

Administrative Case No. 387
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VERIFICATION

STATE OF South Carolina)
COUNTY OF Richland)

SS:

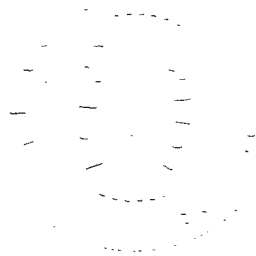
The undersigned, Nes Arnette, Lead Load Forecast Analyst, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information, and belief.

Nes Arnette
Nes Arnette, Affiant

Subscribed and sworn to before me by Nes Arnette on this 26th day of
March 2026.

Nettle Green
NOTARY PUBLIC


My Commission Expires:



VERIFICATION


STATE OF OHIO)
) SS:
COUNTY OF HAMILTON)

The undersigned, Mark Richard Thieman, GM System Operations, 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.



Mark Richard Thieman, Affiant

Subscribed and sworn to before me by Mark Richard Thieman on this 17th day of March, 2026.



NOTARY PUBLIC

My Commission Expires: July 8, 2027



EMILIE SUNDERMAN
Notary Public
State of Ohio
My Comm. Expires
July 8, 2027

**Duke Energy Kentucky
Administrative Case No. 387
March 31, 2026**

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:

Duke Energy Kentucky Electric Native Demands - MW						
	Actual Native Demand			Weather Normal Native Demand		
	Firm	Non-Firm	Total	Firm	Non-Firm	Total
Jan-25	830	0	830	745	0	745
Feb-25	719	0	719	702	0	702
Mar-25	600	0	600	591	0	591
Apr-25	576	0	576	543	0	543
May-25	677	0	677	698	0	698
Jun-25	878	0	878	839	0	839
Jul-25	869	0	869	827	0	827
Aug-25	853	0	853	877	0	877
Sep-25	729	0	729	721	0	721
Oct-25	641	0	641	601	0	601
Nov-25	600	0	600	590	0	590
Dec-25	775	0	775	698	0	698

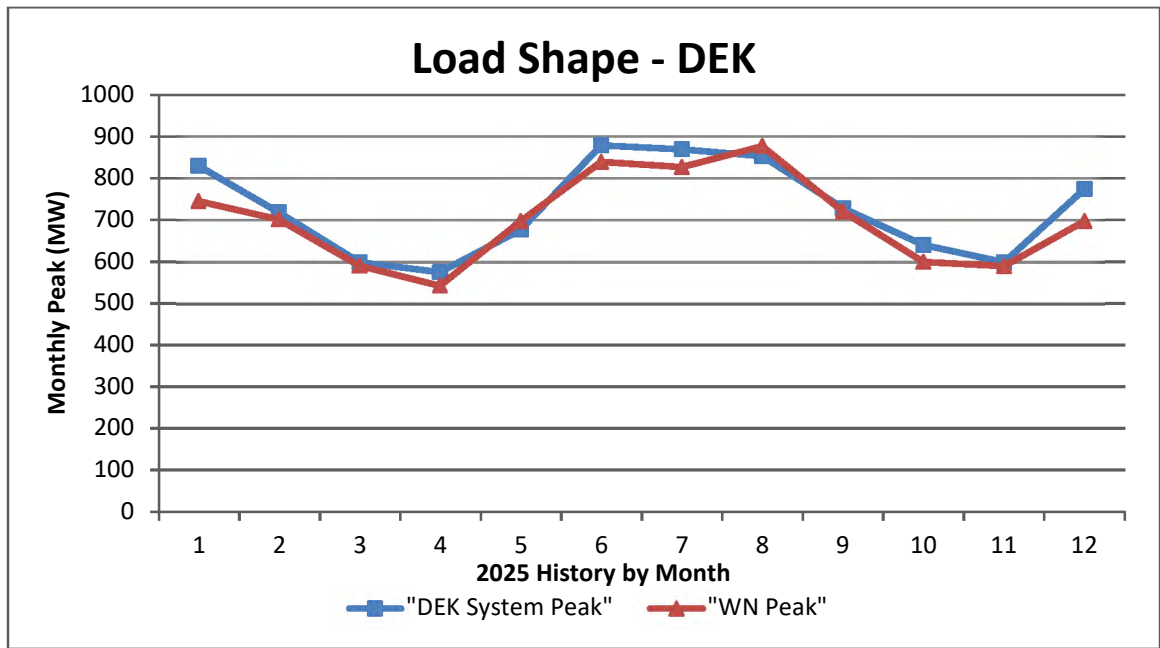
Duke Energy Kentucky Electric Off-System Demands - MW						
	Actual Off-System Demand			Weather Normal Off-System Demand		
	Firm	Non-Firm	Total	Firm	Non-Firm	Total
Jan-25	0	0	0	0	0	0
Feb-25	0	0	0	0	0	0
Mar-25	0	0	0	0	0	0
Apr-25	0	0	0	0	0	0
May-25	0	0	0	0	0	0
Jun-25	0	0	0	0	0	0
Jul-25	0	0	0	0	0	0
Aug-25	0	0	0	0	0	0
Sep-25	0	0	0	0	0	0
Oct-25	0	0	0	0	0	0
Nov-25	0	0	0	0	0	0
Dec-25	0	0	0	0	0	0

