

RECEIVED

March 31, 2011

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PUBLIC SERVICE  
COMMISSION

Mr. Jeff Derouen  
Executive Director  
Kentucky Public Service Commission  
211 Sower Boulevard  
P.O. Box 615  
Frankfort, Kentucky 40602-0615

Re: Annual Resource Assessment for East Kentucky Power Cooperative, Inc.  
(Administrative Case No. 387) and FERC Form No. 1: Annual Report of Major Electric  
Utilities, Licensees and Others

Dear Mr. Derouen:

Pursuant to the Commission's Order dated October 7, 2005 in Administrative Case No.  
387, please find enclosed for filing with the Commission an original and ten copies of the  
2010 Annual Resource Assessment for East Kentucky Power Cooperative, Inc. ("EKPC")

Also enclosed for filing is one signed copy of the FERC Form No. 1: Annual Report of  
Major Electric Utilities, Licensees and Others of EKPC.

If you have any questions, please call me.

Very truly yours,



Ann F. Wood  
Director, Regulatory Services

Enclosures

**EAST KENTUCKY POWER COOPERATIVE, INC.**

**UPDATED INFORMATION TO BE FILED ANNUALLY AS SUPPLEMENT TO THE  
ANNUAL REPORT**

**AS ORDERED on October 7, 2005 in the CLOSED PSC ADMINISTRATIVE CASE 387**

**PUBLIC SERVICE COMMISSION'S REQUEST DATED 12/20/01**

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

**In the Matter of:**

**A REVIEW OF THE ADEQUACY OF            )**  
**KENTUCKY'S GENERATION                )** **ADMINISTRATIVE**  
**CAPACITY AND TRANSMISSION        )** **CASE NO. 387**  
**SYSTEM                                    )**

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

A REVIEW OF THE ADEQUACY	)	
OF KENTUCKY'S GENERATION	)	PSC ADMINISTRATIVE
CAPACITY AND TRANSMISSION	)	CASE NO. 387
SYSTEM	)	

CERTIFICATE

STATE OF KENTUCKY )  
 )  
 COUNTY OF CLARK )

Darrin W. Adams, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission in the above-referenced case dated December 20, 2001, 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.

Darrin Adams

Subscribed and sworn before me on this 31<sup>st</sup> day of March, 2011.

Greg M. Wilcox  
 Notary Public

MY COMMISSION EXPIRES NOVEMBER 30, 2013  
 NOTARY ID #409352

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

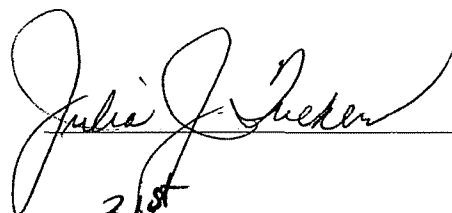
In the Matter of:

A REVIEW OF THE ADEQUACY	)	
OF KENTUCKY'S GENERATION	)	PSC ADMINISTRATIVE
CAPACITY AND TRANSMISSION	)	CASE NO. 387
SYSTEM	)	

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 in the above-referenced case dated December 20, 2001, 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.



Subscribed and sworn before me on this 3<sup>rd</sup> day of March, 2011.



Notary Public

MY COMMISSION EXPIRES NOVEMBER 30, 2013  
 NOTARY ID #409352

**EAST KENTUCKY POWER COOPERATIVE, INC.**

**PSC ADMINISTRATIVE CASE 387**

**PUBLIC SERVICE COMMISSION'S REQUEST DATED 12/20/01**

East Kentucky Power Cooperative, Inc. (EKPC) hereby submits responses to the information requests contained in Appendix G to the Order of the Public Service Commission ("PSC") in this case dated December 20, 2001, as subsequently revised by Orders dated March 29, 2004 and October 7, 2005. Each response with its associated supportive reference materials is individually tabbed.

The requests listed below, which were originally contained in Appendix G of the Commission's Order dated December 20, 2001, are no longer required pursuant to the Commission's Order of March 29, 2004, amending the previous Order.

Request No. 1

Request No. 2

Request No. 5

Request No. 9

Request No. 10

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC ADMINISTRATIVE CASE NO. 387**  
**ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 3**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 3.** Actual and weather-normalized coincident peak demands for the just completed calendar year. Demands should be disaggregated into (a) native load demand (firm and non-firm) and (b) off-system demand (firm and non-firm).

**Response 3a.**

<b>Monthly Native Load Peak Demands for 2010</b>		
	<b>Actual (Firm and Non-Firm) (MW)</b>	<b>Weather Adjusted (Firm and Non-Firm) (MW)</b>
January	2,868	3,012
February	2,684	2,733
March	2,313	2,346
April	1,670	1,716
May	1,919	1,912
June	2,277	2,277
July	2,260	2,261
August	2,443	2,345
September	2,131	2,090
October	1,562	1,577
November	1,958	2,012
December	2,870	2,856

**Response 3b.** EKPC had no off-system demand obligations during the calendar year 2010.

**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 4**

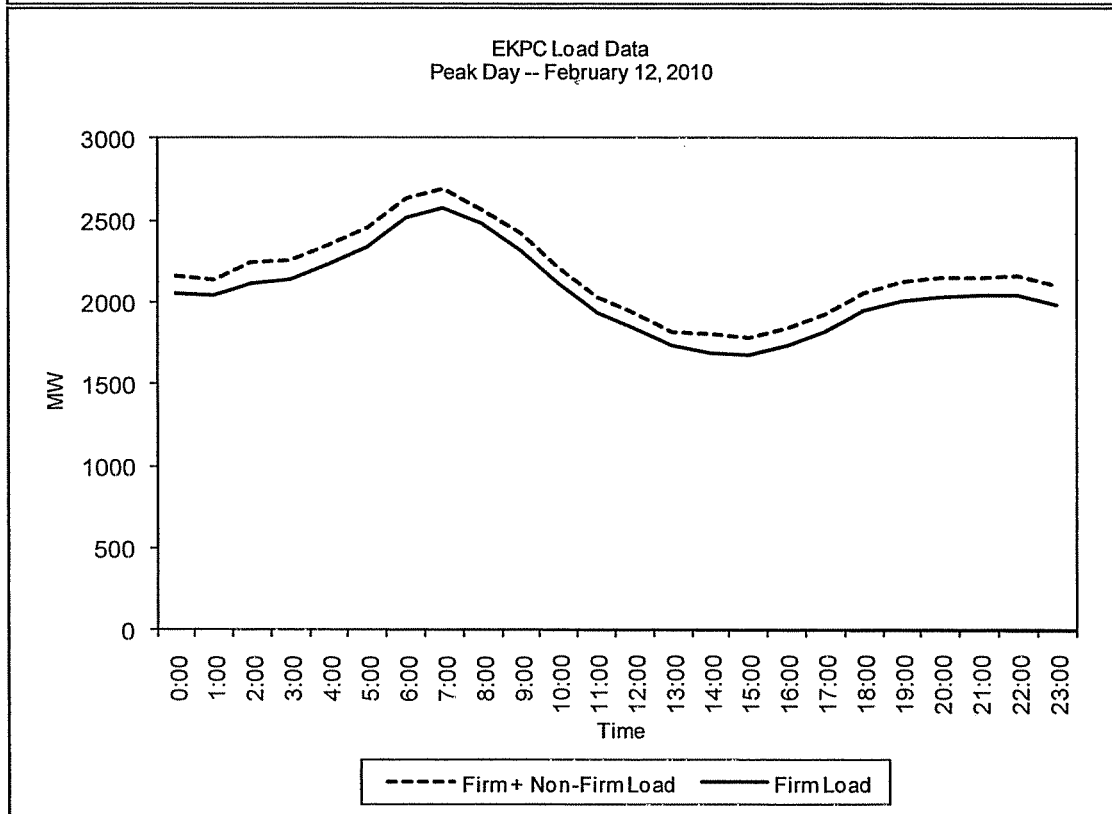
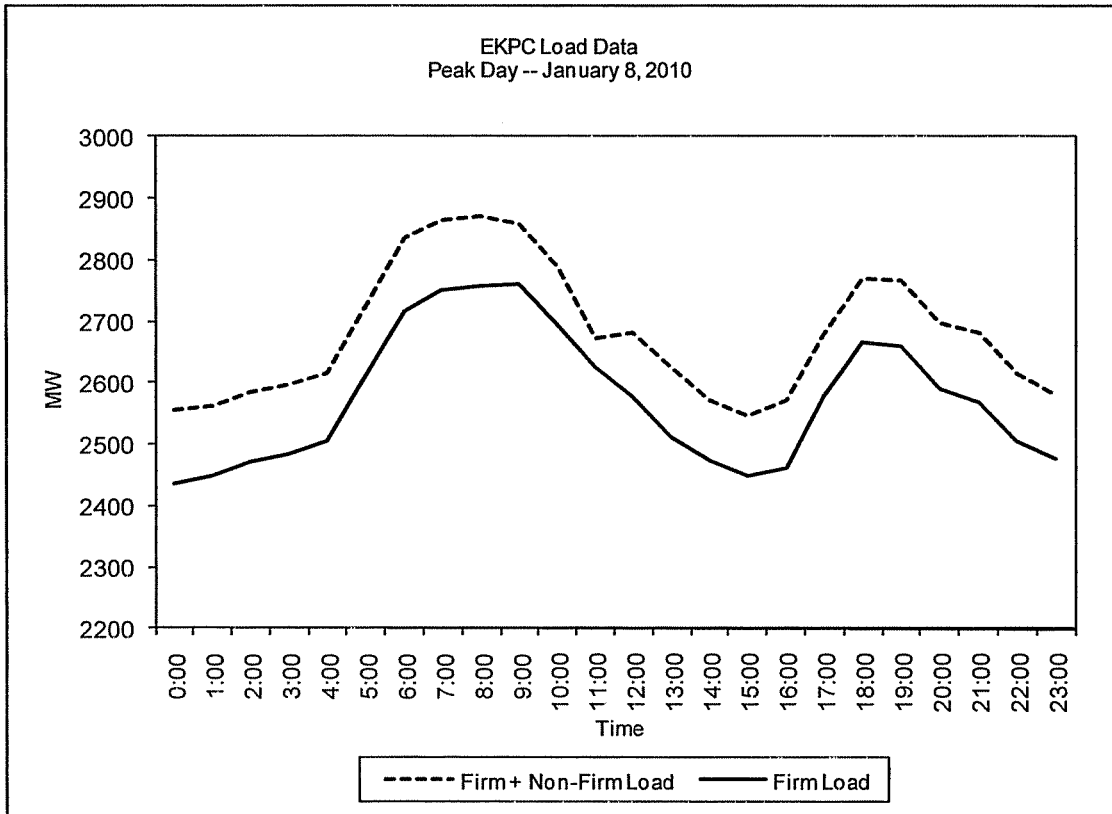
**RESPONSIBLE PERSON: Julia J. Tucker**

