

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF DUKE ENERGY KENTUCKY, INC.)
FOR AN ADJUSTMENT TO RIDER NM RATES AND) CASE NO.
FOR TARIFF APPROVAL) 2023-00413

DUKE ENERGY KENTUCKY, INC.’S POST-HEARING BRIEF

Comes now Duke Energy Kentucky, Inc. (Duke Energy Kentucky or the Company), by counsel, pursuant to the Commission’s May 24, 2024 Order setting a schedule for the filing of briefs in the above-styled case, and other applicable law, does hereby respectfully state as follows:

I. Introduction

Duke Energy Kentucky’s Application in this proceeding seeks to update the Company’s tariff to comply with statutory revisions and to improve clarity and organization. The primary driver of this Application was Senate Bill 100, An Act Related to Net Metering (SB 100), which took effect on January 1, 2020. SB 100 amended the previously existing statutory requirements for the net metering of electricity, which are codified in KRS 278.465 to 278.467.¹

In accordance with the revision of the net metering statutory requirements and in order to improve tariff clarity and organization, Duke Energy Kentucky has proposed in this proceeding to make the following updates to its electric tariff:

¹ See *In the Matter of Electronic Investigation of Interconnection and Net Metering Guidelines*, Case No. 2020-00302, Order, p. 1 (September 24, 2020).

- Update its current net metering tariff, Sheet No. 89, Rider NM I, to reflect that this tariff will remain available to current net metering customers for a 25-year period, but will no longer be available to new net metering customers and to remove the interconnection guidelines from the tariff sheet;
- Create a new net metering tariff, Sheet No. 84, Rider NM II, which conforms to the revised net metering statutory requirements post-SB-100; and
- Create a new interconnection tariff sheet, Sheet No. 83, Interconnection, containing the interconnection guidelines which previously resided in Sheet No. 89.

As detailed further below, the Company’s Application should be approved.

II. Background

SB 100 made several important changes to the net metering statutory requirements.

First, SB 100 revised the definition of “Net metering” in KRS 278.465(4) as follows:

- (4) “Net metering” means ~~measuring~~ the difference between the:
- (a) Dollar value of all ~~electricity supplied by the electric grid and the~~ electricity generated by an eligible customer-generator that is fed back to the electric grid over a billing period and priced as prescribed in Section 2 of this Act; and
 - (b) Dollar value of all electricity consumed by the eligible customer-generator over the same billing period and priced using the applicable tariff of the retail electric supplier.²

Thus, the definition of “net metering” changed from a netting of kilowatt hours³—as was done under so-called “legacy” net metering rates approved prior to the enactment of SB 100—to a netting of dollar values of exported and consumed energy. Indeed, in a recent post-SB-100 decision, the Commission explained that “net[ting] the dollar value of the

² See Senate Bill 100, An Act relating to net metering, available at <https://apps.legislature.ky.gov/recorddocuments/bill/19RS/sb100/bill.pdf>. The “Section 2” referred to in the revisions is the portion that amended KRS 278.466.

³ See KRS 278.466(6) (describing the prior statute as authorizing a “one-to-one (1:1) kilowatt-hour denominated energy credit provided for electricity fed into the grid”).

total energy consumed and the dollar value of the total energy exported by eligible customer generators over the billing period” was “[c]onsistent with . . . KRS 278.465(4).”⁴

Second, after SB 100, the revised KRS 278.466(3) requires that “[a] retail electric supplier serving an eligible customer-generator ***shall compensate*** that customer for all electricity produced by the customer’s eligible electric generating facility that flows to the retail electric supplier,” and that “[t]he rate to be used for such compensation ***shall be set by the commission using the ratemaking processes under this chapter*** during a proceeding initiated by a retail electric supplier” (emphasis added). Thus, to determine the appropriate “[d]ollar value of all electricity generated by an eligible customer-generator that is fed back to the electric grid over a billing period,”⁵ to use in a successor rate compensating eligible customer-generators, a utility would need to initiate a ratemaking proceeding.

Third, SB 100 provided that legacy net metering rates would remain in effect at the premises of existing net metering customers under certain conditions:

For an eligible electric generating facility in service prior to the effective date of the initial net metering order by the commission in accordance with subsection (3) of this section, the net metering tariff provisions in place when the eligible customer-generator began taking net metering service, including the one-to-one (1:1) kilowatt-hour denominated energy credit provided for electricity fed into the grid, shall remain in effect at those premises for a twenty-five (25) year period, regardless of whether the premises are sold or conveyed during that twenty-five (25) year period.⁶

⁴ *In the Matters of: Electronic Application of Kentucky Utilities Company for an Adjustment of its Electric Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit and Electronic Application of Louisville Gas and Electric Company for an Adjustment of its Electric and Gas Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit*, Case Nos. 2020-349 and 2020-350, Rehearing Order, pp. 11-12. (November 4, 2021).

