### 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:

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
	CERT	TIFICATE	
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-reference 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.

Juli J. Incher

Subscribed and sworn before me on this  $\underline{\phantom{a}28th}$  day of March 2024.

Notary Public

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

#### 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 she has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission in the above-reference 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.

Dan Ada

Subscribed and sworn before me on this \_\_28th day of March 2024.

Notary Public

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

#### 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

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 2023					
	Actual	Weather Adjusted			
	(Firm and Non-	(Firm and Non-			
	Firm)	Firm)			
	(MW)	(MW)			
January	2,546	3,433			
February	2,562	3,353			
March	2,707	2,970			
April	1,962	2,347			
May	2,017	2,050			
June	2,094	2,319			
July	2,497	2,636			
August	2,498	2,414			
September	2,281	2,288			
October	2,024	1,938			
November	2,669	2,629			
December	2,677	3,186			

**Response 3b.** EKPC had no off-system demand obligations during the calendar year 2023.

PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01

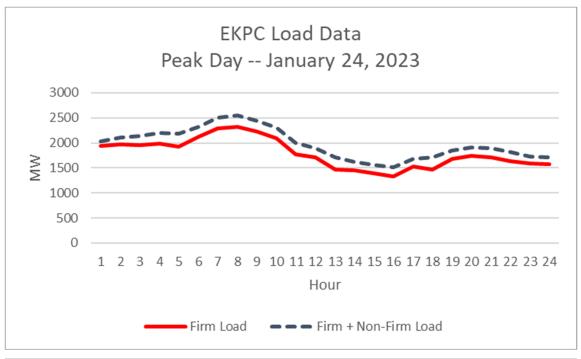
**REQUEST 4** 

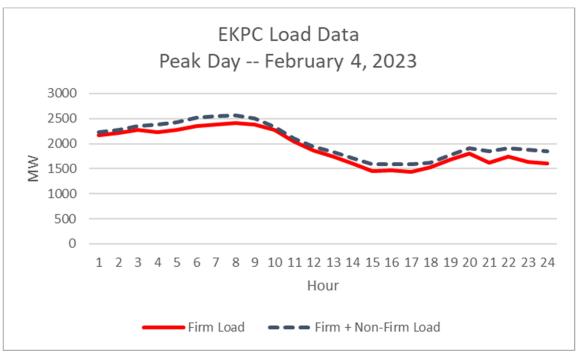
**RESPONSIBLE PERSON:** Julia J. Tucker

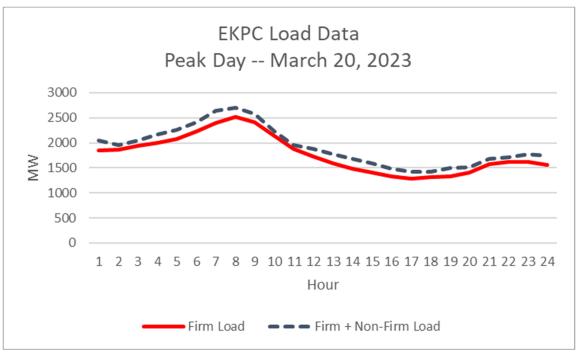
**COMPANY:** East Kentucky Power Cooperative, Inc.

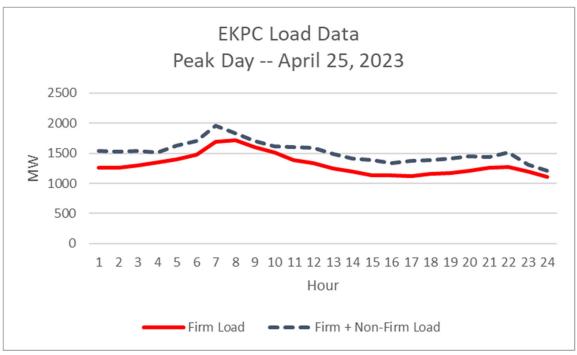
Request 4. Load shape curves that show actual peak demands and weather-normalized peak demands (native load demand and total demand) on a monthly basis for the just completed calendar year.

