EAST KENTUCKY POWER COOPERATIVE

March 31, 2016

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).

Dear Executive Director:

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 2015 Annual Resource Assessment for East Kentucky Power Cooperative, Inc. ("EKPC").

Also enclosed, please find a discussion of the price elasticity study commissioned by EKPC pertaining to forecasted demand, energy and reserve margin information provided in the Annual Resource Assessment, as requested in your May 31, 2013 letter to me. Please note that this discussion is identical to the one provided by EKPC to the Commission in filing its 2014 Annual Resource Assessment. The results of this price elasticity summary were employed by EKPC in conducting the sensitivity analysis found in its 2015 Integrated Resource Plan (Case No. 2015-00134).

If you have any questions, please call me.

Very truly yours,

Patrick C. Woods
Director, Regulatory and Compliance Services

Enclosures

4775 Lexington Road 40391
P.O. Box 707, Winchester,
Kentucky 40392-0707

Tel. (859) 744-4812
Fax: (859) 744-6008
http://www.ekpc.coop

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 CAPACITY AND TRANSMISSION SYSTEM	))))	**PSC ADMINISTRATIVE CASE NO. 387**

CERTIFICATE

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Amanda Stacy, 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.

Amanda Stacy

Subscribed and sworn before me on this 31st day of March, 2016.

Gwyn M. Willoughby #500144
Notary Public

GWYN M. WILLOUGHBY
Notary Public
State at Large
Kentucky
My Commission Expires Nov 30, 2017

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

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.

Julia J. Tucker

Subscribed and sworn before me on this 31st day of March, 2016.

Gwyn M. Willoughby #580144
Notary Public

GWYN M. WILLOUGHBY
Notary Public
State at Large
Kentucky
My Commission Expires Nov 30, 2017

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

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. Refer to table below.

Monthly Native Load Peak Demands for 2015

	Actual (Firm and Non-Firm) (MW)	Weather Adjusted (Firm and Non-Firm) (MW)
January	3,230	3,262
February	3,507	3,192
March	2,869	2,647
April	1,688	1,724
May	1,765	1,767
June	2,152	2,164
July	2,179	2,228
August	2,158	2,287
September	2,111	2,070
October	1,686	1,677
November	2,235	2,210
December	2,135	2,397

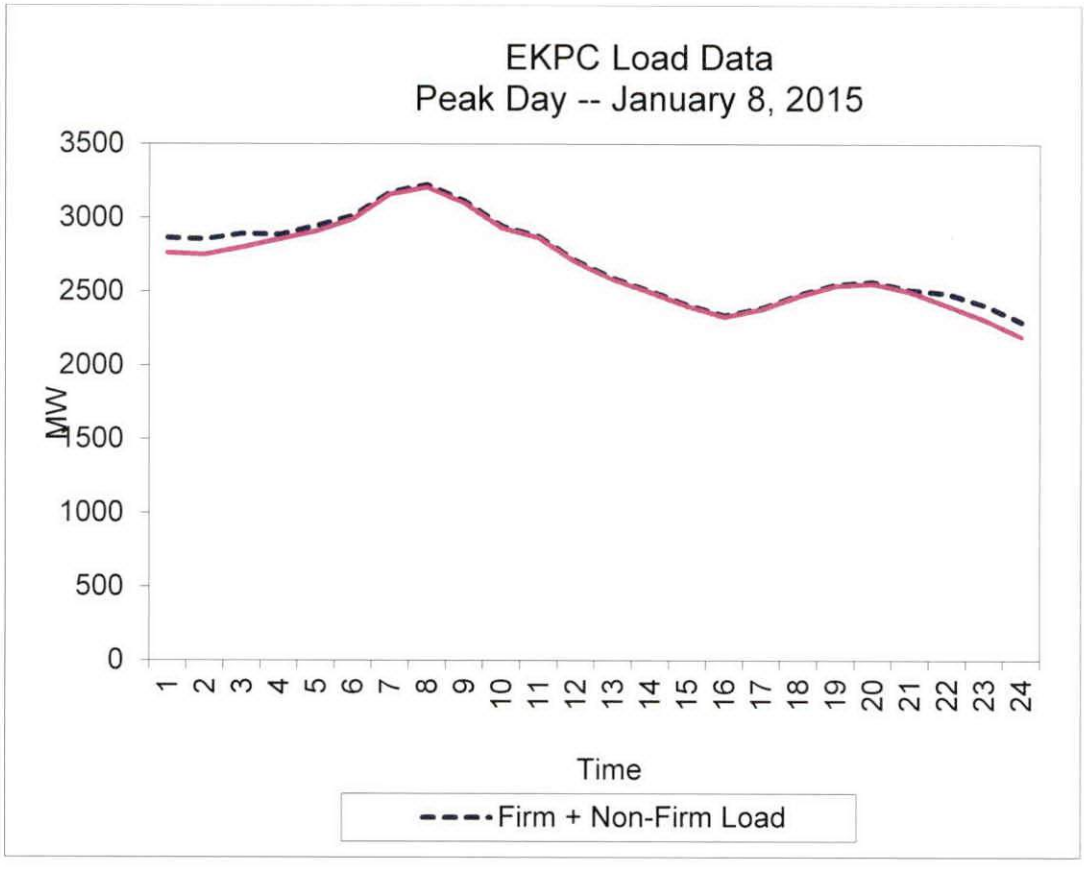
Response 3b. EKPC had no off-system demand obligations during the calendar year 2015.

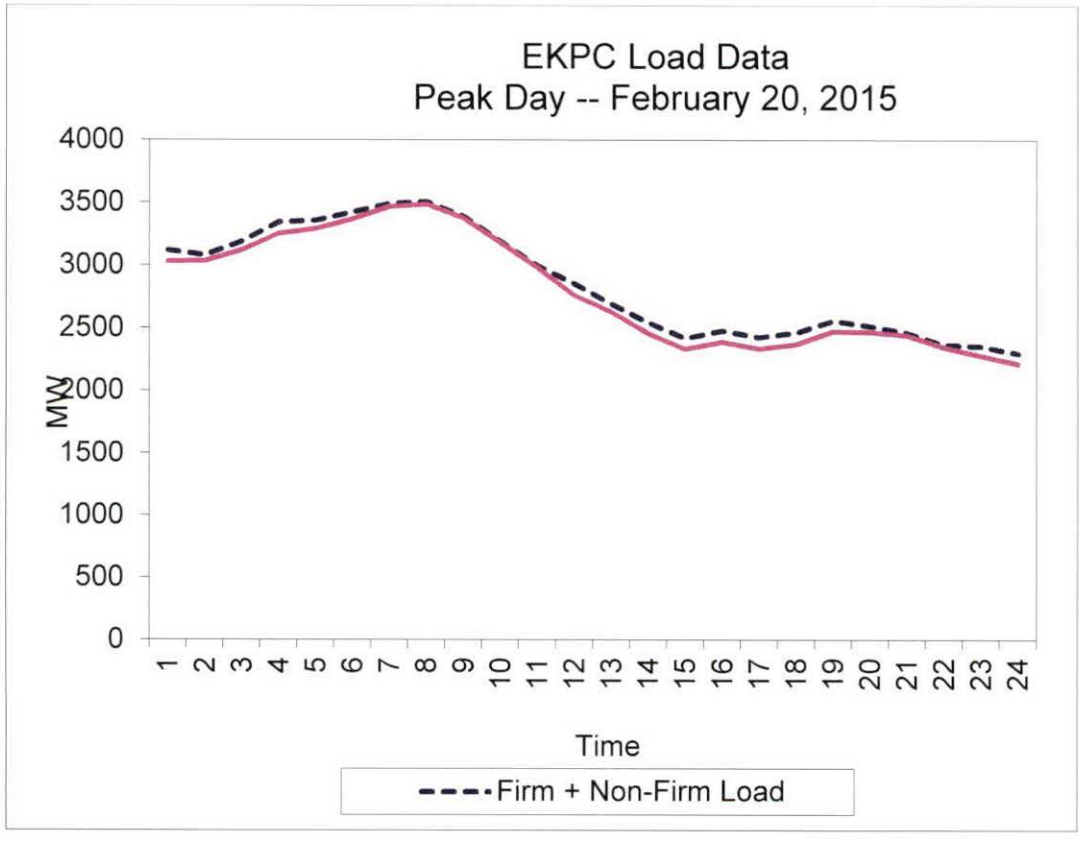
EAST KENTUCKY POWER COOPERATIVE, INC.
PSC ADMINISTRATIVE CASE NO. 387
ANNUAL RESOURCE ASSESSMENT FILING

