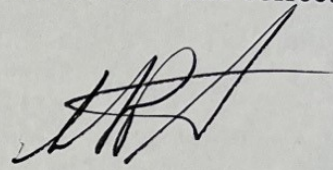




VERIFICATION

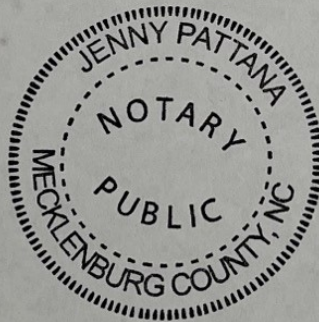
STATE OF NORTH CAROLINA        )  
  )        SS:  
COUNTY OF MECKLENBURG        )

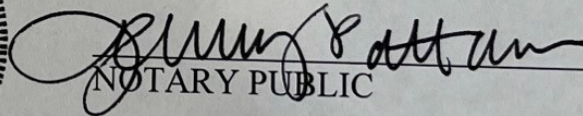
The undersigned, Scott Park, Manager Director IRP & Analytics being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.



\_\_\_\_\_  
Scott Park, Affiant

Subscribed and sworn to before me by Scott Park on this 31<sup>st</sup> day of March 2022.



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

My Commission Expires: 06/08/2025

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 22 day of March, 2022.

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

My Commission Expires:

SHAMALE M WILSON  
Notary Public, North Carolina  
Mecklenburg County  
My Commission Expires  
July 06, 2026

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 22 day of March, 2022.

*Corey Swearingen*

NOTARY PUBLIC

My Commission Expires: 3/18/26

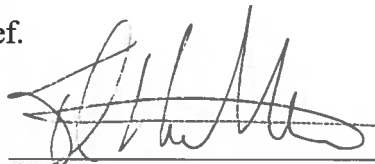


COREY SWEARINGEN  
Notary Public  
State of Ohio  
My Comm. Expires  
March 18, 2026

VERIFICATION

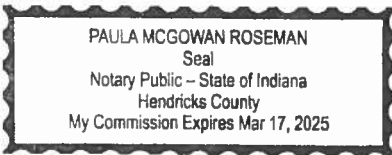
STATE OF INDIANA )  
 ) SS:  
COUNTY OF HENDRICKS )

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 16<sup>TH</sup> day of MARCH 2022.

  
NOTARY PUBLIC

My Commission Expires: 3-17-25

**Administrative Case No. 387**  
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**Duke Energy Kentucky  
Administrative Case No. 387  
March 31, 2022**

**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:**

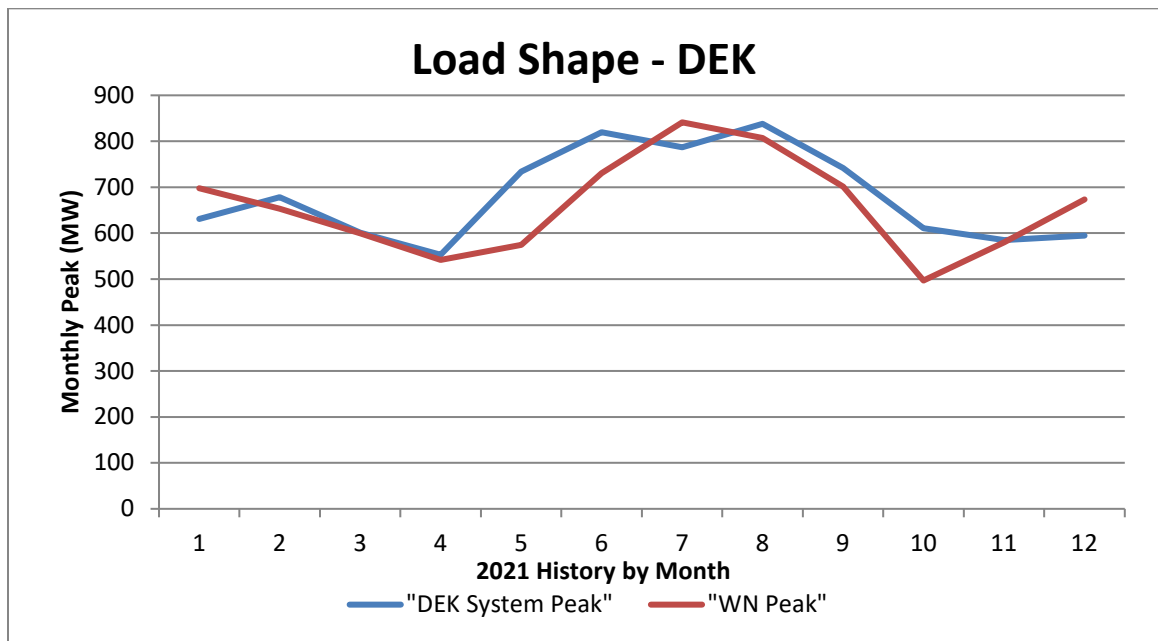
| <b>Duke Energy Kentucky Electric Energy Demands - MW</b> |             |               |                              |       |
|--|-------------|---------------|------------------------------|-------|
|  | Native Peak | Internal Peak | Weather Normal Internal Peak | Total |
| Jan-21   | 631         | 631           | 698                          | 698   |
| Feb-21   | 678         | 678           | 654                          | 654   |
| Mar-21   | 601         | 601           | 600                          | 600   |
| Apr-21   | 553         | 553           | 542                          | 542   |
| May-21   | 734         | 734           | 575                          | 575   |
| Jun-21   | 820         | 820           | 730                          | 730   |
| Jul-21   | 787         | 787           | 841                          | 841   |
| Aug-21   | 838         | 838           | 807                          | 807   |
| Sep-21   | 742         | 742           | 701                          | 701   |
| Oct-21   | 611         | 611           | 497                          | 497   |
| Nov-21   | 585         | 585           | 580                          | 580   |
| Dec-21   | 595         | 595           | 673                          | 673   |