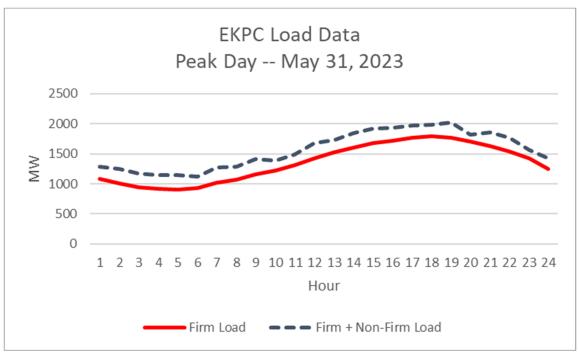
Response 4. Actual monthly peak-day load shapes are presented on pages 2 through 7 of this response. EKPC performs an analysis to weather-normalize the peak hour but EKPC does not weather-normalize the peak-day load shapes.

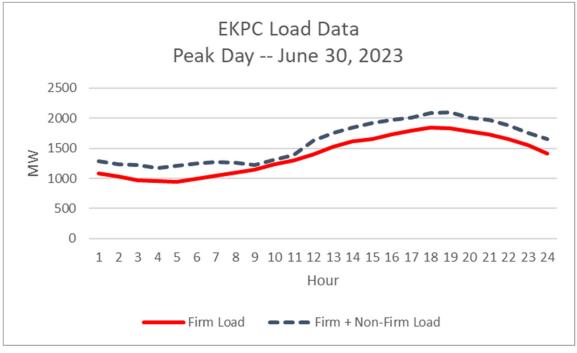


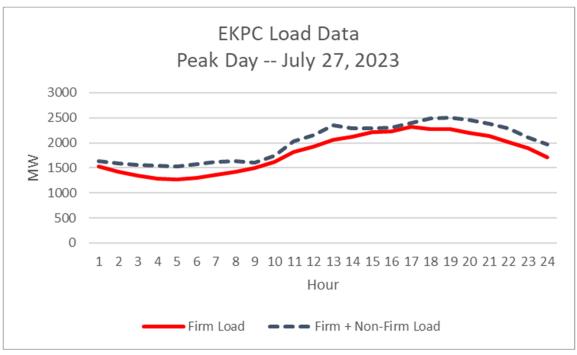


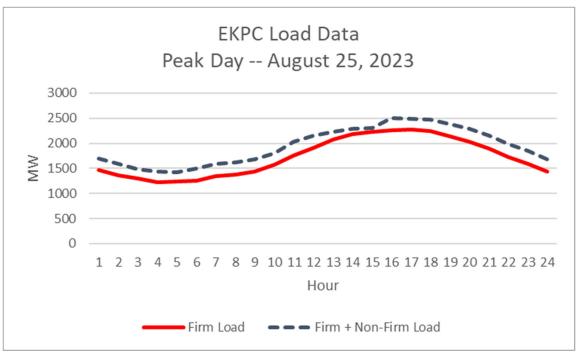


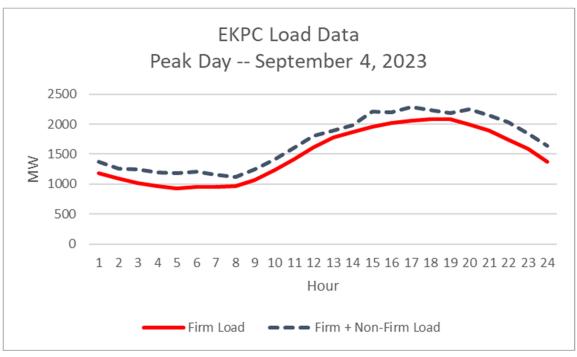


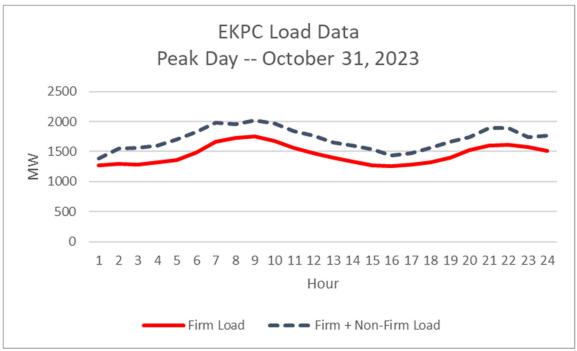


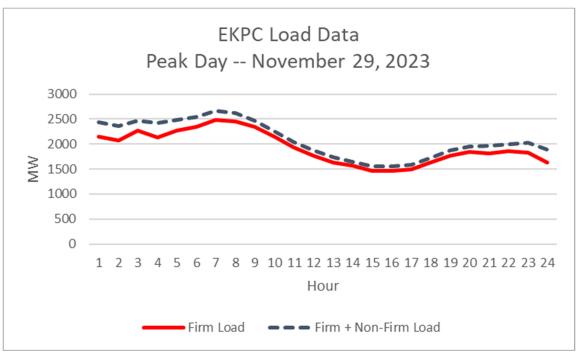


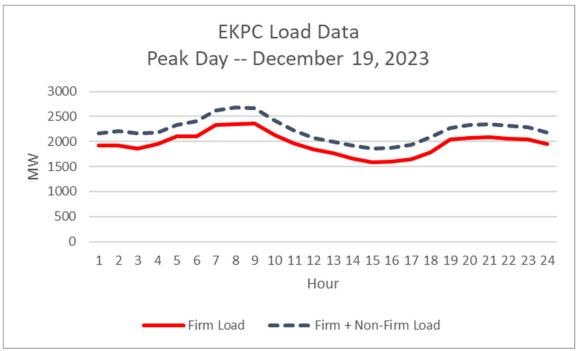












PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01

**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
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
2028	15,248	16,034	16,496	16,961	17,838

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

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Year	Pessimistic Economics Mild Weather	Pessimistic Economics Normal Weather	BASE CASE	Optimistic Economics Normal Weather	Optimistic Economics Extreme Weather
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
2027 - 28	2,967	3,372	3,452	3,533	3,957

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

	Pessimistic	Pessimistic		Optimistic	Optimistic
	Economics	Economics	BASE	Economics	Economics
Year	Mild Weather	Normal Weather	CASE	Normal Weather	Extreme Weather
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
2028	2,269	2,578	2,640	2,702	3,026

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

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, 2024 through May 31, 2025 is 17.7% installed reserve margin, established in December 2023.

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.

### 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 (%)
2024	2,558	3,120	22%	3,349	3,435	3%
2025	2,590	3,120	20%	3,370	3,435	2%
2026	2,603	3,120	20%	3,400	3,435	1%
2027	2,619	3,120	19%	3,419	3,435	0%
2028	2,640	3,120	18%	3,452	3,435	-1%

