

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

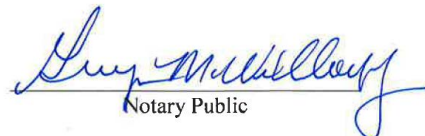
CERTIFICATE

**STATE OF KENTUCKY)
)
COUNTY OF CLARK)**

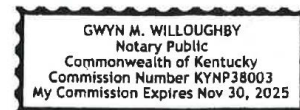
Darrin Adams, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission in the above-referenced case dated December 20, 2001, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.



Subscribed and sworn before me on this 31st day of March, 2023.



Notary Public



COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

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**A REVIEW OF THE ADEQUACY)
OF KENTUCKY'S GENERATION)
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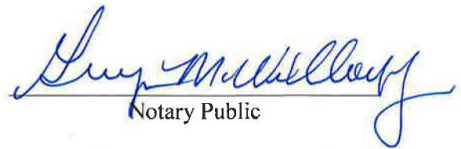
CERTIFICATE

**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 31st day of March, 2023.



Notary Public

**GWYN M. WILLOUGHBY
Notary Public
Commonwealth of Kentucky
Commission Number KYNP38003
My Commission Expires Nov 30, 2025**

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

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 2022		
	Actual (Firm and Non- Firm) (MW)	Weather Adjusted (Firm and Non- Firm) (MW)
January	3,017	3,557
February	2,605	3,556
March	2,435	2,395
April	1,935	2,386
May	2,046	1,999
June	2,465	2,467
July	2,382	2,503
August	2,400	2,381
September	2,245	2,161
October	2,001	2,152
November	2,640	2,754
December	3,747	3,532

Response 3b. EKPC had no off-system demand obligations during the calendar year 2022.

EAST KENTUCKY POWER COOPERATIVE, INC.
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PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01

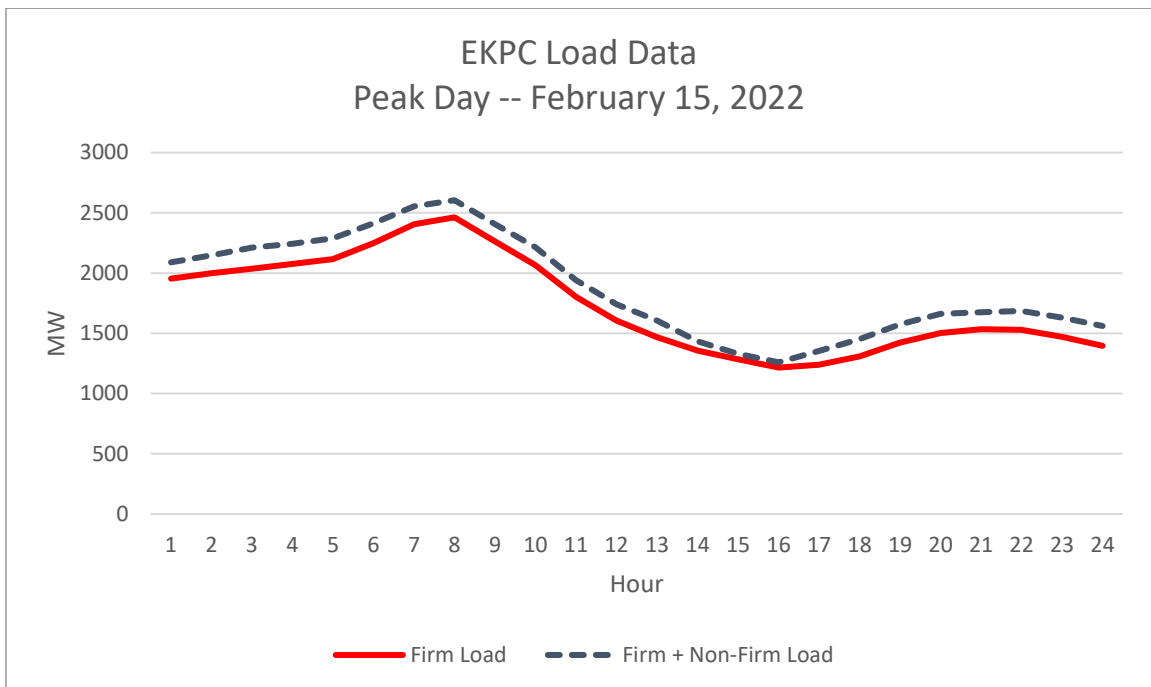
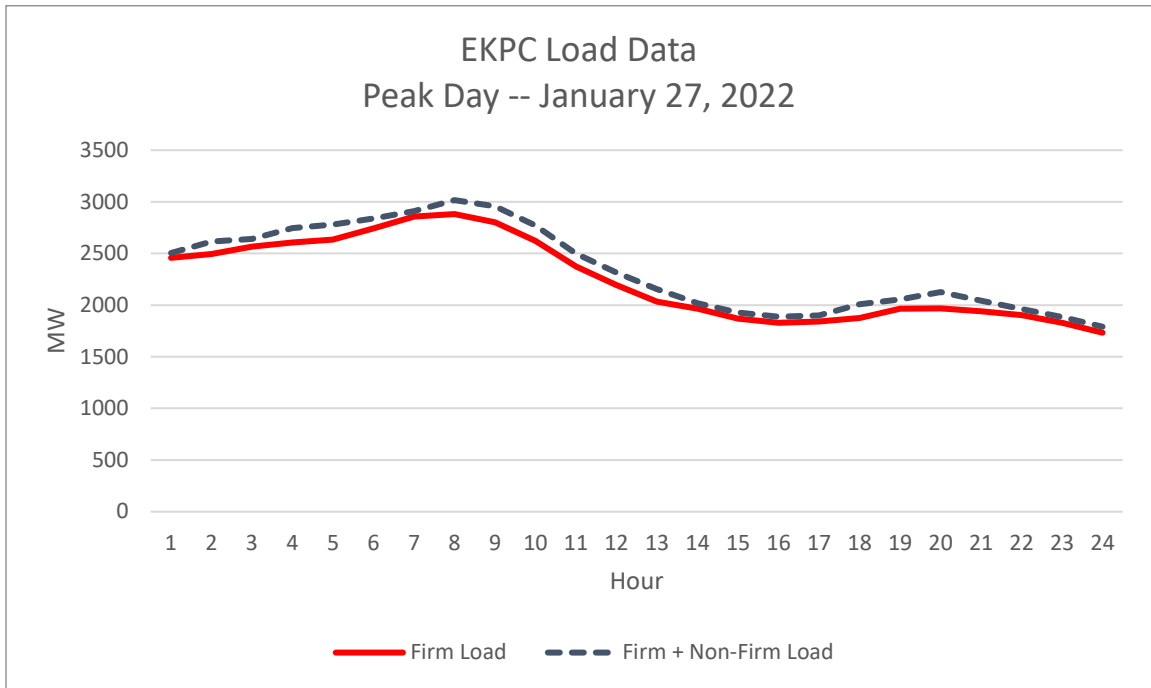
REQUEST 4

