

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matters of:

ELECTRONIC APPLICATION OF KENTUCKY)
UTILITIES COMPANY FOR AN ADJUSTMENT)
OF ITS ELECTRIC RATES, A CERTIFICATE)
OF PUBLIC CONVENIENCE AND NECESSITY) CASE NO.
TO DEPLOY ADVANCED METERING) 2020-00349
INFRASTRUCTURE, APPROVAL OF CERTAIN)
REGULATORY AND ACCOUNTING)
TREATMENTS, AND ESTABLISHMENT OF A)
ONE-YEAR SURCREDIT)

ELECTRONIC APPLICATION OF LOUISVILLE)
GAS AND ELECTRIC COMPANY FOR AN)
ADJUSTMENT OF ITS ELECTRIC AND GAS)
RATES, A CERTIFICATE OF PUBLIC) CASE NO.
CONVENIENCE AND NECESSITY TO DEPLOY) 2020-00350
ADVANCED METERING INFRASTRUCTURE,)
APPROVAL OF CERTAIN REGULATORY AND)
ACCOUNTING TREATMENTS, AND)
ESTABLISHMENT OF A ONE-YEAR SURCREDIT)

**KENTUCKY SOLAR INDUSTRIES ASSOCIATION, INC.
COMBINED REQUESTS FOR INFORMATION
TO KENTUCKY UTILITIES COMPANY AND
LOUISVILLE GAS AND ELECTRIC COMPANY**

Comes now the Kentucky Solar Industries Association, Inc. (KYSEIA), by and through counsel, and in accordance with the Public Service Commission’s Order dated June 30, 2021, submits its combined requests for information to Kentucky Utilities Company (KU) and Louisville Gas and Electric Company (LG&E) (collectively – “Companies”).

- 1) In each case in which a request seeks information provided in response to a request of Commission Staff, reference to the Companies' response to the appropriate Staff request will be deemed a satisfactory response.
- 2) Please identify the Companies' 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 Companies receive or generate 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 Companies have 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 on the basis 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 Companies, 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 Companies discover 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 combined requests for information to the Companies.

Respectfully submitted,

/s/ David E. Spenard

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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 22nd day of July 2021, and further certifies that the electronic version of the paper is a true and accurate copy of each paper filed in paper medium. Pursuant to the Commission's March 16, 2020, and March 24, 2020, Orders in Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus Covid-19*, the paper, in paper medium, will be filed at the Commission's offices within 30 days of the lifting of the state of emergency.

/s/ David E. Spenard
David E. Spenard

Notice Regarding Service

The Commission has not yet excused any party from electronic filing procedures for this case.

