**KyPSC Case No. 2025-00258**
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# VERIFICATION

**STATE OF OHIO** )
)  **SS:**
**COUNTY OF HAMILTON** )

The undersigned, Bruce L. Sailers, Director Jurisdictional Rate Administration, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing supplemental data requests, and that the information contained therein is true and correct to the best of his knowledge, information, and belief.

Bruce L. Sailers

Bruce L. Sailers, Affiant

Subscribed and sworn to before me by Bruce L. Sailers on this 14th day of January, 2026

Emilie Sunderman

NOTARY PUBLIC

My Commission Expires: July 8, 2027

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

**VERIFICATION**

**STATE OF OHIO** )
)  **SS:**
**COUNTY OF HAMILTON** )

The undersigned, Dominic "Nick" J. Melillo, Director Distribution Asset Management, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing supplemental data responses, and that the answers contained therein are true and correct to the best of his knowledge, information, and belief.

Dominic "Nick" J. Melillo, Affiant

Subscribed and sworn to before me by Dominic "Nick" J. Melillo on this 14th day of January, 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**
**Case No. 2025-00258**
**STAFF First Request for Information**
**Date Received: December 19, 2025**

**SUPPLEMENTAL STAFF-DR-05-002**

**REQUEST:**

Refer to Duke Kentucky's response to Staff's Second Request, Item 6(b).

a. Provide an avoided Transmission capacity value that is calculated from the last three years (2022-2024) of actual Duke Energy Kentucky System Peak Loads as provided in the response, and behind the meter solar expected contribution to the monthly peak hour (ratio of generation in that hour compared to nameplate based on the PV Watts profile used to calculate the avoided energy costs) in months with the four highest peaks per year. Include in the response all workpapers in excel format with all cells visible and unprotected.

b. Explain whether calculating an avoided transmission cost in this manner would be reasonable to Duke Kentucky. If not, explain why not and propose alternative assumptions and calculations for any element that is not reasonable in Duke Kentucky's estimation.

c. Provide an avoided distribution capacity value that is calculated based on the behind-the-meter solar-expected capacity contribution (ratio of generation in that hour compared to nameplate based on the PV Watts profile used to calculate the avoided energy costs) for an average of the four highest load hours for a typical residential and a typical commercial feeder across the months of July to September as provided in the response to Staff's Second Request, Item 6(d). Average those avoided distribution capacity values for a residential and commercial feeder based on a weighting for each class to determine an

average solar avoided distribution capacity cost. Include in the response all workpapers in excel format with all cells visible and unprotected.

d. Explain whether calculating an avoided Distribution cost in this manner would be reasonable? If not, please explain why not and propose alternative assumptions and calculations for any element that is not reasonable in Duke Kentucky's estimation.

**SUPPLEMENTAL RESPONSE:**

a. The Company interprets and calculates this request as follows:

- Step 1: From STAFF-DR-02-006(b), determine the four highest peak values in each year from 2022 - 2024. See the twelve (12) highlighted resulting values in STAFF-DR-05-002(a) Supplemental Attachment 1, ANNUAL 4 MO PEAKS tab. The 2025 values are highlighted as well for reference.
- Step 2: Using the PVWatt's data utilized in the calculation of the avoided energy cost, match the hour of the peaks, by month, day, and hour, with the PVWatt's data and provide the percent of nameplate contribution for each of the 12 peak hours.
    i. The PVWatt's information from Attachment BLS-2 in this proceeding is copied into STAFF-DR-05-002(a) Supplemental Attachment 1 as tab PVWATTS INPUT. This information is designed to represent a 1 kW-AC solar array system. Therefore, the values in either columns M (non-leap year) or N (leap year) represent the percentage of nameplate output in each hour. The Company uses the kW-AC value since all solar values in this proceeding have focused on kW-AC and not kW-DC.

ii. Finally, the request does not specify how to view or combine the 12 resulting values. The Company provides both an average and a minimum for the Commission's review. As shown, the percentage varies depending on the month, day, and hour of the peak. Please see STAFF-DR-05-002(a) Supplemental Attachment 1, ANNUAL 4 MO PEAKS tab in cells I54 and I55 respectively for the average and minimum values.