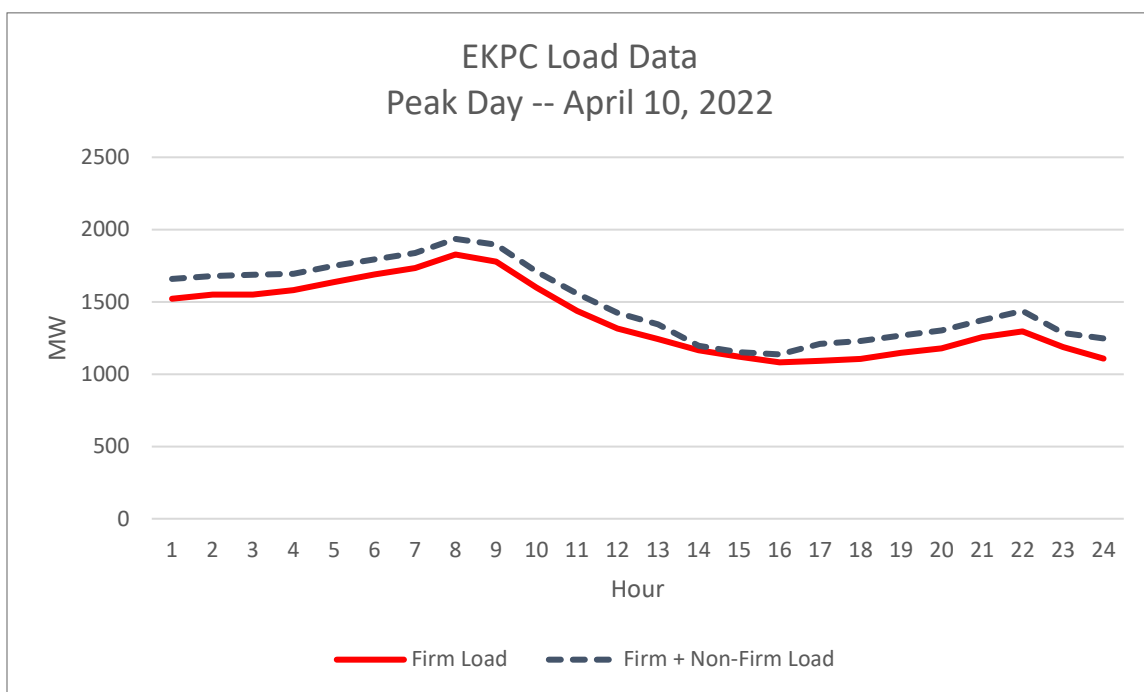
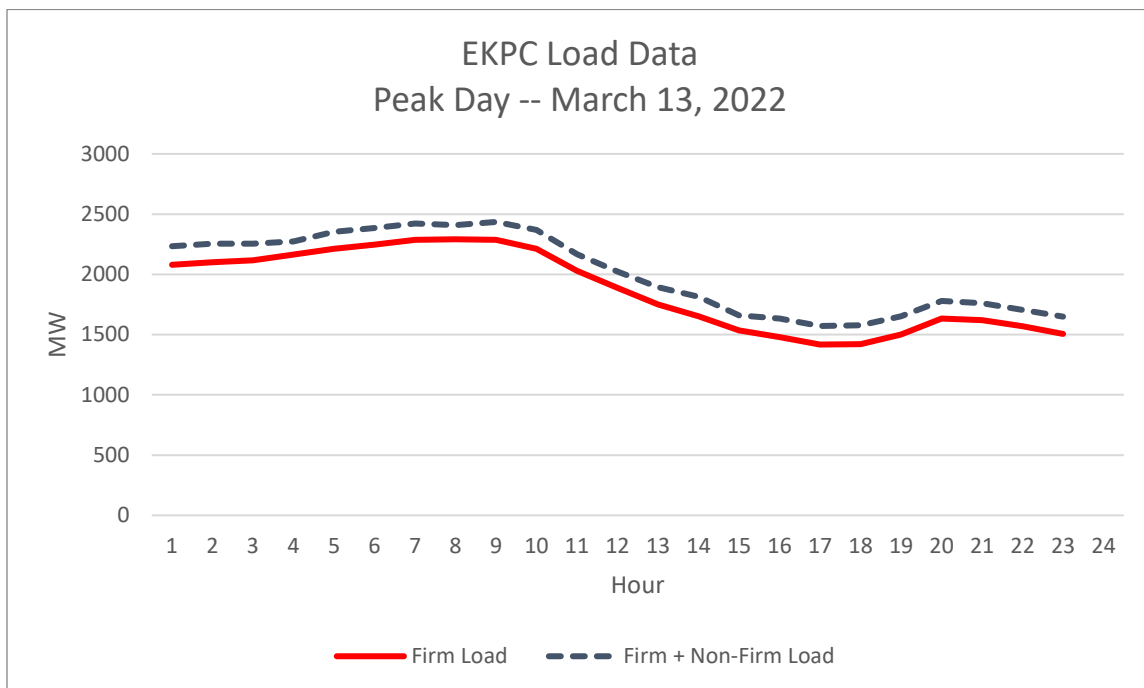
RESPONSIBLE PERSON: Julia J. Tucker

