







VERIFICATION

STATE OF OHIO )  
 ) SS:  
COUNTY OF HAMILTON )

The undersigned, Maida Session, Lead Energy Accounting Analyst, being duly sworn, deposes and says that she has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of her knowledge, information, and belief.

Maida Session  
Maida Session, Affiant

Subscribed and sworn to before me by Maida Session on this 27th day of March, 2024.

Matthew S. Wurzelbacher  
NOTARY PUBLIC



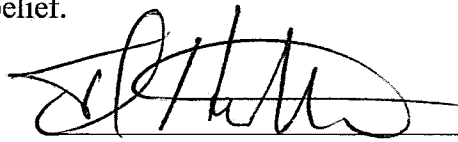
MATTHEW S. WURZELBACHER  
Notary Public, State of Ohio  
My Commission Expires  
October 02, 2028  
COMMISSION: 2023-RE-869104

My Commission Expires:  
10/2/28

VERIFICATION

STATE OF INDIANA )  
 )  
COUNTY OF HENDRICKS ) SS:

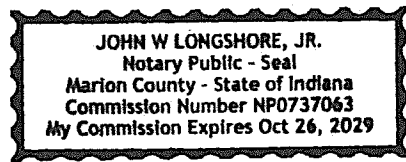
The undersigned, Timothy J. Hohenstatt, Director Transmission Planning, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information, and belief.

  
\_\_\_\_\_  
Timothy J. Hohenstatt, Affiant

Subscribed and sworn to before me by Timothy J. Hohenstatt on this 26<sup>th</sup> day of MARCH 2024.

  
\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires: 10/26/29



**2024 Admin Case No. 387 (Mini IRP)**  
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**Duke Energy Kentucky  
Administrative Case No. 387  
March 31, 2024**

**STAFF-DR-01-003**

**REQUEST:**

Actual and weather-normalized monthly 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:**

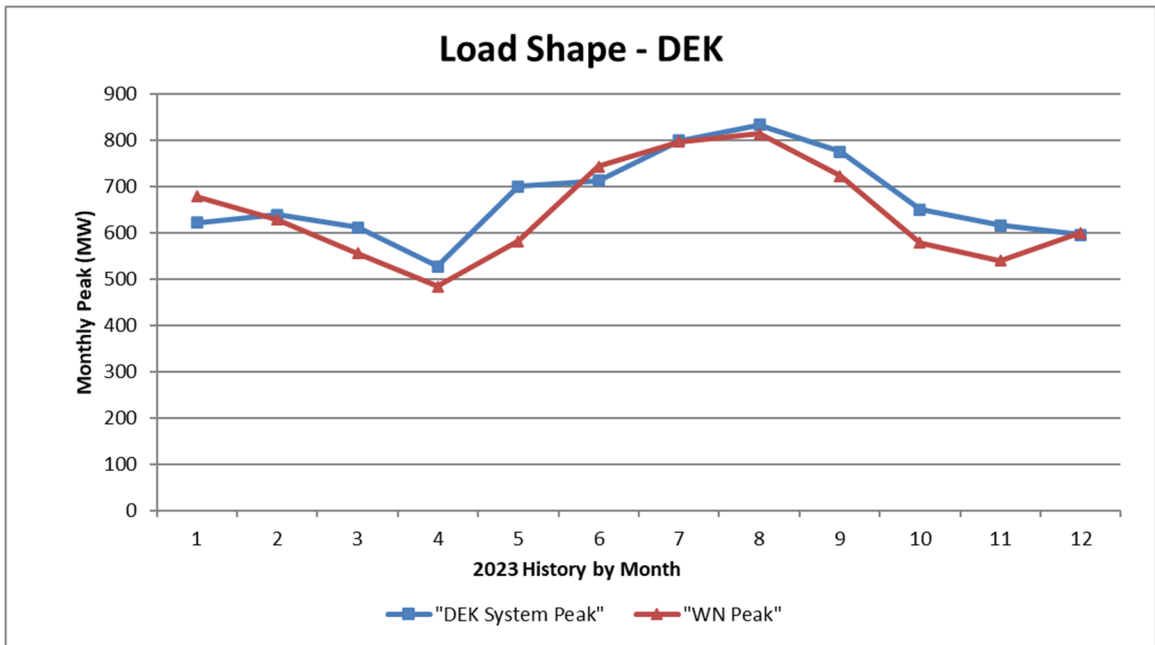
<b>Duke Energy Kentucky Electric Energy Demands - MW</b>				
	Native Peak	Internal Peak	Weather Normal Internal Peak	Total
Jan-23	622	622	679	679
Feb-23	639	639	629	629
Mar-23	612	612	556	556
Apr-23	528	528	484	484
May-23	701	701	583	583
Jun-23	713	713	744	744
Jul-23	800	800	797	797
Aug-23	834	834	814	814
Sep-23	776	776	724	724
Oct-23	651	651	579	579
Nov-23	617	617	541	541
Dec-23	596	596	601	601