⁵ KRS 278.465(4).

⁶ KRS 278.466(6).

With these, among other revisions, SB 100 modified the net metering statutory framework. No deadline was given in the statute for the initiation of a ratemaking proceeding to set appropriate compensation rates under the new framework. Some utilities did so in their rate cases.⁷ Duke Energy Kentucky did not propose a successor net metering tariff in its most recent electric rate case, Case No. 2022-372, but committed that it would propose a successor tariff within 60 days of the rate case order.⁸

In addition to the statutory revisions made by SB 100, the Commission has developed “guiding principles” for net metering:

- Evaluate eligible generating facilities as a utility system or supply side resource. Because eligible customer-generators and their eligible generating facilities can meet power system needs, they should be compared with other energy resources using consistent methods and assumptions.
- Treat benefits and costs symmetrically. . . . [A]n evaluation consisting of only the costs incurred by [the utility] would be deficient if the evaluation failed to consider known or reasonably expected measurable positive effects, or benefits, that accrue to [the utility]. Thus, to avoid bias, it is important to weigh the costs and benefits of a resource symmetrically.
- Conduct forward-looking, long-term, and incremental analysis. A utility makes economic decisions that consider the entire life of a project, and such long-term analysis should also apply to an eligible customer-generator. Given

⁷ See *In the Matters of: Electronic Application of Kentucky Utilities Company for an Adjustment of its Electric Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit and Electronic Application of Louisville Gas and Electric Company for an Adjustment of its Electric and Gas Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit*, Case Nos. 2020-349 and 2020-350; *Electronic Application of Kentucky Power Company for (1) A General Adjustment of its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) Approval of a Certificate of Public Convenience and Necessity; and (5) All Other Required Approvals and Relief*, Case No. 2020-174.

⁸ *In the Matter of Electronic Application of Duke Energy Kentucky, Inc. for (1) An Adjustment of Electric Rates; (2) Approval of New Tariffs; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and (4) All Other Required Approvals and Relief*, Case No. 2022-372, Order, p. 72 (October 12, 2023).

that the typical warranty provided by a solar panel manufacturer is 25 years, this would be an appropriate analysis period for [a utility's] net metered customers. A long-term approach ensures unbiased evaluation of system resources, ensures ratepayers are paying fair value for avoided future costs, and compensates eligible customer-generators fairly.

- Avoid double counting. There is a risk of counting certain benefits or costs more than once if they fall into multiple categories of benefit or cost. All impacts should therefore be clearly defined and carefully quantified.

- Ensure transparency. Transparency creates trust between parties and allows for a robust public process around resource evaluation. All relevant assumptions, methodologies, and results from any party should therefore be clearly documented and available for stakeholder review and input.⁹

Although the Commission has included transparency among its guiding principles, the Commission has indicated that accurately reflecting costs can take priority over transparency when the two principles are in tension.¹⁰

In this case, the Company has proposed Rider NM II for approval as its successor net metering rate, in accordance with the statutory revisions made by SB 100 and attempting to optimally balance the guiding principles offered by the Commission. In addition to proposing NM II, the Company has modified its legacy net metering rider, Rider NM I, to close the rider to new participation and also to implement the grandfathering

⁹*In the Matters of: Electronic Application of Kentucky Utilities Company for an Adjustment of its Electric Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit and Electronic Application of Louisville Gas and Electric Company for an Adjustment of its Electric and Gas Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit*, Case Nos. 2020-349 and 2020-350, Order, pp. 41-42 (September 24, 2021).

¹⁰ *Id.*, at p. 49 (“Although KYSEIA’s proposal to use PJM locational marginal pricings (LMPs) to calculate the avoided energy cost would be a more transparent use of data, the approach less accurately reflects LG&E/KU’s energy costs in the current proceeding.”).

requirement of KRS 278.466(6). In the interest of improving clarity and tariff organization, the Company proposed also to remove its interconnection guidelines from Rider NM I, and place them in a separate tariff sheet, as the interconnection guidelines are applicable to all net metering customers as well as non-net metering customers desiring interconnection and it would not be sensible to duplicate them in both tariffs. Finally, in order to be consistent with the policies against double counting (*i.e.*, double compensation of the same resource for the same service) in recent Federal Energy Regulatory Commission’s (FERC) orders and the most recent compliance filing made by PJM Interconnection, LLC (PJM),¹¹ the Company has included provisions in both Rider NM I and Rider NM II prohibiting simultaneous participation by a customer-generator in (1) either of the two net metering rates and (2) resource aggregations at the PJM level, except for an aggregation with Duke Energy Kentucky—the party compensating customer-generators for their generation—acting as the aggregator and ensuring no double counting.