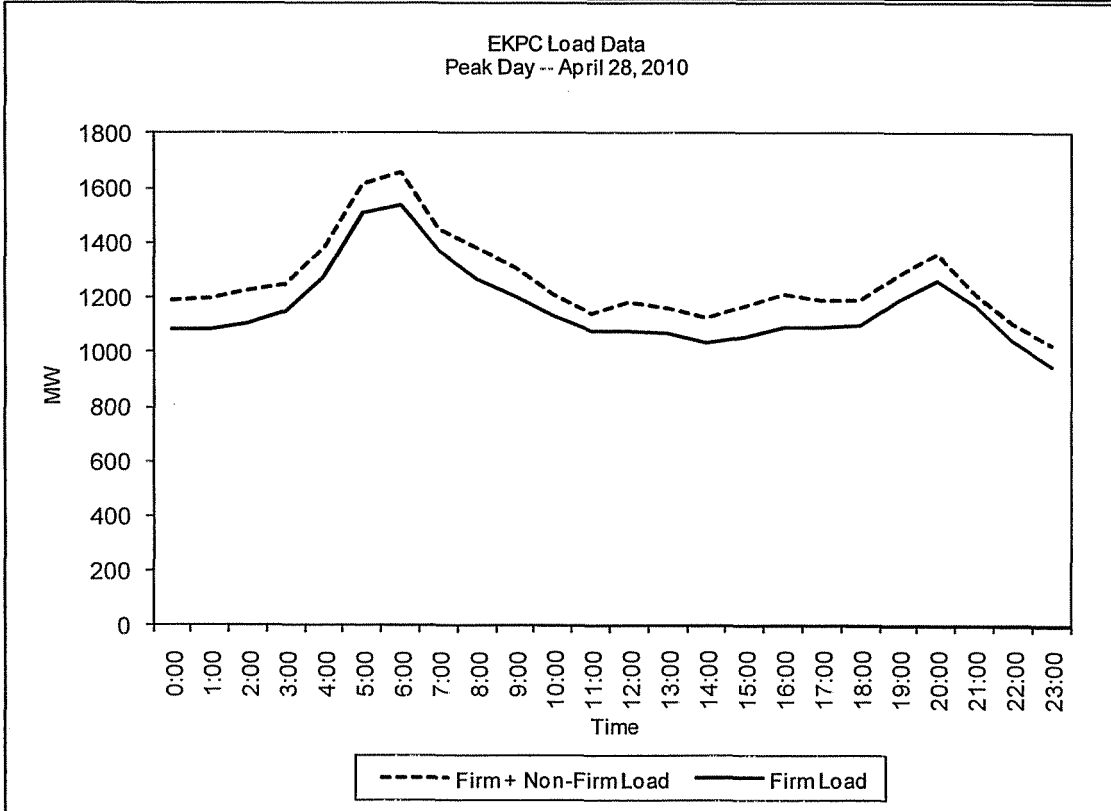
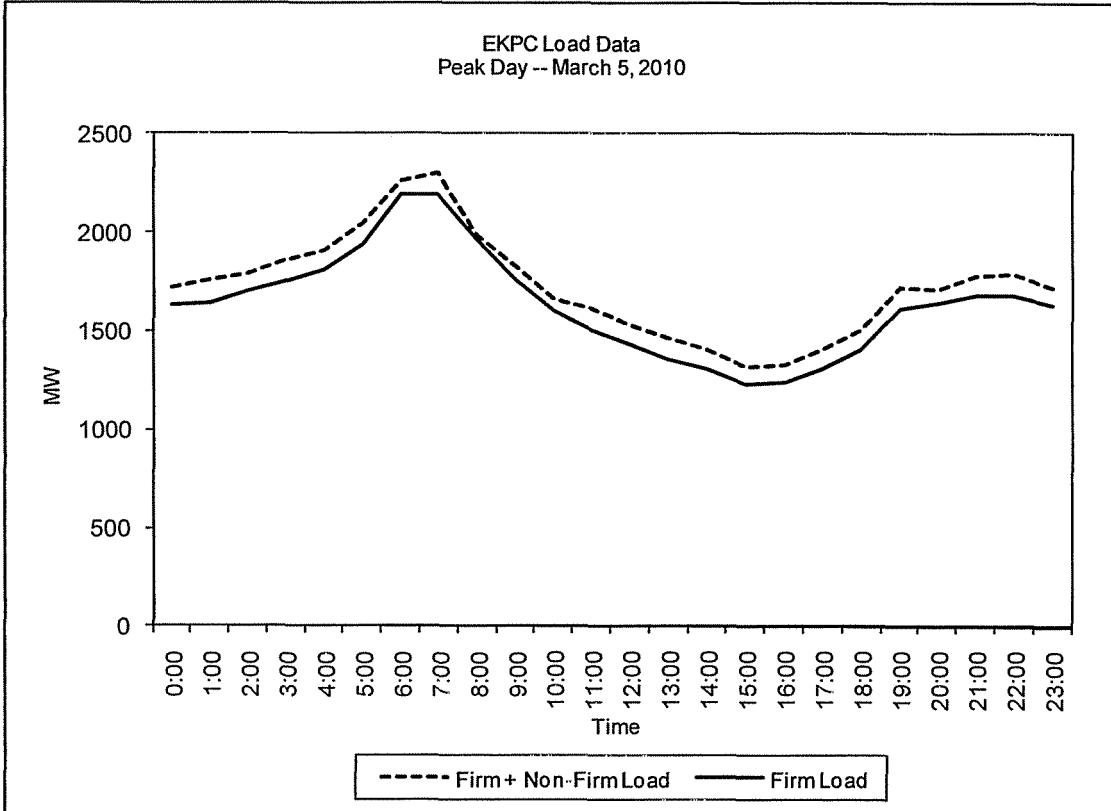
**COMPANY: East Kentucky Power Cooperative, Inc.**

