Completion - Mechanical Const |
| Contract 8410 - Electrical Construction       |   |          |         |             |              |   |
| BMS8410-05                                    | SU and Commissioning Support - Electrical Const | 120      | 120     | 24NOV11     | 09MAY12      | Substantial Completion - Electrical Const |
| BMC8410-90                                    | Substantial Completion - Electrical Const       | 0        | 0       |             | 07MAR12      | Substantial Completion - Electrical Const |
| Start Up & Commissioning                      |   |          |         |             |              |   |
| SUA1020                                       | Start Up & Test PF and FD Fans                  | 5        | 5       | 19MAR12*    | 23MAR12      | Start Up & Test PF and FD Fans            |
| SUA1040                                       | Start Up Air Heater                             | 10       | 10      | 19MAR12*    | 30MAR12      | Start Up Air Heater                       |
| SUA1070                                       | Start Up & Test ID Fans (Air)                   | 5        | 5       | 26MAR12     | 30MAR12      | Start Up & Test ID Fans (Air)             |
| SUA1090                                       | Start Up & Test ID Fans (Air)                   | 3        | 3       | 02APR12     | 04APR12      | Start Up & Test ID Fans (Air)             |
| SUA1050                                       | Precoat Fabric Filter Bags                      | 5        | 5       | 05APR12     | 11APR12      | Precoat Fabric Filter Bags                |
| SUA1060                                       | Start Up Line Prep and Feed System              | 0        | 0       | 16APR12     | 13APR12      | Start Up Line Prep and Feed System        |
| SUA1070                                       | Gas Path Complete for Operation                 | 0        | 0       | 16APR12     | 13APR12      | Gas Path Complete for Operation           |
| SUC2000                                       | Unit Start Up                                   | 5        | 5       | 16APR12     | 20APR12      | Unit Start Up                             |
| SUC2050                                       | Air Heater Checkout                             | 5        | 5       | 16APR12     | 20APR12      | Air Heater Checkout                       |
| SUC2090                                       | CEMS Start Up                                   | 20       | 20      | 16APR12     | 11MAY12      | CEMS Start Up                             |
| SUC2020                                       | SCR Start Up                                    | 20       | 20      | 16APR12     | 11MAY12      | SCR Start Up                              |
| SUC2030                                       | FGD Start Up                                    | 20       | 20      | 16APR12     | 11MAY12      | FGD Start Up                              |
| SUC2040                                       | Baghouse Checkout                               | 20       | 20      | 16APR12     | 11MAY12      | Baghouse Checkout                         |
| Testing                                       |   |          |         |             |              |   |
| SUT3000                                       | CEMS Drift Test                                 | 7        | 7       | 23APR12     | 01MAY12      | CEMS Drift Test                           |
| SUT3010                                       | CEMS High Load RATA                             | 1        | 1       | 02MAY12     | 02MAY12      | CEMS High Load RATA                       |
| SUT3020                                       | CEMS Mid & Low RATA                             | 1        | 1       | 03MAY12     | 03MAY12      | CEMS Mid & Low RATA                       |
| SUT3030                                       | CEMS High Load PM RATA                          | 1        | 1       | 04MAY12     | 04MAY12      | CEMS High Load PM RATA                    |
| SUT3040                                       | FGD Performance Test A                          | 1        | 1       | 14MAY12     | 14MAY12      | FGD Performance Test A                    |
| SUT3070                                       | SCR Performance Test A                          | 1        | 1       | 14MAY12     | 14MAY12      | SCR Performance Test A                    |
| SUT3050                                       | FGD Performance Test B                          | 23       | 23      | 14MAY12     | 13JUN12      | FGD Performance Test B                    |
| SUT3060                                       | CD Demonstration Period                         | 23       | 23      | 14MAY12     | 13JUN12      | CD Demonstration Period                   |
| SUT3060                                       | FGD Reliability Demonstration                   | 128      | 128     | 14JUN12     | 11DEC12      | FGD Reliability Demonstration             |
| SUT3060                                       | SCR Performance Test B (16000hrs / 2yrs)        | 1        | 1       | 30OCT12*    | 30OCT12*     | SCR Performance Test B (16000hrs / 2yrs)  |
| SUT3060                                       | SCR Reliability Demonstration                   | 128      | 128     | 31OCT12     | 30APR13      | SCR Reliability Demonstration             |

2009 2010 2011 2012  
A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D  
CD Date - FGD System In Service

Substantial Completion - FGD

Substantial Completion - SCR

Startup & Commissioning - Boiler Mods

Substantial Completion - Mechanical Const

SU and Commissioning Support - Electrical Const

Substantial Completion - Electrical Const

Start Up & Test PF and FD Fans

Start Up Air Heater

Start Up & Test ID Fans (Air)

Precoat Fabric Filter Bags

Start Up Line Prep and Feed System

Gas Path Complete for Operation

Unit Start Up

Air Heater Checkout

CEMS Start Up

SCR Start Up

FGD Start Up

Baghouse Checkout

CEMS Drift Test

CEMS High Load RATA

CEMS Mid & Low RATA

CEMS High Load PM RATA

FGD Performance Test A

SCR Performance Test A

FGD Performance Test B

CD Demonstration Period

FGD Reliability Demonstration

SCR Performance Test B (16000hrs / 2yrs)

SCR Reliability Demonstration

| Table   | Revision                         | Checked | Approved |
|---------|----------------------------------|---------|----------|
| 23OCT09 | Issued with draft scoping report | EB      |          |
| 14MAR10 | Revised / Updated                | CLB     |          |
| 25APR10 | Revised / Updated                | YKO     |          |

Sheet 7 of 7

East Kentucky Power Cooperative  
Cooper Retiroil Air Pollution Project - Unit No. 2  
SCHEDULE

11AUG08  
30APR13  
20APR09  
30APR09 (023)

EMGS

Early Bar  
Progress Bar  
Critical Path

© Primavera Systems, Inc.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 3**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 3.** Refer to page 5-11 of the IRP, specifically, the discussion of EKPC's key forecast assumptions.

**Request 3a.** Appliance efficiency improvements are expected to reduce residential sales by roughly 500,000 MWh over the forecast period. Explain whether a decrease in peak demand is also expected due to these improvements.

**Response 3a.** A decrease in peak demand is expected due to energy efficiency improvements of appliances. This decrease will be seen gradually over the forecast period as the appliance stock changes from the existing less efficient appliances.

**Request 3b.** EKPC's forecast load growth reflects normal weather as defined by the National Oceanic and Atmospheric Administration ("NOAA"). Confirm whether this is based on the traditional 30-year "normals" developed by NOAA and identify the specific period on which it is based.

**Response 3b.** EKPC's normal weather is based on NOAA data for the 20 year period of 1988 through 2007.





**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 4**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 4.** Refer to Table 5(4)-1 on page 5-16 of the IRP. Explain why the amount of existing resources is shown decreasing from 3,130 MW in 2009 to 2,720 MW in 2010.