- Step 3: If the Commission desires the average value, 41.5%, the company uses this value in place of the ELCC value for the avoided transmission cost calculation. Please see STAFF-DR-05-002(a) Supplemental Attachment 2. This attachment is a copy of STAFF-DR-01-008 Supplemental Attachment 1 with the ELCC value used for transmission avoided cost replaced with 41.5%. This results in the avoided transmission capacity component changing from $0.000331 / kWh to $0.002200 / kWh.

b. For the reasons given below, the Company does not recommend as reasonable to calculate an avoided transmission capacity value in the manner described above in part a. Instead, the Company recommends relying on the PJM ELCC value, which is a reasonable value. Calculating the value as described above in part a is less robust and is highly variable depending on the focus of the calculation. For example, many hours are excluded from the review that are close to the peak values presented but are earlier or later in the day or on a different day of the month than the peak day. Another item of consideration is how much emphasis should be placed on winter peaks or some other set of hours such as the 200 highest load hours of the year. By contrast, such considerations

are avoided if the PJM ELCC value is adopted since such issues are vetted at PJM. Additionally, the values from PVWatt's represent typical meteorological year (TMY) data and not the contribution of a 1 kW-AC solar array on the actual day and hour of the peaks presented. Finally, related to whether the result is robust, if an average of all the PVWatt's hours during the year is used, 17.2% would be the average. The Company proposes the use of the PJM ELCC value because it is vetted at PJM and is a robust analysis by the regional transmission organization and is publicly available. If the Commission determines that the analysis in part a above is desired, the Company proposes that at a minimum, the Commission should consider using all of the data. The average of all 45 PVWatt's values for the referenced peak hour information is 25.5% as shown in cell H57 on the ANNUAL 4 MO PEAKS tab in STAFF-DR-05-002(a) Supplemental Attachment 1.

In conclusion, the Company proposes the PJM ELCC value. If the Commission rejects this value, the Company suggests using one of the more robust numbers, using more data points, presented above.

c. The Company interprets and calculates this request as follows:

- Step 1: Using the data provided in STAFF-DR-02-006(d) Attachment, but expanding it to consider all data from July through September, identify the 4 highest load hours for residential and commercial. These 4 residential and 4 commercial hours are identified in file STAFF-DR-05-002(c) Supplemental Attachment in Tabs DEK RESIDENTIAL and DEK COMMERCIAL in columns J - M.
- Step 2: Using the PVWatt's data utilized in the calculation of the avoided energy cost, match the associated hours, by month, day, and hour, with the

PVWatt's data and provide the percent of nameplate contribution for each of the residential and commercial peak hours. The values can be found in column T in Tabs DEK RESIDENTIAL and DEK COMMERCIAL in STAFF-DR-05-002(c) Supplemental Attachment.

- Step 3: Using an unspecified weighting criteria, combine the data into a single average value. Since the weighting criteria is not specified, the Company uses the residential and non-residential kW-AC participation values consistent with the information filed in the instant case. Therefore, the four residential values are averaged and the four commercial values are averaged. A reasonable weighting factor for this data would be the amount of solar in the net metering program for residential and non-residential. These values are 6,704 kW-AC residential and 826 kW-AC non-residential; which is 89% residential and 11% non-residential. The overall average contribution is 20.9% found in cell T10 of the DEK_RESIDENTIAL tab in STAFF-DR-05-002(c) Supplemental Attachment.
- Step 4: If the Commission accepts the weighting proposed above, the company uses the resulting value, 20.9%, in place of the ELCC value for the avoided distribution cost calculation. Please see STAFF-DR-05-002(a) Supplemental Attachment 2. This attachment is a copy of STAFF-DR-01-008 Supplemental Attachment 1 with the ELCC value used for distribution avoided cost replaced with 20.9%. This results in the avoided distribution capacity component changing from $0.003772 / kWh to $0.012583 / kWh.