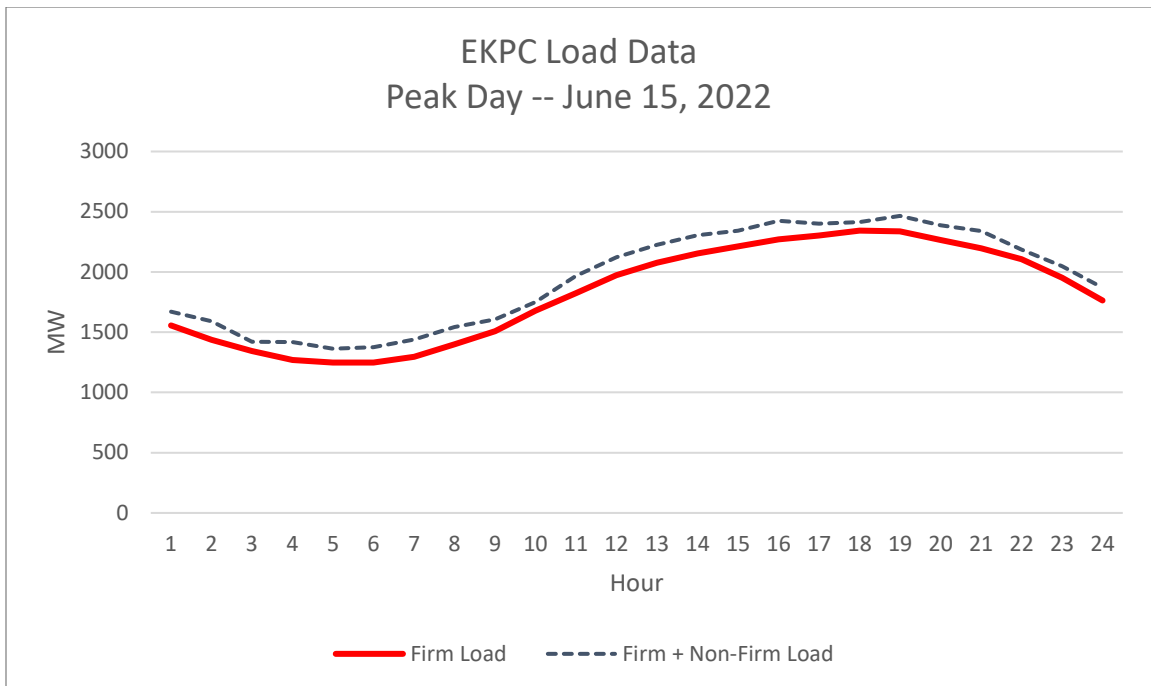
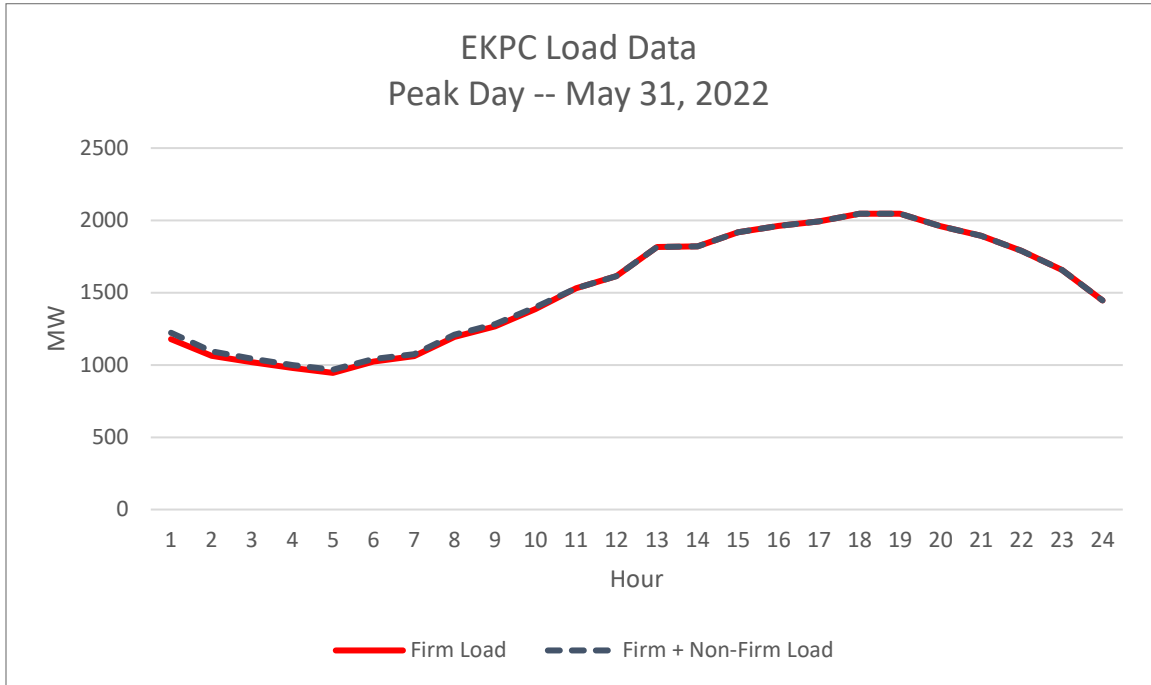
COMPANY: East Kentucky Power Cooperative, Inc.

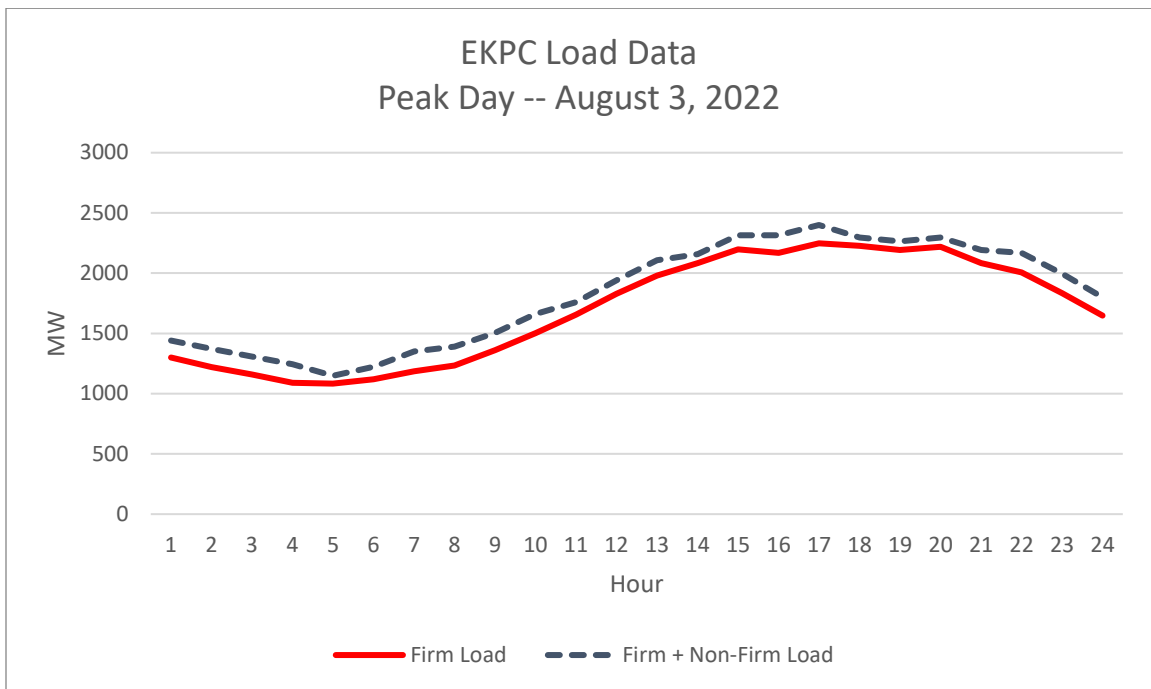
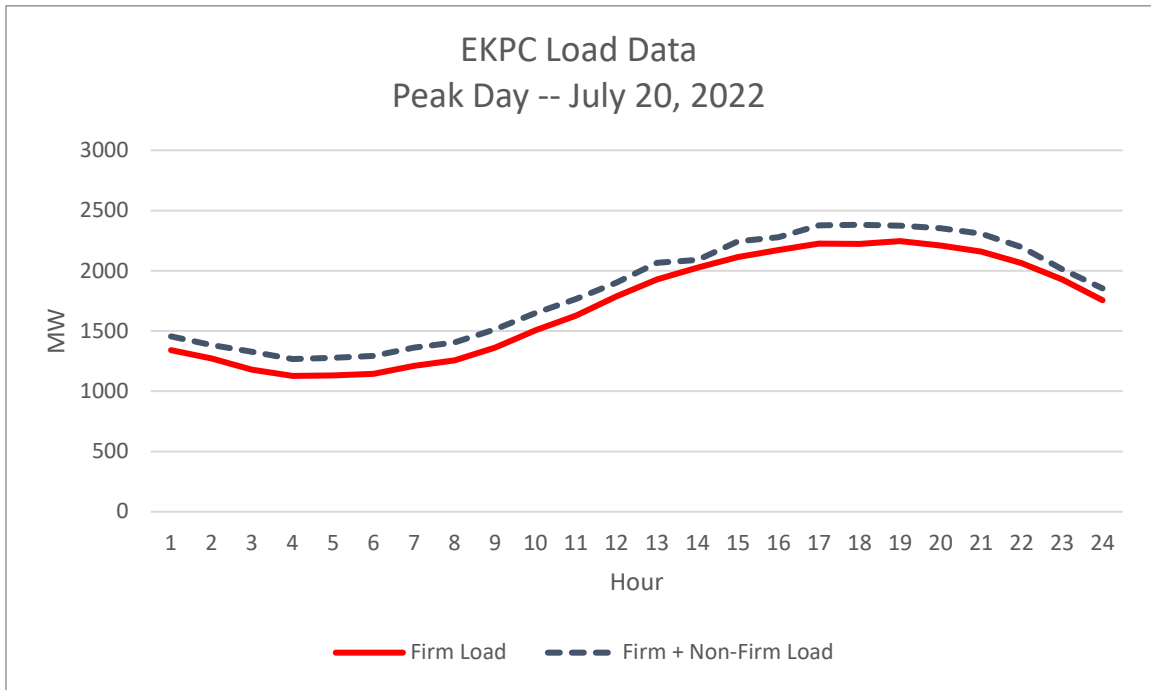
Request 4. Load shape curves that show actual peak demands and weather-normalized peak demands (native load demand and total demand) on a monthly basis for the just completed calendar year.