**Request 4.** 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 that were needed to serve load prior to Spurlock 4 becoming operational. 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.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 5**

**RESPONSIBLE PERSON: Ann F. Wood**

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

**Request 5.** Refer to page 5-19 of the IRP, specifically, the reference to rate design changes EKPC plans over the forecast period. As part of the settlement in Case No. 2008-00409,<sup>2</sup> EKPC agreed not to make the rate design changes it had proposed in its application.

**Request 5a.** In general, when does EKPC expect to file its next base rate case?

**Response 5a.** Based on EKPC's twenty-year financial forecast, EKPC expects to file its next base rate case in 2011 to be effective in 2012. Please note that EKPC continues to evaluate its financial condition and will request a rate increase sooner if circumstances warrant. Please also see the response to Request 5b below.

**Request 5b.** Explain whether EKPC expects to propose rate design changes in its next base rate case similar to those it proposed in Case No. 2008-00409.

**Response 5b.** In 2010, EKPC intends to conduct a wholesale cost of service study. Subject to the results of this study, EKPC may file a base rate case for the sole purpose of rate design changes. At present, these rate design changes will be along the lines of the Phase II concept in Case No. 2008-00409.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 6**

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

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

**Request 6.** Refer to page 5-19 of the IRP, specifically, the discussion of natural gas prices during 2008. Provide, for calendar year 2008 and the first six months of 2009, EKPC's average monthly price incurred for natural gas purchases.

**Response 6.** Shown below is EKPC's average monthly price incurred for natural gas purchases for 2008 and for January – June 2009. These prices reflect reported numbers in EKPC's monthly fuel adjustment clause filing and associated reports.

| Month and Year | Dollars per MMBtu |
|----------------|-------------------|
| January 2008   | 9.33              |
| February 2008  | 9.71              |
| March 2008     | 10.20             |
| April 2008     | 15.31             |
| May 2008       | 11.39             |
| June 2008      | 12.74             |
| July 2008      | 9.45              |
| August 2008    | 9.12              |
| September 2008 | 8.80              |
| October 2008   | 7.64              |
| November 2008  | 9.52              |
| December 2008  | 8.94              |
| January 2009   | 7.79              |
| February 2009  | 8.10              |
| March 2009     | 6.97              |
| April 2009     | 4.15              |
| May 2009       | 15.70             |
| June 2009      | 6.98              |



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 7**

**RESPONSIBLE PERSON: John F. Farley**

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

**Request 7.** Refer to page 6-3 of the IRP. Identify the environmental stewards and other parties from whom EKPC received feedback regarding proposed Demand-Side Management (“DSM”) measures.

**Response 7.** EKPC received feedback regarding Demand-Side Management programs from the following environmental stewards and other parties:

Kentucky Environmental Foundation<sup>1</sup>

Kentuckians for the Commonwealth

Sierra Club

University of Kentucky

Other utilities, including LG&E/KU, TVA, and Great River Energy

GoodCents Solutions

Florida Solar Energy Association

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<sup>1</sup> In February 2008, the Kentucky Environmental Foundation, Kentuckians for the Commonwealth, and the Sierra Club provided EKPC a set of recommendations and suggestions concerning a portfolio of DSM programs for EKPC in their report titled “A Portfolio of Energy Efficiency and Renewable Energy Options for East Kentucky Power Cooperative”, February 2008.





**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09  
REQUEST 8**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 8.** Refer to the table on page 7-1 of the IRP. Generally, the most significant impacts of the weakened economy have been experienced in 2008 and 2009. In light of that experience, describe:

**Request 8a.** What accounts for the loss of 400 commercial customers on the EKPC system from 2005 to 2006; and

**Response 8a.** The reported loss of commercial customers is due to a data reclassification from the commercial class to the residential class by one of EKPC's member distribution cooperatives, and does not represent an actual loss of customers.

**Request 8b.** What accounts for the loss of 13, or approximately 10 percent, of the industrial customers on the EKPC system from 2006 to 2007.

**Response 8b.** The reported loss of industrial customers is due to a data reclassification from the industrial class to the commercial class by one of EKPC's member distribution cooperatives, and does not represent an actual loss of customers.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 9**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 9.** Refer to page 7-17 of the IRP. For each of the four customer groups listed at the bottom of the page provide the following information:

**Request 9a.** The number of customers on the EKPC system that fall within each of the groups as of the most recent date for which such information is available; and

- Response 9a.**
1. Residential customers – 416,309
  2. Small Commercial & Industrial – 26,964
  3. Medium Commercial & Industrial – 1,292
  4. Large Power - 315

**Request 9b.** An explanation of how the number of load profile meters installed was determined for each customer group.

**Response 9b.** Ratio estimation is used by EKPC for load research and this technique takes advantage of the correlation of the  $x$  and  $y$  variables to obtain increased precision. The ratio estimation technique can be applied if the relationship of  $x$  and  $y$  is approximately linear and passes through the origin. Class demands estimates for rate

classes and other populations with known total energy use ( $X$ ) are adjusted by the ratio of demand ( $y$ ) to energy use ( $x$ ) for the sample. Energy use for the sample and target populations must be for the same time period, usually the monthly billing period or the calendar month in which the demands of interest fall. Ratio estimation using customer demands metered for billing purposes is also an option for certain groups of commercial and industrial customers.

The residential sample design uses ratio-estimation. The sample design interval data is used to create mean kW estimates from the population billing data. The design was based on the 15-minute winter peak kW and provides at least  $\pm 10\%$  precision with 90% confidence (90/10) regardless of season.

The small commercial design reflects its mean demand growth and is based on kW measurements instead of kWh.

Medium commercial sample design was created to provide 5% relative accuracy with 95% confidence. Now it is providing 4% relative accuracy with 95% confidence, and 3% relative accuracy with 90% confidence. As a result, its sample sizes were left the same, although they could be decreased without ill effect.

Large power is customers whose peak demands are greater than 350 kW and are census metered to the best of our ability.

The billing kWh data was calendarized prior to performing analysis. Calendarization is the process of re-stating the customer's kWh so that they are based on a monthly calendar basis rather than a billing date to billing date basis.

Monthly kW estimates were also calculated from billing kWh data for non-demand billed commercial accounts by multiplying monthly consumption by the ratio of peak kW to monthly kWh derived for each class and strata from existing MV-90 load research data.

The current sample design sample sizes and their associated levels of confidence and accuracy were based on statistics derived from the population's 2000/2001 winter peak month billing data and from existing load research sample 2001/2002 winter peak interval data. (March 4, 2002 @ 7:15 A.M.)



**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 10**

**RESPONSIBLE PERSON:** Isaac S. Scott

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

**Request 10.** Refer to page 7-18 of the IRP. Provide the anticipated timetable for the education and training of member cooperative personnel and the eventual rollout of the Real Time Pricing pilot program.

