COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

KENTUCKY SOLAR INDUSTRIES ASSOCIATION, INC.
SUPPLEMENTAL REQUESTS FOR INFORMATION TO
DUKE ENERGY KENTUCKY, INC.

Come now the Kentucky Solar Industries Association, Inc. (KYSEIA), by and through counsel, and in accordance with the Public Service Commission's Order dated January 5, 2024, submits its Supplemental Requests for Information to Duke Energy Kentucky, Inc. ("Duke" also "Company").

1) In each case in which a request seeks information provided in response to a request of Commission Staff, reference to the Company's response to the appropriate Staff request will be deemed a satisfactory response.
2) Please identify the Company's witness who will be prepared to answer questions concerning the request during an evidentiary hearing.
3) These requests shall be deemed continuing and require further and supplemental responses if the Company receives or generates additional information within the scope of these request between the time of the response and the time of any evidentiary hearing held by the Commission.

4) If any request appears confusing, please request clarification directly from Counsel for KYSEIA.
5) To the extent that the specific document, workpaper, or information as requested does not exist, but a similar document, workpaper, or information does exist, provide the similar document, workpaper, or information.
6) To the extent that any request may be answered by way of a computer printout, please identify each variable contained in the printout which would not be self-evident to a person not familiar with the printout.
7) If the Company has any objections to any request on the grounds that the requested information is proprietary in nature, or for any other reason, please notify Counsel for KYSEIA as soon as possible.
8) For any document withheld through a claim of privilege, state the following: Date; author; addressee; indicated or blind copies; all person to whom distributed, shown, or explained; and the nature and legal basis for the privilege asserted.
9) In the event that any document called for has been destroyed or transferred beyond the control of the Company, state: The identity of the person by whom it was destroyed or transferred and the person authorizing the destruction or transfer; the time, place, and method of destruction or transfer; and, the reason(s) for its destruction or transfer. If destroyed or disposed of by operation of a retention policy, state the policy.
10) As the Company discovers errors in its filing and/or responses, please provide an update as soon as reasonable that identifies such errors and provide the document to support any changes.

WHEREFORE, KYSEIA respectfully submits its Supplemental Requests for Information to Duke.

Respectfully submitted,

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Notice And Certification For Filing

Undersigned counsel provides notice that the electronic version of the paper has been submitted to the Commission by uploading it using the Commission's E-Filing System on this 21st day of February, in conformity with the Commission's January 5, 2024 Order of procedure in the instant case. Pursuant to the Commission's Orders in Case No. 2020-00085, *Electronic Emergency Docket Related to Novel Coronavirus Covid-19*, the paper, in paper medium, is not required to be filed.

/s/ David E. Spenard

Notice And Certification Concerning Service

No party has been excused from the electronic filing procedures in the instant proceeding.

/s/ David E. Spenard
David E. Spenard

KENTUCKY SOLAR INDUSTRIES ASSOCIATION, INC.
SUPPLEMENTAL REQUESTS FOR INFORMATION TO
DUKE ENERGY KENTUCKY, INC.

1. Reference: Duke Response to Kentucky Solar Energy Society Kentuckian's for the Commonwealth's First Request for Information, Item 13, Attachment 1, page 4 of 19 ("Joint Intervenors 1-___).; and Duke Response to Attorney General's First Data Requests, Item 5 ("OAG 1-___"). Attachment 1, page 4 of 19 includes the statement: "At current pace, net metering cap could be reached in October 2025." The Response to the OAG (scenario considering the impact of a 10kW rooftop solar generator on the need for transmission capacity on the DEK system) includes the statement: "Due to the random, intermittent, and non-dispatchable nature of such exports of energy back to the grid, they are not valued for purposes of transmission capacity."

   a. Rather than through a hypothetical single 10kW rooftop solar generator in isolation but, instead, by reference to the actual cumulative generating capacity of net metering systems for the DEK system as of the date of the application in the instant proceeding, is Duke's position that the current cumulative generating capacity of net metering systems should not be valued for purposes of transmission capacity? If yes (that they should not be valued), explain why not. If no (that they should be valued), explain how they should be valued.

   b. In a scenario in which Duke deployed a distributed energy management system ("DERMS") or other similar management system for the actual cumulative generating capacity of net metering systems for the DEK system as of the date of the application in the instant proceeding, is Duke's position that the current cumulative generating capacity of net metering systems should not be valued for purposes of transmission capacity? If yes (that they should not be valued), explain why not. If no (that they should be valued), explain how they should be valued.

   c. Further reference Duke Response to Joint Intervenors 1-13(a), Attachment 2, page 16 of 17. Is it Duke's position that (in a scenario featuring) the deployment of "EE" for the actual cumulative generating capacity of net metering systems for the DEK system as of the date of the application in the instant proceeding, the actual cumulative generating capacity of the net metering systems should not be valued for the purpose of transmission capacity? If yes (that they should not be valued), explain why not. If no (that they should be valued), explain how they should be valued.