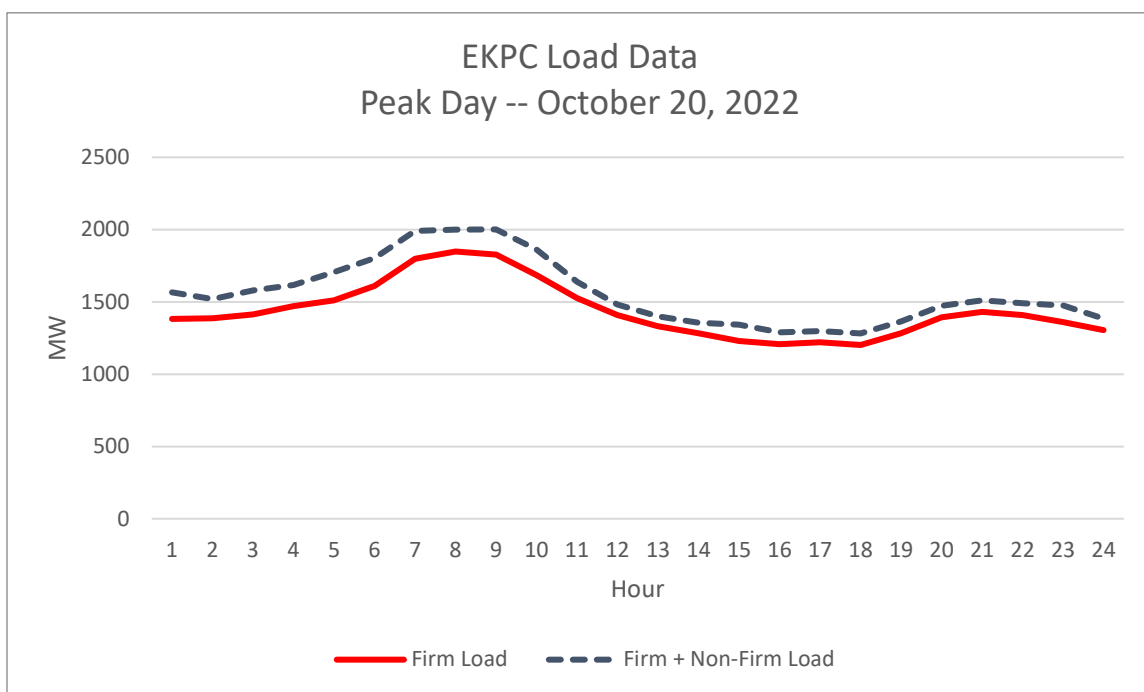
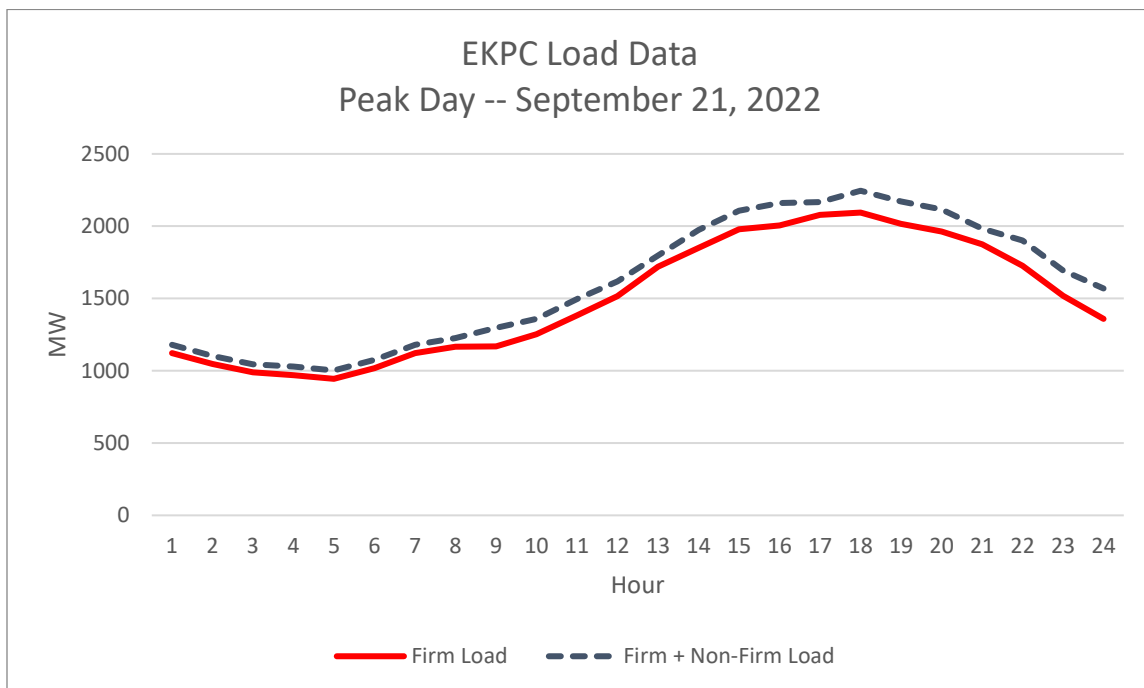
Response 4. Actual monthly peak-day load shapes are presented on pages 2 through 7 of this response. EKPC performs an analysis to weather-normalize the peak hour but EKPC does not weather-normalize the peak-day load shapes.