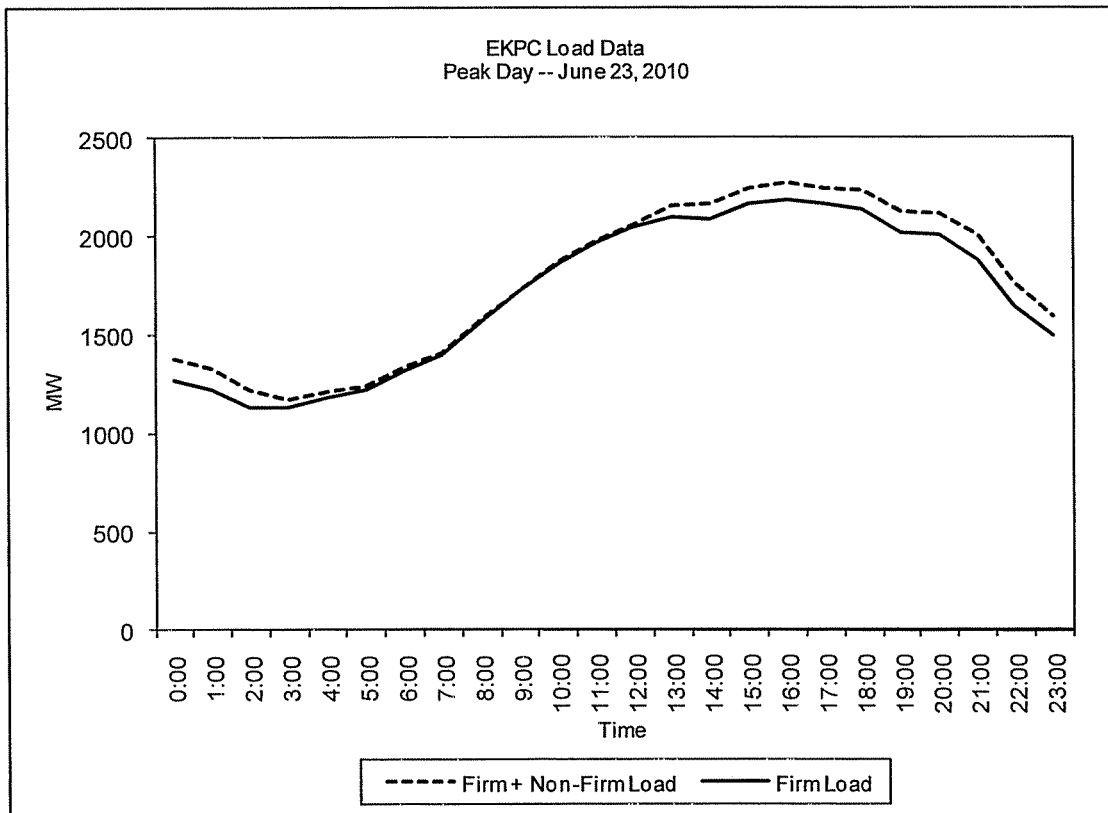
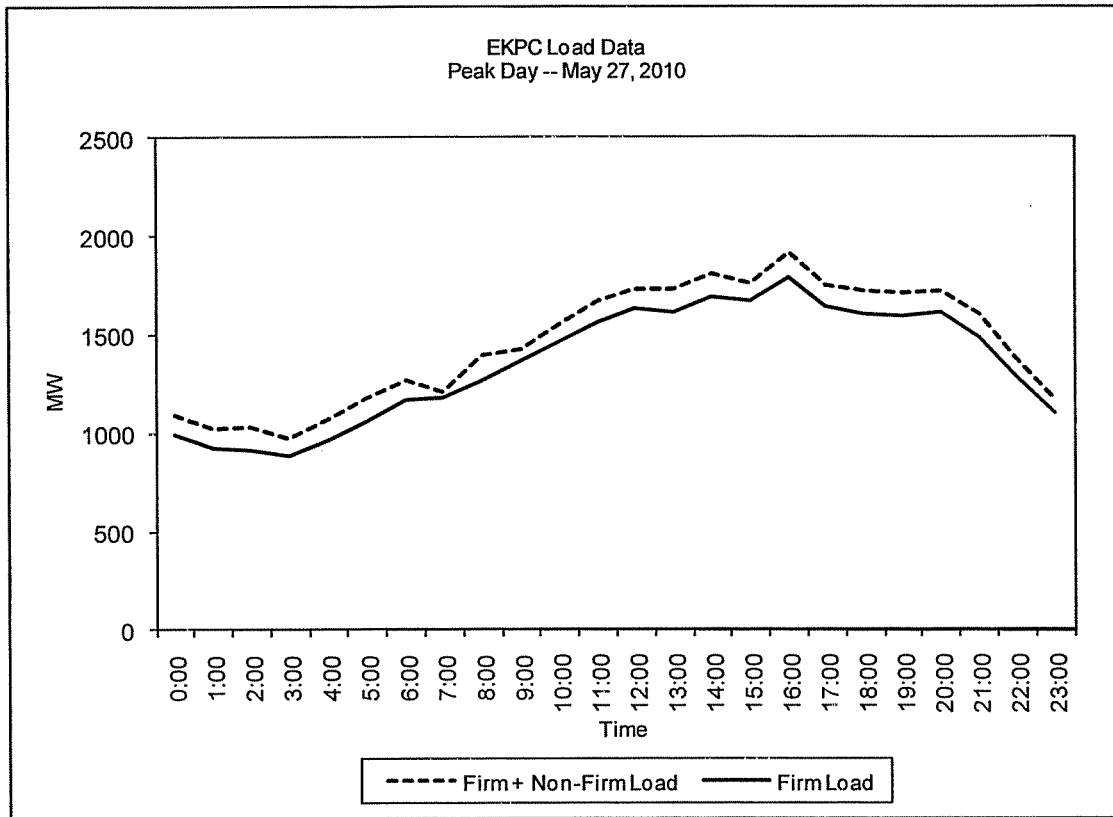
**Request 4.** Load shape curves that show actual peak demands and weather-normalized peak demands (native load demand and total demand) on a monthly basis for the just completed calendar year.

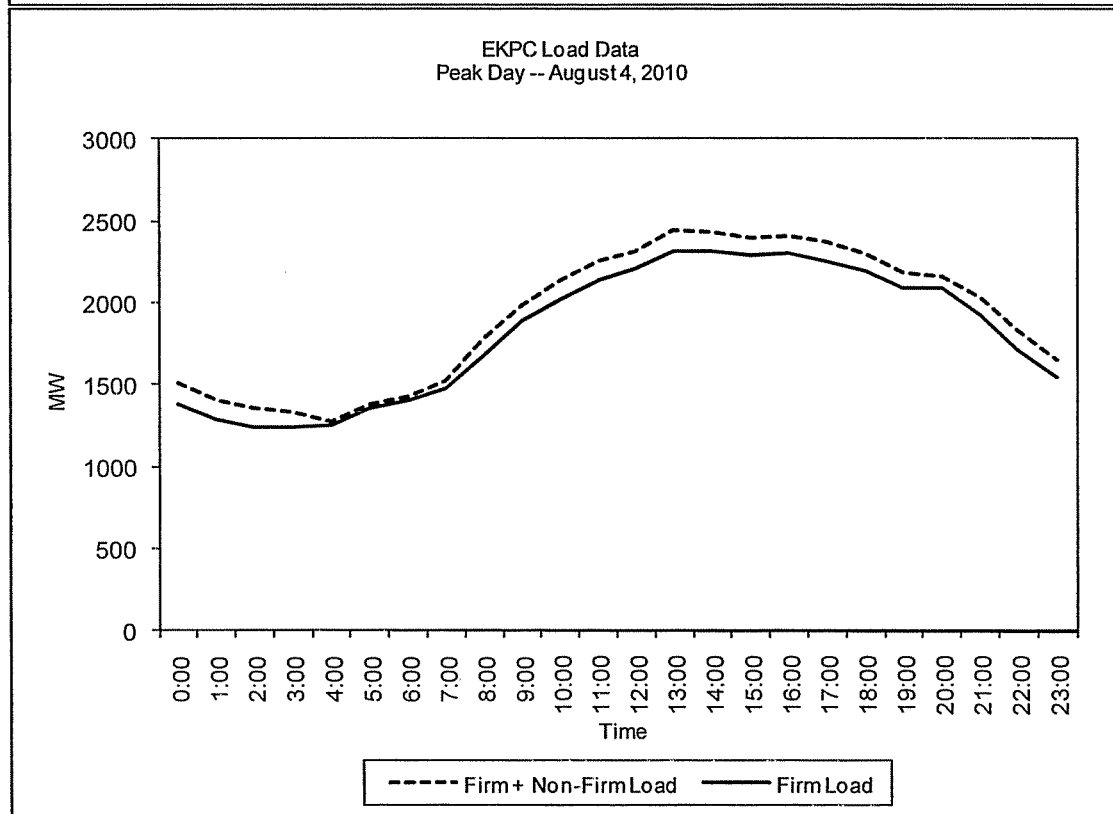
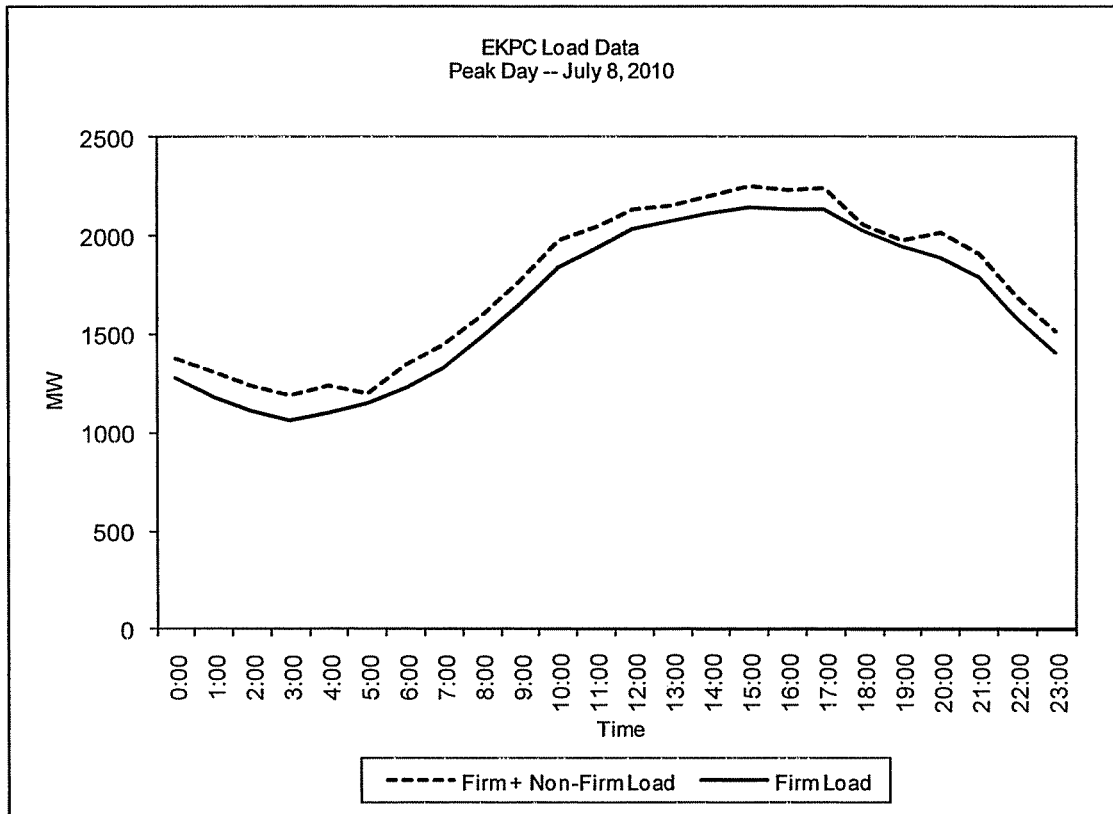
**Response 4.** Actual monthly peak day load shapes are presented on pages 2 through 7 of this response. EKPC makes an analysis to weather normalize the peak hour but EKPC does not weather adjust the peak day load shapes.