**PERSON RESPONSIBLE:** Benjamin Passty

**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:** Benjamin Passty



**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>2022</b>  | 825                | 910         | 3,993               | 4,403       |
| <b>2023</b>  | 838                | 923         | 4,068               | 4,480       |
| <b>2024</b>  | 845                | 930         | 4,101               | 4,513       |
| <b>2025</b>  | 854                | 939         | 4,150               | 4,563       |
| <b>2026</b>  | 855                | 940         | 4,150               | 4,562       |

| <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>2022</b>  | n/a                | n/a         | n/a                 | n/a         |
| <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         |

**PERSON RESPONSIBLE:** Benjamin Passty

**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 a 9.0% Planning Reserve Margin for the duration of the IRP. For reference purposes, the most recent PJM Planning Reserve Margin requirement for Planning Year 2023/24 is 9.0%.

**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 (%) |
|------|------------------------------|------------------------------|
| 2022 | 188                          | 29%                          |
| 2023 | 188                          | 27%                          |
| 2024 | 198                          | 28%                          |
| 2025 | 199                          | 27%                          |
| 2026 | 216                          | 27%                          |

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**

| <b>Unit Name</b> | <b>Year</b> | <b>Duration (Weeks)</b> |
|------------------|-------------|-------------------------|
| Woodsdale CT 4   | 2022        |                         |
| Woodsdale CT 1   | 2022        |                         |
| Woodsdale CT 2   | 2022        |                         |
| Woodsdale CT 3   | 2022        |                         |
| Woodsdale CT 5   | 2022        |                         |
| Woodsdale CT 6   | 2022        |                         |
| East Bend 2      | 2022        |                         |
| Woodsdale CT 1   | 2022        |                         |
| Woodsdale CT 2   | 2022        |                         |
| East Bend 2      | 2022        |                         |
| Woodsdale CT 3   | 2022        |                         |
| Woodsdale CT 4   | 2022        |                         |
| Woodsdale CT 5   | 2022        |                         |
| Woodsdale CT 6   | 2022        |                         |
| 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      | 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 |  |
| 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 1 | 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 1 | 2025 |  |
| Woodsdale CT 2 | 2025 |  |
| Woodsdale CT 3 | 2025 |  |
| Woodsdale CT 4 | 2025 |  |
| Woodsdale CT 5 | 2025 |  |
| Woodsdale CT 6 | 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 |  |  |

**PERSON RESPONSIBLE:** Brad Daniel

**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, 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 |
|------------|-----------|-----------------------|
| 2021       | January   | 373,083               |
|            | February  | 358,261               |
|            | March     | 328,023               |
|            | April     | 295,351               |
|            | May       | 322,457               |
|            | June      | 380,508               |
|            | July      | 412,798               |
|            | August    | 423,203               |
|            | September | 348,431               |
|            | October   | 313,851               |
|            | November  | 317,933               |
|            | December  | 337,519               |
| 2020 Total |           | 4,211,419             |

- b. There were 239,471 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 12, 2021 | 16          | 838         |

**WINTER PEAK**

| <b>Date</b>       | <b>Hour</b> | <b>MW's</b> |
|-------------------|-------------|-------------|
| February 17, 2021 | 8           | 678         |

**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 1.5 miles in length. Planned in-service Date: 9/1/2022
- Hebron to Oakbrook 69 kV line – erect a single circuit 69 kV line from Hebron Substation to the vicinity of St. Route 237 and Northside Drive, approximately 1.1 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