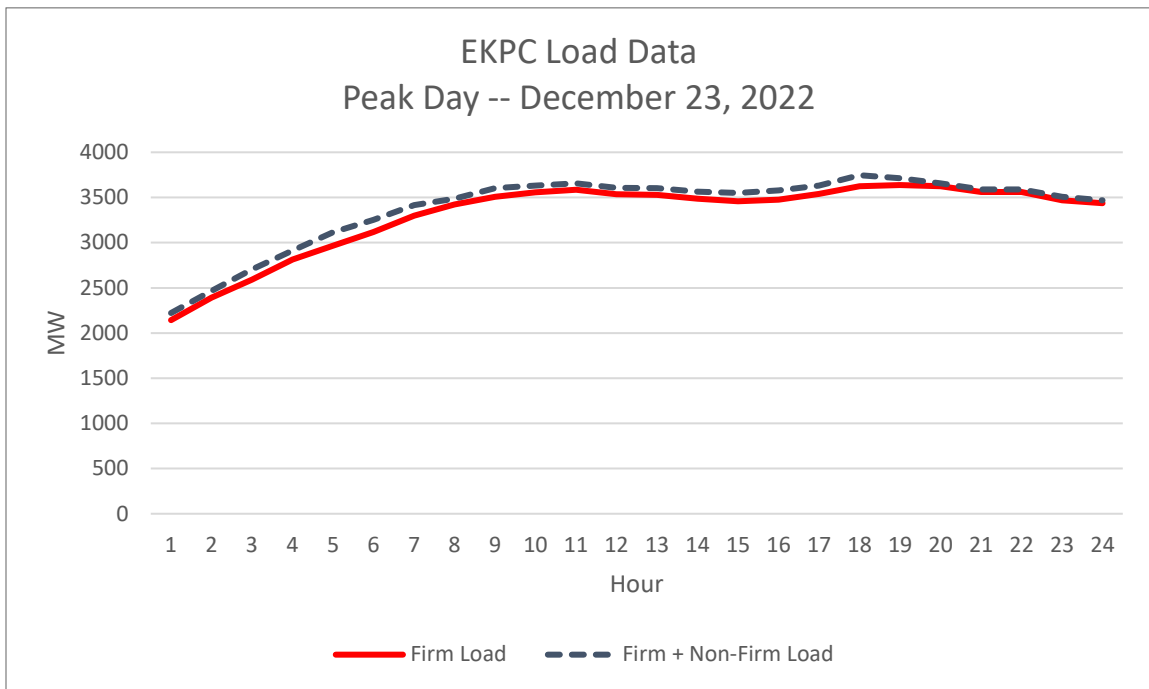
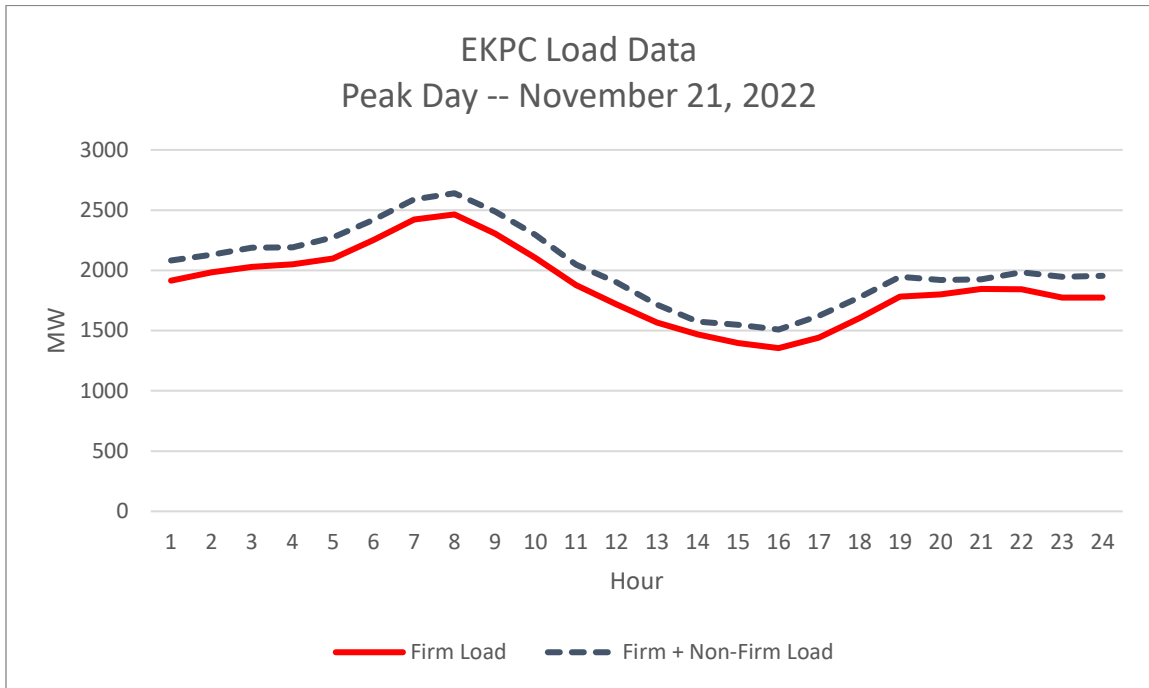












EAST KENTUCKY POWER COOPERATIVE, INC.
PSC ADMINISTRATIVE CASE NO. 387
ANNUAL RESOURCE ASSESSMENT FILING

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.

Net Total Energy Requirements - Thousand MWh

Year	Pessimistic Economics Mild Weather	Pessimistic Economics Normal Weather	BASE CASE	Optimistic Economics Normal Weather	Optimistic Economics Extreme Weather
2023	14,870	15,655	15,730	15,803	16,680
2024	15,042	15,828	15,978	16,127	17,004
2025	15,084	15,870	16,097	16,322	17,199
2026	15,158	15,944	16,249	16,553	17,430
2027	15,177	15,962	16,345	16,728	17,605

Net Winter Peak Demand (MW) by Economic and Weather Scenario

Year	Pessimistic Economics Mild Weather	Pessimistic Economics Normal Weather	BASE CASE	Optimistic Economics Normal Weather	Optimistic Economics Extreme Weather
2022 - 23	2,881	3,274	3,289	3,305	3,701
2023 - 24	2,934	3,334	3,349	3,365	3,769
2024 - 25	2,937	3,338	3,370	3,401	3,809
2025 - 26	2,950	3,352	3,400	3,448	3,861
2026 - 27	2,953	3,355	3,419	3,483	3,901

Net Summer Peak Demand (MW) by Economic and Weather Scenario

Year	Pessimistic Economics Mild Weather	Pessimistic Economics Normal Weather	BASE CASE	Optimistic Economics Normal Weather	Optimistic Economics Extreme Weather
2023	2,219	2,522	2,534	2,545	2,851
2024	2,240	2,546	2,558	2,570	2,878
2025	2,258	2,565	2,590	2,614	2,928
2026	2,258	2,566	2,603	2,639	2,956
2027	2,261	2,569	2,618	2,667	2,987

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's obligation to PJM for capacity is defined by the Resource Planning Model (RPM). PJM establishes a Variable Resource Requirement against which all supply resources clear, establishing the clearing price for committed capacity resources. The Variable Resource Requirement incorporates the reserve requirement established for the particular delivery year. Among other factors, the reserve requirement incorporates PJM's summer peak load forecast, forced outage rates of resources and, an expectation of resources the PJM region might receive from other regions during emergency conditions. The calculated reserve requirement for the delivery year June 1, 2023 through May 31, 2024 is 14.9% installed reserve margin, established in October 2022.

EKPC's allocated capacity obligation based upon the RPM clearings have resulted in EKPC carrying its stand-alone summer peak load requirement plus a roughly three percent addition. The three percent addition is due to load diversity throughout the PJM region. EKPC does not historically peak at the same time that the PJM system as a whole peaks. Therefore, the reserve margin for the EKPC only load is less than the reserve margin that PJM carries on its entire load at the time of its coincident peak. All EKPC capacity resources that clear in the market are committed to the PJM region to ensure resource adequacy; all committed resources are responsible to perform when PJM needs them to ensure regional reliability. All also must offer into the Day Ahead Energy Market.

The commitment of capacity resources to be available to produce electricity in a future delivery year, however, does not lock in energy market prices for that future delivery year. The only way to guarantee a maximum cost on energy is to secure enough resources or energy contracts to hedge the prices that may result from the real time conditions and fuel prices in the energy market. EKPC takes measures to hedge its energy price exposure through the entire year.