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 Uni	it 1			JK Smith	CT1		
	2024	4	week(s) or less		2024	4	week(s) or less
	2025	4	week(s) or less		2025	2	week(s) or less
	2026	4	week(s) or less		2026	2	week(s) or less
	2027	4	week(s) or less		2027	2	week(s) or less
	2028	4	week(s) or less		2028	2	week(s) or less
Cooper Uni				JK Smith			
	2024	4	week(s) or less		2024	4	week(s) or less
	2025	4	week(s) or less		2025	2	week(s) or less
	2026	4	week(s) or less		2026	2	week(s) or less
	2027	4	week(s) or less		2027	2	week(s) or less
	2028	4	week(s) or less		2028	2	week(s) or less
Courle als I Iv	n:+ 1			II/ Cooith	СТЭ		
Spurlock Ur		10	aalda) ardaaa	JK Smith		4	
	2024	10	week(s) or less		2024	4	week(s) or less
	2025	10	week(s) or less		2025	2	week(s) or less
	2026	13	week(s) or less		2026	2	week(s) or less
	2027	16	week(s) or less		2027	2	week(s) or less
	2028	10	week(s) or less		2028	2	week(s) or less
Spurlock Ur	nit 2			JK Smith	CT4		
2024	2	5	weeks or less	2024	011	6	weeks or less
	2025	ر 5	weeks or less	2024	2025	2	weeks or less
	2025	7	weeks or less		2025	2	weeks or less
	2027	10	weeks or less		2027	2	weeks or less
	2027	7	week(s) or less		2028	2	week(s) or less
	2020	,	Week(3) of iess		2020	_	Week(3) or less
Spurlock Ur	nit 3			JK Smith	CT5		
2024		4	week(s) or less	2024		2	week(s) or less
	2025	8	week(s) or less		2025	2	week(s) or less
	2026	4	week(s) or less		2026	2	week(s) or less
	2027	4	week(s) or less		2027	2	week(s) or less
	2028	4	week(s) or less		2028	2	week(s) or less

### PSC Request 11 Page 3 of 3

Spurlock Unit 4			JK Smith CT6		
2024	4	week(s) or less	2024	2	week(s) or less
2025	4	week(s) or less	2025	2	week(s) or less
2026	4	week(s) or less	2026	2	week(s) or less
2027	4	week(s) or less	2027	2	week(s) or less
2028	4	week(s) or less	2028	2	week(s) or less
Bluegrass CT1			JK Smith CT7		
2024	5	week(s) or less	2024	2	week(s) or less
2025	4	week(s) or less	2025	2	week(s) or less
2026	4	week(s) or less	2026	2	week(s) or less
2027	4	week(s) or less	2027	2	week(s) or less
2028	4	week(s) or less	2028	2	week(s) or less
Bluegrass CT2			JK Smith CT9		
2024	5	week(s) or less	2024	4	week(s) or less
2025	11	week(s) or less	2025	3	week(s) or less
2026	4	week(s) or less	2026	3	week(s) or less
2027	4	week(s) or less	2027	3	week(s) or less
2028	4	week(s) or less	2028	3	week(s) or less
Bluegrass CT3			JK Smith CT10		
2024	9	week(s) or less	2024	6	week(s) or less
2025	5	week(s) or less	2025	3	week(s) or less
2026	6	week(s) or less	2026	3	week(s) or less
2027	6	week(s) or less	2027	3	week(s) or less
2028	6	week(s) or less	2028	3	week(s) or less

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 inservice 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.

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 2023 was 23,069,171 MWh. The total energy delivered to all interconnections on the EKPC system in 2023 was 8,674,634 MWh.

The forecasted total energy requirements for the EKPC system for 2024 through 2028 are as follows:

2024 15,978,213 MWh 2025 16,097,281 MWh 2026 16,249,016 MWh 2027 16,344,822 MWh 2028 16,496,456 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.

SUMMER	<u>2023</u>	<u>2024</u>	<u> 2025</u>	2026	<u>2027</u>	<u>2028</u>
Date	8/25/2023					
Hr.	1600					
Peak Demand (MW)	2497	2558	2590	2603	2618	2640
WINTER	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>
Date	2/4/2023	1/17/2024*				
Hr.	0800	0800				
Peak Demand (MW)	2562	3754	3370	3400	3419	3452

<sup>\*</sup>Reflects January 2024 actual winter peak.

PUBLIC SERVICE COMMISSION REQUEST DATED 12/20/01

**REQUEST 14** 

**RESPONSIBLE PERSON:** Darrin Adams

transmission need each addition is intended to address.