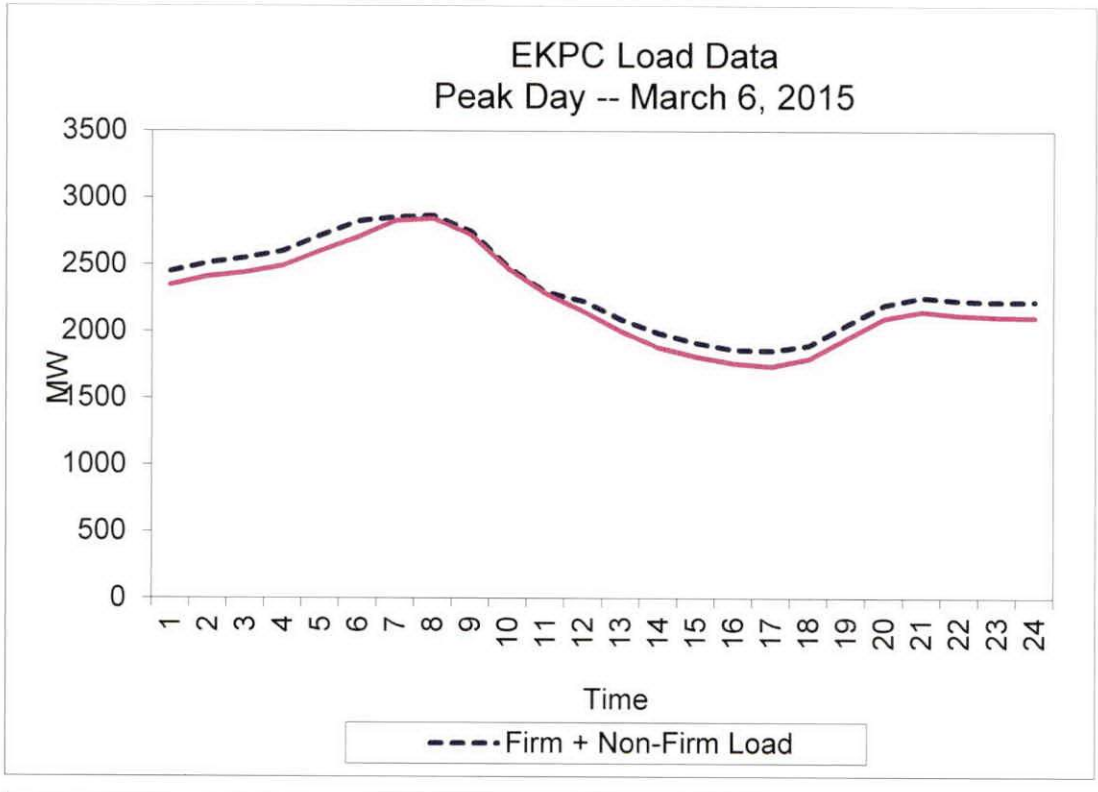
PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01
REQUEST 4
RESPONSIBLE PERSON: **Julia J. Tucker**
COMPANY: **East Kentucky Power Cooperative, Inc.**

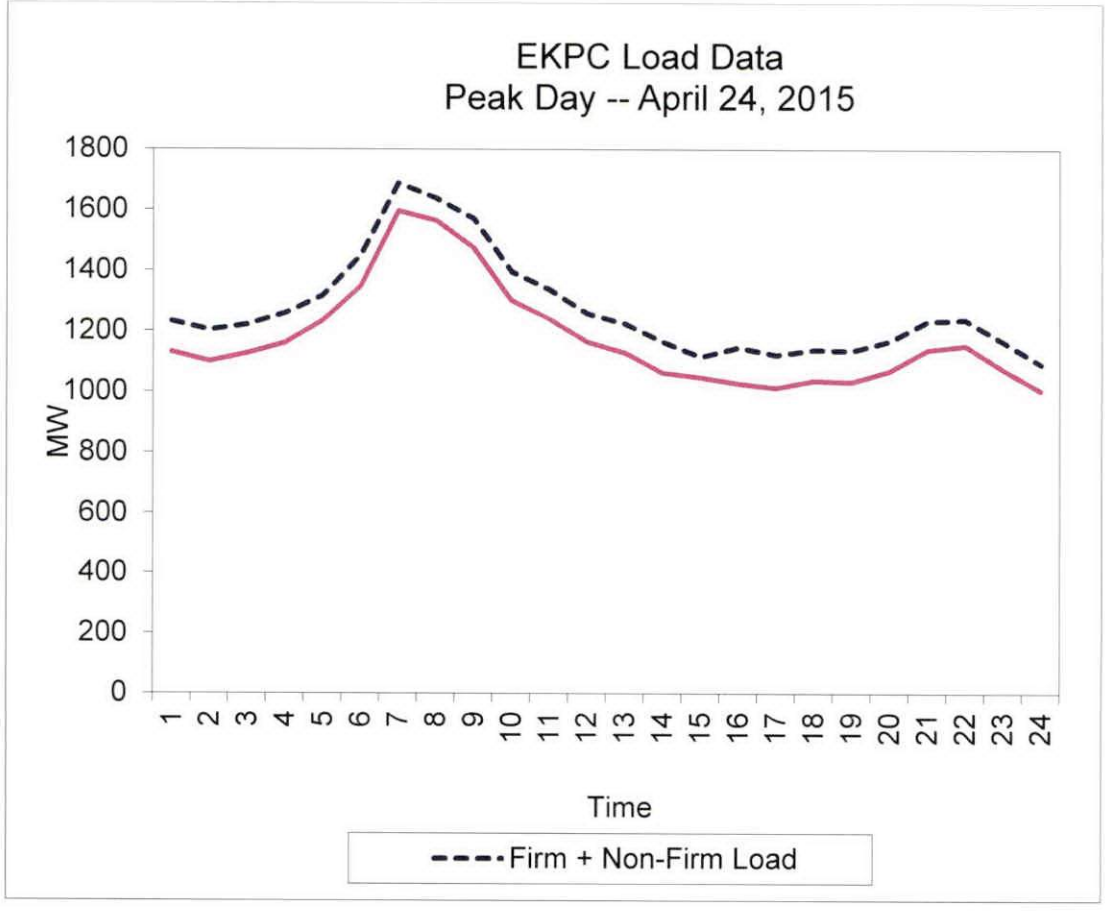
Request 4. Load shape curves that show actual peak demands and weather-normalized peak demands (native load demand and total demand) on a monthly basis for the just completed calendar year.