/s/ David. E. Spenard
David E. Spenard

**KENTUCKY SOLAR INDUSTRIES ASSOCIATION, INC.
COMBINED REQUESTS FOR INFORMATION
TO KU AND LG&E**

1. Please refer to the Supplemental Direct Testimony of David S. Sinclair (“Sinclair Supplemental”), Supplemental Exhibit DSS-2, Table 8 at p. 9.
 - a. Does each monthly peak hour represented in Table 8 have an equal loss of load expectation?
 - b. Please explain how the Company considers loss of load expectation in its capacity planning efforts.
 - c. Please identify, if any, all of the 12 monthly peak hours shown in Table 8 that have a zero loss of load expectation according to the study the Company presented in this proceeding.
2. Please refer to Sinclair Supplemental at p. 10 lines 15-18, stating “While both the Current Market Price and the Levelized Cost of a CT methodologies are fundamentally sound, it is important to keep in mind that the customers that are paying for this capacity would prefer the least-cost option.” Please also refer to Supplemental Exhibit DSS-2 in Tables 1, 9, and 14.
 - a. In Table 14 the recommended capacity prices for wind are higher than they are for either fixed or tracking solar. Yet Table 9 shows that in relation to a combustion turbine, both types of solar resource have a higher annual avoided cost (\$/MW) than a wind resource. Please explain why it would be prudent for the Company to enter into a QF contract with a wind resource that provides lower or equivalent capacity benefits at a higher price than the Company would pay for either a tracking or fixed tilt solar resource.
3. Please refer to Sinclair Supplemental at p. 10 lines 15-18, stating “While both the Current Market Price and the Levelized Cost of a CT methodologies are fundamentally sound, it is important to keep in mind that the customers that are paying for this capacity would prefer the least-cost option.” Please also refer to Supplemental Exhibit DSS-3 containing technology specific recommended SQF and LQF rates.
 - a. For a fixed tilt solar array under a 20-year contract beginning in 2022, the total sum of energy and capacity rates (for a 2028 capacity need) is \$25.77/MWh. If one assumed a “perfect” capacity resource, the capacity payment would increase to \$5.90/MWh (\$1.70/28.8%) and the total rate to \$29.97/MWh. Would it be prudent from a least-cost resource perspective for the Company to make an investment in a natural gas combustion turbine or a natural gas combined cycle unit if the 20-year levelized cost of energy from that unit is higher than \$29.97/MWh? Please explain in detail.

- b. For an “other” technology that is not solar or wind, which are modeled as a perfect capacity resource, the sum of energy and capacity compensation for a 2028 capacity need is \$31.25/MWh. Please explain why it would be reasonable from a least-cost resource perspective to pay an other “other” technology QF this amount when a hypothetical perfect capacity solar or wind resource would receive a different amount, and as reflected in subpart a., a lower amount for a fixed tilt solar array. Please explain in detail.
 - c. Which “avoided cost” as reflected in the sum of energy and capacity compensation for each technology type should a Company investment be compared to in order to determine whether it is a least-cost resource?
4. Please refer to Sinclair Supplemental at p. 10 lines 12-15, stating “As described in Supplemental Exhibit DSS-2, I recommend using the lowest cost method for each generation technology. Therefore, I recommend using the Current Market Price methodology based on the Companies’ PPA data for solar and the LevelTen Energy index for wind.”
 - a. Please confirm that this approach will always produce avoided cost pricing that is not technology neutral. If your response is anything other than an unqualified confirmation, please explain in detail. In particular, please address how the use of different market price benchmarks for different technologies cannot fail to produce a discriminatory outcome.
5. Please refer to Sinclair Supplemental at p. 6 lines 1-3 explaining the lack of carbon emission costs in the calculated avoided energy costs, stating “As of now, there are no laws or regulations that put a price on CO₂ like there are for SO₂ and NO_x, which is why the latter were included. If there is a price on CO₂ in the future, then it will be included in the Companies’ next biennial avoided cost filing.”
 - a. Does Mr. Sinclair agree that there is a non-zero chance that laws or regulations which put a price on carbon emissions will be established during the next 20 years? If your response is to not agree, please explain.
 - b. In Mr. Sinclair’s capacity as the Vice President, Energy Supply and Analysis, is it his view that the potential for carbon pricing to be established at some point in the future should be considered as part of the resource planning at present.
6. Please provide workpapers associated with all Figures, Graphs, Tables, and Exhibits associated with the Direct Testimony of Company Witness David S. Sinclair in executable spreadsheet format with all formulas and file linkages intact.
7. Please refer to the Supplemental Testimony of William S. Seelye (“Seelye Supplemental”) at p. 9 lines 16-18, stating “Whether a customer generator adds to or decreases line losses on the system depends on a multitude of factors that are ultimately affected by customer specific and locational considerations.”