**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

Response 14. Pages 2 through 8 of this response include EKPC's 10-year transmission expansion plan for the 2024-2033 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:

- 4.43 miles of new 161 kV transmission line
- 12.1 miles of new 138 kV transmission line
- 50.1 miles of new 69 kV transmission line
- 392.3 miles of transmission line re-conductor/rebuild (all at 69 kV)
- 5 new 69 kV transmission switching stations
- 1 new 138/69 kV transmission substation
- 1 new 161/69 kV transmission substation
- 112.6 MVAR of new transmission capacitor banks/increases of existing bank sizes
- 11 new distribution substations (256 MVA added capacity)
- 27 upgrades of existing distribution substations (165.56 MVA added capacity)
- 1 project to add substation terminal facilities

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:

- 3 new 69 kV switching stations
- 1 new 138 kV switching station
- 2 new 161 kV switching stations
- 2 increases to the maximum operating temperature of an existing transmission line

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2024 – 2033)					
A. New Transmission Lines Project Description	Needed In- Service Date				
Construct a new County Farm Road 69 kV Tap using 556 ACSR (1 mile)	May-24				
Construct a new Marion Co Industrial Tap 161 kV parallel line using 795 ACSR (2.28 miles)	Jun-25				
Construct a new Madison County 69 kV Tap using 795 ACSR (1.3 miles)	Dec-25				
Construct a new Coburg-EKPC Campbellsville 69 kV line section using 556 ACSR (10 miles)	Dec-26				
Construct a new Jenny Wiley 138 kV Tap using 795 ACSR (5 miles)	Dec-28				
Construct a new Shelby County-Wieland 161 kV line using 795 ACSR (1 mile)	Dec-29				

B. Transmission Line Rebuilds Project Description	Needed In- Service Date
Rebuild the 3/0 Beattyville-South Fork 69 kV line section using 556 ACSR (14.39 miles)	Jul-24
Rebuild the 4/0 Boone-Williamstown 69 kV line section using 556 ACSR (28.5 miles)	Jul-24
Rebuild the 4/0 Three Links-Three Links Junction 69 kV line section using 556 ACSR (9.61 miles)	Jun-24
Rebuild the 3/0 Oak Ridge-Charters 69 kV line section using 556 ACSR (8.95 miles)	Sep-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
Replace structures on the Spurlock-Stuart double circuit 345kV line (0.6 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 556 ACSR Baker Lane double circuit 69 kV line section as two separate circuits using 556 ACSR (0.37 miles)	Dec-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 4/0 North Springfield-Loretto line section using 556 ACSR (14.11 miles)	Dec-25
Rebuild the 3/0 Fall Rock-Manchester 69 kV line section using 556 ACSR (5.83 miles)	Feb-26
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 Bonnieville-Stephensburg 69 kV line section using 556 ACSR (16.42 miles)	Mar-27
Rebuild the 266 ACSR Nicholasville-Davis 69 kV line section using 556 ACSR (3.91 miles)	May-27
Rebuild the 3/0 Headquarters-Murphysville 69 kV line section using 556 ACSR (19.9 miles)	Jul-27
Rebuild the 556 ACSR Duncannon Lane-West Berea 69 kV line sections using 795 ACSR (9.63 miles)	Aug-27
Replace structures on the 556 ACSR Elizabethtown-Vine Grove 69 kV line section (7.45 miles)	Aug-27
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 266 ACSR Davis-Fayette 69 kV line section using 556 ACSR (3.15 miles)	Dec-27
Rebuild the 3/0 KU Wofford-McCreary Co. Junction 69 kV line section using 556 ACSR (20.7 miles)	May-28
Rebuild the 266.8 Bekaert-Budd 69 kV line section using 556 ACSR (0.8 miles)	Jun-28
Rebuild the 266.8 Budd-Logan Tap 69 kV line section using 556 ACSR (0.48 miles)	Jun-28
Replace the structures on the 556 ACSR Elizabethtown-Stephensburg 69 kV line section (11.71 miles)	Aug-28
Rebuild the 4/0 Maytown-West Liberty 69 kV line section using 556 ACSR (12.3 miles)	Nov-28