PERSON RESPONSIBLE: Nes Arnette

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: Nes Arnette

**Duke Energy Kentucky
Administrative Case No. 387
March 31, 2026**

STAFF-DR-01-006

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:

Duke Energy Kentucky – Native Electric Load Forecast				
	Demand – MW		Energy - GWH	
	Base	High	Base	High
2026	891	965	4,212	4,560
2027	910	983	4,399	4,755
2028	904	978	4,443	4,805
2029	906	980	4,464	4,807
2030	957	1,031	4,791	5,160

Duke Energy Kentucky – Non-Firm Electric Forecast				
	Demand – MW		Energy - MWH	
	Base	High	Base	High
2026	n/a	n/a	n/a	n/a
2027	n/a	n/a	n/a	n/a
2028	n/a	n/a	n/a	n/a
2029	n/a	n/a	n/a	n/a
2030	n/a	n/a	n/a	n/a

Duke Energy Kentucky – Off-System Electric Forecast				
	Demand – MW		Energy - MWH	
	Base	High	Base	High
2026	n/a	n/a	n/a	n/a
2027	n/a	n/a	n/a	n/a
2028	n/a	n/a	n/a	n/a
2029	n/a	n/a	n/a	n/a
2030	n/a	n/a	n/a	n/a

PERSON RESPONSIBLE: Nes Arnette

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 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 a -6.13% Planning Reserve Margin for the duration of the 2024 IRP based on PJM's requirement for the 2025/2026 delivery year at the time the 2024 IRP was developed. The Company continues to monitor PJM reserve margin updates, and uses the most recent information available in its planning.

In January 2026, PJM published an FPR (forecasted pool requirement) of 0.9291 for the 3rd Incremental Auction (3rd IA) for 2026/2027 delivery year, implying a reserve margin requirement of -7.09%. PJM released the results of the Base Residual Auctions (BRA) for delivery year 2027/2028 in July 2025 with an FPR of 0.9260, corresponding to a -7.40% reserve margin requirement. In January 2026, PJM published an FPR of 0.9401 in the BRA for delivery year 2028/2029, implying a reserve margin requirement of -5.99%. Duke Energy Kentucky uses projected FPR figures from PJM's "2025 PJM Effective Load

Carrying Capability and Reserve Requirement Study (ELCC/RRS)” published in October 2025 to estimate planning reserve margin requirements for the 2029/2030 delivery year and beyond. The table below provides a summary of planning reserve margin requirements by delivery year for the next five years.

Planning Year	Reserve Margin Requirement	Source (PJM)
2026/2027	-7.09%	2026/2027 3 rd IA
2027/2028	-7.40%	2027/2028 BRA
2028/2029	-5.99%	2028/2029 BRA
2029/2030	-8.47%	2025 PJM Effective Load Carrying Capability and Reserve Requirement Study (ELCC/RRS)
2030/2031	-8.43%	2025 PJM Effective Load Carrying Capability and Reserve Requirement Study (ELCC/RRS)

PERSON RESPONSIBLE: Nathan Gagnon

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:

$$\text{Projected Reserve Margin (MW)} = \text{Estimated Firm Capacity} - (\text{Annual Peak Demand} * (1 + \text{Required Reserve Margin}))$$

$$\text{Projected Reserve Margin (\%)} = (\text{Estimated Firm Capacity} - (\text{Annual Peak Demand} * (1 + \text{Required Reserve Margin}))) / (\text{Annual Peak Load} * (1 + \text{Planning Reserve Margin}))$$

Year	Annual Peak Load (MW)	Est Firm Cap (MW)	Required Reserve Margin (%)	Projected Reserve Margin (MW)	Projected Reserve Margin (%)
2026	891	889	-7.09%	61	7.42%
2027	910	868	-7.40%	25	3.02%
2028	904	890	-5.99%	40	4.68%
2029	906	932	-8.47%	103	12.42%
2030	957	932	-8.43%	56	6.37%

This data reflects the Spring 2025 Load Forecast. The current fleet consists of, based on summer rating, 600 MW East Bend 2 and 476 MW Woodsdale generating stations plus 9 MW solar (nameplate) and 3 MW of DR. The total capacity of the Woodsdale generating station is expected to increase by 84 MW in 2029 as a result of replacement

parts installed in the course of normal maintenance. The Company estimated firm capacity of resources using the Final ELCC Class Ratings for the 2026/2027 3IA, the 2027/2028 BRA, the 2028/2029 BRA, and PJM's preliminary forecasted class ratings for later years. Please see the response to STAFF-DR-01-007 for an explanation of the target reserve margin.