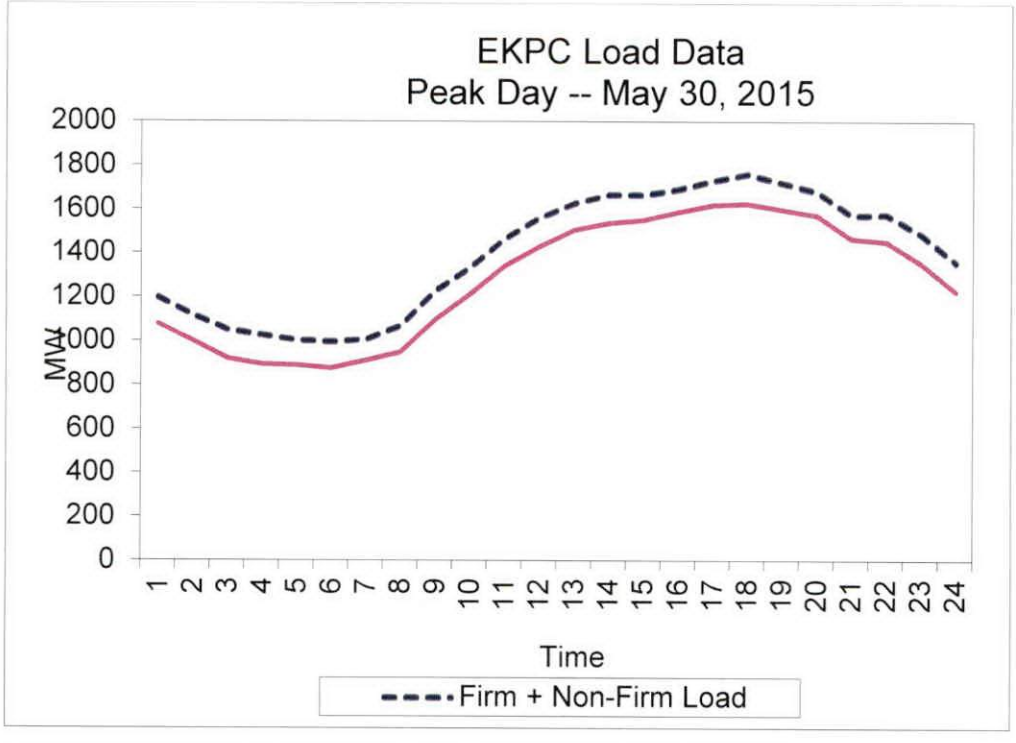
Response 4. Actual monthly peak-day load shapes are presented on pages 2 through 7 of this response. EKPC performs an analysis to weather-normalize the peak hour but EKPC does not weather-normalize the peak-day load shapes.

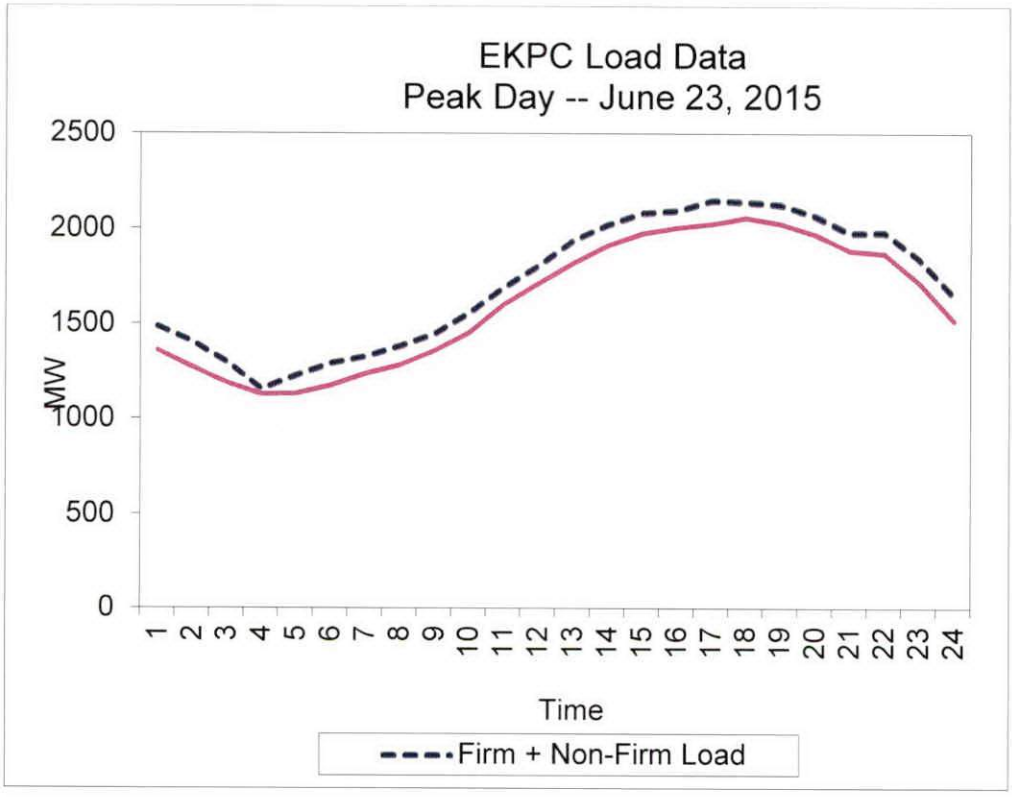

EKPC Load Data
Peak Day -- January 8, 2015
3500
3000
2500
2000
1500
1000
500
0
MW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time
Firm + Non-Firm Load