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2024 – 2033)	
B. Transmission Line Rebuilds (continued) Project Description	Needed In- Service Date
Rebuild the 3/0 South Fork-Tyner 69 kV line section using 556 ACSR (14.9 miles)	Dec-28
Rebuild the 266.8 Dale-Newby 69 kV Double-Circuit line section using 556 ACSR (11.1 miles)	Jun-29
Rebuild the 556 ACSR Nicholasville-Holloway Junction line sections using 556 ACSR (3.13 miles)	Dec-29
Replace the structures on the 266 and 556 ACSR Powell Co-Zachariah line sections (16.14 miles)	Oct-30
Rebuild the 1/0 Renaker-Williamstown 69 kV line section using 556 ACSR (18.5 miles)	Dec-30
Replace the structures on the 556 ACSR Hope-Frenchburg line section (10.94 miles)	Aug-31

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (	2024 – 2033)
C. New Transmission Substations Project Description	Needed In- Service Date
Build a new County Farm Road 69 kV Switching Station	May-24
Build a new Madison County 69 kV Switching Station	Dec-25
Build a new Coburg Junction 69 kV Switching Station	Dec-26
Build a new 138/69 kV Switching Station near Jenny Wiley Tap	Dec-28
Build a new Newby 69 kV Switching Station	Dec-28
Build a new 161/69 kV Switching Station near Wieland	Dec-29
Build a new Munk Junction 69 kV Switching Station	Dec-30

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2024 – 2033)	
D. Transmission Switching Station Rebuilds Project Description	Needed In- Service Date
Install a new 30.6 MVAR, 69 kV Capacitor Bank at Liberty Junction substation	Dec-24
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
Increase the size of the Williamstown 69 kV Capacitor Bank from 8.4 to 11.2 MVARs	Dec-28
Install a new 43 MVAR, 69 kV Capacitor Bank at the new Wieland substation	Dec-29
Increase the size of the Shelby County 69 kV Capacitor Bank from 23 to 44 MVAR	Dec-32

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2024 – 2033)	
E. New Distribution Substations and associated Tap Lines Project Description	Needed In- Service Date
Construct a new North Lebanon 161 kV Distribution Substation 18/24/30 MVA	Apr-24
Construct a new County Farm Road Distribution Substation 69-13.2 kV 12/16/20 MVA	May-24
Construct a new Heartland Park Distribution Substation 69-13.2 kV 12/16/20 MVA (1 mile)	Jul-24
Construct a new Mineola Pike Distribution Substation 69-12.5 kV 12/16/20 MVA and associated 69 kV tap line to the Hebron 69 kV substation (7.5 miles)	Dec-24
Construct a new Autumn Leaf Distribution Substation 69-13.2 kV 12/16/20 MVA & Tap Line (6.8 miles)	Jun-25
Construct a new Clay Village #2 Distribution Substation 69-13.2kV 12/16/20 MVA	Jun-25
Construct a new Logistics Drive Distribution Substation 69-26.4kV 18/24/30 MVA & Tap (1.4 miles)	Jul-25
Construct a new Big Hill Distribution Substation 69-13.2 kV 12/16/20 MVA & associated tap line from the Three Links-Sand Gap 69 kV line section (8.6 miles)	Dec-25
Construct a new Metts Drive Distribution Substation 161-25 kV 12/16/20 MVA & Tap Line (0.9 miles)	Dec-25
Construct a new Cub Run Distribution Substation 69-25 kV 12/16/20 MVA and Tap Line (11.4 miles)	Dec-26
Construct a new Wieland Distribution Substation 69-25 kV 18/24/30 MVA by looping it into the existing Bekaert-Budd 69 kV line section (1.2 miles)	Dec-29