2. Reference: Duke Response to OAG 1-6. With regard to Duke's definition of "random," as that word is used in the response, is it Duke's position that it is unable to develop profiles and/or model probabilities (based upon actual experience) of solar generation exports from the generators on Duke's system by weather conditions, time-of-day, and/or month-of-year, such that Duke is without ability to

forecast or otherwise plan for solar generation exports from solar generators in terms of when exports should be anticipated? (For examples, that the probability for an export occurring at 2:00 a.m. is just as likely (random) as 2:00 p.m.; exports occurring on hot sunny days just as likely as cool sunny days; etc.) If yes, explain why. If no, explain Duke's efforts to date to develop profiles and/or model probabilities for solar generation exports from solar generators.

3. Reference: Duke Response to Kentucky Solar Industries Association, Inc.'s Initial Requests for Information, Item 1, b and e ("KYSEIA 1-___") and KYSEIA 1-9 d, q, and r.

   a. Confirm that Duke will require each successive customer at a premises eligible for net metering service under NM I for the remainder of the grandfathering period to submit a Level 1 Application for Interconnection and Net Metering – Kentucky (set forth in the present *Schedule of Rates, Classifications Rules and Regulations for Electric Service of Duke Energy Kentucky, Inc.*) as a condition for receiving net metering service. If this cannot be confirmed, identify and explain the submission that will be required.

   b. Confirm that process(es) and point(s) of contact for starting service at a location (opening an account) is(are) the same for submitting and processing a Level 1 applications for interconnection and net metering (that, for example, a person starting residential service using Duke's current website can, as part of that process, simultaneously submit a Level 1 application through the same customer encounter). If this cannot be confirmed, identify and explain the differences in requesting a start of service to a location for, say, general residential service, and submitting a Level 1 application for interconnection and net metering.

   c. Separately from the response to part b (above), can the same Duke customer care representative process an application to start service and accept a Level 1 application for interconnection and net metering? If no, explain why not.

4. Reference: Duke Response to KYSEIA 1-2 d. State whether a net metering customer will be able to submit for review and obtain an approval of a plan to repair or replace a system for the express purpose of determining whether the planned repairs or replacement results in a change in the customer's net metering status (including whether the proposal will require a new interconnection study). If yes (there is a review), describe the review process. If no (there is no review), explain why not.

5. Reference: Duke Response to KYSEIA 1-5 a iii. At pertinent part, Duke states: "The Company would not use this method unless necessary." Provide examples that demonstrate instances in which the method would be necessary (specifically including any example(s) in which this method is presently in use).

6. Reference: Duke Response to KYSEIA 1-8.

   a. State whether Duke is currently a distributed energy resource aggregator for Duke's Kentucky service territory. If no, state why not.

   b. Confirm that the described "double counting" does not occur in the absence of Duke serving as a distributed energy resource aggregator for Duke's Kentucky service territory. If this cannot be confirmed, explain why not.

   c. Provide a reference/citation to any Order of the Kentucky Public Service Commission that identifies and/or discusses "double counting."

7. Please provide all workpapers used in the development of Mr. Sailers' direct testimony in their original electronic format (e.g. native Excel files) with formulas intact. If any values in these files are hardcoded, please provide the source documentation for each of the hardcoded values.

8. Please provide all workpapers used in the development of Mr. Kalemba's direct testimony in their original electronic format (e.g. native Excel files) with formulas intact. If any values in these files are hardcoded, please provide the source documentation for each of the hardcoded values.