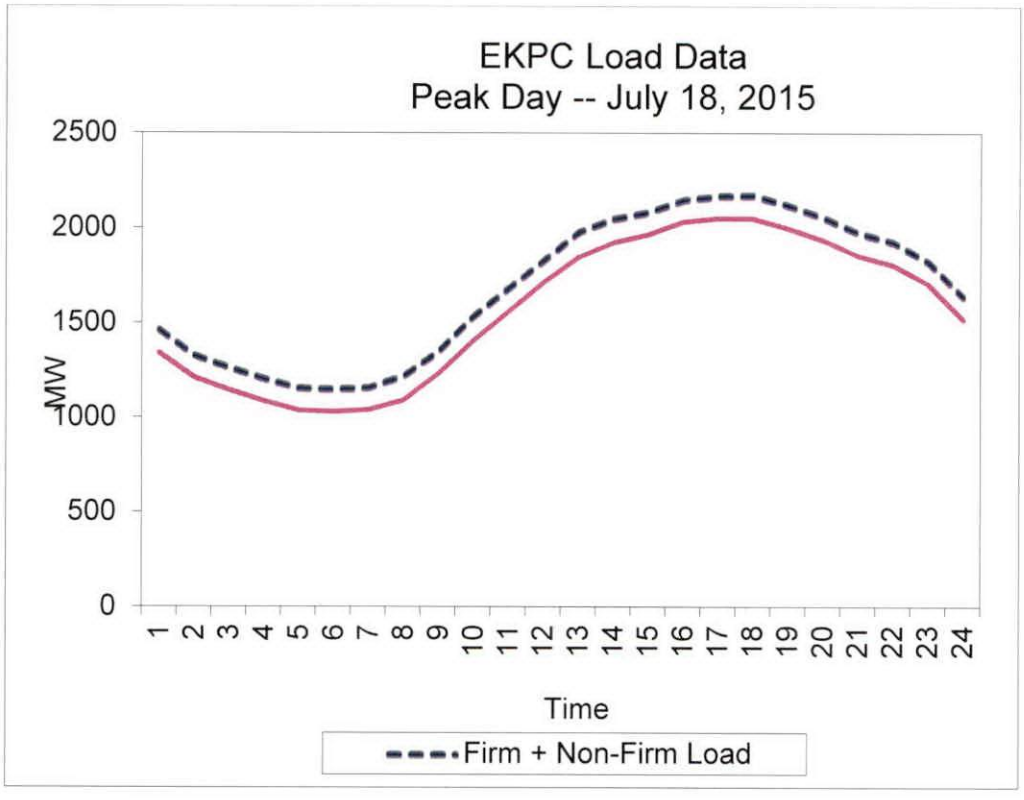

EKPC Load Data
Peak Day -- February 20, 2015
4000
3500
3000
2500
2000
1500
1000
500
0
MW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time
Firm + Non-Firm Load

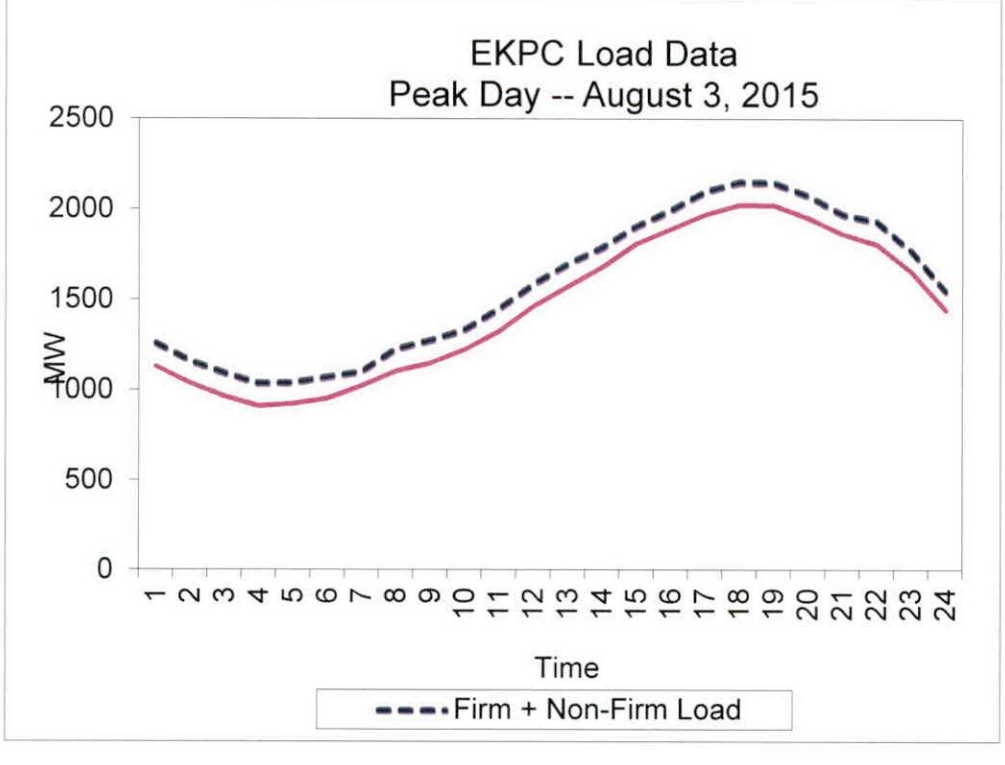

EKPC Load Data
Peak Day -- March 6, 2015
3500
3000
2500
2000
1500
1000
500
0
MW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time
Firm + Non-Firm Load

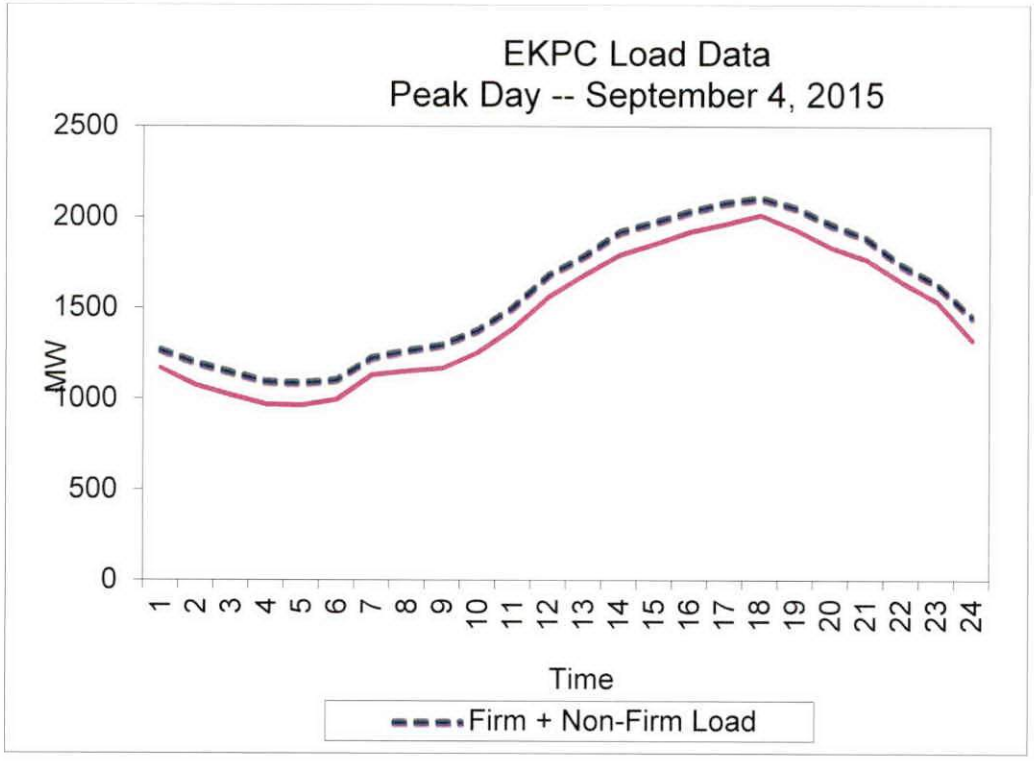

EKPC Load Data
Peak Day -- April 24, 2015
1800
1600
1400
1200
1000
800
600
400
200
0
MW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time
Firm + Non-Firm Load