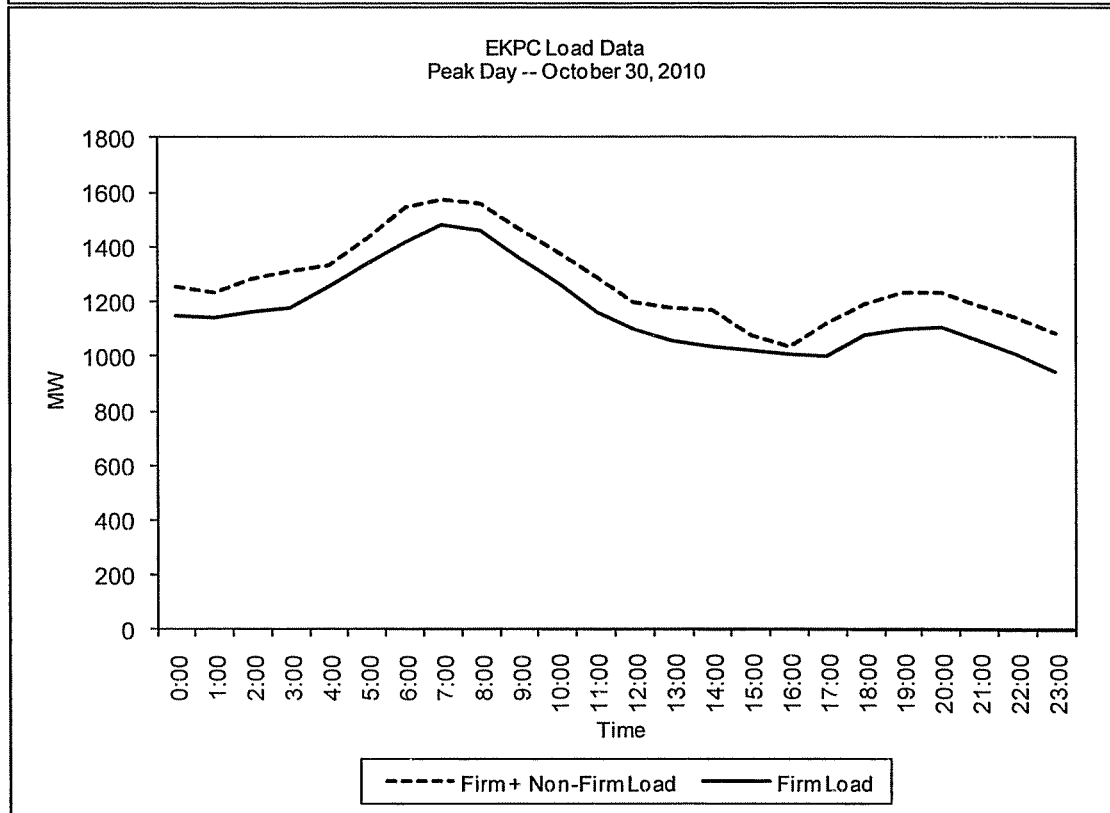
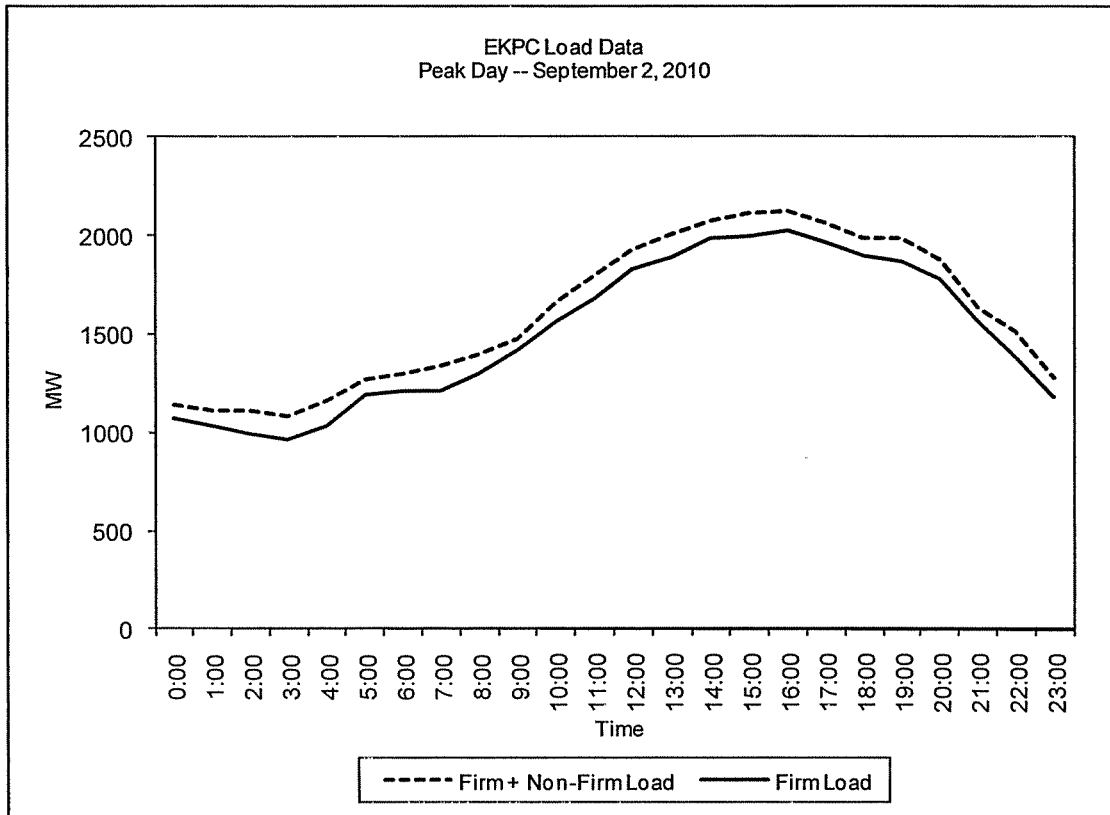