- a. Does Mr. Seelye agree that the “multitude of factors” involving “customer specific” and locational considerations” are also factors that would determine the specific losses attributable to individual customer loads? If your response is anything other than an unqualified agreement, please explain in detail.
 - b. Is it Mr. Seelye’s understanding that averaged line losses are commonly used to derive retail rates where such rates are differentiated by the voltage at which a customer receives electric service?
 - c. Please confirm that the amount of losses avoided by an individual customer generator, after considering the multitude of factors that Mr. Seelye refers to, could be either higher or lower than averaged losses. If your response is anything other than an unqualified confirmation, please explain in detail.
8. Please refer to Seelye Supplemental at p. 10, footnote 6 stating “I²R losses relate to resistance in conductor and transformer windings and are in proportion to the square of the current.” Please confirm that because resistive losses increase in proportion to the square of the current, losses are higher during periods of high or peak demand on the associated infrastructure than they are during periods of lower loads.
9. Please refer to Seelye Supplemental at p. 11 lines 8-17 where he discusses his derivation of transmission loss factors, and footnotes 8 and 9 on p. 11.
 - a. Please identify where in the Company’s response to PSC 5-20 each of the individual %’s used in the calculations on footnotes 8 and 9 are located.
 - b. For the portion of footnotes 8 and 9 located within parentheses please identify what each percentage refers to.
 - c. Please provide Mr. Seelye’s calculation of transmission loss factors for demand losses, as the amounts he relates on p. 11 appear to refer only to energy losses.
10. Please refer to Seelye Supplemental at p. 30 depicting the summation of his calculations of avoided costs.
 - a. Are the amounts for avoided generation capacity grossed-up for demand losses? If not, please explain in detail why a loss adder is not appropriate.
 - b. Are the amounts for avoided transmission capacity grossed-up for demand losses? If not, please explain in detail why a loss adder is not appropriate. If not, please explain in detail why a loss adder is not appropriate.
 - c. Are the amounts for avoided distribution capacity grossed-up for demand losses?

11. Please refer to Seelye Supplemental from p. 22 line 21 through p. 23 line 3, stating “With customer-generators there is no assurance that their solar facilities will be in place over a sufficiently long period of time to allow the Companies to avoid or defer generation capacity.”

- a. Please identify total number of customer-generators that have ever taken net metering service and the number of customer-generators that once took net metering service but are no longer interconnected to the Company’s system. Please provide this information separately for LGE and KU.
- b. Please provide all studies, analysis, or reports that Mr. Seelye is aware of where customer-sited generation has been determined to offer no avoided capacity value because there is no “assurance” that the facilities “will be in place over a sufficiently long period of time”.
- c. Is it Mr. Seelye’s opinion that the PJM and ISO-NE are in error in their use of forecasted amounts of behind the meter solar as decrements to forecasted load for the purpose of determining capacity requirements?
- d. Does the Company’s IRP incorporate demand-side management (“DSM”) as a decrement to gross load when determining its capacity position and reserve margin? If so, please identify the “assurance” that the Company is provided in the form of contracts or other legally enforceable commitments that DSM measures will remain in place throughout their useful lives.

12. Please refer to Seelye Supplemental Exhibit WSS-1, p. 1.

- a. For both LGE and KU separately, please identify the aggregate load carrying capability in kW of the capacity related transmission investments referred to in the accompanying table.
- b. Please provide an equivalent table depicting the transmission capital plan inclusive of all transmission investments, not just those that the Company considered to be load-related.
- c. Please identify with specificity all categories of investments that the Company has designated as capacity-related and all categories of investments that it has designated as non-capacity related.

13. Please refer to Seelye Supplemental Exhibit WSS-2, p. 1.

- a. For both LGE and KU separately, please identify the aggregate load carrying capability in kW of the capacity related distribution investments referred to in the accompanying table.

- b. Please provide an equivalent table depicting the transmission capital plan inclusive of all distribution investments, not just those that the Company considered to be load-related.
 - c. Please identify with specificity all categories of investments that the Company has designated as capacity-related and all categories of investments that it has designated as non-capacity related.
14. Please provide workpapers associated with all Figures, Graphs, Tables, and Exhibits associated with the Direct Testimony of Company Witness William S. Seelye in executable spreadsheet format with all formulas and file linkages intact.