**Response 10.** While specific dates have not been established, it is anticipated that the education and training of member cooperative personnel for the Real Time Pricing (RTP) pilot program would occur over a six-week to two-month period. EKPC continues to work on the development of the RTP price components, making the secure website operational, and developing procedures for accurate and current RTP price postings. Given the work that remains to be accomplished, including the education and training of the member cooperative personnel, EKPC's target is to rollout the RTP pilot program by January 2010.





**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 11**

**RESPONSIBLE PERSON: Paul A. Dolloff**

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

**Request 11.** Refer to page 8-3 of the IRP. The section on “Carbon Capture Research” indicates that EKPC is a member of the Carbon Management Research Group (“CMRG”) along with the four jurisdictional investor-owned electric utilities (“IOUs”). However, EKPC was not a co-applicant in Case No. 2008-00308<sup>3</sup> in which the Commission authorized the IOUs to establish regulatory assets in which to record and defer the amounts they were contributing to the CMRG. Identify when EKPC became a member of the CMRG and provide the amount of its contribution thereto.

**Response 11.** EKPC was not an applicant to the petition (2008-00308) since, at the time of filing, dollars had neither been budgeted for 2008 nor approved by the Board for 2009.

EKPC became a member of CAER on January 5, 2009 for the annual membership fee of \$200,000. The membership and associated fee will be evaluated by EKPC on an annual basis.

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<sup>3</sup> Case No. 2008-00308, Joint Application of Duke Energy Kentucky, Inc., Kentucky Power Company, Kentucky Utilities Company and Louisville Gas and Electric Company for an Order Approving Accounting Practices to Establish Regulatory Assets and Liabilities Related to Certain Payments Made to the Carbon Management Research Group and the Kentucky Consortium for Carbon Storage (Ky. PSC Oct. 30, 2008).



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09  
REQUEST 12**

**RESPONSIBLE PERSON: Paul A. Dolloff**

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

**Request 12.** Refer to page 8-4 of the IRP. Provide a description of the Cooperative Research Network ("CRN"), and state whether EKPC is a member thereof. If so, provide the amount of the membership dues or fees it pays CRN.

**Response 12.** EKPC and all of its Member Systems are members of the Cooperative Research Network. In 2008, EKPC paid \$ 75,275 in CRN dues.

The Cooperative Research Network is a service of the National Rural Electric Cooperative Association, a trade association headquartered in Arlington, Virginia. The mission of the Cooperative Research Network is to monitor, evaluate and apply technologies that help electric cooperative utilities control costs, increase productivity, and enhance service to their consumer-members.

CRN is a benefit of NRECA membership, with its results available to all NRECA voting members. Members access information through this website by entering their Cooperative.com username and password at the sign-on prompt.

CRN meets its mission through collaborative research into a wide range of technologies and services. This research may result in the development of new products and services of particular value to the cooperative industry, often features cooperative-specific demonstrations and deployment of technology, and always includes the transfer of knowledge to its users through on-line and published reports, handbooks, newsletters, web conferences, seminars and other means of disseminating information.

CRN offers:

- ❑ Research designed specifically for electric cooperatives
- ❑ Intelligence on technology innovations affecting the utility industry
- ❑ New member service and revenue generation opportunities
- ❑ Creative technical and management approaches to cost control
- ❑ New products and services developed for co-op delivery
- ❑ Opportunity to invest research dollars in areas critical to success

The key decisions on research project selection and funding, as well as policies related to the funding of the program, are guided by NRECA member input and direction obtained through the CRN Advisory structure. An advisory task force, consisting of CRN members, is assigned to oversee research efforts in the following six areas:

1. Energy Innovations
2. Information Management and Telecommunications
3. Distribution Operations Best Practices
4. Renewable and Distributed Energy
5. Transmission and Substation Assets
6. Generation, Fuels, and Environment



**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 13**

**RESPONSIBLE PERSON: George S. Carruba**

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

**Request 13.** Refer to page 8-5 of the IRP. Provide the Southeast Electric Reliability Corporation's report on its recent audit of EKPC's compliance with the reliability standards of the North American Reliability Corporation.

**Response 13.** EKPC has not yet received the Southeast Electric Reliability Corporation's final audit report on EKPC's compliance with the reliability standards of the North American Reliability Corporation.





**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 14**

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

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

**Request 14.** Refer to page 8-13 of the IRP. Provide a description of the National Renewables Cooperative Organization (“NRCO”), and state whether EKPC is a member thereof. If so, provide the amount of the membership dues or fees it pays NRCO.

**Response 14.** Please see the NRCO website at [www.nrco.coop](http://www.nrco.coop)

***What is the National Renewables Cooperative Organization?***

In the tradition of working together, cooperatives across the country have formed the National Renewables Cooperative Organization (NRCO) to promote and facilitate the development of renewable energy resources for members.

***Who is eligible to join?***

Membership in the NRCO is open to generation and transmission cooperatives (G&T's) and distribution cooperatives with the legal ability to buy power in the wholesale market.

***How is the NRCO supported?***

The NRCO receives financial support from its members: each participant must commit \$100,000, with an upfront investment of \$25,000.

***How many cooperatives belong to NRCO?***

As of May 22, the NRCO had 24 members serving 24 members in 20 states. Of these members, four are unaffiliated distribution cooperatives.

***How is the NRCO administered?***

The NRCO has been incorporated as a 501(c)(12), a not-for-profit cooperative, and will be

governed by its members. The Board, elected in April 2008, is comprised of cooperative executives.

The NRCO will engage an energy management company. The National Rural Electric Cooperative Association and the Cooperative Research Network will provide assistance in communications and research.

***What will the NRCO do?***

The NRCO will allow cooperatives to pool their expertise, so that the knowledge base of cooperatives with experience in developing renewable energy will be available to all. At the outset, the NRCO will serve in a consulting capacity, evaluating renewable resource opportunities, facilitating participation in renewable energy projects and assist in creating optimal arrangements for its members.

The NRCO will also assist cooperatives in the on-going management of renewable resources.

Specific NRCO functions include:

- Serving as a clearinghouse for renewable resource development opportunities available to cooperatives
- Packaging development opportunities for evaluation by members
- Aggregating renewable energy request for proposals (RFPs) for members

EKPC is a member and owner of NRCO, and is on the Board of Directors. Fees for 2009 are \$76,433.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 15**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 15.** Refer to page 8-14 of the IRP where Table 8(2)(c)-1 identifies the resource alternatives included in the optimization model for this IRP. The paragraph immediately following the table lists other resources that, apparently, were not included in the optimization model. Explain why supercritical pulverized coal units, hydropower, wind power and landfill gas projects were not included in the optimization model.