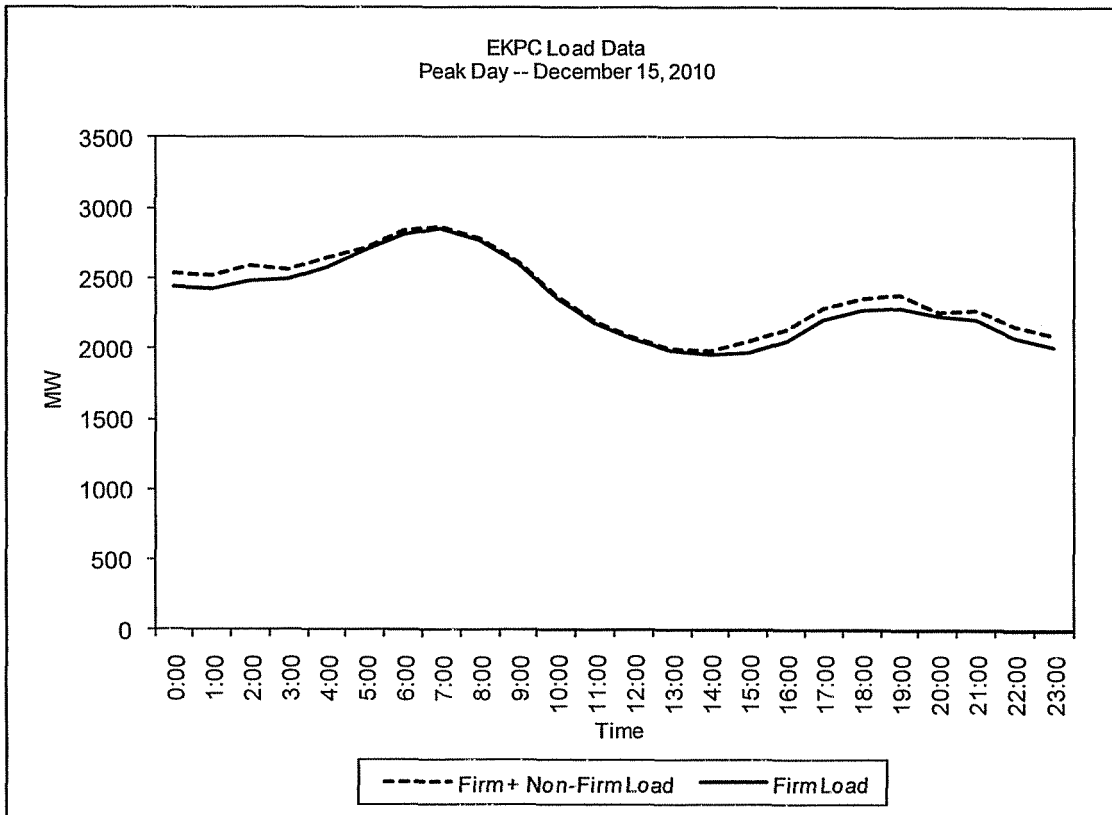
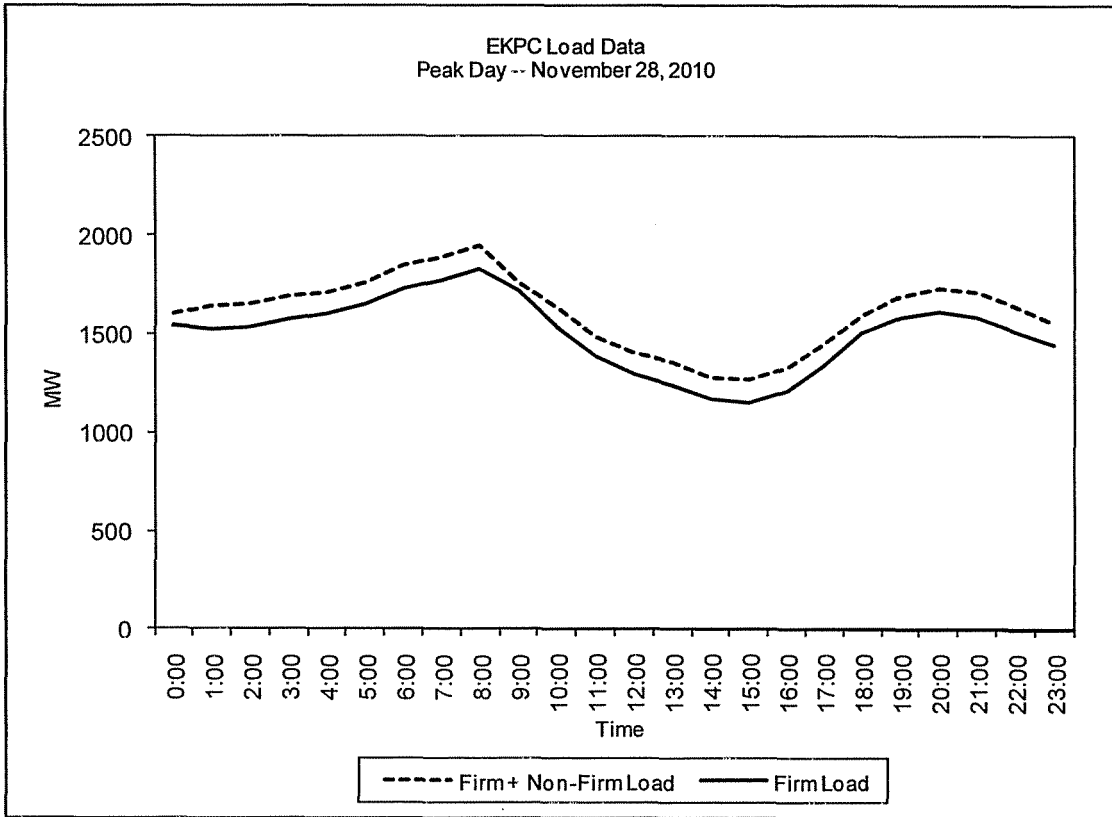












**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC ADMINISTRATIVE CASE NO. 387**  
**ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 6**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 6.** Based on the most recent demand forecast, the base case demand and energy forecasts and high case demand and energy forecasts for the current year and the following four years. The information should be disaggregated into (a) native load (firm and non-firm demand) and (b) off-system load (both firm and non-firm demand).

**Response 6a.** EKPC prepares a high case and low case forecast to bracket its base case forecast. The ranges are shown in the table below. These numbers are firm native load only. EKPC does not prepare range forecasts for non-firm native load.

Total Winter Peak Demand (MW)			Total Summer Peak Demand (MW)			Total Requirements (MWh)					
Season	Low Case	Base Case	High Case	Year	Low Case	Base Case	High Case	Year	Low Case	Base Case	High Case
2010-11	2,891	3,018	3,174	2011	2,129	2,259	2,333	2011	12,153,322	12,891,117	13,660,364
2011-12	2,872	3,053	3,202	2012	2,117	2,294	2,359	2012	12,099,554	13,080,545	13,806,940
2012-13	2,871	3,087	3,254	2013	2,116	2,325	2,401	2013	12,041,142	13,206,274	13,962,232
2013-14	2,891	3,137	3,331	2014	2,125	2,363	2,455	2014	12,101,620	14,427,584	14,258,591
2014-15	2,907	3,191	3,406	2015	2,134	2,399	2,510	2015	12,155,375	13,652,549	14,550,739

**Response 6b.** EKPC is projecting no off-system demands.

**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 7**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 7.** The target reserve margin currently used for planning purposes, stated as a percentage of demand. If changed from what was in use in 2001, include a detailed explanation of the change.

**Response 7.** The target reserve margin currently used for planning purposes is 12%.



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 8**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 8.** Projected reserve margins stated in megawatts and as a percentage of demand for the current year and the following 4 years. Identify projected deficits and current plans for addressing these. For each year identify the level of firm capacity purchases projected to meet native load demand.

**Response 8.** The tables below and associated notes show the projected reserve margins, capacity needs, and plans to address the needs.

Year	Reserve Margin (%)		Reserve Margin (MW)		Committed Firm Purchases (MW)		Additional Purchases Needed to Meet Reserve Margin (MW)	
	WIN	SUM	WIN	SUM	WIN	SUM	WIN	SUM
2011	7.0%	20.5%	212	477	150	0	150	0
2012	4.0%	18.9%	124	445	100	0	240	0
2013	3.4%	22.3%	99	525	0	0	260	0
2014	1.9%	20.9%	56	499	0	0	310	0
2015	0.5%	19.7%	11	475	0	0	360	0

Year	Total Firm Purchases (Committed + Needed) Used to Meet Reserve Margin (MW)		Firm Transmission Purchased
	WIN	SUM	
2011	300	0	466
2012	340	0	400
2013	260	0	400
2014	310	0	400
2015	360	0	400

**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/2001**

**REQUEST 11**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 11.** A list that identifies scheduled outages or retirements of generating capacity during the current year and the following four years.

**Response 11.** Please see scheduled outage information below and through page 6 of this response. Please note there are no retirements of generating capacity anticipated through 2014.

