KyPSC Case No. 2025-00258
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VERIFICATION

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

The undersigned, Bruce L. Sailers, Director Rate Administration, 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.

Bruce L. Sailers

Bruce L. Sailers, Affiant

Subscribed and sworn to before me by Bruce L. Sailers on this 20th day of November, 2025

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)
)
COUNTY OF HAMILTON)

SS:

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 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

Dominic "Nick" J. Melillo, Affiant

Subscribed and sworn to before me by Dominic "Nick" J. Melillo on this 21st day of November, 2025.

Emilie Sunderman

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's Third Request for Information
Date Received: November 6, 2025

STAFF-DR-03-001

REQUEST:

Refer to Duke Kentucky's response to Commission Staff's Second Request for Information (Staff's Second Request) Item 6, Attachment BLS-2 Excel File and the provided PV Watts data. Calculate and provide the percent of solar nameplate capacity being generated in each hour of the year.

RESPONSE:

The data from PV Watts in Attachment BLS-2 represents typical meteorological year (TMY) data. The system size is 1.2 kW-DC (i.e., 1200 W-DC) which translates into 1.0 kW-AC (i.e., 1000 W-AC). The percentages provided in STAFF-DR-03-001 Attachment use columns K and L from Attachment BLS-2 and divide them by the associated nameplate size; 1200 W-DC and 1000 W-DC, respectively. All hours are in eastern standard time (EST).

PERSON RESPONSIBLE: Bruce L. Sailers

STAFF-DR-03-001 ATTACHMENT

UPLOADED ELECTRONICALLY ONLY

DUE TO SIZE

Duke Energy Kentucky
Case No. 2025-00258
STAFF's Third Request for Information
Date Received: November 6, 2025

STAFF-DR-03-002

REQUEST:

Refer to the Direct Testimony of Bruce L. Sailers (Sailers Direct Testimony), page 11. Explain the process to calculate a Transmission and Distribution capacity credit based on an average of the solar capacity factor across a certain number of peak hours for the transmission and distribution system and provide the credit value.

RESPONSE:

The below response is based on the understanding that "solar capacity factor" refers to the PJM ELCC. The Company understands that the calculation being requested is what the Company has performed in calculating its proposed rate, as updated in the Supplemental Response to STAFF-DR-01-008. Please see Company witness Sailers' Direct Testimony on page 11 and Sailers' direct testimony attachment, Attachment BLS-1. Attachment BLS-1 was updated in STAFF-DR-01-008 Supplemental Attachment 1, to reflect the most recently approved weighted average cost of capital in Case No. 2024-00354 and incorporate updated transmission and distribution cost inputs, as had been provided in the Company's response to STAFF-DR-02-005. The following steps were used to calculate the avoided transmission and distribution capacity credits.

1. The $/kW-year avoided cost is obtained from Mr. Melillo and described in his testimony. This value is in 2024 dollars as sourced from FERC Form 1 information.
2. Using an escalation factor of 3.5%, also provided by Mr. Melillo, the per kW-year avoided capacity cost values are escalated for a 25-year period.

a. Note, the Company does not attempt to bifurcate the capacity value associated with generation consumed on-site versus the capacity value associated with the generation exported to the grid. Therefore, in step 5, the levelized $/kW-year avoided cost value is divided by the total system generation for 1 kW-AC from PV Watts.

3. Each value in the 25-year period is then multiplied by the ELCC for fixed solar. The ELCC value is obtained from PJM and represents the effective load carrying capability for fixed solar. The Company uses the PJM ELCC value as PJM's calculated average solar capacity factor across the PJM determined critical peak load hours. See Sailers' Direct Testimony on page 10 and the Company's responses to STAFF-DR-01-004 and STAFF-DR-02-006.
4. The resulting columns of avoided capacity costs are then levelized over the 25-year period using the formulas found in cells B32 and B39 of STAFF-DR-01-008 SUPP Attachment 1 on the tab ACEGC Rate Calculations. These formulas use the Company's weighted average cost of capital, WACC, to level the values. This results in a levelized 25-year $/kW-year value.
5. The values in step 4 above are then inflated for losses and then divided by the total kWh output for a 1 kW-AC array sourced from the PV Watts information.
6. The proposed values for the avoided transmission and distribution costs are $0.000331 / kWh and $0.003772 / kWh, respectively.