**Response 15.** Supercritical pulverized coal units typically are large (750 MW) units, which are too big for the EKPC system by itself. Such a unit would require EKPC be in a partnership with one or more other entities to obtain the benefit of such a unit. EKPC is not opposed to partnering with others in such a unit, and has, in fact, evaluated such proposals in the past. However, at this time, EKPC is not aware of a partnering opportunity that would meet its needs so this specific unit was not evaluated in this IRP. Once EKPC determines it needs to begin the procurement process for its next baseload supply source, then an RFP for capacity will be issued. EKPC would expect to solicit proposals from the developer(s) of any supercritical pulverized coal units that are available for purchase at that time and perform a very detailed analysis of that technology as compared to other available alternatives.

Similar to the above discussion, EKPC is not aware of any viable hydro projects that are available to be developed or to purchase output from. EKPC currently purchases the output of the Greenup Hydro unit and SEPA power projects. EKPC would willingly entertain the evaluation of a viable hydro project if one were brought forward. In the past, EKPC evaluated hydro in its IRP analysis because there were projects that were available for development and the developers provided proposals to EKPC.

EKPC evaluated wind power in its evaluation of the proposals received in response to the RFP that was issued for Renewable Power in April 2008. These proposals continue to be evaluated and negotiated, so no report has been written on the details of this evaluation at this time. No new legislation or environmental rules were assumed in the 2009 IRP analysis, and without such requirements, the renewables analysis indicated that wind is not an economic choice for EKPC members. EKPC continues to monitor renewable requirements and will update its analysis if the requirements materialize.

Landfill gas projects are very site specific. EKPC has six projects on-line and will continue to actively pursue additional projects. These projects tend to be small, 1.5 to 3.5 MW, and are hard to evaluate when considering 3,000 MW of total system capacity. EKPC will continue evaluating and justifying these projects on a site specific basis. The absence of them from the optimization is in no way an indication that EKPC does not intend to pursue continued development of these projects.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09  
REQUEST 16**

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

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

**Request 16.** Refer to page 8-16 of the IRP, specifically, the discussion of the project to study the use of switchgrass as fuel in EKPC's power plants. The text refers to the December 2008 mix of 70 tons of switchgrass into the coal feedstock of the Gilbert Unit ("Gilbert") and that the proposed Smith Unit 1 is also planned to feature the same technology as Gilbert. Clarify whether Spurlock 4, which became commercial in the spring of 2009, also features that same technology.

**Response 16.** As noted in the IRP, page 8-16, both circulating fluidized bed units at Spurlock Power Station feature the same technology which may allow the economical use of switchgrass. The two units are the Gilbert Unit and Spurlock 4.





**EAST KENTUCKY POWER COOPERATIVE, INC.**

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**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09  
REQUEST 17**

**RESPONSIBLE PERSON: John F. Farley**

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

**Request 17.** Refer to pages DSM-8 through DSM-10 in the DSM Technical Appendix. Provide the individual qualitative screening results of each of the DSM measures listed.

**Response 17.** The tables on pages 2 through 4 of this response provide the individual qualitative screening results of each of the DSM measures listed.

**Complete List of DSM Measures & Results of Qualitative Screen**  
**Measures that passed the Qualitative Screen are IN BOLD**

| Residential |   | Customer Acceptance | Measure Applicability | Savings Potential | Cost Effectiveness | Total Score |
|-------------|---|---------------------|-----------------------|-------------------|--------------------|-------------|
| 1           | <b>Residential Efficient Lighting</b>                             | 4.0                 | 4.5                   | 4.0               | 4.2                | <b>16.7</b> |
| 2           | <b>Direct Load Control - air conditioners &amp; water heaters</b> | 3.8                 | 4.8                   | 4.8               | 4.2                | <b>17.7</b> |
| 3           | <b>Programmable thermostats with electric furnace heat</b>        | 4.2                 | 4.3                   | 4.2               | 4.4                | <b>17.0</b> |
| 4           | <b>ENERGY STAR Refrigerator</b>                                   | 5.0                 | 5.0                   | 4.0               | 3.0                | <b>17.0</b> |
| 5           | <b>ENERGY STAR Room Air Conditioner</b>                           | 5.0                 | 5.0                   | 3.0               | 3.0                | <b>16.0</b> |
| 6           | <b>ENERGY STAR Clothes Washers</b>                                | 4.0                 | 5.0                   | 3.0               | 4.0                | <b>16.0</b> |
| 7           | Cold climate heat pump  | 2.5                 | 3.5                   | 3.5               | 4.5                | 14.0        |
| 8           | <b>Heat retrofit/ early replace: resistance to heat pump</b>      | 3.3                 | 3.5                   | 4.3               | 4.7                | <b>15.8</b> |
| 9           | Inefficient heat pump to geothermal early replacement             | 1.8                 | 3.0                   | 3.8               | 3.5                | 12.2        |
| 10          | SEER 10 heat pump to SEER 15 early replacement                    | 2.8                 | 3.2                   | 3.3               | 3.2                | 12.5        |
| 11          | Ductless mini-split heat pump                                     | 2.7                 | 3.0                   | 3.7               | 3.7                | 13.0        |
| 12          | Inefficient Central Air Conditioner to SEER 15                    | 2.7                 | 3.0                   | 3.7               | 3.3                | 12.7        |
| 13          | High efficiency furnace fan motors                                | 3.0                 | 3.3                   | 3.0               | 3.3                | 12.5        |
| 14          | <b>Low income weatherization</b>                                  | 4.7                 | 4.3                   | 4.3               | 4.2                | <b>17.5</b> |
| 15          | <b>Enhanced Button-Up (air sealing)</b>                           | 3.8                 | 4.3                   | 3.8               | 3.8                | <b>15.8</b> |
| 16          | <b>Enhanced Tune-Up (duct sealing)</b>                            | 4.2                 | 4.3                   | 4.5               | 4.5                | <b>17.5</b> |
| 17          | <b>Enhanced Touchstone Home (thermal sealing/bypass)</b>          | 3.7                 | 4.0                   | 4.3               | 4.3                | <b>16.3</b> |
| 18          | Ceiling Fans  | 3.5                 | 2.8                   | 2.8               | 3.3                | 12.3        |
| 19          | Multi-family program  | 5.0                 | 3.0                   | 4.0               | 3.0                | 15.0        |
| 20          | <b>Mobile home retrofit program</b>                               | 3.0                 | 3.8                   | 4.3               | 4.2                | <b>15.3</b> |
| 21          | Polarized Refrigerant oxidant agent                               | 3.5                 | 2.5                   | 3.0               | 2.5                | 11.5        |
| 22          | <b>ENERGY STAR Central Air Conditioner</b>                        | 4.2                 | 3.8                   | 3.8               | 3.8                | <b>15.7</b> |
| 23          | Low flow showerhead with faucet aerator/pipe insulation           | 3.0                 | 3.0                   | 3.3               | 3.8                | 13.2        |
| 24          | Heat pump water heater  | 3.0                 | 3.8                   | 4.0               | 3.8                | 14.5        |
| 25          | Instantaneous water heater  | 3.2                 | 2.4                   | 2.2               | 2.2                | 10.0        |
| 26          | Solar water heater  | 2.2                 | 3.2                   | 2.8               | 2.2                | 10.3        |
| 27          | Room AC exchange & recycle program                                | 2.8                 | 3.0                   | 2.7               | 2.7                | 11.2        |
| 28          | <b>ENERGY STAR Dishwashers</b>                                    | 4.0                 | 3.7                   | 3.0               | 3.0                | <b>13.7</b> |
| 29          | Refrigerator/Freezer Recycling                                    | 3.5                 | 2.7                   | 3.0               | 3.0                | 12.2        |
| 30          | Remove old second refrigerators                                   | 3.0                 | 2.8                   | 3.7               | 3.3                | 12.8        |
| 31          | Removed old second freezers                                       | 3.0                 | 2.8                   | 3.7               | 3.5                | 13.0        |
| 32          | <b>ENERGY STAR Freezers</b>                                       | 3.8                 | 3.5                   | 3.8               | 3.5                | <b>14.7</b> |
| 33          | <b>ENERGY STAR Home electronics</b>                               | 3.5                 | 3.5                   | 3.5               | 3.3                | <b>13.8</b> |
| 34          | <b>ENERGY STAR Windows</b>  | 3.3                 | 3.2                   | 3.0               | 2.5                | <b>12.0</b> |
| 35          | <b>ENERGY STAR Dehumidifiers</b>                                  | 3.3                 | 3.3                   | 3.0               | 3.3                | <b>12.8</b> |
| 36          | Heat pump dryer   | 2.8                 | 3.0                   | 3.3               | 2.8                | 11.8        |
| 37          | Efficient pool pump   | 3.5                 | 3.3                   | 3.0               | 3.3                | 13.0        |
| 38          | Well water pump   | 3.3                 | 3.0                   | 3.0               | 3.0                | 12.3        |
| 39          | High efficiency outdoor lighting                                  | 3.0                 | 3.2                   | 2.8               | 2.8                | 11.8        |
| 40          | LED lighting  | 3.3                 | 3.7                   | 4.0               | 3.2                | 14.2        |
| 41          | <b>Direct load control - pool pump</b>                            | 3.8                 | 4.3                   | 4.0               | 4.0                | <b>16.0</b> |
| 42          | <b>Time of use rates</b>  | 2.8                 | 4.3                   | 4.2               | 4.5                | <b>15.8</b> |
| 43          | Inclining block rates   | 2.0                 | 3.7                   | 4.0               | 5.0                | 14.7        |
| 44          | Passive Solar (new construction)                                  | 3.8                 | 3.0                   | 3.0               | 3.4                | 13.2        |
| 45          | Photovoltaics (customer sited)                                    | 2.7                 | 2.7                   | 2.8               | 1.8                | 10.0        |
| 46          | Wind turbine (customer sited)                                     | 2.0                 | 2.8                   | 1.8               | 1.7                | 8.3         |