**Dale Unit 1**

2011	3 weeks or less
2012	3 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**Dale Unit 2**

2011	3 weeks or less
2012	3 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**Dale Unit 3**

2011	3 weeks or less
2012	3 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**Dale Unit 4**

2011	3 weeks or less
2012	3 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**J.K. Smith CT1**

2011	1 weeks or less
2012	1 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**J.K. Smith CT2**

2011	1 weeks or less
2012	8 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**J.K. Smith CT3**

2011	1 weeks or less
2012	1 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**J.K. Smith CT4**

2011	1 weeks or less
2012	1 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**J.K. Smith CT5**

2011	1 weeks or less
2012	3 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**J.K. Smith CT6**

2011	4 weeks or less
2012	1 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**J.K. Smith CT7**

2011	1 weeks or less
2012	1 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**J.K. Smith CT9**

2011	1 weeks or less
2012	1 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**J.K. Smith CT10**

2011	1 weeks or less
2012	1 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**Cooper 1**

2011	3 weeks or less
2012	1 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**Cooper 2**

2011	5 weeks or less
2012	12 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**Spurlock 1**

2011	5 weeks or less
2012	2 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**Spurlock 2**

2011	2 weeks or less
2012	8 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**Gilbert 3**

2011	4 weeks or less
2012	4 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less

**Spurlock 4**

2011	4 weeks or less
2012	4 weeks or less
2013	4 weeks or less
2014	4 weeks or less
2015	4 weeks or less



**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 12**

**RESPONSIBLE PERSON: Julia J. Tucker**

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

**Request 12.** Identify all planned base load or peaking capacity additions to meet native load requirements over the next 10 years. Show the expected in-service date, size and site for all planned additions. Include additions planned by the utility, as well as those by affiliates, if constructed in Kentucky or intended to meet load in Kentucky.

**Response 12.** Although there is an expectation of additional capacity requirements in the 2016 to 2020 time frame, no specific base load or peaking additions are planned at this time. A long term strategy for meeting capacity needs is being evaluated.

**EAST KENTUCKY POWER COOPERATIVE, INC.**  
**PSC ADMINISTRATIVE CASE NO. 387**  
**ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 13**

**RESPONSIBLE PERSON: Darrin W. Adams**

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

**Request 13.** The following transmission energy data for the just completed calendar year and the forecast for the current year and the following four years:

**Request 13a.** Total energy received from all interconnections and generation sources connected to the transmission system.

**Request 13b.** Total energy delivered to all interconnections on the transmission system.

**Response 13a & 13b.** The total energy received from all interconnections and from generation sources connected to the EKPC transmission system for calendar year 2010 was 23,443,685 MWh. The total energy delivered to all interconnections on the EKPC system was 10,231,792 MWh.

The forecasted total energy requirements for the EKPC system for 2011 through 2015 are as follows:

2011	12,855,553 MWh
2012	13,024,858 MWh
2013	13,124,067 MWh
2014	13,318,597 MWh
2015	13,516,766 MWh

**Request 13c.** Peak load capacity of the transmission system.

**Response 13c.** The transmission capacity of a grid system changes constantly based on factors like generation dispatch, ambient temperature, load characteristics, contingencies, transfers, etc. EKPC's transmission system is planned and constructed to deliver all of its generation resources to its native load delivery points during forecasted normal summer and winter peak load conditions. EKPC's transmission system is also designed to accommodate an outage of a single transmission facility and/or generating unit. Also, EKPC designs its transmission system to deliver its generation resources to its native load delivery points during "extreme" weather conditions (1-in-10 year temperatures) for summer and winter with all facilities in service.

Other than simulation of imports into EKPC to replace an outage of a single generating unit, the transfers used in the EKPC transmission planning process are those modeled in the NERC MMWG models, which are typically the long-term firm transactions known at the time of the development of the models.

Regional transfer studies have identified limits for north to south transfers that range from 0 MW to 5000 MW, depending on the specific source generators, season, etc. The following facilities have been identified in recent studies and/or during actual operating experience as possible limiting facilities on the EKPC transmission system:

- The Blue Lick-Bullitt County 161 kV Circuit (LGEE-EKPC)
- The Lebanon-Marion County 138 kV Circuit (LGEE-EKPC)
- The Marion County 138-161 kV Transformer (EKPC)
- The Spurlock-Kenton 138 kV Circuit (EKPC-LGEE)
- The Summershade-Summershade Tap 161 kV Circuit (TVA-EKPC)
- The Wolf Creek-Russell County 161 kV Circuit (TVA-EKPC)

EKPC has constructed facilities to address some of the limitations that had previously been identified on its transmission system. These facilities include the J.K. Smith-West Garrard 345 kV line, the J.K. Smith-North Clark 345 kV line, the Cranston-Rowan County 138 kV line, and the Marion County 161-138 kV transformer upgrade. EKPC has implemented dynamic ratings on some highly-loaded facilities to increase available capacity based on actual ambient system conditions.

Scheduled north-south transactions routinely exceed the limitations identified in regional transfer studies. These transactions have periodically overloaded EKPC transmission facilities, and moreover, often have the potential to result in overloads in the event of a subsequent contingency.

**Request 13d.** Peak demand for summer and winter seasons on the transmission system.

**Response 13d.**

	<b>Summer</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Date</b>		08/04/10					
<b>Hr.</b>		1400					
<b>Peak Demand (MW)</b>		2,443	2,238	2,263	2,282	2,309	2,334
	<b>Winter</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Date</b>		01/08/10					
<b>Hr.</b>		0900					
<b>Peak Demand (MW)</b>		2,868	2,865*	3,033	3,059	3,101	3,147

\* Represents January 2011 actual winter peak.

**EAST KENTUCKY POWER COOPERATIVE, INC.  
PSC ADMINISTRATIVE CASE NO. 387  
ANNUAL RESOURCE ASSESSMENT FILING**

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01**

**REQUEST 14**

**RESPONSIBLE PERSON: Darrin W. Adams**

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

**Request 14.** Identify all planned transmission capacity additions for the next 10 years. Include the expected in-service date, size and site for all planned additions and identify the transmission need each addition is intended to address.

**Response 14.** EKPC is providing its current transmission expansion plan for the period of 2011-2020. During this period, EKPC expects to make the following transmission improvements for normal system development and load growth to serve native load customers and not to provide for large wholesale power transfers.

- 99 miles of new transmission line (161 kV, 138 kV, and 69 kV)
- 98 miles of transmission line reconductor/rebuild (69 kV)
- 264 miles of transmission line high-temperature upgrades (161 kV and 69 kV)
- 7 new transmission substations or upgrades (520 MVA added)
- 9 new transmission switching stations
- 28 transmission capacitor banks (489 MVAR)
- 14 projects – upgrade terminal facilities
- 12 modifications of existing substations
- 24 system protection upgrades
- 1 miscellaneous project

A detailed list of EKPC's expected transmission facility additions for the 10-year planning horizon (2011-2020) is shown on pages 3 through 11 of this response.

Project Description	Need Date
Operate the Goldbug - KU Wofford 69 kV line normally closed.	06/2011
Construct a 138-69 kV substation at a new site ("Webster Road") located near Richardson distribution substation, looping in DEM's Buffington-Hands 138 kV line. Construct approximately 0.5 miles of 69 kV DC line, using 954 MCM ACSR, to loop the Richardson-Turkey Foot 69 kV Line into the Webster Road Substation. Construct a 69 kV switching substation at Turkey Foot Junction on the Boone County - Stanley Parker 69 kV circuit.	06/2011
Reconfigure the Cooper Station 161 kV bus to provide two main busses and a transfer bus .	06/2011
Re-conductor the Central Hardin-Stephensburg 69 kV, 266.8 MCM line section using 556.5 MCM ACSR/TW conductor.	06/2011
Re-conductor the Horse Cave Jct.-Munfordville KU Jct. 69 kV, 4/0 line using 556.5 MCM ACSR/TW conductor.	06/2011
Change the distance relay setting at Summer Shade (Bullitt Co/TVA Summer Shade line) to 398 MVA minimum.	06/2011
Change the distance relay setting at Three Links Junction (Tyner line) to 74 MVA minimum.	06/2011
Construct a 138-69 kV substation at Hebron. Construct approximately 2 miles of 69 kV line, using 954 MCM ACSR, from the Hebron Substation to Bullittsville.	08/2011
Construct an EKPC-AEP 69 kV switching substation at Index Junction ("Morgan County") connecting EKPC's Index - West Liberty line section with AEP's Morehead-Index line section.	12/2011
Rebuild the Stephensburg 69 kV switching station .	12/2011
Increase the MOT of the Bristow Junction-Richardson Junction 69 kV line section to 167°F.	12/2011
Increase the MOT of the Bullittsville-Burlington Junction 69 kV line section to 167°F.	12/2011
Increase the MOT of the Fort Knox Junction-Rineyville Junction 69 kV line section to 284°F.	12/2011
Increase the MOT of the Knob Lick-McKinney Junction 69 kV line section to 167°F.	12/2011
Increase the MOT of the Lebanon-Lebanon KU Junction 69 kV line section to 167°F.	12/2011
Increase the MOT of the Stephensburg-Upton Junction 69 kV line section to 167°F.	12/2011
Increase the MOT of the Stephensburg Vertrees 69 kV line section to 167°F.	12/2011
Increase the MOT of the Taylorsville-Taylorsville Jct 69 kV line section to 167°F.	12/2011
Increase the MOT of the Treehaven Junction-Van Meter 69 kV line section to 167°F.	12/2011
Install a 25.51 MVAR, 69 kV capacitor bank at Skaggs Substation	12/2011
Boone Relay Replacements 3 @ 69 kV and 2 @ 138 kV	12/2011
Fawkes 138 kV Relay Replacements	12/2011
Pine Knot VBM Replacement	12/2011
Index VBM Replacement	12/2011
West Somerset VBM Replacement	12/2011
Booneville VBM Replacement	12/2011
Cooper 69 & 161 kV Relay Replacements (Transfers & Transformer BU)	12/2011
Spurlock GSU 1 Relay Upgrade (to 487)	12/2011