III. Procedural History

Duke Energy Kentucky filed its Notice of Intent to File an Application for an Adjustment to Rider NM Rates and for Tariff Approval on December 11, 2023. The Application was filed on December 11, 2023. The Commission issued Deficiency Letters on December 14, 2023, and December 20, 2023, to which the Company responded on December 19, 2023 and December 20, 2023, respectively. On December 21, 2023, the Commission found that the Company had cured all Application filing deficiencies.

The Office of the Attorney General (OAG), Kentucky Solar Industries Association, Inc. (KYSEIA), and Kentucky Solar Energy Society and Kentuckians for the

¹¹ See Duke Energy Kentucky Response to STAFF-PHDR-01-005.

Commonwealth (collectively Joint Intervenors), each filed a motion to intervene in the case on December 18, 2023, January 3, 2024, and January 17, 2024, respectively. The Commission granted OAG's motion on December 21, 2023, KYSEIA's motion on January 12, 2024, and the Joint Intervenors' motion on January 29, 2024.

On January 5, 2024, the Commission issued an order suspending the proposed tariff for five months and issuing a procedural schedule. After multiple rounds of discovery, the Commission issued an order on April 2, 2024, setting a formal hearing date for May 15, 2024. On April 5, 2024, Duke Energy Kentucky made an unopposed motion to reschedule the hearing date, and the Commission issued an order rescheduling the hearing date to May 21, 2024. The Company filed a copy of its Request for Publication of Hearing Notice on April 30, 2024, and filed its Proof of Publication of Hearing Notice on May 20, 2024.

A formal hearing was held on May 21, 2024 at the Commission's offices in Frankfort, Kentucky. Seven witnesses took the stand on behalf of Duke Energy Kentucky. Only one other witness testified, on behalf of the Joint Intervenors. Following the hearing, Duke Energy Kentucky responded to additional Post-Hearing Requests for Information from Commission Staff and KYSEIA.

IV. Discussion

- A. Duke Energy Kentucky's Proposed Revisions to Its Rider NM I Tariff Comply With The Revised Net Metering Statutory Requirements And Are Reasonable.

The revised Rider NM I should provide a continuous customer experience for current participants for the next 25 years—Duke Energy Kentucky proposed no revisions to the METERING or BILLING portions of the rate. However, the AVAILABILITY section has been proposed to be revised in accordance with the revised KRS 278.466(6) and with currently-available FERC and PJM guidance. Therefore, current net metering

participants *will not* see a change in the calculation of the compensation they receive, as long as they remain on Rider NM I.

Pursuant to KRS 278.466(6), Duke Energy Kentucky has proposed to revise its Rider NM I to close it to new participation and to provide for its termination in 25 years.¹² Additionally, since KRS 278.466(6) permits the grandfathering only of “an eligible electric generating facility *in service prior to the effective date* of the initial net metering order,” in this proceeding, the Company added language to clarify that a customer will be removed from Rider NM I if he or she materially modifies such an eligible generating facility, such that the modified facility effectively constitutes a different generating facility than the one previously in service:

Customers altering their generating facility beyond like replacement of equipment resulting in a material increase in the generating capacity will be removed from participation in this net metering rider and will be required to reapply for interconnection under then current applicable options for customer-generators.¹³

The “material increase” tariff language will only be triggered if the customer increases the capacity of the generating facility’s inverter from the inverter capacity that was approved in the facility’s initial interconnection study. As the Company has clarified, replacing like-for-like equipment will not be considered a material modification. Additionally, increases in solar panel capacity will not be considered material as long as they are consistent with the capability of the generating facility’s pre-existing inverter, *i.e.*, the inverter that was approved in the generating facility’s initial interconnection study.¹⁴ However, if a customer increases the inverter capacity from the previously approved

¹² Application, Exhibit 2, p. 1 (December 11, 2023).

¹³ *Id.*

¹⁴ Duke Energy Kentucky Response to STAFF-DR-01-002, part b.

inverter capacity, the Company will require a new interconnection application and study and the customer will no longer be eligible for Rider NM I.¹⁵

Finally, the Company proposes a modification to the Rider NM I tariff—duplicated in the proposed NM II tariff—to address future anticipated scenarios in which some of Duke Energy Kentucky’s customer-generators may also have opportunities to participate in a Distributed Energy Resource Aggregation or with any Distributed Energy Resource Aggregator, as those terms are defined by PJM. Guided by the policies against double counting (*i.e.*, double compensation of the same resource for the same service) in recent Federal Energy Regulatory Commission’s (FERC) orders and the most recent compliance filing made by PJM Interconnection, LLC (PJM),¹⁶ the Company has included the following language in both Rider NM I and Rider NM II:

Regarding the net metering generating facility, Customer-generators are prohibited from simultaneous participation in both this Rider NM I and any Distributed Energy Resource Aggregation or with any Distributed Energy Resource Aggregator, as those terms are defined by PJM or subsequent Regional Transmission Organization, other than an aggregation formed by Duke Energy Kentucky acting as the aggregator. Customer-generators who desire to participate in PJM markets through a third party aggregator must contact the Company and terminate participation in this Rider NM I prior to such PJM market participation.¹⁷

Although the most recent PJM compliance filing, made on September 1, 2023,¹⁸ is still pending FERC approval and there is not yet complete certainty as to the text that will ultimately be approved, the Company believes that the above language in the Rider NM I

¹⁵ *Id.*

¹⁶ See Duke Energy Kentucky Response to STAFF-PHDR-01-005.

¹⁷ Application, Exhibit 2, pp. 1-2 (Rider NM I); Exhibit 3, p. 1 (Rider NM II, identical language except that “Rider NM I” is replaced by “Rider NM II”).

¹⁸ *PJM Interconnection L.L.C.*, Docket No. ER22-962-00, Order No. 2222 Compliance Filing of PJM Interconnection, L.L.C. (September 1, 2023).

and II tariffs is in line with the available guidance and information to date and therefore reasonable.

B. Duke Energy Kentucky's Proposed New Rider NM II Tariff Complies With The Revised Net Metering Statutory Requirements And Reasonably Balances The Commission's Guiding Principles For Net Metering Compensation.

Besides its availability to new net metering customers, Duke Energy Kentucky's proposed Rider NM II differs from Rider NM I in a number of additional ways, including:

- Most importantly: Rider NM II applies the revised definition of "net metering" KRS 278.465(4), such that dollar values are netted instead of kWh, and includes a new section titled "EXCESS GENERATION AVOIDED COST CREDIT RATE," which sets out the proposed rates for compensating customer generators for excess generation after dollar values are properly netted;¹⁹
- Rider NM II provides that "[e]xcess generation purchases by the Company will be recovered in Company's Fuel Adjustment Clause";²⁰ and
- Rider NM II provides that customers receiving temporary services are ineligible for Rider NM II and that Rider NM II participants are ineligible for Rider AMO, the Advanced Meter Opt-out rider.²¹

For the reasons given below, the proposed Rider NM II is in compliance with the revised net metering statutes and otherwise fair and reasonable and should be approved.

- a. The Company's netting methodology is consistent with both the statute and the most recent Commission precedent.

¹⁹ Application, Exhibit 3, pp. 2-3.

²⁰ *Id.*, Exhibit 3, p. 2.

²¹ *Id.*, Exhibit 3, p. 3.

The revised KRS 278.465(4) defines “[n]et metering” as “the difference between the: (a) Dollar value of all electricity generated by an eligible customer-generator that is fed back to the electric grid over a billing period . . . and (b) Dollar value of all electricity consumed . . . over the same billing period.” This means that the “electricity . . . fed back to the electric grid,” is immediately viewed as a dollar value. Electricity consumed by the customer generator on the premises is not part of the netting calculation; effectively the customer receives full retail value for any kWh generated and consumed on the premises because that prevents the customer from needing to consume that kWh from the grid. However, excess generation fed back to the electric grid is immediately converted to a dollar value and is included as a credit on the customer’s bill subject to minimum bill provisions. In its order on rehearing in Case Nos. 2020-349 and 2020-350, the Commission recently clarified this:

The Commission finds that the first sentence in the second paragraph on page 48 of the September 24, 2021 Order should be stricken and replaced with the following: “Consistent with our finding in Case No. 2020-00174 and KRS 278.465(4), the Commission finds that LG&E/KU should continue to *net the dollar value* of the total energy consumed *and the dollar value* of the total energy exported by eligible customer generators over the billing period in NMS 2 consistent with the billing period netting period established in NMS 1.”²²

The stricken sentence had previously read, “Consistent with our finding in Case No. 2020-00174 and KRS 278.465(4), the Commission finds that LG&E/KU should

²² *In the Matters of: Electronic Application of Kentucky Utilities Company for an Adjustment of its Electric Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit and Electronic Application of Louisville Gas and Electric Company for an Adjustment of its Electric and Gas Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit*, Case Nos. 2020-349 and 2020-350, Rehearing Order, pp. 11-12. (November 4, 2021) (emphasis added).

continue to *net the total energy* consumed *and the total energy* exported by eligible customer-generators over the billing period in NMS 2 consistent with the billing period netting period establishes in NMS 1.”²³ Thus, the Commission deliberately corrected and specified that *dollar values* should be netted, not *energies*.