## Commercial

|    |  | Customer Acceptance | Measure Applicability | Savings Potential | Cost Effectiveness | Total Score |
|----|--|---------------------|-----------------------|-------------------|--------------------|-------------|
| 1  | <b>Commercial HVAC</b>   | 3.8                 | 4.0                   | 4.3               | 4.0                | <b>16.0</b> |
| 2  | <b>Demand Response</b>   | 2.8                 | 4.5                   | 4.5               | 5.0                | <b>16.8</b> |
| 3  | <b>Commercial Building Performance</b>                         | 3.5                 | 4.0                   | 4.5               | 4.0                | <b>16.0</b> |
| 4  | <b>Commercial New Construction</b>                             | 3.7                 | 4.7                   | 4.7               | 4.7                | <b>17.7</b> |
| 5  | <b>Efficient refrigeration equipment</b>                       | 4.0                 | 4.5                   | 4.5               | 4.5                | <b>17.5</b> |
| 6  | <b>Small C&amp;I audit program</b>                             | 4.5                 | 4.8                   | 4.3               | 3.5                | <b>17.0</b> |
| 7  | Building operator certification program                        | 3.5                 | 4.0                   | 3.5               | 4.0                | 15.0        |
| 8  | <b>Geothermal heat pump</b>                                    | 3.3                 | 4.3                   | 4.8               | 4.5                | <b>16.8</b> |
| 9  | Evaporative cooling  | 3.0                 | 3.0                   | 4.5               | 4.0                | 14.5        |
| 10 | Advanced ventilation   | 3.3                 | 3.7                   | 4.3               | 3.3                | 14.7        |
| 11 | High efficiency HVAC motors                                    | 3.0                 | 3.0                   | 3.3               | 3.3                | 12.7        |
| 12 | <b>Early replacement inefficient unitary/split system HVAC</b> | 4.3                 | 4.3                   | 3.3               | 3.0                | <b>15.0</b> |
| 13 | Cool roof program  | 2.7                 | 3.0                   | 4.3               | 4.3                | 14.3        |
| 14 | High performance glazings                                      | 3.0                 | 3.0                   | 4.0               | 4.0                | 14.0        |
| 15 | <b>Duct sealing</b>  | 4.3                 | 4.3                   | 4.8               | 4.0                | <b>17.3</b> |
| 16 | Thermal energy storage   | 2.7                 | 3.0                   | 4.3               | 3.3                | 13.3        |
| 17 | Heat pump water heaters  | 2.5                 | 3.0                   | 3.5               | 3.5                | 12.5        |
| 18 | Drain heat recovery water heaters                              | 3.5                 | 3.0                   | 3.5               | 4.0                | 14.0        |
| 19 | <b>LED exit signs</b>  | 4.3                 | 4.5                   | 4.5               | 4.5                | <b>17.8</b> |
| 20 | <b>Advanced lighting program</b>                               | 4.3                 | 4.3                   | 4.8               | 4.8                | <b>18.0</b> |
| 21 | Efficient cooking equipment                                    | 2.7                 | 4.0                   | 3.0               | 3.3                | 13.0        |
| 22 | Efficient clothes washers                                      | 3.7                 | 4.0                   | 3.7               | 3.3                | 14.7        |
| 23 | <b>ENERGY STAR Vending machines</b>                            | 4.3                 | 4.3                   | 4.3               | 4.0                | <b>17.0</b> |
| 24 | Energy Management Systems                                      | 3.5                 | 3.5                   | 4.0               | 4.0                | 15.0        |
| 25 | DLC of irrigation pumps  | 2.5                 | 3.0                   | 3.0               | 3.5                | 12.0        |
| 26 | <b>DLC of central air conditioners</b>                         | 3.0                 | 4.7                   | 4.7               | 4.7                | <b>17.0</b> |
| 27 | <b>Energy efficient schools</b>                                | 4.3                 | 4.7                   | 4.0               | 4.3                | <b>17.3</b> |
| 28 | Farms program: fans, pumps, irrigation                         | 3.5                 | 4.0                   | 3.5               | 4.0                | 15.0        |
| 29 | Time of use rates  | 2.5                 | 3.5                   | 3.5               | 4.0                | 13.5        |
| 30 | Combined heat & power  | 3.0                 | 3.0                   | 4.0               | 4.0                | 14.0        |
| 31 | Stand-by generation program                                    | 3.5                 | 3.0                   | 4.0               | 3.0                | 13.5        |
| 32 | Daylighting  | 3.0                 | 3.0                   | 3.0               | 4.0                | 13.0        |
| 33 | Solar hot water  | 3.5                 | 3.5                   | 3.0               | 3.0                | 13.0        |
| 34 | Photovoltaics  | 2.5                 | 3.0                   | 3.0               | 3.0                | 11.5        |
| 35 | Wind turbine   | 2.5                 | 3.0                   | 3.0               | 3.0                | 11.5        |