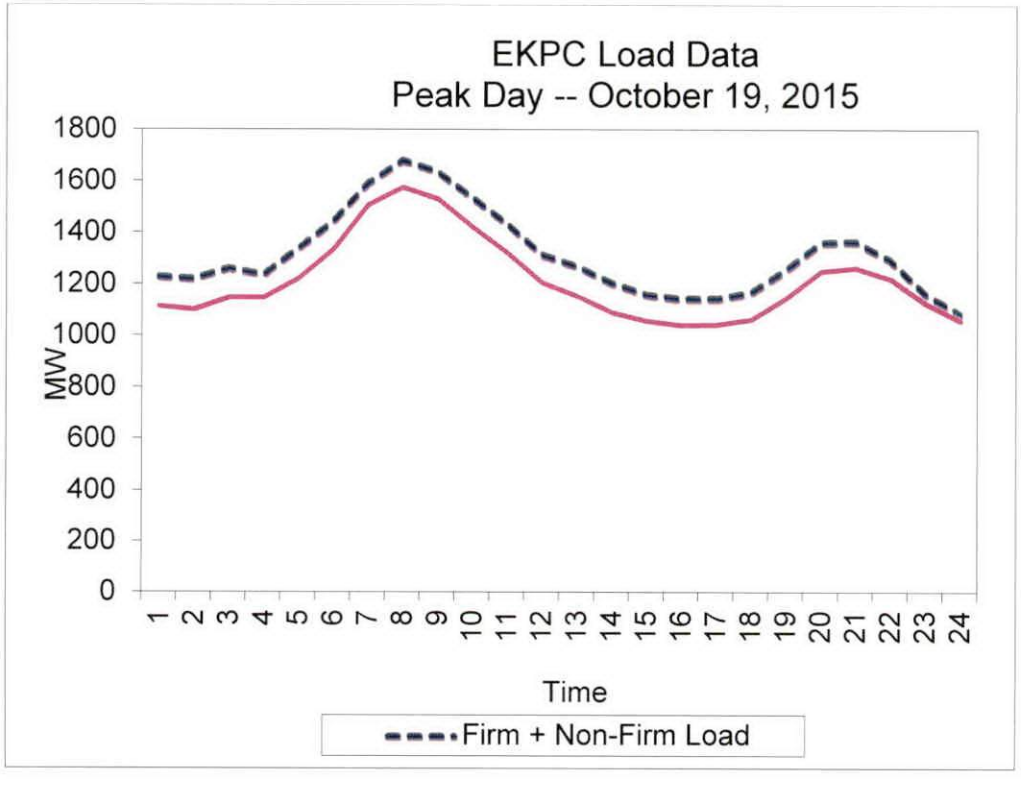

EKPC Load Data
Peak Day -- May 30, 2015
2000
1800
1600
1400
1200
1000
800
600
400
200
0
MW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time
Firm + Non-Firm Load

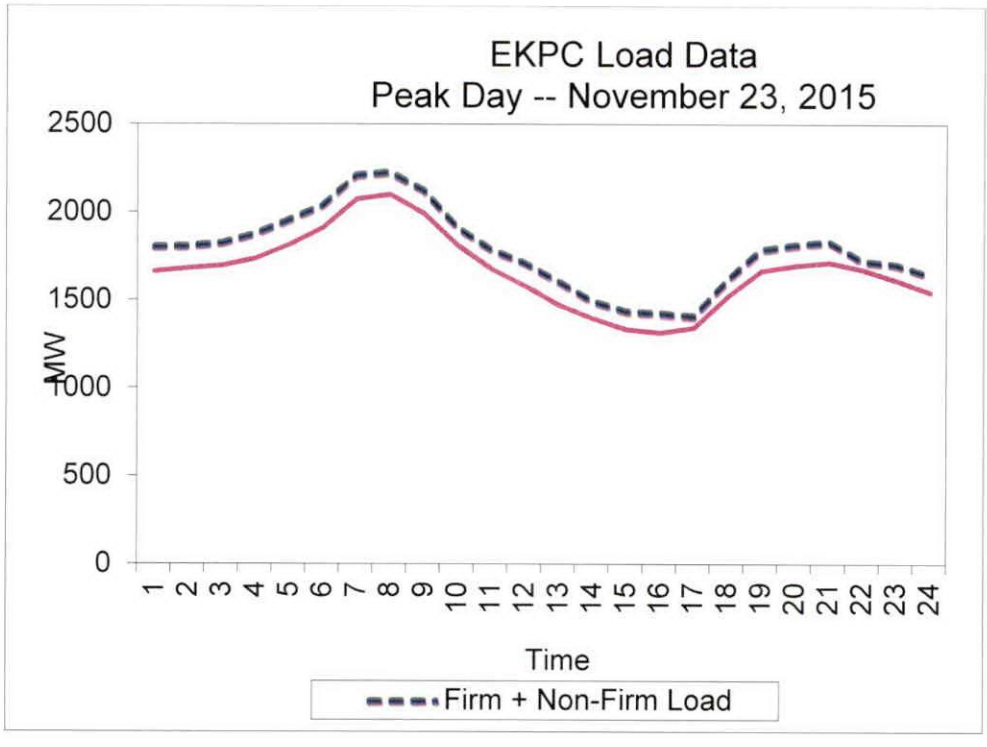

EKPC Load Data
Peak Day -- June 23, 2015
2500
2000
1500
1000
500
0
MW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time
Firm + Non-Firm Load

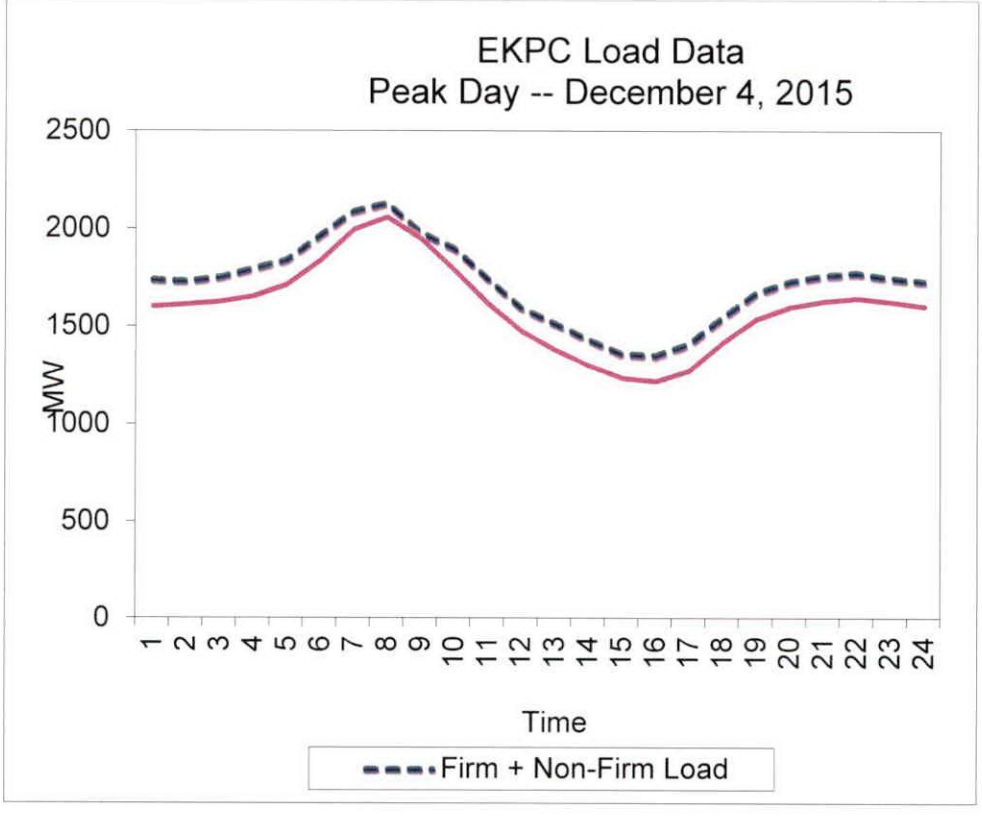

EKPC Load Data
Peak Day -- July 18, 2015
2500
2000
1500
1000
500
0
MW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time
Firm + Non-Firm Load