Duke Energy Kentucky’s proposed netting methodology in Rider NM II is consistent with the Commission’s most recent guidance as stated above. Accordingly, although some stakeholders might prefer a different approach, this aspect of Rider NM II is both consistent with the statute and the most recent Commission precedent and therefore reasonable.

- b. The Company’s Proposed Avoided Cost Excess Generation Credit (ACEGC) rates are reasonable and should be approved.

After much consideration of both statutory requirements, the Commission’s above-described guiding principles, and the cost categories identified by the Commission in past cases, Duke Energy Kentucky proposed a compensation rate for excess generation, the ACEGC, which fairly and reasonably represents “all costs necessary to serve its eligible customer-generators.”²⁴

The Company’s proposed rate has been guided by the Commission’s previous consideration of the following avoided cost categories in reviewing net metering rates: (1) Avoided Energy Cost; (2) Avoided Generation Capacity Cost; (3) Avoided Transmission Capacity Cost; (4) Avoided Distribution Capacity Cost; (5) Avoided Ancillary Services Cost; (6) Avoided Carbon Cost; (7) Avoided Environmental Compliance Cost; and (8) Job Benefits.²⁵ Although, as discussed further below, the Company does not propose to include

²³ *Id.*, Order, p. 48 (September 24, 2021) (emphasis added).

²⁴ KRS 278.466(5).

²⁵ See *In the Matters of: Electronic Application of Kentucky Utilities Company for an Adjustment of its Electric Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering*

any amount for avoided transmission capacity cost or avoided distribution capacity cost, the Company did provide data on these items for the Commission’s consideration if the Commission believes that these avoided costs must be included.

Additionally, during the pendency of this case, a couple of updated inputs became available. First, the Company was required to make a regular 2-year update to its cogeneration tariff, which resulted in the availability of updated avoided capacity costs which the Company acknowledged could be used as an update to the filed avoided generation capacity cost figures in this proceeding.²⁶ Second, PJM released revised ELCC values for Fixed Solar for use in the 2025/2026 Base Residual Auction.²⁷ In Mr. Sailers’ rebuttal testimony, Confidential Rebuttal Attachment BLS-1 provides an ACEGC rate calculated with these two items updated.

The individual items will be discussed in more detail below, but a summary table is provided here, in \$/kWh. The “Proposed” columns reflect the ACEGC proposed by the Company, which does not include assigned avoided costs for transmission and distribution capacity. The “Alternative” columns incorporate the “Proposed” values plus transmission and distribution capacity cost data shared by the Company.²⁸

Avoided Cost	Proposed Residential	Proposed Non-Residential	Alternative Residential	Alternative Non-Residential
Energy	\$0.041491	\$0.041901	\$0.041491	\$0.041901
Environmental	Included in Energy	Included in Energy	Included in Energy	Included in Energy
Carbon	Included in Energy	Included in Energy	Included in Energy	Included in Energy

Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit and Electronic Application of Louisville Gas and Electric Company for an Adjustment of its Electric and Gas Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Metering Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit, Case Nos. 2020-349 and 2020-350, Order, pp. 48-58 (September 24, 2021).

²⁶ See Bruce L. Sailers Rebuttal Testimony (Sailers Rebuttal), pp. 11-12 (April 17, 2024).

²⁷ *Id.*

²⁸ Bruce L. Sailers Direct Testimony (Sailers Direct), p. 24 (tables).

Ancillary Services	\$0.000578	\$0.000499	\$0.000578	\$0.000499
Generation Capacity	\$0.015063	\$0.015063	\$0.015063	\$0.015063
Transmission Capacity	Not Included	Not Included	\$0.007662	\$0.007662
Distribution Capacity	Not Included	Not Included	\$0.015393	\$0.015393
Job Benefit	Not Included	Not Included	Not Included	Not Included
Total	\$0.057132	\$0.057463	\$0.080187	\$0.080518

Additionally, if the avoided generation capacity costs were updated in accordance with the updates discussed in Mr. Sailers’s rebuttal testimony, the revised ACEGC would be as follows:²⁹

Total	\$0.051067 Residential (No Avoided T&D)	\$0.051398 Non-Residential (No Avoided T&D)	\$0.074122 Residential (Incl. Avoided T&D)	\$0.074453 Non-Residential (Incl. Avoided T&D)
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Avoided Energy Cost, Avoided Environmental Compliance Cost, And Avoided Carbon Cost

The Company’s calculation of the avoided energy cost reflects the most accurate and up-to-date information available to the Company and mirrors the Company’s IRP methodology. As described in detail in the testimony of Company witness Matthew Kalembe, Duke Energy Kentucky has proposed to derive avoided energy costs in the form of forecasted LMPs (which incorporate avoided environmental compliance and carbon costs), avoided generation capacity costs, and avoided ancillary services costs.³⁰ Although more transparent methods could have been used, these would not have been as accurate or as current a reflection of the Company’s actual avoided costs.