## Industrial/Other

|    |   | Customer Acceptance | Measure Applicability | Savings Potential | Cost Effectiveness | Total Score |
|----|---|---------------------|-----------------------|-------------------|--------------------|-------------|
| 1  | <b>Motors</b>   | 3.6                 | 4.5                   | 4.3               | 4.4                | <b>16.8</b> |
| 2  | <b>Variable speed drives</b>                          | 3.5                 | 4.3                   | 4.3               | 4.3                | <b>16.3</b> |
| 3  | <b>Demand Response</b>                                | 2.8                 | 4.3                   | 4.3               | 4.3                | <b>15.5</b> |
| 4  | <b>Compressed air</b>                                 | 3.5                 | 4.0                   | 4.0               | 4.3                | <b>15.8</b> |
| 5  | Industrial process                                    | 2.5                 | 3.0                   | 3.5               | 4.0                | 13.0        |
| 6  | Process cooling                                       | 3.7                 | 3.3                   | 3.7               | 4.3                | 15.0        |
| 7  | Refrigerated Warehouse                                | 4.0                 | 3.3                   | 3.7               | 4.0                | 15.0        |
| 8  | High efficiency transformers                          | 3.0                 | 4.0                   | 3.0               | 3.0                | 13.0        |
| 9  | Automotive and transportation sector equipment        | 4.0                 | 3.5                   | 3.5               | 3.5                | 14.5        |
| 10 | Livestock, equine, poultry and meat processing sector | 3.5                 | 3.5                   | 3.5               | 3.5                | 14.0        |
| 11 | Chemicals sector                                      | 4.0                 | 4.0                   | 3.0               | 3.0                | 14.0        |
| 12 | Machinery/machine tools sector                        | 4.0                 | 3.0                   | 3.0               | 3.0                | 13.0        |
| 13 | Aluminum sector                                       | 4.0                 | 3.0                   | 3.0               | 3.0                | 13.0        |
| 14 | Plastics sector                                       | 4.0                 | 3.0                   | 3.0               | 3.0                | 13.0        |
| 15 | Computer and electronics sector                       | 4.0                 | 3.0                   | 3.0               | 3.0                | 13.0        |
| 16 | Combined heat and power                               | 4.0                 | 3.0                   | 4.0               | 3.0                | 14.0        |
| 17 | Other onsite generation (conventional)                | 3.0                 | 3.0                   | 3.0               | 3.0                | 12.0        |
| 18 | Photovoltaics   | 2.5                 | 3.0                   | 3.0               | 2.0                | 10.5        |
| 19 | Wind turbine  | 2.5                 | 3.0                   | 3.0               | 3.0                | 11.5        |
| 20 | LED Traffic signals                                   | 4.5                 | 2.5                   | 4.0               | 4.0                | 15.0        |
| 21 | <b>Water/Wastewater Treatment facilities</b>          | 4.0                 | 4.0                   | 3.5               | 4.0                | <b>15.5</b> |
| 22 | Conservation Voltage Reduction                        | 3.0                 | 3.0                   | 3.0               | 4.0                | 13.0        |



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**SECOND DATA REQUEST RESPONSE**

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**REQUEST 18**

**RESPONSIBLE PERSON: John F. Farley**

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

**Request 18.** Refer to pages DSM-5 and DSM-10 in the DSM Technical Appendix of the IRP, specifically, EKPC's qualitative screening criteria.

**Request 18a.** Explain whether the criteria were developed by EKPC independent of any reliance on similar criteria developed by other utilities, energy service providers, DSM specialists, etc.

**Response 18a.** The qualitative screening criteria were originally developed for use in the 2006 EKPC IRP. At that time, EKPC did review similar criteria used by other utilities.

**Request 18b.** Describe how EKPC determined that 15 out of a possible 20 was the score required in order for a measure to pass the qualitative screening.

**Response 18b.** The cutoff score is a matter of judgment. EKPC decided that a measure should be scoring better than mediocre (all 3s), and that (A) three 4s and one 3, or (B) one 5, one 4, and two 3s were examples of minimum scores below which a measure should not pass qualitative screening.

**Request 18c.** Identify the individuals at EKPC who conduct the qualitative screening, provide the relevant portions of their backgrounds that make them qualified to conduct the screening, and provide a general description of the steps and/or procedures that constitute the qualitative screening process.

**Response 18c.** Many individuals participated in the qualitative screening of the programs. John Farley, the primary consultant working with EKPC on these analyses, completed a screening form. Mr. Farley has 25 years of experience in the planning, design, implementation, and evaluation of DSM programs. In addition to the consultant, EKPC experts participated in the screening, including: Senior Vice President of Power Supply, Director of Power Supply Planning, Member Services Manager, Resource Planning Manager, Manager and Senior Engineer of Envision Services (a group that specializes in commercial and industrial load usage), and the Energy Advisors at EKPC as well as different member systems' Energy Advisors. All of these individuals have the knowledge and experience to provide input concerning these programs.

There is a general description of the steps/procedures that constitute the qualitative screening process in the DSM Technical Appendix. The steps are:

1. Develop a comprehensive list of DSM measures to consider.
2. Develop the criteria to screen the DSM measures.
3. Provide the list of measures, and the criteria, to the professionals who score the measures according to the criteria.
4. Tally the results and provide final scores for each measure.
5. Screen the measures based on a cutoff score.





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**REQUEST 19**

**RESPONSIBLE PERSON: John F. Farley**

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

**Request 19.** Refer to pages 1 of 26 through 26 of 26 of Exhibit DSM-3. For each new DSM program, provide a detailed explanation of how the projected participation levels were determined.

**Response 19.** The projected participation level targets for each new DSM program are presented on each page of exhibit DSM-3 under column heading 'Source'. The targets are based on consultant's expertise in industry data to determine the share of the available market, and that is combined with the estimated size of the market.



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**REQUEST 20**

**RESPONSIBLE PERSON: John F. Farley**

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

**Request 20.** Refer to pages 1 of 23 through 9 of 23 in Exhibit DSM-7. Explain why the number of participants and the energy and demand impacts of all the existing DSM programs are reflected at levels that remain fixed for the entire 15-year forecast period ending in 2024.