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)	Capacity (MW)	Reserves (%)	Winter Load (MW)	Capacity (MW)	Reserves (%)
2023	2,534	3,132	24%	3,289	3,434	4%
2024	2,558	3,132	22%	3,349	3,434	3%
2025	2,590	3,132	21%	3,370	3,434	2%
2026	2,603	3,132	20%	3,400	3,434	1%
2027	2,618	3,132	20%	3,419	3,434	0%

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

**PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01
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 on pages 2 through 3 of this response

PSC Request 11
Page 2 of 3

Cooper Unit 1

2023	9	week(s) or less
2024	4	week(s) or less
2025	4	week(s) or less
2026	4	week(s) or less
2027	4	week(s) or less

JK Smith CT1

2023	6	week(s) or less
2024	2	week(s) or less
2025	2	week(s) or less
2026	2	week(s) or less
2027	2	week(s) or less

Cooper Unit 2

2023	5	week(s) or less
2024	4	week(s) or less
2025	4	week(s) or less
2026	4	week(s) or less
2027	4	week(s) or less

JK Smith CT2

2023	6	week(s) or less
2024	2	week(s) or less
2025	2	week(s) or less
2026	2	week(s) or less
2027	2	week(s) or less

Spurlock Unit 1

2023	16	week(s) or less
2024	10	week(s) or less
2025	10	week(s) or less
2026	13	week(s) or less
2027	16	week(s) or less

JK Smith CT3

2023	6	week(s) or less
2024	2	week(s) or less
2025	2	week(s) or less
2026	2	week(s) or less
2027	2	week(s) or less

Spurlock Unit 2

2023	5	weeks or less
2024	5	weeks or less
2025	5	weeks or less
2026	7	weeks or less
2027	10	week(s) or less

JK Smith CT4

2023	3	weeks or less
2024	2	weeks or less
2025	2	weeks or less
2026	2	weeks or less
2027	2	week(s) or less

Spurlock Unit 3

2023	4	week(s) or less
2024	4	week(s) or less
2025	8	week(s) or less
2026	4	week(s) or less
2027	4	week(s) or less

JK Smith CT5

2023	3	week(s) or less
2024	2	week(s) or less
2025	2	week(s) or less
2026	2	week(s) or less
2027	2	week(s) or less

PSC Request 11

Page 3 of 3

Spurlock Unit 4

2023	4	week(s) or less
2024	4	week(s) or less
2025	4	week(s) or less
2026	4	week(s) or less
2027	4	week(s) or less

JK Smith CT6

2023	4	week(s) or less
2024	2	week(s) or less
2025	2	week(s) or less
2026	2	week(s) or less
2027	2	week(s) or less

Bluegrass CT1

2023	9	week(s) or less
2024	5	week(s) or less
2025	4	week(s) or less
2026	4	week(s) or less
2027	4	week(s) or less

JK Smith CT7

2023	4	week(s) or less
2024	2	week(s) or less
2025	2	week(s) or less
2026	2	week(s) or less
2027	2	week(s) or less

Bluegrass CT2

2023	4	week(s) or less
2024	5	week(s) or less
2025	11	week(s) or less
2026	4	week(s) or less
2027	4	week(s) or less

JK Smith CT9

2023	3	week(s) or less
2024	2	week(s) or less
2025	3	week(s) or less
2026	3	week(s) or less
2027	3	week(s) or less

Bluegrass CT3

2023	6	week(s) or less
2024	9	week(s) or less
2025	5	week(s) or less
2026	6	week(s) or less
2027	6	week(s) or less

JK Smith CT10

2023	3	week(s) or less
2024	2	week(s) or less
2025	3	week(s) or less
2026	3	week(s) or less
2027	3	week(s) 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's 2022 Integrated Resource Plan ("IRP") indicates that a peaking unit could be needed by 2032, but EKPC has not started developing plans for this resource yet.

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 Adams

COMPANY: East Kentucky Power Cooperative, Inc.

Request. 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 & b. The total energy received from all interconnections and from generation sources connected to the EKPC transmission system for calendar year 2022 was 24,494,215 MWh. The total energy delivered to all interconnections on the EKPC system in 2022 was 10,786,612 MWh.

The forecasted total energy requirements for the EKPC system for 2023 through 2027 are as follows:

2023	15,729,754 MWh
2024	15,978,213 MWh
2025	16,097,281 MWh
2026	16,249,016 MWh
2027	16,344,822 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, facility outages, power 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 accommodate other contracted users (e.g., merchant generation facilities, customers taking Network Integration Transmission Service, etc.) 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 at these load levels. Also, EKPC designs its transmission system to reliably 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 to the PJM market (for instance, merchant generation facilities) or for their native-load customers (for instance, LG&E/KU).

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

Response 13d.

	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>
SUMMER						
Date	6/15/2022					
Hr.	1900					
Peak Demand (MW)	2465	2534	2558	2590	2603	2618
WINTER						
Date	12/23/2022	2/4/2023*				
Hr.	1800	0800				
Peak Demand (MW)	3747	2562	3349	3370	3400	3419

*Reflects February 2023 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 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. Pages 2 through 8 of this response include EKPC's 10-year transmission expansion plan for the 2023-2032 period. During this period, EKPC expects to make the following transmission improvements for replacement of aging transmission line and substation infrastructure, normal system development, and load growth to serve native load customers and other long-term contracted uses of the EKPC transmission system:

- 3.38 miles of new 161 kV transmission line
- 7.1 miles of new 138 kV transmission line
- 40.2 miles of new 69 kV transmission line
- 413.71 miles of transmission line re-conductor/rebuild (all at 69 kV)
- 6 new 69 kV transmission switching stations
- 1 69 kV transmission switching station rebuild
- 42.71 MVAR of new transmission capacitor banks or increases
- 2 projects to add/upgrade substation terminal facilities
- 9 new distribution substations (196 MVA added)
- 38 upgrades of existing distribution substations (213.12 MVA added)

In addition, EKPC has identified the need for the following transmission expansion projects due to generator interconnection requested projects with executed Interconnection Construction Service Agreements and that have been granted a Certificate of Construction by the Kentucky Electric Generation and Transmission Siting Board:

- Three new 69 kV switching stations
- One new 138 kV switching station
- Two new 161 kV switching stations
- One expansion of an existing 161 kV transmission substation
- One terminal equipment upgrade
- Two increases to the maximum operating temperature of an existing transmission line

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2023 – 2032)	
A. New Transmission Lines	Needed In-Service Date
Project Description	
Construct a new Floyd-Woodstock 69 kV line section using 556 ACSR (7 miles)	Jan-24
Construct a new Marion Co Industrial Tap 161 kV parallel line using 795 ACSR (2.28 miles)	Jun-25
Construct a new Coburg-EKPC Campbellsville 69 kV line section using 556 ACSR (10 miles)	Dec-26