EKPC Load Data
Peak Day -- August 3, 2015
2500
2000
1500
1000
500
0
MW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time
Firm + Non-Firm Load


EKPC Load Data
Peak Day -- September 4, 2015
2500
2000
1500
1000
500
0
MW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time
Firm + Non-Firm Load


EKPC Load Data
Peak Day -- October 19, 2015
1800
1600
1400
1200
1000
800
600
400
200
0
MW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time
Firm + Non-Firm Load


EKPC Load Data
Peak Day -- November 23, 2015
2500
2000
1500
1000
500
0
MW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time
Firm + Non-Firm Load


EKPC Load Data
Peak Day -- December 4, 2015
2500
2000
1500
1000
500
0
MW
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
Time
Firm + Non-Firm Load

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 higher and lower growth scenarios to bracket its baseline scenario forecast. The ranges are shown in the table below. The peaks 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 (GWh)			
Season	Low Case	Base Case	High Case	Year	Low Case	Base Case	High Case	Year	Low Case	Base Case	High Case
2015-16	3,091	3,239	3,332	2016	2,287	2,363	2,430	2016	12,839	13,564	14,262
2016-17	3,106	3,259	3,379	2017	2,281	2,396	2,487	2017	12,611	13,782	14,712
2017-18	3,085	3,282	3,434	2018	2,277	2,428	2,542	2018	12,436	13,975	15,151
2018-19	3,070	3,302	3,485	2019	2,277	2,456	2,593	2019	12,322	14,148	15,584
2019-20	3,070	3,338	3,547	2020	2,300	2,502	2,668	2020	12,290	14,437	16,116

Response 6b. EKPC is projecting no off-system demand.

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. EKPC integrated into PJM on June 1, 2013. EKPC is required to provide its pro-rated share of the PJM reserve requirements. PJM is a summer peaking system, so EKPC's reserve requirement shifted from being based on winter peak to summer peak. Additionally, EKPC's load diversity with PJM's peak period acts to reduce EKPC's net reserve requirements. Based on current conditions, EKPC carries approximately 6% reserves on its summer peak load during the first three years under the Fixed Resource Requirements ("FRR") plan. Starting on June 1, 2016, EKPC will participate in the Reliability Pricing Model ("RPM"), which will lower EKPC's resource requirements, to roughly 3% of its summer peak load. In addition to the summer reserve requirements, EKPC economically hedges near 100% of its winter peak load expectations.

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 table below shows the projected summer peak and reserve levels.

Year	Summer Load (MW)*	Reserves (MW)	Reserves (%)	Winter Load (MW)*	Reserves (MW)	Reserves (%)
2016	2,342	3,004	28%	3225	3582	11%
2017	2,366	3,006	27%	3239	3334	3%
2018	2,389	3,006	26%	3250	3334	3%
2019	2,403	3,171	32%	3254	3334	2%
2020	2,430	3,171	30%	3261	3536	8%

*Net of DSM

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 4 of this response. Please note that Dale 1 and Dale 2 were placed in inactive status April 2015 and Dale 3 and Dale 4 will be placed in inactive status in April 2016.

Dale Unit 1

2016	0 weeks or less
2017	0 weeks or less
2018	0 weeks or less
2019	0 weeks or less
2020	0 weeks or less

Dale Unit 2

2016	0 weeks or less
2017	0 weeks or less
2018	0 weeks or less
2019	0 weeks or less
2020	0 weeks or less

Dale Unit 3

2016	0 weeks or less
2017	0 weeks or less
2018	0 weeks or less
2019	0 weeks or less
2020	0 weeks or less

Dale Unit 4

2016	0 weeks or less
2017	0 weeks or less
2018	0 weeks or less
2019	0 weeks or less
2020	0 weeks or less

Cooper Unit 1

2016	4 weeks or less
2017	4 weeks or less
2018	4 weeks or less
2019	4 weeks or less
2020	4 weeks or less

Cooper Unit 2

2016	4 weeks or less
2017	4 weeks or less
2018	4 weeks or less
2019	4 weeks or less
2020	4 weeks or less

Spurlock Unit 1

2016	9 weeks or less
2017	8 weeks or less
2018	8 weeks or less
2019	8 weeks or less
2020	8 weeks or less

Spurlock Unit 2

2016	5 weeks or less
2017	4 weeks or less
2018	4 weeks or less
2019	4 weeks or less
2020	4 weeks or less

Spurlock Unit 3

2016	4 weeks or less
2017	4 weeks or less
2018	4 weeks or less
2019	4 weeks or less
2020	4 weeks or less

Spurlock Unit 4

2016	6 weeks or less
2017	4 weeks or less
2018	4 weeks or less
2019	4 weeks or less
2020	4 weeks or less

JK Smith CT1

2016	1 weeks or less
2017	1 weeks or less
2018	1 weeks or less
2019	1 weeks or less
2020	1 weeks or less

JK Smith CT2

2016	9 weeks or less
2017	1 weeks or less
2018	1 weeks or less
2019	1 weeks or less
2020	1 weeks or less

JK Smith CT3

2016	1 weeks or less
2017	9 weeks or less
2018	1 weeks or less
2019	1 weeks or less
2020	1 weeks or less

JK Smith CT4

2016	2 weeks or less
2017	2 weeks or less
2018	1 weeks or less
2019	1 weeks or less
2020	1 weeks or less

JK Smith CT5

2016	2 weeks or less
2017	1 weeks or less
2018	1 weeks or less
2019	1 weeks or less
2020	1 weeks or less

JK Smith CT6

2016	2 weeks or less
2017	1 weeks or less
2018	1 weeks or less
2019	1 weeks or less
2020	1 weeks or less

JK Smith CT7

2016	4 weeks or less
2017	1 weeks or less
2018	1 weeks or less
2019	1 weeks or less
2020	1 weeks or less

JK Smith CT9

2016	4 weeks or less
2017	4 weeks or less
2018	4 weeks or less
2019	4 weeks or less
2020	4 weeks or less

JK Smith CT10

2016	4 weeks or less
2017	4 weeks or less
2018	4 weeks or less
2019	4 weeks or less
2020	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. EKPC purchased the Bluegrass Generation facility on December 29, 2015. The facility consists of three simple cycle combustion turbines with a net summer rating of 165 MW each. Two of the units will be utilized immediately to economically dispatch in the PJM market to hedge EKPC's peak loads. The third unit is currently subject to a tolling agreement with LG&E/KU until April 30, 2019. EKPC will have full access to that capacity beginning May 1, 2019.

EKPC plans to seek a Certificate of Public Convenience and Necessity for an 8.5 MW solar facility to be located at its headquarters building and to be installed by mid-year 2017.

EKPC also plans to continue its development of the economical Landfill-Gas-To-Energy projects, but nothing definitive is currently in development.

EKPC will continue to closely monitor all market and environmental law changes to ensure that its power supply adequately covers its members' exposure to the PJM market conditions.

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: **Amanda Stacy**
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. The total energy received from all interconnections and from generation sources connected to the EKPC transmission system for calendar year 2015 was 21,573,617 MWh.

Response 13b. The total energy delivered to all interconnections on the EKPC system in 2015 was 9,191,979 MWh.

