

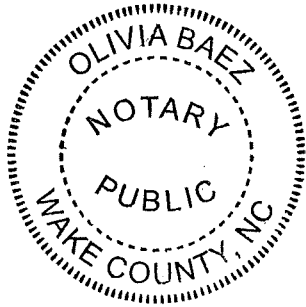
VERIFICATION

STATE OF North Carolina)
)
COUNTY OF Orange) SS:

The undersigned, Max W. McClellan, Lead Load Forecasting 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

Max W. McClellan
Max W. McClellan Affiant

Subscribed and sworn to before me by Max W. McClellan on this 15th day of March 2023.



Olivia Baez
NOTARY PUBLIC

My Commission Expires: 9/29/26

VERIFICATION

STATE OF NORTH CAROLINA)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, Scott Park, Manager Director IRP & Analytics 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.



Scott Park, Affiant

Subscribed and sworn to before me by Scott Park on this 22nd day of March, 2023.



Janita S. Lyles
NOTARY PUBLIC Janita S Lyles

My Commission Expires:

My Commission Expires 7-28-2027

VERIFICATION

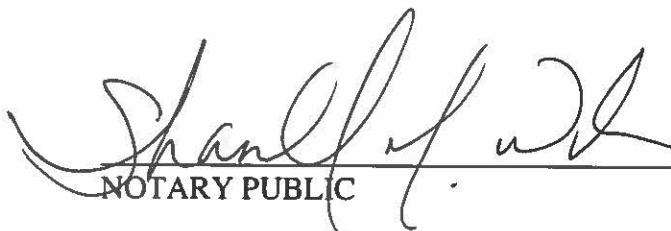
STATE OF NORTH CAROLINA)
)
) SS:
COUNTY OF MECKLENBURG)

The undersigned, Brad Daniel, Director, Generation Dispatch and 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



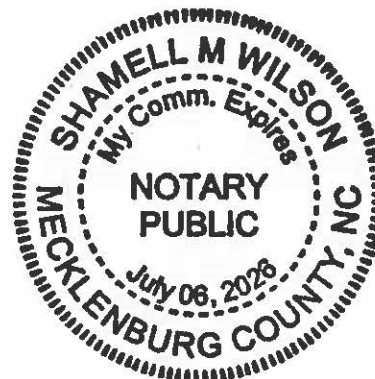
Brad Daniel, Affiant

Subscribed and sworn to before me by Brad Daniel on this 28 day of March, 2023.



NOTARY PUBLIC

My Commission Expires:



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 29 day of March, 2023.

Suzanne Collins
NOTARY PUBLIC

My Commission Expires: 06/29/27



VERIFICATION

STATE OF INDIANA)
) SS:
COUNTY OF HENDRICKS)

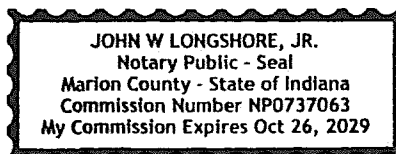
The undersigned, Timothy J. Hohenstatt, Director Transmission Planning, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information, and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


Timothy J. Hohenstatt, Affiant

Subscribed and sworn to before me by Timothy J. Hohenstatt on this 20th day of MARCH 2023.


NOTARY PUBLIC

My Commission Expires: 10/26/2029



Administrative Case No. 387
TABLE OF CONTENTS

<u>DATA REQUEST</u>	<u>WITNESS</u>	<u>TAB NO.</u>
STAFF-DR-01-003	Max McClellan	3
STAFF-DR-01-004	Max McClellan	4
STAFF-DR-01-006	Max McClellan	6
STAFF-DR-01-007	Scott Park	7
STAFF-DR-01-008	Scott Park	8
STAFF-DR-01-011 PUBLIC	Brad Daniel	11
STAFF-DR-01-012	Scott Park	12
STAFF-DR-01-013	Maida Session Tim Hohenstatt.....	13
STAFF-DR-01-014	Tim Hohenstatt.....	14

**Duke Energy Kentucky
Administrative Case No. 387
March 31, 2023**

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:

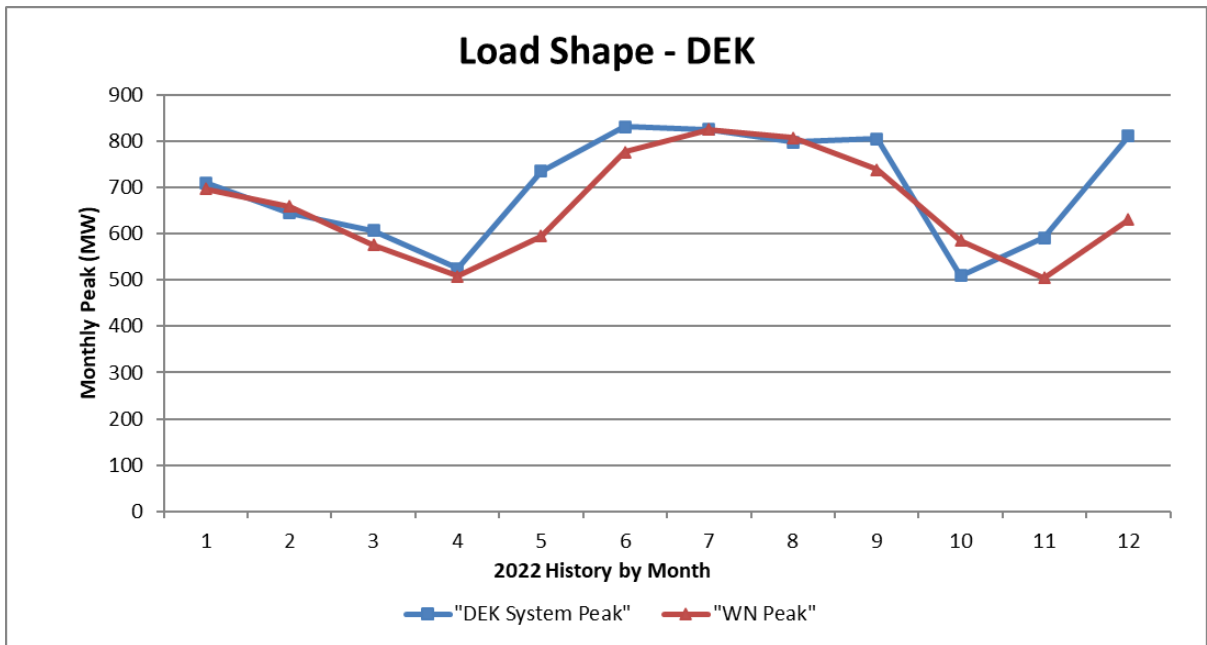
Duke Energy Kentucky Electric Energy Demands - MW				
	Native Peak	Internal Peak	Weather Normal Internal Peak	Total
Jan-22	710	710	697	697
Feb-22	645	645	659	659
Mar-22	607	607	575	575
Apr-22	525	525	508	508
May-22	735	735	595	595
Jun-22	831	831	776	776
Jul-22	825	825	824	824
Aug-22	798	798	807	807
Sep-22	805	805	739	739
Oct-22	509	509	586	586
Nov-22	591	591	505	505
Dec-22	810	810	631	631

PERSON RESPONSIBLE: Max McClellan

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: Max McClellan

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 Load Forecast				
	Demand – MW		Energy - GWH	
	Base	High	Base	High
2022	823	923	3,981	4,463
2023	819	918	4,004	4,492
2024	820	920	4,007	4,494
2025	830	929	4,072	4,561
2026	835	935	4,104	4,594

Duke Energy Kentucky – Non-Firm Electric Forecast				
	Demand – MW		Energy - MWH	
	Base	High	Base	High
2022	n/a	n/a	n/a	n/a
2023	n/a	n/a	n/a	n/a
2024	n/a	n/a	n/a	n/a
2025	n/a	n/a	n/a	n/a
2026	n/a	n/a	n/a	n/a

PERSON RESPONSIBLE: Max McClellan

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 IRP. For reference purposes, the most recent PJM Planning Reserve Margin Requirement (Base Residual Auction) for Planning Year 2025/26 is 9.18%.

PERSON RESPONSIBLE: Scott Park

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	Projected Reserves (UCAP MW)	Projected Reserve Margin (%)
2023	218	27%
2024	228	28%
2025	229	27%
2026	232	27%
2027	240	28%

This data reflects the Fall 2021 Load Forecast. The current fleet consists of, based on summer rating, the 600 MW East Bend 2 and 462 MW Woodsdale generating stations plus 7 MW solar.

PERSON RESPONSIBLE: Scott Park

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 1	2023	
Woodsdale CT 2	2023	
Woodsdale CT 4	2023	
Woodsdale CT 5	2023	
Woodsdale CT 6	2023	
East Bend 2	2023	
East Bend 2	2023	
Woodsdale CT 1	2023	
Woodsdale CT 2	2023	
Woodsdale CT 3	2023	
Woodsdale CT 4	2023	
Woodsdale CT 5	2023	
Woodsdale CT 6	2023	
East Bend 2	2024	
Woodsdale CT 1	2024	
Woodsdale CT 2	2024	
Woodsdale CT 3	2024	
Woodsdale CT 4	2024	
Woodsdale CT 5	2024	
Woodsdale CT 6	2024	
Woodsdale CT 1	2024	
Woodsdale CT 2	2024	
Woodsdale CT 3	2024	

Woodsdale CT 4	2024	
East Bend 2	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 1	2025	
Woodsdale CT 2	2025	
Woodsdale CT 3	2025	
Woodsdale CT 4	2025	
Woodsdale CT 5	2025	
Woodsdale CT 6	2025	
Woodsdale CT 1	2026	
Woodsdale CT 2	2026	
Woodsdale CT 3	2026	
Woodsdale CT 4	2026	
Woodsdale CT 5	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	
East Bend 2	2026	
Woodsdale CT 5	2026	
Woodsdale CT 6	2026	
Woodsdale CT 1	2027	
Woodsdale CT 2	2027	
Woodsdale CT 3	2027	
Woodsdale CT 4	2027	
Woodsdale CT 5	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		
East Bend 2	2027		
Woodsdale CT 5	2027		
Woodsdale CT 6	2027		

PERSON RESPONSIBLE: Brad Daniel

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: Scott Park

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
2022	January	401,683
	February	339,493
	March	343,761
	April	304,408
	May	342,914
	June	383,677
	July	424,137
	August	406,123
	September	349,826
	October	301,208
	November	323,040
	December	376,591
2022 Total		4,296,860

- b. There were 280,402 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 22, 2022	15	831

WINTER PEAK

Date	Hour	MW's
December 23,2022	19	810

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

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:

- Woodspoint to Aero 138 kV line – erect a single circuit 138 kV line from Woodspoint Substation to Aero Substation, approximately 1.9 miles in length. Planned in-service Date: 5/1/2023.
- 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: 12/31/2024.

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