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2024 – 2033)  F. Distribution Substation Upgrades and associated Tap Lines	Needed In-
Project Description	Service Date
Rebuild the Shopville 69 kV Distribution Substation 69-13.2 kV 11.2/14 MVA	Jun-24
Rebuild and upgrade the Salt Lick Distribution Substation to 138-13.2 kV 12/16/20 MVA	Dec-24
Rebuild the Blue Lick Distribution Substation to 69-13.2 kV 12/16/20 MVA	Mar-25
Upgrade the Asahi #1 transformer to 12/16/20 MVA 69-13.2 kV	Dec-25
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-25
Rebuild and upgrade the Elizabethtown #1 Distribution Substation to 69-13.2 kV 12/16/20 MVA	Dec-25
Rebuild and upgrade the North Springfield Distribution Substation to 69-13.2 kV 12/16/20 MVA (Adjacent property) (0.75 miles)	Dec-25
Upgrade the Mariba transformer to 12/16/20 MVA 69-13.2 kV	Jul-26
Rebuild and upgrade the Campbellsburg Distribution Substation to 69-13.2 kV 12/16/20 MVA (0.02 miles)	Dec-26
Rebuild the Homestead Lane Distribution Substation as 69-13.2 kV 18/24/30 MVA	Dec-26
Rebuild and upgrade the Murphysville Distribution Substation to 69-26.4 kV 12/16/20 MVA & Control Building Replacement (0.25 miles)	Dec-26
Rebuild and upgrade the Bass Distribution Substation to 12/16/20 MVA	Dec-27
Rebuild and upgrade the Vertrees Distribution Substation to 69-13.2 kV 12/16/20	Dec-27
Rebuild and upgrade the Cumberland Falls Distribution Substation to 12/16/20 MVA	Dec-28
Rebuild and upgrade the Greensburg Distribution Substation to 69-13.2 kV 12/16/20 MVA (0.19 miles)	Dec-28
Rebuild and upgrade the Newby Distribution Substation to 69/12.5 kV 12/16/20 MVA (New Location)	Dec-28
Rebuild and upgrade the Oakdale Distribution Substation to 69-13.2 kV 12/16/20 MVA (New Location) (0.75 miles)	Dec-28
Rebuild the Phil Distribution Substation to 69-13.2kV 12/16/20 MVA (Adjacent Property)	Dec-28
Rebuild and upgrade the Russell Springs #2 Distribution Substation to 69-13.2 kV 12/16/20 MVA	Dec-28
Rebuild and upgrade the Whitley City Distribution Substation to 69-26.4 kV 12/16/20 MVA	Dec-28
Rebuild and upgrade the Columbia Distribution Substation to 69-13.2 kV 12/16/20 (New Location) (0.05 miles)	Jun-29
Rebuild and upgrade the Mt Olive Distribution Substation to 12/16/20 MVA	Dec-29
Rebuild the Mt Washington #1 Distribution Substation to 69-13.2 kV 12/16/20 MVA	Dec-29
Rebuild and upgrade the Zula Distribution Substation to 12/16/20 MVA	Dec-29
Rebuild and upgrade the Russell Springs #1 Distribution Substation to 69-13.2 kV 12/16/20 MVA	Dec-30
Upgrade the Holloway transformer to 69-13.2 kV 12/16/20 MVA	May-32
Add a Hebron #2 transformer 69-13.2 12/16/20 MVA	May-32
Upgrade the Bardstown Shopping Center transformer to 69-13.2 kV 12/16/20 MVA	May-33

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2024 – 2033)	
G. Terminal Facility Upgrades & Additions Project Description	Needed In- Service Date
Rowan County Breaker Addition	Dec-28

EKPC 10-YEAR TRANSMISSION EXPANSION SCHEDULE (2024 – 2033)	
H. Solar Generation Interconnection Request with executed Interconnection construction service agreements and certificates to construct  Project Description	Needed In- Service Date
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 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 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-25
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-26
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-26
Upgrade the maximum conductor operating temperature of the 795 MCM ACSR Cooper-Elihu 161 kV line section to 275°F (4.2 miles) to facilitate the connection of the AF1-050 solar generation project	Jun-26
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	Sept-26