**Response 20.** The reason why the number of participants and the load impacts of all the existing DSM programs show fixed levels in this Exhibit 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.



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**REQUEST 21**

**RESPONSIBLE PERSON: John F. Farley**

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

**Request 21.** Refer to pages 12 of 23 through 23 of 23 of Exhibit DSM-7. Explain why, for several of the new DSM programs, the number of participants and/or the energy and demand impacts reach a plateau within a few years and either remain at that level or decline over the remainder of the 15-year forecast period. Provide individual responses addressing each of the new programs.

**Response 21.** The general answer is the relationship between the program implementation period and the lifetime of the measure savings. The program implementation period refers to the number of years that the program is adding new participants. The lifetime of the measure savings refers to the number of years that the measure savings for any one participant persist. Programs with short implementation periods will see a leveling off sooner than programs with longer implementation periods. Programs with short savings lifetimes and short implementation periods will see a decline in the latter years of the forecast period.

The individual program implementation periods (new participants) and measure savings lifetimes appear in Table 8.(3) (e)(2) – 2 on page 8-20 of the IRP.



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REQUEST 22

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

**Request 22.** Refer to the Load Forecast Technical Appendix, Table 1-4, page 9.

**Request 22a.** Define Office Use (MWh) shown in column 3.

**Response 22a.** 'Office Use' refers to the sum of the energy used for the member system buildings if served by EKPC.

**Request 22b.** Define % Loss in column 4 and explain how it is calculated.

**Response 22b.** The % Loss column represents the total distribution losses of the member systems. The calculation is as follows:

$\Sigma$  EKPC Sales to Members (Column 5)      **minus**       $\Sigma$  Member System Total Retail Sales (Column 2)      **minus**       $\Sigma$  Office Use (Column 3)

**divided by**

$\left( \Sigma \text{ EKPC Sales to Members (Column 5)} \right)$

**multiplied by 100.**

**Request 22c.** Explain how EKPC Sales to Members in column 5 is calculated.

**Response 22c.** EKPC Sales to Members is not calculated. It is taken from member distribution cooperatives' RUS Form 7, Part O, Power Requirements Database, line 15.

**Request 22d.** Summing columns 5 and 6 and adding in the transmission losses percentage in column 7 does not equal the amount for Total System Requirements in column 8. Explain how Total System Requirements is calculated.

**Response 22d.** The Total System Requirements for history is not calculated. It is reported on RUS Form 12. If calculating this based on the losses shown in the table, there are rounding issues resulting in the difference. In 2005, for example, the calculated loss value is 3.798% instead of the 3.8%. This results in a 169 MWh variance. For the forecast, total requirements are developed using a software modeling package, MetrixLT. An assumption about future transmission loss based on the historical trend and internal input with regard to system upgrades is applied. After making adjustments for distribution office use and EKPC office use, the resulting total requirements is different by 0.1%.





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**REQUEST 23**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 23.** Refer to the Load Forecast Technical Appendix, Section 3.0, at page 19. Over the forecast period, explain whether all new households with electric heat are assumed to install the most efficient HVAC equipment and whether this efficiency improvement is included in the estimated 500,000 MWh decrease in residential sales.

**Response 23.** Yes. The forecast assumes new households will install HVAC and household appliances that meet the DOE Efficiency standards for any given year. The forecast reflects improvements in these efficiencies throughout the forecast period as estimated by the Energy Information Administration (EIA). These are reflected in the 500,000 MWh decrease.



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**REQUEST 24**

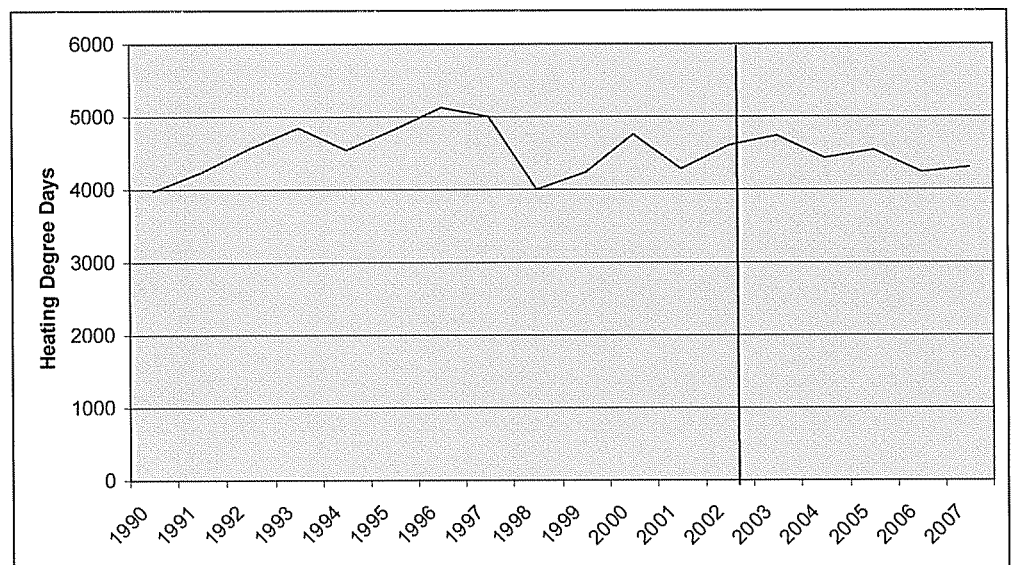
**RESPONSIBLE PERSON:** Julia J. Tucker

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

**Request 24.** Refer to the Load Forecast Technical Appendix, Section 3, Figure 3-5 on page 23. The annual system load factor appears to be much less variable from 2003 - 2007 than in previous years. Provide an explanation for the apparent decrease in load factor variability.

**Response 24.** The overall winter seasons for the years 2003 to 2007 have been mild. Since the winters have been milder than the previous 10 years, and given EKPC is a winter peaker, the load factor has not been as variable for the last 5 years.

| Year | Heating Degree Days |
|------|---------------------|
| 1990 | 3973                |
| 1991 | 4245                |
| 1992 | 4556                |
| 1993 | 4855                |
| 1994 | 4553                |
| 1995 | 4833                |
| 1996 | 5135                |
| 1997 | 5001                |
| 1998 | 4006                |
| 1999 | 4246                |
| 2000 | 4757                |
| 2001 | 4288                |
| 2002 | 4602                |
| 2003 | 4736                |
| 2004 | 4441                |
| 2005 | 4547                |
| 2006 | 4248                |
| 2007 | 4303                |



1990 to 2007 Standard Deviation = 328  
 2003 to 2007 Standard Deviation = 196



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**REQUEST 25**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 25.** Refer to the Load Forecast Technical Appendix, Section 3.0 and the IRP Section 7(2)(g) at page 7-4 and Section 8(3)(e) at pages 8-17 through 8-43. Aside from the direct load control program's winter and summer peak reductions referenced on page 28 in the Technical Appendix, there is no discussion of how DSM programs have been included in either the Total System Requirements or peak Demand Forecasts or how the programs may affect the forecasts. Provide a detailed explanation of how the results of EKPC's DSM programs have been modeled and included in the total system requirements and peak demand forecasts at each stage of the forecasting process.