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2023 – 2032)	
B. Transmission Line Rebuilds	Needed In-Service Date
Project Description	
Rebuild the 3/0 Goddard-Oak Ridge 69 kV line section using 556 ACSR (8.04 miles)	Jun-23
Rebuild the 3/0 Beattyville Distribution-Booneville 69 kV line section using 556 ACSR (9 miles)	Jul-23
Rebuild the 4/0 Three Links-Three Links Junction 69 kV line section using 556 ACSR (9.61 miles)	Jul-23
Rebuild the 4/0 Summersville-Magnolia 69 kV line section using 556 ACSR (15.0 miles)	Dec-23
Rebuild the 4/0 Boone-Williamstown 69 kV line section using 556 ACSR (28.5 miles)	Dec-23
Rebuild the 3/0 Beattyville-South Fork 69 kV line section using 556 ACSR (14.39 miles)	May-24
Rebuild the 3/0 Oak Ridge-Chartiers 69 kV line section using 556 ACSR (8.95 miles)	Sep-24
Rebuild the 3/0 Fall Rock-Manchester 69 kV line section using 556 ACSR (5.83 miles)	Dec-24
Rebuild the 3/0 Stephensburg-Vertrees 69 kV line section using 556 ACSR (8.7 miles)	Dec-24
Rebuild the 556 ACSR KU Fawkes-Duncannon Lane 69 kV line section to 138 & 69 kV double circuit using 795 ACSR (7.1 miles)	Dec-24
Rebuild the 1/0 Clay Village-New Castle 69 kV line section using 556 ACSR (14.29 miles)	Apr-25
Rebuild the 3/0 Liberty Junction-Peyton's Store 69 kV line section using 556 ACSR (14.2 miles)	Jun-25
Rebuild the 4/0 KU Carrollton-Milton 69 kV line section using 556 ACSR (13.39 miles)	Dec-25
Rebuild the 4/0 Headquarters-Millersburg 69 kV line section using 556 ACSR (5.12 miles)	Dec-25
Rebuild the 556 ACSR Duncannon Lane-West Berea 69 kV line sections using 795 ACSR (9.63 miles)	Dec-25
Rebuild the 4/0 Milton-EK Bedford 69 kV line section using 556 ACSR (8.71 miles)	Dec-25
Rebuild the 4/0 North Springfield-Loretto line section using 556 ACSR (14.11 miles)	Dec-25
Rebuild the 4/0 Norwood Junction-Shopville 69 kV line section using 556 ACSR (6.3 miles)	May-26
Rebuild the 4/0 Snow-North Albany 69 kV line section using 556 ACSR (4.4 miles)	Jun-26
Rebuild the 4/0 Bonnierville-Stephensburg 69 kV line section using 556 ACSR (16.42 miles)	Mar-27
Rebuild the 266.8 Budd-Logan Tap 69 kV line section using 556 ACSR (0.48 miles)	Jun-27
Rebuild the 3/0 Headquarters-Murphysville 69 kV line section using 556 ACSR (19.9 miles)	Jul-27
Replace structures on the 556 ACSR Elizabethtown-Vine Grove 69 kV line section (7.45 miles)	Aug-28
Rebuild the 2/0 Penn-Renaker 69 kV line section using 556 ACSR (20.79 miles)	Nov-27
Replace the structures on the 556 ACSR Windsor-Somerset 69 kV line section (18.66 miles)	Dec-27
Rebuild the 3/0 KU Wofford-McCreary Co. Junction 69 kV line section using 556 ACSR (20.7 miles)	Dec-27
Rebuild the 1/0 Renaker-Williamstown 69 kV line section using 556 ACSR (18.5 miles)	Dec-27
Rebuild the 556 ACSR Baker Lane double circuit 69 kV line section as two separate circuits using 556 ACSR (0.37 miles)	Jun-28
Replace the structures on the 556 ACSR Elizabethtown-Stephensburg 69 kV line section (11.71 miles)	Aug-28

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2023 – 2032)	
B. Transmission Line Rebuilds (continued)	Needed In-Service Date
Project Description	
Rebuild the 4/0 Maytown-West Liberty 69 kV line section using 556 ACSR (12.3 miles)	Nov-28
Rebuild the 266.8 Dale-Newby 69 kV Double-Circuit line section using 556 ACSR (11.1 miles)	Dec-28
Rebuild the 3/0 South Fork-Tyner 69 kV line section using 556 ACSR (14.9 miles)	Dec-28
Replace the structures on the 266 and 556 ACSR Powell Co-Zachariah line sections (16.14 miles)	Apr-29
Replace the structures on the 556 ACSR Hope-Frenchburg line section (10.94 miles)	Feb-30
Rebuild the 266 ACSR Davis-Fayette 69 kV line section using 556 ACSR (3.15 miles)	Jun-30
Rebuild the 266 ACSR Nicholasville-Davis 69 kV line section using 556 ACSR (4 miles)	Jun-31
Rebuild the 266.8 Bekaert-Budd 69 kV line section using 556 ACSR (0.8 miles)	Jun-31

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2023 – 2032)	
C. New Transmission Switching Stations	Needed In-Service Date
Project Description	
Build a new Penn 69 kV Switching Station	Apr-23
Build a new Norwood Junction 69 kV Switching Station	Dec-23
Build a new Nicholasville 69 kV Switching Station	Mar-24
Build a new Dav Lane 69 kV Switching Station & Tap (1 mile)	Dec-24
Build a new Coburg Junction 69 kV Switching Station	Dec-26
Build a new Munk Junction 69 kV Switching Station	Dec-27

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2023 – 2032)	
D. Transmission Switching Station Rebuilds	Needed In-Service Date
Project Description	
Rebuild the 69 kV Tyner Switching Station	Dec-23

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2023 – 2032)	
E. Capacitor Bank Additions	Needed In-Service Date
Project Description	
Increase the size of the Williamstown 69 kV Capacitor Bank from 8.4 to 11.2 MVARs	Dec-24
Increase the size of the Tyner 69 kV Capacitor Bank from 16.3 to 24.5 MVARs	Dec-25
Increase the size of the Coburg 69 kV Capacitor Bank from 7.1 to 17 MVARs	Dec-26
Increase the size of the Green River Plaza 69 kV Capacitor Bank from 20.4 to 27 MVARs	Dec-26
Install a new 9.7 MVAR, 69 kV Capacitor Bank at Bullitt County substation	Jun-31
Upgrade the Leon 69 kV Capacitor Bank to 400 kVar cans and increase the size from 13.2 to 20 MVAR	Dec-32

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2023 – 2032)	
F. Terminal Facility Upgrades & Additions	Needed In-Service Date
Project Description	
Argentum Relay Replacement & 138 kV Breaker Addition & Control House Replacement	Jun-23
Upgrade the East Bardstown 400/5 Current Transformer	Dec-32

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2023 – 2032)	
G. New Distribution Substations and associated Tap Lines	Needed In-Service Date
Project Description	
Construct a new Central Hardin 69-13.2 kV 18/24/30 MVA Distribution Substation	Dec-23
Construct a new Dav Lane 69 kV Distribution Substation 69 kV-13.2 kV 12/16/20 MVA	Dec-24
Construct a new North Lebanon 161 kV Distribution Substation 18/24/30 MVA	May-24
Construct a new Campbellsville Bypass Distribution Substation 69-13.2 kV 12/16/20 MVA (1 mile)	Jul-24
Construct a new Big Hill Distribution Substation 69 kV-13.2 12/16/20 MVA & New Three Links-Sand Gap Tap (8.6 miles)	Dec-24
Construct a new Mineola Pike 69-12.5 kV 12/16/20 MVA Distribution Substation and associated 69 kV tap line to the Hebron 69 kV substation (7.5 miles)	Dec-24
Construct a new Metts Drive Distribution Substation 161-25 kV 12/16/20 MVA & Tap Line (0.9 miles)	Jun-25
Construct a new West Shepherdsville 69-13.2 kV, 12/16/20 MVA Distribution Substation & Tap Line (3.9 miles)	Jun-25
Construct a new Wieland 69-25 kV 18/24/30 MVA Distribution Substation by looping it into the existing Bekaert-Budd 69 kV line section (1.2 miles)	Dec-28