Currently, Duke Energy Kentucky is not projected to be in a reserve margin deficit through 2030.

PERSON RESPONSIBLE: Nathan Gagnon

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

Unit Name	Year	Duration (Weeks)
Woodsdale CT 5	2026	
Woodsdale CT 2	2026	
Woodsdale CT 3	2026	
Woodsdale CT 6	2026	
East Bend 2	2026	
Woodsdale CT 1	2026	
Woodsdale CT 2	2026	
Woodsdale CT 3	2026	
Woodsdale CT 4	2026	
Woodsdale CT 5	2026	
Woodsdale CT 6	2026	
Woodsdale CT 2	2027	
Woodsdale CT 6	2027	
East Bend 2	2027	
Woodsdale CT 1	2027	
Woodsdale CT 2	2027	
Woodsdale CT 3	2027	
Woodsdale CT 4	2027	
Woodsdale CT 5	2027	
Woodsdale CT 6	2027	
Woodsdale CT 1	2028	
Woodsdale CT 2	2028	
Woodsdale CT 3	2028	
Woodsdale CT 4	2028	
Woodsdale CT 1	2028	
Woodsdale CT 5	2028	
Woodsdale CT 6	2028	
Woodsdale CT 3	2028	

Woodsdale CT 4	2028		
Woodsdale CT 2	2028		
Woodsdale CT 4	2029		
Woodsdale CT 5	2029		
East Bend 2	2029		
Woodsdale CT 3	2029		
Woodsdale CT 4	2029		
Woodsdale CT 5	2029		
Woodsdale CT 6	2029		
Woodsdale CT 1	2029		
Woodsdale CT 2	2029		
Woodsdale CT 3	2030		
Woodsdale CT 4	2030		
Woodsdale CT 5	2030		
Woodsdale CT 6	2030		
Woodsdale CT 1	2030		
Woodsdale CT 2	2030		

PERSON RESPONSIBLE: John D. Swez

STAFF-DR-01-012

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. However, the Company expects normal maintenance that it plans to perform at the Woodsdale peaking facility over the next several years to increase the capacity of the six turbines at the site by 14 MW each (84 MW total). Replacement parts will be installed and planned maintenance completed at all units by 2030. Duke Energy Kentucky continually evaluates its needs for additional base load or peaking capacity based upon annual load projections.

PERSON RESPONSIBLE: Nathan Gagnon

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
2025	January	430,003
	February	357,378
	March	339,528
	April	316,834
	May	323,307
	June	415,683
	July	472,696
	August	422,010
	September	359,636
	October	320,596
	November	326,295
	December	391,220
2025 Total		4,475,158

- b. There were 197,032 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**

Date	Hour	MW’s
June 24, 2025	17	873

WINTER PEAK

Date	Hour	MW’s
January 22, 2025	8	830

PERSON RESPONSIBLE: Mark Thieman – 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.) The purpose of this project 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. Planned in-service Date: 11/9/2027.

Hebron to Oakbrook 138 kV line conversion – rebuild the existing 69 kV circuit between Litton and Limaburg Substations as 138 kV, approximately 3.5 miles. Relocate the Hebron to Oakbrook 69 kV line at Hebron Substation to a position to be established in the Hebron 138 kV ring bus to reenergize the circuit at 138 kV. Install a 138-69 kV

transformer in Hebron to supply the Hebron to Villa 69 kV and Hebron to East Kentucky power tie circuits. Remove the Oakbrook 138–69 kV transformer and install bus from the existing 138 kV bus to the existing 69 kV bus in Oakbrook, converting the existing 69 kV section to 138 kV operation. The purpose of this project 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. Planned in-service Date: 2/19/2029.

Wilder transformer replacement – remove the existing 100/100/35 MVA 132-66-13.2 kV transformer and install a new 150 MVA 138-69 kV autotransformer. The purpose of this project is to address aging infrastructure issues with the existing transformer. Planned in-service Date: 11/03/2026.

PERSON RESPONSIBLE: Tim Hohenstatt