**Response 25.** The total requirements reported in the Load Forecast Technical Appendix represent the collective load needed by the EKPC system in order to supply distribution cooperative customers. Existing DSM programs and the impacts listed on pages 8-21 through 8-31 of the IRP document have been occurring for many years. The impacts of these are in load history and are assumed to continue at the same trend as history. Of these, the DLC program is the most recent offering and is very expansive in its scope. A formal implementation plan is in place. All member systems are participating and have goals for participation for the implementation period, the next 5 years. Therefore, the DLC program is treated as an existing program and the impacts are

reflected in the Total Requirements reported in the Load Forecast. New programs listed on pages 8-32 through 8-43 of the IRP document are in the initial phases of planning for implementation. Cost benefit analyses of these programs show there is a savings to EKPC to put these programs in place and avoid building generation. Therefore, these are included in the production modeling and are considered a power supply option. Load impacts are reflected in this modeling and are shown on page 5-8 of the IRP document.





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**REQUEST 26**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 26.** Refer to the Load Forecast Technical Appendix, Sections 4.0 and 5.0. It does not appear that greenhouse gas emission (GHG) constraints have been included in any of the forecasts.

**Request 26a.** Explain how GHG constraints have been included in any of the base case forecasts.

**Response 26a.** GHG constraints have not been added in any of the base case forecasts.

**Request 26b.** Provide a general discussion of the sensitivity of the regional economic model results to an increase in the price of electricity that might occur if GHG constraints were to be implemented.

**Response 26b.** If GHG constraints are implemented, as proposed in the current Waxman-Markey legislation, the EKPC member consumers could see a 10-15% increase in their electric prices. Such an increase will tend to reduce member consumer consumption and will deter member cooperatives from being able to attract new business into their regions.

**Request 26c.** Provide a specific discussion of the sensitivity of commercial and industrial customers as employers in the region to increases in the price of electricity.

**Response 26c.** Kentucky's economic development has historically focused on the manufacturing industry. As a consequence, the state has a relatively high number of manufacturing companies in the state and EKPC member systems serve several manufacturing plants. As the price of electricity increases, holding everything else constant, the relative competitiveness of Kentucky manufacturing declines, and employment will tend to decline.



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**REQUEST 27**

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

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

**Request 27.**           Refer to the Load Forecast Technical Appendix, Section 8.0, and the IRP at pages 7-11 and 7-12. It does not appear that GHG constraints have been included in any of the peak demand or scenario forecasts.

**Request 27a.**           Explain how GHG constraints have been included or, if not, could be included in any of these forecasts or analyzed separately in another scenario.

**Response 27a.**           GHG constraints have not been included in the load forecast scenarios. The GHG constraints or costs have been modeled in the production costing analysis portion of the IRP. The load forecast would only reflect the GHG constraints via increased costs to member consumers as an input into developing the load forecast. That step has not been completed at this time.

**Request 27b.**           Provide a discussion of the sensitivity of the peak demand forecasts and the scenario forecasts to an increase in the price of electricity due to GHG constraints.

**Response 27b.** Peak demand and energy are positively correlated. In general, as electricity prices increase, consumption decreases, resulting in lower energy use as well as lower peak demands.



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**REQUEST 28**

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

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

**Request 28.**           Refer to the Load Forecast Technical Appendix, Section 8.3, pages 76-77 and page 7-12 of the IRP. Clarify whether Case 2 should refer to “mild weather” and “lower loads.”

**Response 28.**           Page 77, Case 2 should read ‘Most probable economic assumptions with mild weather causing lower loads’.





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**REQUEST 29**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 29.** Explain how EKPC has factored current and future technology improvements into its long-term plan to provide electric service more economically, efficiently and reliably, with better environmental performance.

**Response 29.** EKPC is the only utility in the state of Kentucky that utilizes the Circulating Fluidized Bed Boiler technology for coal burning plants. EKPC has two such units in operation at Spurlock Station near Maysville, KY. Those plants meet and/or exceed Maximum Achievable Control Technology (“MACT”) standards today, ahead of when it would be required. EKPC has installed FGD, or scrubber, technology, as well as Wet Electrostatic Precipitators (“WESP”), at both Spurlock Units 1 and 2. The addition of these technologies has significantly improved the environmental performance of these units. They are able to meet the strictest environmental compliance requirements. Spurlock Station houses over 70% of EKPC’s coal fired generation. An air quality control system will be added to the Cooper 2 generating unit in 2012, also increasing its environmental compliance capabilities. Additionally, EKPC is currently adding two General Electric LMS100 combustion turbines at the Smith site. These units are highly efficient gas turbines utilizing state of the art technology.



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**REQUEST 30**

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

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

**Request 30.** Describe EKPC's efforts to establish a fuel mix diversification policy.

**Response 30.** EKPC currently has a fuel mix diversification policy and strategy in place. Based on EKPC's policy and strategy, EKPC will evaluate the source and location of fuel on any purchase. Also, EKPC will procure its coal requirements through a diversity of long-term and short-term contracts as well as spot deliveries. These quantities will be larger in the near term with decreasing quantities over time. The mix will have staggered expiration dates, and external factors may change the mix. Fuel oil purchases will typically be purchased on the spot market based on limited storage capabilities. Natural gas will be purchased on the spot market based on the variable usage of the combustion turbines. Alternative/renewable fuels will be evaluated on an ongoing basis to determine their economic benefit as well as their environmental compliance benefit.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09**

**REQUEST 31**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 31.** Refer to page 8-13 of EKPC's IRP. What is the actual or estimated capacity associated with the 14 potential renewable energy projects to be located in Kentucky.

**Response 31.** The 14 proposals that were for projects to be located in Kentucky added up to a total of 744.6 MW of proposed capacity. Those numbers have not been verified by EKPC.



**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC CASE NO. 2009-00106**

**SECOND DATA REQUEST RESPONSE**

**COMMISSION STAFF'S SECOND DATA REQUEST DATED 07/24/09  
REQUEST 32**

**RESPONSIBLE PERSON: Craig A. Johnson**

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

**Request 32.** Refer to pages 8-2 and 8-3 of EKPC's IRP regarding the Maintaining Electrical and Generating Equipment Reliability ("MEAGER") program utilized to assess and analyze the fitness of EKPC's generating facilities and equipment and the most cost-effective means of maintaining and operating those facilities. Explain if the MEAGER program is also used by other utilities in Kentucky.

**Response 32.** The MEAGER program was developed by EKPC. EKPC does not know which long-term planning tool is used by other utilities in Kentucky.