Project Description	Need Date
Generator DGP Replacement	12/2011
Spurlock 345 kV Breaker Replacement	12/2011
Re-size the Cedar Grove 69 kV, 10.8 MVAR capacitor bank to 20.41 MVAR	06/2012
Construct 9.7 miles of 69 kV line using 954 MCM ACSR from Keith to Owen County. Install a 69 kV switching substation at Penn, and install terminal equipment at the Owen County Substation.	12/2012
Construct a 69 kV switching substation at Hunt Farm Junction.	12/2012
Rebuild the Zachariah 69 kV switching station and add two 69 kV line breakers.	12/2012
Install a new 69 kV breaker at the Magoffin County substation.	12/2012
Install a new 69 kV breaker at the Hope substation.	12/2012
Re-conductor the Clay Village - New Castle 69 kV, 1/0 line section using 556.5 MCM ACSR/TW conductor.	12/2012
Re-conductor the Norwood Junction-Shopville 69 kV, 4/0 line section using 556.5 MCM ACSR/TW conductor.	12/2012
Increase the MOT of the Albany-South Albany 69 kV line section to 167°F.	12/2012
Increase the MOT of the Arkland Jct-Oven Fork Jct 69 kV line section to 167°F.	12/2012
Increase the MOT of the Bluegrass Parkway Junction-Owens Illinois Junction 69 kV line section to 167°F.	12/2012
Increase the MOT of the Booneville-Booneville Junction 69 kV line section to 167°F.	12/2012
Increase the MOT of the Etown EK #1-Tunnel Hill Junction 69 kV line section to 275°F.	12/2012
Increase the MOT of the Glendale-Hodgenville 69 kV line section to 212°F.	12/2012
Increase the MOT of the Helechawa-Sublett Junction 69 kV line section to 167°F.	12/2012
Increase the MOT of the Loretto-Sulphur Creek 69 kV line section to 167°F.	12/2012
Increase the MOT of the Oven Fork-Oven Fork Junction 69 kV line section to 167°F.	12/2012
Increase the MOT of the Richardson Junction-Turkey Foot 69 kV line section to 167°F.	12/2012
Increase the MOT of the Volga-Volga Junction 69 kV line section to 167°F.	12/2012



Project Description	Need Date
Install a 69 kV, 4.59 MVAR capacitor bank at the Cemetery Road Substation	12/2012
Install a 35.72 MVAR, 69 kV capacitor bank at EKPC's Etown #1 Substation.	12/2012
Re-size the Frenchburg and Index 7.2 MVAR capacitor banks back to their original 10.8 MVAR size.	12/2012
Install a 28.06 MVAR, 69 kV capacitor bank at EKPC's Hodgenville Substation.	12/2012
Re-size the Tyner 69 kV, 16.33 MVAR capacitor bank to 26.53 MVAR.	12/2012
Install a 25.51 MVAR, 69 kV capacitor bank at the West London Substation.	12/2012
Install a 12.245 MVAR, 69 kV capacitor bank at Maggard Substation.	12/2012
Increase terminal limits of breaker 814 at Avon Substation to match transformer capability.	12/2012
Replace a 161 kV, 1200A breaker at KU's Pineville substation with a 2000A breaker.	12/2012
Dale - New Control Building & Relay Panels	12/2012
Coburg VBM Replacement	12/2012
Manchester VBM Replacement	12/2012
Lancaster VBM Replacement	12/2012
Argentum 138 kV Relay Replacements	12/2012
Avon 138 kV Relay Replacements (Fayette and Loudon Lines)	12/2012
Shelby County 1-69 kV and 161 kV Relay Replacements	12/2012
Renaker 138 kV Relay Panel Upgrade (Spurlock Line)	12/2012
Cooper 161 kV Relay Panel Upgrade (Denny Line)	12/2012
Denny 161 kV Relay Panel Upgrade (Cooper Line)	12/2012
Construct 12.2 miles of 69 kV line using 556.5 MCM ACSR from the Beckton to Bon Ayr to Cave City substation. Add terminal facilities at the Fox Hollow substation to accommodate this new circuit.	12/2012
Construct a 2.7 mile 69 kV line using 795 MCM from Fox Hollow to Parkway. Serve the Parkway #1 and #2 substations from the new line.	12/2012
Increase the MOT of the Boone County-Boone Distribution 69 kV line section to 284°F.	06/2013
Construct 6.36 miles of 69 kV line using 266.8 MCM ACSR conductor from Oakdale to a tap point near AEP's Jackson substation. AEP adds terminal facilities for this line.	12/2013
Install a 69 kV switching substation at Bonds Mill Junction.	12/2013
Construct 5.6 miles of 69 kV line using 266.8 MCM ACSR conductor from Pine Mountain to a tap point on KU's Bailey Creek-Highsplint 69 kV line. Operate the Bledsoe-Pine Mountain line section in a normally open line by opening switch E50-615 at the Pine Mountain substation. KU adds terminal facilities for this line.	12/2013
Increase the MOT of the Bluegrass Parkway Junction-Woodlawn 69 kV line section to 167°F.	12/2013
Increase the MOT of the Elliottville-Rowan County 69 kV line section to 167°F.	12/2013

Project Description	Need Date
Increase the MOT of the Floyd-Floyd KU Junction 69 kV line section to 167°F.	12/2013
Increase the MOT of the Goose Rock-Garrard Junction- Manchester 69 kV line section to 167°F.	12/2013
Increase the MOT of the Griffin-Griffin Junction 69 kV line section to 167°F.	12/2013
Increase the MOT of the Jellico Creek-Jellico Creek Junction 69 kV line section to 167°F.	12/2013
Increase the MOT of the Keith-Penn 69 kV line section to 167°F.	12/2013
Increase the MOT of the Loretto-South Springfield Junction 69 kV line section to 167°F.	12/2013
Increase the MOT of the Ninevah-Ninevah KU Junction 69 kV line section to 167°F.	12/2013
Increase the MOT of the North Corbin-North Corbin KU Junction 69 kV line section to 167°F.	12/2013
Increase the MOT of the North Springfield-South Springfield Junction 69 kV line section to 167°F.	12/2013
Increase the MOT of the Oakdale-Oakdale Junction 69 kV line section to 167°F.	12/2013
Increase the MOT of the Pelfrey-Pelfrey AEP Junction 69 kV line section to 167°F.	12/2013
Increase the MOT of the South Springfield-South Springfield Junction 69 kV line section to 167°F.	12/2013
Green County 161 kV Relay Replacements (3 Panels)	12/2013
Summersshade 161 kV Relay Replacements (2 Panels)	12/2013
Bullitt County 161 kV Relay Replacements (at least add a SEL on 3 lines)	12/2013
Barren County 161 kV Relay Replacement (Summersshade Line)	12/2013
Construct 12.8 miles of 69 kV line using 954 MCM ACSR from Coburg to Green County. Construct a 69 kV switching substation at Coburg Junction. Install a 69 kV line breaker at Green County Substation.	12/2014
Re-conductor the Brodhead - Three Links Jct. 69 kV, 4/0 line section using 556.5 MCM ACSR/TW conductor.	12/2014
Re-conductor the Headquarters - Millersburg Jct. 69 kV, 4/0 line section using 556.5 MCM ACSR/TW conductor.	12/2014
Increase the MOT of the Big Bone-Big Bone Junction 69 kV line section to 167°F.	12/2014

Project Description	Need Date
Increase the MOT of the Carson-New Liberty 69 kV line section to 167°F.	12/2014
Increase the MOT of the Cave Run-Cave Run KU Junction 69 kV line section to 167°F.	12/2014
Increase the MOT of the Chad-Chad KU Junction 69 kV line section to 167°F.	12/2014
Increase the MOT of the Colesburg-Colesburg Junction 69 kV line section to 167°F.	12/2014
Increase the MOT of the Davis Junction-Fayette 69 kV line section to 248°F.	12/2014
Increase the MOT of the Eberle-Eberle Junction 69 kV line section to 167°F.	12/2014
Increase the MOT of the Liberty Junction-Casey County-Marion County 161 kV line to 167°F.	12/2014
Increase the MOT of the Magnolia-Summersville 69 kV line section to 167°F.	12/2014
Increase the MOT of the Millers Creek-Millers Creek KU Junction 69 kV line section to 167°F.	12/2014
Increase the MOT of the Mount Olive-Mount Olive Junction 69 kV line section to 167°F.	12/2014
Increase the MOT of the Mount Sterling-Reid Village 69 kV line section to 167°F.	12/2014
Increase the MOT of the Oven Fork-Scotia 69 kV line section to 167°F.	12/2014
Increase the MOT of the Pleasant Grove-Pleasant Grove KU Junction 69 kV line section to 212°F.	12/2014
Increase the MOT of the Russell Springs #1-Russell Springs #2 69 kV line section to 167°F.	12/2014
Increase the MOT of the Summersshade EK-Summersshade TVA 69 kV line section to 167°F.	12/2014
Increase the MOT of the Upton-Upton Junction 69 kV line section to 167°F.	12/2014
Increase the MOT of the Zula-Zula Junction 69 kV line section to 167°F.	12/2014
Re-size the Leon 69 kV, 13.2 MVAR capacitor bank to 18.37 MVAR.	12/2014
Install a 28.06 MVAR, 69 kV capacitor bank at Murphysville Substation	12/2014
Purchase a spare 138/69 kV, 150 MVA transformer (use existing spare as replacement for Renaker).	12/2014