²⁹ Sailers Rebuttal, p. 12.

³⁰ See Matthew Kalembe Direct Testimony (Kalembe Direct), pp. 3-4 (December 11, 2023).

The Company first prepared a 25-year forecast of hourly Locational Marginal Prices (LMPs) by modeling the Eastern Interconnection using a proprietary data base of existing units, planned retirements and additions, fuel prices, reagent costs, and emission allowances, and production and investment tax credits.³¹ The calculated LMPs represent the hourly dispatch prices of a marginal unit in PJM at each respective time.³²

The LMPs calculated by the Company incorporate anticipated environmental costs, including those associated with carbon. The modeling includes Sulfur Oxide and Nitrogen Oxide allowance costs for 2023 to 2032, and then escalates these costs at 2% for each year afterwards.³³ Additionally, the model incorporates investment tax credits for solar and storage resources and production tax credits for renewable and nuclear resources that meet the statutory requirements of the Inflation Reduction Act of 2022 (IRA), as detailed in the Direct Testimony of Company Witness Matthew Kalemba.³⁴

The Company used this LMP forecast to develop average annual energy prices for the next 25 years, as described and depicted by Mr. Sailers in his direct testimony and the accompanying Confidential Attachment BLS-3.³⁵ Then, the average annual prices were discounted according to a net present value calculation using the Company's most recently approved weighted average cost of capital in Case No. 2022-372.³⁶ This produced values of \$0.041491 / kWh for residential and \$0.041901 / kWh for non-residential customer generators.

³¹ *Id.*

³² *Id.*

³³ *Id.*, p. 5.

³⁴ *Id.*, p. 6.

³⁵ Sailers Direct, pp. 16-17 & Confidential Attachment BLS-3.

³⁶ *Id.*

Furthermore, it is noteworthy that Joint Intervenors' witness Dr. McCann does not dispute the Company's Avoided Energy Cost figure as such, only disputing whether it adequately incorporates environmental and carbon costs, since he recommends an additional avoided cost for carbon. Indeed, Dr. McCann includes the Company's Avoided Energy Cost figure in his recommendations.³⁷

Although the proprietary modeling is not able to be entirely transparent, the modeling is consistent with that used in the Company's IRP and the resulting values reasonably and most accurately capture the avoided energy cost, avoided environmental compliance cost, and avoided carbon cost collectively. For all these reasons, the Company's avoided energy cost values should be accepted.

Avoided Generation Capacity Cost

To calculate avoided generation capacity cost, the Company calculated the fixed costs of constructing, financing, and staffing a Combustion Turbine (CT) that would be available to meet customer demand when needed.³⁸ The Company began with overnight construction and financing costs for a CT, as well as operations and maintenance costs for a CT provided by a third-party consultant specific to the Duke Energy Kentucky service territory.³⁹ Then, Mr. Sailers escalated those costs to create a 25-year projection, applied the PJM Effective Load Carrying Contribution for a Fixed Solar resource (ELCC) (holding constant for future years), and then discounted the cost using a net present value calculation.⁴⁰

³⁷ See Richard McCann Direct Testimony (McCann Direct), p. 36, Table JI-2 (March 13, 2024).

³⁸ Kalembe Direct, p. 4.

³⁹ *Id.*, p. 7.

⁴⁰ Sailers Direct, p. 18.

Although the Company recognizes that PJM Net CONE values would offer more transparency, they would not as accurately reflect the avoided generation capacity costs of the Company. Joint Intervenors' witness Dr. McCann claims that the Commission "determined that PJM's Net CONE calculation best represents the long-term value of avoided generation capacity,"⁴¹ but this is a mischaracterization of existing precedent. The Commission merely said that "Net CONE . . . better reflects long-term avoided capacity value," when comparing PJM Net CONE to Kentucky Power's proposed approach.⁴² The Commission did not deem it the best of all possible approaches. In this case, the Company's proposed approach is more tailored to the Company's service territory and therefore more accurate.

For all the reasons above, the Company's proposed avoided generation capacity cost of \$0.015063 / kWh should be accepted. If the Commission prefers to use the updated figure of \$0.008998 / kWh offered in Mr. Sailers' rebuttal testimony, based on the same methodology but with inputs updated as described above, Duke Energy Kentucky would not object.

Avoided Ancillary Services Cost

As explained by Mr. Kalemba in his direct testimony, the Company obtained price forecasts for ancillary services, such as contingency/operating reserves and spinning reserves.⁴³ Then, the Company applied a net present value calculation, using its most

⁴¹ McCann Direct, p. 20.