**PERSON RESPONSIBLE:** Ibrar Khera

**REQUEST:**

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:**



**PERSON RESPONSIBLE:** Ibrar Khera



**REQUEST:**

Based on the most recent demand forecast, the base case demand and energy forecasts and high 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:**

<b>Duke Energy Kentucky – Native Load Forecast</b>				
	<b>Demand – MW</b>		<b>Energy - GWH</b>	
	<b>Base</b>	<b>High</b>	<b>Base</b>	<b>High</b>
<b>2023</b>	834	934	3,941	4,412
<b>2024</b>	808	907	3,973	4,463
<b>2025</b>	810	909	3,969	4,457
<b>2026</b>	812	912	3,975	4,463
<b>2027</b>	812	912	3,969	4,457

<b>Duke Energy Kentucky – Non-Firm Electric Forecast</b>				
	<b>Demand – MW</b>		<b>Energy - MWH</b>	
	<b>Base</b>	<b>High</b>	<b>Base</b>	<b>High</b>
<b>2023</b>	n/a	n/a	n/a	n/a
<b>2024</b>	n/a	n/a	n/a	n/a
<b>2025</b>	n/a	n/a	n/a	n/a
<b>2026</b>	n/a	n/a	n/a	n/a
<b>2027</b>	n/a	n/a	n/a	n/a

**PERSON RESPONSIBLE:** Ibrar Khera

**REQUEST:**

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 for the change.

**RESPONSE:**

In order to better align our internal planning process with that of PJM, we used the UCAP methodology for the 2021 Duke Energy Kentucky IRP. This will reflect the capacity accreditation that PJM uses for different types of resources.

Duke Energy Kentucky recognizes that the PJM Planning Reserve Margin varies with every capacity action and assumed an 8.71% Planning Reserve Margin for the duration of the 2021 IRP. Last year, the Planning Reserve Margin was updated to 9.18%. However, PJM recently updated their planning reserve margins and the new Reserve Margin is -6.13% (or 93.87% of peak load) for modeling purposes based on the FPR (Forecast Pool Requirement) from the most recent PJM update on 3/13/2024. This is a departure from the 9.18% (109.18%) previously used by PJM and reflects a major decrease in Pool Wide Average Accredited UCAP (Down from about 95% to 79.7% in most recent update.).

**PERSON RESPONSIBLE:** Matthew Kalemba

**REQUEST:**

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:**

Projected reserve margins are calculated as follows and assume PJM’s UCAP methodology:

$$\text{Reserve Margin (MW)} = \text{Generating Capacity} - \text{Peak Demand} - \text{Demand Response}$$
$$\text{Reserve Margin (\%)} = (\text{Generating Capacity} / (\text{Peak Demand} - \text{Demand Response})) - 1$$

Year	Annual Peak	Estimated Firm Cap	Projected Reserve Margin	Required Reserve Margin
2024	822	879	6.9%	-6.13%
2025	821	879	7.0%	-6.13%
2026	835	879	5.2%	-6.13%
2027	839	879	4.7%	-6.13%
2028	842	879	4.3%	-6.13%

This data reflects the Fall 2023 Load Forecast. The current fleet consists of, based on summer rating, the 600 MW East Bend 2 and 462 MW Woodsdale generating stations plus 9 MW solar and 3 MW of DR.