The forecasted total energy requirements for the EKPC system for 2016 through 2020 are as follows:

2016	13,563,866 MWh
2017	13,781,894 MWh
2018	13,974,738 MWh
2019	14,147,514 MWh
2020	14,436,649 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 and to other contracted users of the EKPC transmission system 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.

Transfer studies performed in regional assessments by both SERC and PJM have not identified any significant limitations within the EKPC system. Therefore, EKPC's system is expected to be capable of handling a reasonable level of overlaid transfers while also delivering energy to EKPC's native-load customers and other transmission customers using EKPC's transmission system to deliver energy for their native-load customers (for instance, LG&E/KU).

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

Response 13d. Please refer to the table below.

Summer	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Date	7/18/2015					
Hr.	1800					
Peak Demand (MW)	2179	2363	2396	2428	2456	2502

Winter	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Date	2/20/2015	1/18/2016				
Hr.	800	900				
Peak Demand (MW)	3507	2890*	3259	3282	3302	3338

*Reflects January 2016 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: **Amanda Stacy**
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. Pages 2 through 6 of this response include EKPC's 10-year transmission expansion plan for the 2016-2025 period. During this period, EKPC expects to make the following transmission improvements for normal system development and load growth to serve native-load customers.

11.66 miles of new transmission line (69 kV)
0.13 miles of new transmission line (161 kV)
54.88 miles of transmission line reconductor/rebuild (69 kV)
0.66 miles of transmission line rebuild (138 kV)
77.04 miles of transmission line operating temperature upgrades
17 projects to upgrade terminal facilities
13 transmission capacitor banks addition/upgrades (310 MVAR)
2 Transmission transformer upgrades (107 MVA capacity added)
10 new distribution substations (185 MVA added)
8 upgrades of existing distribution substations (71 MVA added)

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2016 – 2025)	
A. New Transmission Lines and Status Changes **Project Description**	**Needed In-Service Date**
Construct a new 69 kV line from Beattyville Distribution-Oakdale using 556 ACSR/TW (11.66 miles). Operate this new line normally closed and operate the existing Oakdale Jct.-Oakdale line normally open.	12/2017
Construct a 2nd Summershade EKPC-Summershade TVA 161 kV line (0.13 miles) and associated terminal facilities at EKPC's Summershade substation. TVA constructs necessary terminal facilities at the TVA Summershade substation.	6/2018

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2016 – 2025)	
B. Transmission Line Re-conductor/Rebuilds **Project Description**	**Needed In-Service Date**
Re-conductor the Seymour Tap-KU Horse Cave Tap 69 kV line section (1.98 miles) using 556.5 MCM ACTW conductor.	6/2016
Re-conductor the Baker Lane - Holloway Jct. 69 kV line section (1.28 miles) using 556.5 MCM ACTW wire with 248 *F MOT.	12/2016
Re-conductor the Owen County-New Castle 69 kV line section (19.6 miles) using 556.5 MCM ACTW conductor.	12/2016
Rebuild a portion of the Dale-Hunt 69 KV line section (0.75 miles) using 556.5 MCM ACTW conductor.	12/2016
Re-conductor S Bardstown - W Bardstown Jct. 69 kV line section. (1.5 miles) using 556.5 MCM ACTW conductor	12/2017
Re-conductor the South Bardstown-West Bardstown 69 kV line section (3.0 miles) using 556.5 MCM ACTW conductor.	12/2017
Re-conductor the Leon-Airport Road 69 kV line section (5.72 miles) using 556.5 MCM ACTW conductor.	12/2018
Decouple the double-circuited Spurlock- Maysville Industrial Tap 138 kV & Spurlock-Flemingsburg 138 kV line sections (0.66 miles).	6/2019
Re-conductor the Summershade-Summershade Jct. 69 kV line section (0.15 miles) using 795 MCM ACSR.	6/2020
Re-conductor Temple Hill - Summershade Jct. 69 kV line section (9.55 miles) using 556.6 MCM ACTW.	6/2022
Re-conductor the Brodhead-Three Links Jct 69 kV line section (8.2 miles) using 556.5 MCM ACTW wire.	12/2021
Re-conductor the Davis - Fayette 69 kV line section (3.15 miles) using 556.5 MCM ACTW wire.	6/2025

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2016 – 2025)	
C. Transmission Line High Temperature Upgrades Project Description	**Needed In-Service Date**
Increase the MOT of the Ninevah-Ninevah KU Junction 69 kV line section (2.4 miles) to 167°F.	6/2016
Increase the MOT of the Davis Junction-Fayette 69 kV line section (3.15 miles) to 266F. (LTE at 248F).	12/2016
Increase the MOT of the Summershade Jct. - Summershade 69 kV line section (0.15 miles) to 302°F. (LTE at 284°F).	6/2017
Increase the MOT of the Arkland Tap-Oven Fork 69 kV line section (7.3 miles) to 167°F.	6/2017
Increase the MOT of the Eberle Tap-Eberle 69 kV line section (4.5 miles) to 167°F.	6/2017
Increase the MOT of the Rowan County-Elliottville 69 kV line section (5.83 miles) to 167°F.	6/2017
Increase the MOT of the Mount Sterling-Fogg Pike-Reid Village 69 kV line section (3.2 miles) to 167°F.	6/2017
Increase the MOT of the Jellico Creek Tap-Jellico Creek 69 kV line section (5.0 miles) to 167°F.	6/2017
Increase the MOT of the Penn-Keith 69 kV line section (10.86 miles) to 167°F.	6/2017
Increase the MOT of the Big Bone Tap-Big Bone 69 kV line section (1.2 miles) to 167°F	6/2017
Increase the MOT of the Cave Run Tap-Cave Run 69 kV line section (1.1 miles) to 167°F	6/2017
Increase the MOT of the Griffin-Griffin Junction 69 kV line section (6.4 miles) to 167°F.	6/2017
Increase the MOT of the Oakdale Jct.-Oakdale 69 kV line section (10.5 miles) to 167°F.	6/2018
Increase the MOT of the Chad-Chad Tap 69 kV line section (0.08 miles) to 167°F.	6/2018
Increase the MOT of the Millers Creek-Millers Creek Jct. 69 kV line section (0.17 miles) to 167°F.	6/2018
Increase the MOT of the Davis Jct. - Nicholasville 69 kV line section (4.0 miles) to 266F. (LTE at 248F)	6/2021
Increase the MOT of the J.K. Smith-Dale 138 kV line section (9.5 miles) to 275°F. (LTE at 257°F)	6/2024
Increase the MOT of the EKPC Elizabethtown Dist. #2 Tap - Tharp Tap 69 KV line section (1.7 miles) to 302°F. (LTE at 284°F)	12/2025