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2023 – 2032)	
H. Distribution Substation Upgrades and associated Tap Lines	Needed In-Service Date
Project Description	
Rebuild and upgrade the Newfoundland 69 kV Distribution Substation to 69-13.2 kV 12/16/20	Apr-23
Rebuild and upgrade the Rice Distribution Substation to 69-13.2 kV 12/16/20 MVA (0.3 miles)	Apr-23
Rebuild and upgrade the Penn Distribution Substation to 69-13.2 kV 12/16/20 MVA	Apr-23
Rebuild and upgrade the Redbush Distribution Substation to 69-13.2 kV 12/16/20 MVA	May-23
Rebuild the Griffin 69 kV Distribution Substation 69-12.5 kV 12/16/20 and tap line (6 miles)	Oct-23
Rebuild and upgrade the Albany Distribution Substation to 69-13.2 kV 12/16/20 MVA (0.4 miles)	Dec-23
Rebuild and upgrade the Brodhead Distribution Substation to 69-13.2 kV 12/16/20 MVA (0.04 miles)	Dec-23
Rebuild the Frenchburg Distribution Substation to 69 kV-25 kV 11.2 MVA (0.25 miles)	Dec-23
Rebuild the Shopville 69 kV Distribution Substation 69-13.2 kV 11.2/14 MVA	Dec-23
Rebuild and upgrade the 69 kV Taylorsville Distribution Substation to 161-13.2 kV 12/16/20 MVA (New Location) (0.2 miles)	Dec-23
Rebuild and upgrade the Tyner 69 kV Distribution Substation in the Tyner 161 kV yard (New Location)(0.1 miles)	Dec-23
Retire the South Fork Distribution Substation and rebuild and upgrade it as White Oak 69-13.2 kV 12/16/20 MVA Distribution Substation & Tap (New Location) (0.1 miles)	Dec-23
Rebuild and upgrade the Pleasant Grove #1 Distribution Substation to 69 kV-13.2 18/24/30 MVA (0.01 miles)	Jan-24
Rebuild and upgrade the Three Links Distribution Station to 69/13.2 kV 12/16/20 MVA (0.05 miles)	Mar-24
Rebuild and upgrade the Nicholasville Distribution Substation to 69-13.2 kV 12/16/20 MVA (0.03 miles)	Mar-24
Rebuild and upgrade the Salt Lick Distribution Substation to 138-13.2 kV 12/16/20 MVA	Sep-24
Rebuild and upgrade the Bullittsville Distribution Substation to 69-13.2 kV 12/16/20 MVA (Rebuild On EKPC Owned Adjacent Property) (0.02 miles)	Dec-24
Rebuild and upgrade the Columbia Distribution Substation to 69-13.2 kV 12/16/20 (New Location) (0.05 miles)	Dec-24
Rebuild and upgrade the Elizabethtown #1 Distribution Substation to 69-13.2 kV 12/16/20 MVA	Dec-24
Rebuild and upgrade the Murphysville Distribution Substation to 69-26.4kV 12/16/20 MVA & Control Building Replacement (0.25 miles)	Dec-24
Rebuild and upgrade the North Springfield Distribution Substation to 69-13.2 kV 12/16/20 MVA (Adjacent property) (0.75 miles)	Dec-24
Rebuild and upgrade the Vertrees Distribution Substation to 69-13.2 kV 12/16/20	Dec-24
Upgrade the Asahi #1 transformer to 12/16/20 MVA 69-13.2 kV	Jun-25
Rebuild the Homestead Lane Distribution Substation as 69-13.2 kV 18/24/30 MVA	Dec-25
Rebuild and upgrade the Campbellsburg Distribution Substation to 69-13.2 kV 12/16/20 MVA (0.02 miles)	Dec-25

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2023 – 2032)	
H. Distribution Substation Upgrades and associated Tap Lines (continued) Project Description	Needed In-Service Date
Rebuild and upgrade the Greensburg Distribution Substation to 69-13.2 kV 12/16/20 MVA (0.19 miles)	Dec-25
Refurbish the Mt. Victory Distribution Substation equipment	Dec-25
Rebuild and upgrade the Oakdale Distribution Substation to 69-13.2 kV 12/16/20 MVA (New Location) (0.75 miles)	Dec-25
Refurbish the Oven Fork Distribution Substation equipment	Dec-25
Rebuild and upgrade the Whitley City Distribution Substation to 69-26.4 kV 12/16/20 MVA	Dec-25
Rebuild and upgrade the Russell Springs #1 Distribution Substation to 69-13.2 kV 12/16/20 MVA	Dec-26
Rebuild and upgrade the Russell Springs #2 Distribution Substation to 69-13.2 kV 12/16/20 MVA	Dec-26
Rebuild and upgrade the Bass Distribution Substation to 12/16/20 MVA	Dec-26
Rebuild and upgrade the Cumberland Falls Distribution Substation to 12/16/20 MVA	Dec-26
Rebuild and upgrade the Mt Olive Distribution Substation to 12/16/20 MVA	Dec-26
Rebuild and upgrade the Zula Distribution Substation to 12/16/20 MVA	Dec-26
Rebuild and upgrade the Newby Distribution Substation to 69/12.5 kV 12/16/20 MVA (New Location)	Dec-28
Rebuild and upgrade the Hebron Distribution Substation to 18/24/30 MVA	Dec-28
Upgrade the Cedar Grove Industrial Park #2 Transformer to 18/24/30 MVA	Dec-30

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2023 – 2032)	
I. Solar Generation Interconnection Request with executed Interconnection construction service agreements and certificates to construct	Needed In-Service Date
Project Description	
Expand the Marion County 161 kV bus to facilitate connection of the AE1-143 solar generation project	May-24
Construct a new 69 kV switching station to facilitate the connection of the AE2-071/AF1-203 solar generation project to the existing Patton Road-Summer Shade 69 kV line section	Dec-24
Upgrade the maximum conductor operating temperature of the 266 MCM ACSR Edmonton Industrial/JB Galloway Junction-Knob Lick 69 kV line section to 212°F (5.64 miles) to facilitate the connection of the AE2-071/AF1-203 solar generation project	Dec-24
Construct a new 69 kV switching station to facilitate the connection of the AD2-048 solar generation project to the existing Cynthiana-Headquarters 69 kV line section	Dec-24
Construct a new 138 kV switching station to facilitate the connection of the AC1-074/AC2-075 solar generation project to the existing Renaker-Jacksonville 138 kV line section	Dec-24
Construct a new 161 kV switching station to facilitate the connection of the AF1-083 solar generation project to the existing Taylor County Junction-Saloma 161 kV line section	Jun-27
Construct a new 69 kV switching station to facilitate the connection of the AF1-038 solar generation project to the existing Sewellton Junction-Webbs Crossroads 69 kV line section	Jun-27
Upgrade the 500 MCM jumpers in the EKPC Somerset-KU Somerset 69 kV tie-line using 750 MCM copper jumpers to facilitate the connection of the AF1-038 solar generation project	Jun-27
Construct a new 161 kV switching station to facilitate the connection of the AF1-050 solar generation project to the existing Green County-Summer Shade 161 kV line section	Jun-27
Upgrade the maximum conductor operating temperature of the 795 MCM ACSR Cooper-Elihu 161 kV line section to 275°F (6.7 miles) to facilitate the connection of the AF1-050 solar generation project	Jun-27