PERSON RESPONSIBLE: Bruce L. Sailers

Duke Energy Kentucky
Case No. 2025-00258
STAFF's Second Request for Information
Date Received: November 6, 2025

STAFF-DR-03-003

REQUEST:

Refer to the Application, Sailers Direct Testimony. Rather than using a 25- year forecast and discounting that back to present value, calculate a Net-Metering II rate based on the next two years of nominal avoided energy and avoided capacity values.

RESPONSE:

The rate depicted below was calculated based on the Company's understanding of this request as follows: the Company used the average avoided costs from years 2026 and 2027, applied the applicable losses, and divided by the applicable kWh. The relevant input values are presented in the table below and are sourced from STAFF-DR-01-008 Supplemental Attachment 1.

Category	2026 Avoided Cost	2027 Avoided Cost	Average Avoided Cost with Losses	PV Watts kWh / kW-AC	Avoided Cost $/kWh
Energy	$0.055224	$0.052930	$0.056765	NA	$0.056765
Generation Capacity	$6.11	$5.34	$6.01	1509	$0.003982
Transmission Capacity	$0.50	$0.44	$0.47	1509	$0.000313
Distribution Capacity	$5.43	$4.83	$5.38	1509	$0.003569
Total					$0.064629

For comparison purposes, the ACEGC calculated by the Company in its supplemental response to STAFF-DR-01-008 was $0.065421 / kWh, and the originally proposed value in the Application was $0.065427 / kWh.

PERSON RESPONSIBLE: Bruce L. Sailers

Duke Energy Kentucky
Case No. 2025-00258
STAFF's Third Request for Information
Date Received: November 6, 2025

STAFF-DR-03-004

REQUEST:

Refer to the Application, the Direct Testimony of Dominic Melillo (Melillo Direct Testimony), Attachment NJM-1. Provide the source, input components and calculations, in executable format with formulas intact, to the Transmission and Distribution Real Levelized Fixed Charge rate presented on the tab "Carrying Charge."

RESPONSE:

Please see STAFF-DR-03-004 Attachment.

PERSON RESPONSIBLE: Dominic "Nick" J. Melillo

STAFF-DR-03-004 ATTACHMENT

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DUE TO SIZE

Duke Energy Kentucky
Case No. 2025-00258
STAFF's Third Request for Information
Date Received: November 6, 2025

STAFF-DR-03-005

REQUEST:

Refer to the Application, Melillo Direct Testimony, Attachment NJM-1.

a. Explain the reasoning for multiplying the incremental cost of transmission and distribution capacity by a fixed charge rate, as shown on the tabs "Trans Capital" and "Dist. Capital" of Attachment NJM-1.

b. Explain how the use of the fixed charge rate result in a component of the Net-Metering-2 rate that represents the actual transmission and distribution costs avoided.

c. Explain why the average incremental cost of distribution capacity of $687.06/kW of distribution capacity more than ten times is the average incremental cost of transmission capacity of $58.74/kW, as shown in the "Trans Capital" and "Dist. Capital" tabs in Attachment NJM-1.

RESPONSE:

a. The Capacity Cost per KW for transmission and distribution capacity is multiplied by the fixed charge rate to annualize the capital investment that is utilized over many years. A fixed charge rate calculates the annual revenue requirement to pay the carrying charges for an asset.

b. Since capital is useful for many years, the cost of the capital needs to be annualized. A fixed charge rate calculates the annual revenue requirement to pay the carrying charges for an asset. In other words it is the cost of deferring the capacity investment for a year.

c. The incremental cost of distribution and transmission capacity is based on the actual costs incurred to install additional capacity. So it is very dependent on the scope of each capacity project. For example, a 20 MW increase could require a new substation and new transformer and five miles of new line (this scope would have a high cost). However, a 20 MW increase could simply require an additional transformer at an existing location and very little or no new line (this scope would be a relatively much lower cost).