9. Please refer to Sailers Direct at 10.

   a. Please provide all settings used to produce the PVWatts hourly profile.

   b. Please provide the PVWatts hourly profile used in this analysis.

   c. Why did the Company decide a solar generation level equal to 80% of the average customer? Did the Company consider any other values (e.g. 50% or 100%)?

   d. When the Company applied a solar production profile from PVWatts, did it use the "typical meteorological year" setting, or did it apply solar production based on weather specifically from the April 2021 to March 2022 timeframe?

   e. To the extent that the Company did not use meteorological data to produce a solar profile that matched the April 2021 to March 2022 timeframe, what steps, if any, did it take to ensure that the hourly solar production corresponded to the weather conditions that produced the historic load data? For example, if June 2, 2021, was in actuality a hot sunny day, resulting in high load conditions for customers, but June 2 in the PVWatts weather file was cloudy and cool, did the Company make any effort to analyze or correct these discrepancies?

   f. Please provide the average hourly load profile of the RS class from April 2021 to March 2022.

g. Please provide the average hourly load profile of residential customers with existing solar generators from April 2021 to March 2022. To the extent that the data is available, provide separately each of the following on an hourly basis:

   i. Energy delivered from Company to the customer;

   ii. Solar generation; and

   iii. Energy exported from the customer to the Company

h. Did the Company produce a COSS unit cost for energy at any higher temporal resolution (e.g., peak/off-peak, monthly, hourly) than an annual average value?

   i. If so, please provide the COSS unit cost at the highest temporal resolution available.

   ii. If not, please explain why not.

10. Please refer to Sailers Direct at 10, which states "Regarding the demand component, the Company simplified the multiple definitions of demand used in the COSS for allocation purposes into a single demand definition based on the system 12 CPs (coincident peaks)."

a. Please provide the day and time of the 12CP peaks from 2019-2023.

b. Please provide the demand allocator (e.g., 12CP, 4CP, Class NCP, etc.) used in the Company's COSS for

   i. Production costs;

   ii. Transmission costs;

   iii. Primary distribution costs; and

   iv. Secondary distribution costs.

c. To the extent that the Company's COSS does not use the 12CP allocator for the allocation of a given set of costs (e.g., production, transmission, etc.), please explain why it is appropriate to simplify the net metering COSS analysis using the 12CP allocator.

11. Please provide a complete and fully functional version of the Company's most recently approved COSS model in its native format (e.g., Excel) with all formulas intact.

12. Please refer to Sailers Direct at 15, which states "The Company proposes to collect the avoided cost excess generation credits (i.e., purchased power) applied to customer bills through the Company's fuel adjustment clause, Rider FAC."

    a. If the credits for excess generation are equal to the avoided cost of generation, is it not the case that the Company will reduce its expenses by an amount equal to the avoided cost credit?

    b. If so, why is the Company proposing to recover these costs from Rider FAC?

    c. If not, please explain why not.

    d. If not, please explain whether the Company will perform any reconciliation between the actual avoided cost of energy purchased from NEM customers and avoided market purchases or other reductions in O&M costs.

13. Please refer to Attachment BLS-2. It appears that that Company is limiting the demand reduction from solar during the 12CP hours to the customers' pre-solar load instead of accounting for any export that may be happening. For example, on 6/29/2021 16:00, the pre-solar usage is 2.5416 kW and the solar generation is 3.9175 kW, resulting in a flow from the customer to the grid of -1.3759 kW. However, the post-solar demand during this hour is listed as 0 kW instead of -1.3759 kW.

    a. Why is the Company artificially limiting the post-solar demand to 0 kW instead of including exported power in the calculation?

    b. For an individual customer that is exporting 1.3759 kW during a 12CP hour, confirm that the power will flow to the nearest load, such as the solar customer's neighbor. If the Company is unable to confirm this statement, please explain why not.

    c. For an individual customer that is exporting 1.3759 kW during a 12CP hour, confirm that the power will flow to the nearest load, such as the solar customer's neighbor, and will reduce that customer's load by 1.3759 (assuming their load was at least this level). If the Company is unable to confirm this statement, please explain why not.

    d. Confirm that solar exports from residential solar customers during 12CP hours in aggregate reduce the total load of the residential class during 12CP hours. If the Company is unable to confirm this statement, please explain why not.

14. Please see Sailers Direct at 23 and Exhibit 2 at 1. Please explain why the Company proposes to prevent any NM I or NM II customer from participating through a third-party aggregator for the purposes of FERC Order 2222 compliance, but would allow the same customer to participate through the Company as an

aggregator for FERC Order 2222 compliance while remaining on the NM I or NM II tariff.

15. Please produce a redline showing the differences between the current interconnection process removed from Exhibit 2 and added to Exhibit 4.