Project Description	Need Date
Construct a 69 kV backfeed for the Bronston #1 and #2 substations using 266.8 MCM conductor. Construct 0.25 miles of double circuit line and 2.28 miles of single circuit line.	12/2015
Re-conductor the Baker Lane-Holloway Jct. 69 kV, 266.8 MCM line using 556.5 MCM ACSR/TW conductor.	12/2015
Re-conductor the Cynthiana-Headquarters 69 kV, 1/0 line section using 556.5 MCM ACSR/TW conductor.	12/2015
Change the distance relay setting at Dale (Dale-Powell Co 69 kV line) to 88 MVA minimum.	12/2015
Change the distance relay setting at McCreary County (Denny line) to 90 MVA minimum.	12/2015
Change the distance relay setting at Murphysville (Plumville Line) to 88 MVA minimum.	12/2015
Change the distance relay setting at Murphysville (KU Kenton Line) to 95 MVA minimum.	12/2015
Replace the 4/0 CU #7 jumpers at Russell County (Sewellton Jct. line) with 556.5 ACSR/TW jumpers.	12/2015
Install a 26.53 MVAR, 69 kV capacitor bank at Burlington Substation.	06/2016
Re-size the Nicholasville 69 kV, 19.8 MVAR capacitor bank to 22.96 MVAR.	06/2016
Replace the 100 MVA 161-69 kV transformer bank at Bullitt County substation with a 150 MVA transformer.	12/2016
Construct 3.9 miles of 69 kV line, using 795 MCM ACSR, from Beattyville Distribution to Oakdale Junction. Construct a 69 kV switching substation at Oakdale Junction.	12/2016
Construct a 69 kV switching sub at Munk Junction. Operate the Renaker-Williamstown Line normally closed.	12/2016
Construct a 2nd 69 kV line, using 795 MCM ACSR, from Plumville to Rectorville Junction. Install a 69 kV breaker at Plumville. Serve the Rectorville load on the existing 266.8 MCM line.	12/2016
Re-conductor the Airport Road Junction - Leon 69 kV, 3/0 line section using 556.5 MCM ACSR/TW conductor.	12/2016
Rebuild the Davis-Fayette 69 kV, 266.8 MCM line using DC 138/69 kV, 954/795 MCM ACSR construction.	12/2016
Install a 38.27 MVAR, 69 kV capacitor bank at Nelson County Substation.	12/2016
Change the distance relay setting at Elizabethtown (KU Elizabethtown Line) to 127 MVA minimum.	12/2016
Re-conductor the West Bardstown - West Bardstown Jct 69 kV, 1/0 line using 556.5 MCM ACSR/TW conductor.	06/2017

Project Description	Need Date
Install a 20.41 MVAR, 69 kV capacitor bank at Fox Hollow Substation	06/2017
Construct 5.4 miles of 69 kV line using 266.8 MCM ACSR conductor from Arkland to a tap point on KU's Lynch-Imboden 69 kV line. Operate the new line section normally-open. KU adds terminal facilities for this line.	12/2017
Re-conductor the Boston Junction - Nelson Co 69 kV, 2/0 line section using 556.5 MCM ACSR/TW conductor.	12/2017
Re-conductor Fort Knox Jct- Smithersville Jct 69 kV, 3/0 line section using 556.5 MCM ACSR/TW conductor.	12/2017
Re-conductor the Boston Jct-Colesburg Jct 69 kV, 2/0 line section using 556.5 MCM ACSR/TW conductor.	12/2017
Install a 16.33 MVAR, 69 kV capacitor bank at Homestead Street Substation. Relocate the Slat 20.41 MVAR capacitor bank to Wayne County Substation and re-size it to 28.06 MVAR.	12/2017
Change the distance relay setting at Elizabethtown (KU Rogersville Line) to 102 MVA minimum.	12/2017
Replace the 4/0 CU #7 jumpers at Nelson County (West Bardstown Jct. line) with 556.5 ACSR/TW jumpers.	06/2018
Construct a 161/69 kV substation at a new site ("Clinton County") located between Snow and Upchurch. Construct a 4.5 mile 69 kV line using 954 MCM ACSR between the Snow, Clinton County, and Upchurch substations. Construct a 9 mile, 161 kV line (954 MCM ACSR) from the Clinton County Substation to Wolf Creek, and install 161 kV terminal facilities at Wolf Creek. Operate the Albany-Upchurch Junction 69 kV line in the normally open mode.	12/2018
Re-conductor the Hillsboro-Peasticks 69 kV, 4/0 line section using 556.5 MCM ACSR/TW conductor.	12/2018
Rebuild the Davis-Nicholasville 69 kV, 266.8 MCM line using DC 138/69 kV, 954/795 MCM construction.	12/2018

Project Description	Need Date
Re-conductor the Peasticks-Preston Junction 69 kV, 4/0 line section using 556.5 MCM ACSR/TW conductor.	12/2018
Increase the MOT of the Etown KU-Tharp Junction 69 kV line section to 248°F.	12/2018
Install a 26.53 MVAR, 69 kV capacitor bank at Goddard Substation.	12/2018
Install a 11.225 MVAR, 69 kV capacitor bank at Oven Fork Substation.	12/2018
Install a 24.49 MVAR, 69 kV capacitor bank at Sewellton Junction Substation.	12/2018
Install a 15.31 MVAR, 69 kV capacitor bank at EKPC's Taylorsville Substation.	12/2018
Construct 8.6 miles of 69 kV line using 795 MCM ACSR from Mercer County Industrial Park to Van Arsdell. Construct a 2nd 69 kV line (266.8 MCM ACSR) from Bonds Mill Junction to Powell-Taylor Junction. Install a 69 kV breaker at Bonds Mill Junction. Serve the Powell-Taylor load on the new 266.8 MCM line.	12/2019
Construct a 69 kV switching substation at Phil. Operate the Bass-Creston 69 kV line section normally closed.	12/2019
Construct a 138 kV line from EKPC to AEP Thelma, and a 138/69 kV transformer at EKPC Thelma. Install the necessary terminal facility additions in AEP's Thelma substation.	12/2019
Re-conductor the Hope-Preston Junction 69 kV, 4/0 line section using 556.5 MCM ACSR/TW conductor.	12/2019
Install a 15.31 MVAR, 69 kV capacitor bank at the EKPC Bonds Mill Switching Substation.	12/2019
Install a 10.204 MVAR, 69 kV capacitor bank at Elliottville Substation.	12/2019
Install a 13.78 MVAR, 69 kV capacitor bank at Floyd Substation.	12/2019
Install a 26.53 MVAR, 69 kV capacitor bank at Hinkle Substation.	12/2019
Install a 17.86 MVAR, 69 kV capacitor bank at Hunt Farm Junction Substation.	12/2019
Move the 7.2 MVAR, 69 kV capacitor bank from HT Adams Substation to the Mercer County Industrial Park Substation, and re-size it to 15.31 MVAR.	12/2019
De-activate the 9.184 MVAR, 69 kV capacitor bank at Sinai, following the installation of the 2nd 69 kV line from Bonds Mill Jct to Powell-Taylor Jct.	12/2019
Relocate the Parkway 13.2 MVAR capacitor bank to the planned Bon Ayr distribution substation. Re-size the bank to 14.29 MVAR.	12/2019
Replace the 600/5 bus CT at Bonnieville substation with a CT capable of 105 MVA Winter emergency rating.	06/2020

<b>Project Description</b>	<b>Need Date</b>
Construct a 2nd 69 kV line (954 MCM) from Garrard County to Tommy Gooch. Add a 69 kV breaker at Garrard County Substation. Serve the Tommy Gooch substation radially from Garrard County using the new line.	12/2020
Replace the 100 MVA 138-69 kV transformer bank at Goddard substation with a 150 MVA transformer.	12/2020
Install a 22.96 MVAR, 69 kV capacitor bank at Phil Substation, following the installation of the switching substation at Phil.	12/2020