**PERSON RESPONSIBLE:** Matthew Kalemba

**REQUEST:**

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

**RESPONSE:**

**CONFIDENTIAL PROPRIETARY TRADE SECRET**

<b>Unit Name</b>	<b>Year</b>	<b>Duration (Weeks)</b>
Woodsdale CT 1	2024	
East Bend 2	2024	
Woodsdale CT 2	2024	
Woodsdale CT 3	2024	
Woodsdale CT 4	2024	
Woodsdale CT 5	2024	
Woodsdale CT 6	2024	
East Bend 2	2024	
Woodsdale CT 4	2024	
Woodsdale CT 1	2024	
Woodsdale CT 2	2024	
Woodsdale CT 3	2024	
Woodsdale CT 5	2024	
Woodsdale CT 6	2024	
Woodsdale CT 5	2025	
Woodsdale CT 6	2025	
Woodsdale CT 1	2025	
Woodsdale CT 2	2025	
Woodsdale CT 3	2025	
Woodsdale CT 4	2025	
East Bend 2	2025	
East Bend 2	2025	
Woodsdale CT 5	2025	
Woodsdale CT 3	2025	
Woodsdale CT 4	2025	
Woodsdale CT 6	2025	
Woodsdale CT 1	2025	
Woodsdale CT 2	2025	

Woodsdale CT 1	2026		
Woodsdale CT 2	2026		
Woodsdale CT 3	2026		
Woodsdale CT 4	2026		
East Bend 2	2026		
Woodsdale CT 5	2026		
Woodsdale CT 6	2026		
East Bend 2	2026		
Woodsdale CT 6	2026		
Woodsdale CT 1	2026		
Woodsdale CT 2	2026		
Woodsdale CT 3	2026		
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Woodsdale CT 3	2028		
Woodsdale CT 4	2028		
Woodsdale CT 5	2028		
Woodsdale CT 6	2028		
Woodsdale CT 1	2028		
Woodsdale CT 2	2028		
Woodsdale CT 3	2028		
Woodsdale CT 4	2028		
East Bend 2	2028		
Woodsdale CT 5	2028		
Woodsdale CT 6	2028		

**PERSON RESPONSIBLE:** John Swez

**REQUEST:**

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:**

There are currently no planned base load capacity additions forecasted for the next 10 years, subject to specific assumptions regarding Federal Carbon Legislation as reflected in the Company's recently filed IRP in Case No. 2021-00245. Additionally, as reflected in the aforementioned IRP, the Company forecasts a need, based upon specific assumptions, for additional renewable generation as possible transitional portfolios. Duke Energy Kentucky continually evaluates its needs for additional base or peaking capacity based upon annual load projections. No final decision has been made at this time.

**PERSON RESPONSIBLE:** Matthew Kalemba

**REQUEST:**

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

- a. Total energy received from all interconnections and generation sources connected to the transmission system.
- b. Total energy delivered to all interconnections on the transmission system.
- c. Peak load capacity of the transmission system.
- d. Peak demand for summer and winter seasons on the transmission system.

**RESPONSE:**

a.

Year	Month	Total Energy Received
2023	January	362,072
	February	312,195
	March	337,652
	April	296,815
	May	322,087
	June	342,757
	July	410,980
	August	409,542
	September	342,379
	October	304,376
	November	307,368
	December	334,594
2023 Total		4,082,817



- b. There were 203,912 MWh delivered to the transmission system from Duke Energy Kentucky.
- c. Neither Duke Energy Kentucky nor the electric utility industry has defined a term “peak load capacity of the transmission system.” There is no single number that defines the capacity of a transmission system due to the interconnected nature of the electric grid. Duke Energy Kentucky does perform assessments of its transmission system to ensure all firm loads can be served in a reliable manner. This ensures that the transmission system has the capacity required to reliably serve the load.
- d. **SUMMER PEAK**

<b>Date</b>	<b>Hour</b>	<b>MW’s</b>
August 25, 2023	15	834

**WINTER PEAK**

<b>Date</b>	<b>Hour</b>	<b>MW’s</b>
February 1, 2023	8	639

**PERSON RESPONSIBLE:** Maida Session – a., b., d.  
 Tim Hohenstatt – c.

**STAFF-DR-01-014**

**REQUEST:**

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:**

The following transmission capacity additions are planned with planned in-service dates indicated:

Hebron to Oakbrook 69 kV line – erect a single circuit 69 kV line from Hebron Substation to the vicinity of St. Route 237 and Orchid Drive, approximately 2 miles in length. Rebuild/upgrade the capacity of a section of an existing 69 kV line from Limaburg Substation south to St. Route 18, approximately 1.4 miles in length. (Both the new line section and the rebuilt/upgraded line section will be constructed to 138 kV standards to allow future capacity upgrade if required due to future load growth.)  
Planned in-service Date: 6/1/2025.

The purpose of the above planned projects is to provide service to the Duke Energy Kentucky transmission and distribution systems to serve load growth in Boone County, in the vicinity of the Cincinnati/Northern Kentucky International Airport.

**PERSON RESPONSIBLE:** Tim Hohenstatt