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2016 – 2025)	
D. Terminal Facility Upgrades **Project Description**	**Needed In-Service Date**
Add a new 69 kV breaker at Thelma for the Thelma - AEP Thelma 69 kV Tie.	12/2017
Increase the overcurrent relay at Bullitt County associated with Bullitt County 161-69 kV transformer to at least 178 MVA LTE Winter.	12/2016
Increase the distance relay setting at Elizabethtown associated with Elizabethtown-Eliziabethtown #2 to at least 126 MVA LTE.	12/2017
Increase the overcurrent Relay associated with the Barren Co 161-69 kV transformer to at least 145 MVA LTE.	12/2019
Upgrade the 1 1/4" IPS bus at Summershade substation associated with the 161-69 kV transformer using 2" IPS or larger. Upgrade the 69 kV metering CT at Summershade associated with 161-69 kV transformer to at least 190 MVA LTE Winter.	12/2020
Uprate Summershade 69 kV bus and Jumpers Associated with the Summershade-Summershade Jct 69 kV line section	6/2020
Upgrade the 600 A disconnect switches W59-633 and W59-635 at the Barren County substation associated with the Barren County-Cave City Jct. 69 kV line using 1200 A switches. Upgrade the 600 A switch W49-615 at Cave City Jct. with a 1200 A switch.	6/2021
Increase the Zone 3 distance relay setting at Baker Lane associated with the Baker Lane-Holloway Jct. 69 kV line to at least 142 MVA LTE Winter. Upgrade the 600 A disconnect switch W43-605 at Baker Lane associated with the Baker Lane-Holloway Jct. 69 kV line using a 1200 A switch.	12/2021
Replace Barren Co. 69 kV CT asociated with the 161-69 kV transformer from 800/5 CT to 1200/5 CT. Raise ratings to at least 148 LTE Summer.	6/2022
Upgrade the 4/0 bus and jumpers at the Nelson County sustation associated with the Nelson County-West Bardstown Jct line using 500 MCM copper or equivalent.	6/2022
Upgrade the existing S408-605, 600 A Russell Spring KU T-Russell County disconnect switch to 1200A.	12/2022
Upgrade the existing W611-625, 600A Horse Cave T-KU Horse Cave Jct. disconnect switch with a 1200 A switch.	6/2023
Increase the Zone 3 distance relay setting at Wayne County associated with the Wayne County 161 kV tie to TVA to at least 167 MVA LTE Winter.	12/2023
Upgrade the 600 A disconnect switch switches W59-613 and W59-615 at the Barren County substation associated with the Barren County-Horse Cave 69 kV line using 1200 A switches.	6/2024
Upgrade the 4/0 bus and jumpers at the Denny substation associated with the Denny-Gregory Road Tap line using 500 MCM copper or equivalent.	6/2024
Increase the overcurrent relay setting at Summershade associated with 161-69 kV transformer to at least 201 MVA LTE Winter.	12/2024
Increase the Zone 3 distance relay at Summershade associated with Summershade-Summershade Jct to at least 126 MVA LTE Winter.	12/2025

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2016 – 2025)	
E. Capacitor Bank Additions Project Description	**Needed In-Service Date**
Install a 33.17 MVAR, 69 kV capacitor bank at Elizabethtown substation.	12/2017
Increase 69 kV cap bank size at Leon from 13 MVAR to 18.36 MVAR.	12/2016
Retire the Hilda 18.37 MVAR 69 kV capacitor bank and move to Big Woods.	6/2017
Install a 22.96 MVAR, 69 kV capacitor bank at Owen County Substation.	12/2017
Install a 161 kV, 81.636 MVAR capacitor bank (2 stages of 40.818 MVARs each) at Cooper Station.	12/2017
Install a 17.858 MVAR, 69 kV capacitor bank at Fox Hollow Substation.	6/2019
Install a 25.511 MVAR, 69 kV capacitor bank at Sewellton Junction substation.	12/2020
Resize the Cedar Grove 69 kV capacitor bank from 10.8 to 22.45 MVAR.	12/2021
Resize the Blevins Valley 69 kV capacitor bank from 10.2 MVAR to 12.245 MVAR	12/2023
Resize the West Bardstown 69 kV capacitor bank from 13.8 MVAR to 18.37 MVAR.	12/2023
Increase Tunnel Hill 69 kV cap bank from 16.8 MVAR to 18.368 MVAR.	12/2024
Resize the Sideview 69 kV capacitor bank from 6.12 MVAR to 9.18 MVAR.	12/2025
Resize the Williamstown 69 kV capacitor bank from 8.4 MVAR to 11.225 MVAR.	12/2025

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2016 – 2025)	
F. New Transmission Substations Project Description	**Needed In-Service Date**
NONE	

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2016 – 2025)	
G. New Transmission Switching Stations Project Description	**Needed In-Service Date**
NONE	

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2016 – 2025)	
H. Transmission Transformer Upgrades Project Description	**Needed In-Service Date**
Replace the existing 100 MVA 161-69 kV transformer bank at Bullitt County substation with a 150 MVA transformer.	12/2017
Replace the existing 93 MVA 161-69 kV transformer bank at Barren County substation with a 150 MVA transformer.	6/2018

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2016-2025)	
I. New Distribution Substations and associated Tap Lines Project Description	**Needed In-Service Date**
Construct a new South Bardstown 69-12.5 kV, 12/16/20 MVA substation and associated 69 kV tap line (0.2 mile) to the West Bardstown Jct.- West Bardstown 69 kV line section.	6/2016
Construct a new Long Lick 69-25 kV, 12/16/20 MVA Substation and associated 69 kV tap line (0.7 miles)	6/2016
Construct a new Bluegrass Parkway #2 69-12.5 kV, 12/16/20 MVA substation and associated 69 kV tap line (0.1 mile).	12/2016
Construct a new Defoe 69-12.5 kV, 12/16/20 MVA substation and associated 69 kV tap line (5.0 mile) to the Clay Village-New Castle 69 kV line section.	12/2016
Construct a new Roanoke 69-12.5 kV, 12/16/20 MVA Substation and associated 69 kV tap line (5.0 miles).	12/2016
Construct a new Big Woods 69-12.5 kV, 12/16/20 MVA Substation and associated 69 kV tap line (0.2 mile).	12/2016
Construct a new Roseville 69-25 kV, 12/16/20 MVA Substation and associated 69 kV tap line (3.5 miles).	12/2016
Construct a new Broughtentown 69-25 kV, 12/16/20 MVA Substation and associated 69 kV tap line (7.4 mile) to the Highland – Tommy Gooch 69 kV line section.	12/2021
Construct a new Contown 69-12.5 kV, 12/16/20 MVA Substation and associated 69 kV tap line (0.2 mile) to the Phil - Creston 69 kV line section.	12/2021
Construct a new Hickory Plains #2 69-12.5 kV, 15/20/25 MVA Substation and associated 69 kV tap line (0.1 mile).	12/2021

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2016-2025)	
J. Distribution Substation Additions and Upgrades Project Description	**Needed In-Service Date**
Upgrade the existing Williamstown 69-12.5 kV, 11.2/14 MVA Substation to 15/20/25 MVA.	4/2016
Upgrade the existing Rectorville 69-12.5 kV, 11.2/14 MVA Substation to 12/16/20 MVA, and convert to 25 kV low-side.	6/2017
Upgrade the McKinney's Corner 69-12.5 kV, 6 MVA substation to 12/16/20 MVA.	12/2018
Upgrade the existing Shepherdsville #2 69-12.5 kV, 11.2/14 MVA substation to 12/16/20 MVA.	6/2019
Upgrade the existing Mt. Washington #1 69-12.5 kV, 11.2/14 MVA substation to 12/16/20 MVA.	6/2020
Upgrade the existing Holloway 69-12.5 kV, 11.2/14 MVA Substation to 15/20/25 MVA.	12/2021
Upgrade the existing W.M. Smith #2 69-12.5 kV, 11.2/14 MVA Substation to 15/20/25 MVA.	6/2021
Upgrade the existing Radcliff 69-12.5 kV, 11.2/14 MVA substation to 12/16/20 MVA	12/2024