Generally, transmission projects achieve a large capacity increase because transmission equipment is much higher voltage and thus higher capacity. So the cost/kW of capacity will generally be lower for transmission as compared to distribution cost/kW of capacity. This is true in general, but as mentioned is project scope specific. An example of approximate installation costs of a typical Transmission 400 MW transformer and a typical Distribution 22 MW transformer are:

	Transmission 400 MW transformer	Distribution 22.4 MW transformer
(a) kW	400,000	22,400
(b) installed cost	$ 9,500,000	$ 2,800,000
(b/a) $/kW	$ 23.75	$ 125.00

In the typical example above, the $/kW for the distribution transformer is 5.3 times (125.00/23.75 = 5.3) as expensive to install as compared to the transmission transformer.

PERSON RESPONSIBLE: Dominic "Nick" J. Melillo

Duke Energy Kentucky
Case No. 2025-00258
STAFF's Third Request for Information
Date Received: November 6, 2025

STAFF-DR-03-006

REQUEST:

Refer to Duke Kentucky's response to Staff's Second Request for Information, Item 5, Staff-DR02-005(b) Attachment.

a. Confirm that the pivot table field list on tab "Summary" shows a total of 17 fields, and yet the source data that pivot table is referencing on cells B6:Q3214 of tab "Capital AvB" includes only 16 columns.

b. If confirmed, provide a version of the source data that includes the field "Project Class PRD2."

c. If not confirmed, explain the discrepancy.

RESPONSE:

a. Confirmed. The pivot table has a field called Project Class PRD2 which was added to aggregate the Project Class PRD codes into either Transmission or Distribution.

b. Since Project Class PRD2 was created on the pivot table tab there is no source data. Its source data is the source data for the Project Class PRD field. Project Class PRD codes EE, FF and GG are Transmission, and all other Project Class PRD codes are Distribution. Below is a screenshot showing this detail. The Project Class PRD can be pulled into the pivot table in the file Duke Energy Kentucky previously provided to show this detail.

Sum of Actual YTD Amount SUM			Fiscal Year CMD							
Bus Unit ID CB	Project Class PRD2	Project Class PRD	2018	2019	2020	2021	2022	2023	2024	Grand Total
75084	Transmission	EE			4,641,799	1,804,130	860,625	395,819	919,382	8,621,755
		FF	1,258,703	3,727,181	13,604,599	1,349,054	143,278	1,536,967	824,046	22,443,828
		GG	419,062	633,776	4,944,997	5,665,035	224,641	1,567,296	3,697,546	17,152,353
	Distribution	HA	(63,859)	33,304	5,827	1,688,099	2,027,992			3,691,364
		HB	3,019,753	5,241,636	13,653,635	2,326,446	5,658,099	7,862,644	9,785,844	47,548,056
		IE					49,600	20,873	(5,402)	65,071
		IESO					2,741			2,741
		IK	1,720,569	12,845,581	3,374,578	5,249,096	5,401,846	1,431,194	4,658,336	34,681,200
		IKSO				4,672	1,116,929	4,067,600	3,315,362	8,504,562
		IO	1,346,929	1,908,363	318,756	253,838	(140,524)			3,687,362
75084 Total			**7,701,158**	**24,389,841**	**40,544,190**	**18,340,371**	**15,345,226**	**16,882,392**	**23,195,114**	**146,398,292**
Grand Total			**7,701,158**	**24,389,841**	**40,544,190**	**18,340,371**	**15,345,226**	**16,882,392**	**23,195,114**	**146,398,292**

c. N/A

PERSON RESPONSIBLE: Dominic “Nick” J. Melillo