d. For the reasons given below, the Company does not recommend as reasonable to calculate avoided distribution capacity value in the manner described above in part c. Instead, the Company recommends relying on the PJM ELCC value, which is a reasonable value. Calculating the value as described above in part (c) is less robust and is highly variable depending on the focus of the calculation. For example, the calculation only focuses on 8 identified hours in the July through September period and disregards all other hours. In addition, the values from PVWatt's represent typical meteorological year (TMY) data and not the contribution of a 1 kW-AC solar array on the actual days and hours of the peaks presented. Finally, in terms of a robust analysis, if an average of all the PVWatt's hours during the year is used, 17.2% is the average. The Company proposes the use of the PJM ELCC value because it is a robust analysis by the regional transmission organization of how generation contributes to load, is vetted at PJM, and is publicly available.

In conclusion, the Company proposes the use of the PJM ELCC. If the Commission determines that the analysis in part c above is desired, the Company proposes that the Commission should consider either more hours or a wider time frame than July through September.

**PERSON RESPONSIBLE:** Bruce L. Sailers

LARGE EXCEL PLACEHOLDER

Supplemental Response Attachment for

STAFF-DR-05-002(a) – ATTACHMENT 1

LARGE EXCEL PLACEHOLDER

Supplemental Response Attachment for

STAFF-DR-05-002(a) – ATTACHMENT 2

LARGE EXCEL PLACEHOLDER

Supplemental Response Attachment for

STAFF-DR-05-002(c) – ATTACHMENT

**Duke Energy Kentucky**
**Case No. 2025-00258**
**STAFF First Request for Information**
**Date Received: December 19, 2025**

**SUPPLEMENTAL STAFF-DR-05-003**

**REQUEST:**

Refer to Duke Kentucky's response to Commission Staff's Fourth Request(Staff's Fourth Request), Item 1 and Staff's Second Request, Item7(a) Attachment. Using the hourly data contained in Staff's Second Request, Item7(a) Attachment, provide an annual system loss value that is limited to the daylight hours when solar is generating. Include in the response all workpapers in excel format with all cells visible and unprotected.

**SUPPLEMENTAL RESPONSE:**

STAFF-DR-05-003 Supplemental Attachment is a revision of the Losses file submitted in response to STAFF-DR-02-007(a). It includes only the following approximate daylight hours for Covington, KY as reflected on the timeanddate.com website for 2024:

| | |
|---|---|
| JAN | 8:00am – 6:00pm |
| FEB | 7:00am – 6:00pm |
| MAR 1st thru 9th | 7:00am – 7:00pm |
| MAR 10th thru 31st | 8:00am – 8:00pm (split due to daylight savings change) |
| APR | 7:00am – 8:00pm |
| MAY | 6:00am – 8:00pm |
| JUN | 6:00am – 9:00pm |
| JUL | 6:00am – 9:00pm |
| AUG | 7:00am – 9:00pm |
| SEP | 7:00am – 8:00pm |
| OCT | 8:00am – 7:00pm |
| NOV 1st thru 2nd | 8:00am – 7:00pm |
| NOV 3rd thru 30th | 7:00am – 5:00pm (split due to daylight savings change) |
| DEC | 8:00am – 5:00pm |

Using this criteria, losses increase slightly because higher demand typically occurs during daylight hours in most months, which results in higher losses on the system. Total

variable Transmission losses in this file are 0.667%, which is an increase from 0.639% using all hours. Total variable Distribution losses in this file are 4.509%, which is an increase from 4.304% using all hours.

**PERSON RESPONSIBLE:** Dominic “Nick” J. Melillo

LARGE EXCEL PLACEHOLDER

Supplemental Response Attachment for

STAFF-DR-05-003 – ATTACHMENT