⁴² See *Electronic Application of Kentucky Power Company for (1) A General Adjustment of its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) Approval of a Certificate of Public Convenience and Necessity; and (5) All Other Required Approvals and Relief*, Case No. 2020-174, Order, p. 29 (May 14, 2021).

⁴³ Kalemba Direct, p. 7.

recently approved weighted average cost of capital to obtain values of \$0.000578/kWh for residential and \$0.000499/ kWh for non-residential customers.

Avoided Transmission Capacity Cost and Avoided Distribution Capacity Cost

The Company did not include components for avoided transmission and distribution capacity costs in its proposed ACEGC rate, due to the random, intermittent, and non-dispatchable nature of *exports* from a net metered solar customer, which precludes a utility from meaningfully relying on such exports to reduce its planned transmission and distribution investments. In considering these components, it is crucial to understand that the ACEGC rate only applies to amounts *exported* to the grid. As discussed earlier *supra*, net metering customers already effectively receive the full retail rate for any solar generation that they themselves consume and do not export. Additionally, to be an “[e]ligible customer-generator” in the first place, a customer’s generating facility must be “for the primary purpose of supplying all or part of the customer’s own electricity requirements.”⁴⁴ Thus, even if the amount of solar *generation* of a specific facility can be somewhat predictably modeled based on weather patterns and so on, the amount *exported* will vary widely with customer consumption patterns, as discussed in the testimony of witness Sailors.⁴⁵ Additionally, if the customer is in compliance with the “primary purpose” statutory requirement cited here, the amount *exported* should typically be, at most, a small fraction of the amount generated and often no energy will be exported at all. And finally, the Company has shown through a simplified unit cost analysis that the decrease in the cost to serve the customer is approximately the same as the decrease the

⁴⁴ KRS 278.465(1).

⁴⁵ See Sailors Rebuttal, pp. 4-5.

customer realizes in their bill, without the inclusion of transmission and distribution components.⁴⁶

Although, as the Commission has said, “[e]ach net metering customer provides a small incremental reduction to load,”⁴⁷ much of that reduction comes from self-consumed energy, for which the customer is already being compensated effectively at the full retail rate. The historic load data used by the Company for transmission and distribution planning indirectly includes such load reductions but these current amounts are immaterial for the Company’s T&D planning purposes. Additionally, the Commission has noted the importance of an “appropriate price signal”⁴⁸ in this context. When the statute requires net metering facilities to be “for the primary purpose of supplying all or part of the customer’s own electricity requirements,”⁴⁹ the appropriate price signal must not over-incentivize increasing exports—net metering facilities are supposed to be primarily for the customer’s own requirements. The Company has other tariffs available for generating facilities whose primary purpose is to *export* energy for the purpose of compensation.⁵⁰

Understanding that the Commission has imputed avoided transmission and distribution capacity costs in prior net metering proceedings,⁵¹ the Company has provided data from its DSM program filings which could be used, as described in the direct

⁴⁶ Sailer Direct, pp. 10-11.

⁴⁷ *Electronic Application of Kentucky Power Company for (1) A General Adjustment of its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) Approval of a Certificate of Public Convenience and Necessity; and (5) All Other Required Approvals and Relief*, Case Nos. 2020-349 and 2020-350, Order, p. 53 (September 24, 2021).

⁴⁸ *Id.*

⁴⁹ KRS 278.465(1).

⁵⁰ See KY. P.S.C. Electric No. 2, Sheet Nos. 93 and 94.

⁵¹ See, e.g., *Electronic Application of Kentucky Power Company for (1) A General Adjustment of its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) Approval of a Certificate of Public Convenience and Necessity; and (5) All Other Required Approvals and Relief*, Case Nos. 2020-349 and 2020-350, Order, pp. 51-54 (September 24, 2021).

testimony of Company witness Sailers.⁵² These data would result in avoided transmission and distribution capacity costs of \$0.007662 / kWh and \$0.015393 / kWh, respectively, noting that the revised values from witness Sailers' rebuttal testimony could be used as preferred by the Commission. However, the Company proposes that the ACEGC be computed without either of these values, as the Company is not able to rely on intermittent, non-dispatchable exports by net metering customers to reduce its planned transmission and distribution investments.

Job Benefits

As explained in the direct and rebuttal testimonies of Company witness Bruce L. Sailers, Duke Energy Kentucky does not, at this time, see evidence to support the inclusion of a job benefits component in the ACEGC.⁵³ The Company recognizes that the Commission has ordered other utilities to "evaluate job benefits and economic development as an export rate component" in their next rate case.⁵⁴ However, there is only a small amount of net metering capacity remaining under the net metering cap for which to evaluate incremental job benefits of NM II.⁵⁵ It seems likely this value would be immaterial.

- c. The Company's Proposed Language Regarding the Fuel Adjustment Clause, Rider AMO, and Temporary Service Is Reasonable.

⁵² Sailers Direct, pp. 20-21. Additional supporting data was provided in discovery. See Duke Energy Kentucky Response to STAFF-DR-05-005 (citing relevant responses).

⁵³ Sailers Direct, p. 21; Sailers Rebuttal, p. 15.

⁵⁴ *Electronic Application of Kentucky Power Company for (1) A General Adjustment of its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) Approval of a Certificate of Public Convenience and Necessity; and (5) All Other Required Approvals and Relief*, Case No. 2020-174, Order, p. 38 (May 14, 2021); *Electronic Application of Kentucky Power Company for (1) A General Adjustment of its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) Approval of a Certificate of Public Convenience and Necessity; and (5) All Other Required Approvals and Relief*, Case Nos. 2020-349 and 2020-350, Order, pp. 57-58 (September 24, 2021).

⁵⁵ See Sailers Rebuttal, p. 2.

In addition to the changes discussed above, Duke Energy Kentucky has also included language in Rider NM II that clarifies the Company’s intent to recover the cost of its excess generation purchases—at the ACEGC rate—in the Company’s Fuel Adjustment Clause proceedings.⁵⁶ As clarified by the Company in discovery, doing so does not necessitate any changes to Duke Energy Kentucky’s Fuel Adjustment Clause tariff, Sheet No. 80. The Commission has previously characterized “avoided cost payments or credits” under a successor net metering tariff as “a purchased power expense,”⁵⁷ and this would be appropriate here as well. Accordingly, Duke Energy Kentucky’s language to this effect in Rider NM II should be approved.

Rider NM II also contains two limitations: (1) it is not available to customers taking temporary service; and (2) it renders customers ineligible for the Company’s Rider AMO, which otherwise would allow those customers to opt-out of having an advanced meter.⁵⁸ These limitations are narrowly tailored, practical, and reasonable. Temporary service accounts are typically for builders during site construction, and the premises would be able to apply for Rider NM II net metering service after a permanent account is established with a customer.⁵⁹ Regarding Rider AMO, the Company’s planned net metering billing process for Rider NM II uses interval meter data to measure both consumption from the grid and exports to the grid, which requires an advanced meter.⁶⁰ The necessary changes to the Company’s field collection system and billing system to accommodate customers

⁵⁶ Application, Exhibit 3, p. 2.

⁵⁷ See *Electronic Application of Kentucky Power Company for (1) A General Adjustment of its Rates for Electric Service; (2) Approval of Tariffs and Riders; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; (4) Approval of a Certificate of Public Convenience and Necessity; and (5) All Other Required Approvals and Relief*, Case No. 2020-174, Order, p. 42.

⁵⁸ Application, Exhibit 3, p. 1.

⁵⁹ Duke Energy Kentucky Response to STAFF-DR-01-003.

⁶⁰ See *id.*

simultaneously being on Rider NM II and Rider AMO would likely require disproportionate effort and costs to implement, when considering the number of customers who would be likely to avail themselves of this option.⁶¹ For these reasons, this language is reasonable and should be approved.

C. Duke Energy Kentucky's Proposed New Interconnection Tariff Is Reasonable and Will Improve Tariff Clarity and Organization.

The Company has not made substantive modifications to the tariff language regarding interconnection, but rather relocated this language to a new tariff sheet that is exclusively dedicated to the topic of interconnection. The alternative would have been to include this same lengthy list of provisions in both tariffs, which would be cumbersome to navigate and also raise the probability of unintentional discrepancies being introduced. Furthermore, any future updates to interconnection requirements should be able to be proposed and reviewed independently of net metering rates, which the new arrangement allows. Thus, the Company's reorganization of these requirements to a new, dedicated, tariff sheet should be approved.

V. **Conclusion**

Wherefore, on the basis of the foregoing, Duke Energy Kentucky respectfully requests that the Commission approve its Application in this proceeding.

Respectfully submitted,

DUKE ENERGY KENTUCKY, INC.

/s/Larisa M. Vaysman

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⁶¹ See Duke Energy Kentucky Response to STAFF-PHDR-01-008.

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CERTIFICATE OF SERVICE

This is to certify that the foregoing electronic filing is a true and accurate copy of the document in paper medium; that the electronic filing was transmitted to the Commission on June 26, 2024; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and that submitting the original filing to the Commission in paper medium is no longer required as it has been granted a permanent deviation.⁶²

/s/Larisa M. Vaysman
_____ *Counsel for Duke Energy Kentucky, Inc.*

⁶²*In the Matter of Electronic Emergency Docket Related to the Novel Coronavirus COVID-19, Order, Case No. 2020-00085 (Ky. P.S.C. July 22, 2021).*