

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter 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)	

COMMISSION STAFF'S SEVENTH REQUEST FOR INFORMATION
TO KENTUCKY UTILITIES COMPANY

Kentucky Utilities Company (KU) pursuant to 807 KAR 5:001, is to file with the Commission an electronic version of the following information. The information requested herein is due on August 2, 2021. The Commission directs KU to the Commission's March 16, 2020 and March 24, 2020 Orders in Case No. 2020-00085¹ regarding filings with the Commission. The Commission expects the original documents to be filed with the Commission within 30 days of the lifting of the current state of emergency. All responses in paper medium shall be appropriately bound, tabbed, and indexed. Electronic documents shall be in portable document format (PDF), shall be searchable, and shall be appropriately bookmarked.

Each response shall include the name of the witness responsible for responding to the questions related to the information provided. Each response shall be answered

¹ Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC Mar. 16, 2020), Order at 5–6. Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC Mar. 24, 2020), Order at 1–3.

under oath or, for representatives of a public or private corporation or a partnership or association or a governmental agency, be accompanied by a signed certification of the preparer or the person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

KU shall make timely amendment to any prior response if KU obtains information that indicates the response was incorrect when made or, though correct when made, is now incorrect in any material respect. For any request to which KU fails or refuses to furnish all or part of the requested information, KU shall provide a written explanation of the specific grounds for its failure to completely and precisely respond.

Careful attention shall be given to copied material to ensure that it is legible. When the requested information has been previously provided in this proceeding in the requested format, reference may be made to the specific location of that information in responding to this request. When applicable, the requested information shall be separately provided for total company operations and jurisdictional operations. When filing a paper containing personal information, KU shall, in accordance with 807 KAR 5:001, Section 4(10), encrypt or redact the paper so that personal information cannot be read.

1. Refer to KU's response to Commission Staff's Third Request for Information, Item 19b., which states that the primary components in the determination of hourly marginal costs were incremental heat rates, fuel prices, variable O&M, and purchased power costs. Indicate whether these components were included in the

determination of the revised avoided energy costs shown in Supplemental Exhibit DSS-3, Recommended LQF and SQF Rates.

2. Refer to KU's response to Commission Staff's Post-Hearing Request for Information, Item 28, regarding the transfer, closing, or opening of an account.

a. Explain why an account would be closed and a new account established when service is transferring to someone who already lives at the address but whose name is just not listed on the account or not listed as financially responsible for the account.

b. Indicate whether an account would still be closed and a new account established if an individual were able to prove by whatever means necessary that they were already residing at the address with the previous primary account holder.

c. Explain the conditions or requirements a new primary account holder would have to meet prior to having electric service placed into their name in instances where the individual already resides at the address but is not listed on the account or listed as financially responsible for the account.

d. Explain the conditions or requirements a new primary account holder would have to meet prior to having electric service placed into their name in instances where the individual does not already reside at the address.

e. Provide the personal information requested of each new potential customer, explain why each item is needed, and for each one, indicate whether the information is required in order to process the application or whether it is optional for the customer to provide.

3. Refer to the Supplemental Testimony of Robert M. Conroy (Supplemental Conroy Testimony), page 11, lines 12–17, discussing setting the capacity rate to zero when a total of 1,000 MW of nameplate QF capacity is contracted across KU and Louisville Gas and Electric Company (LG&E).

a. Provide the current amount of nameplate QF capacity on each system.

b. Explain why the capacity rate should be zero when KU and LG&E have 1,000 MW of nameplate QF capacity.

4. Refer to the Supplemental Conroy Testimony, Exhibit RMC-3, page 2 of 5. Explain how the capacity rate limit MW amounts of 109 MW and 891 MW were derived.

5. Refer to the Supplemental Conroy Testimony, Exhibits RMC-3 and RMC-5. Provide a copy of the present tariff indicating proposed additions by italicized inserts or underscoring and striking over proposed deletions.

6. Refer to the Supplemental Testimony of William Steven Seelye (Supplemental Seelye Testimony), page 9.

a. Explain why KU is not offering NMS-2 customers the option to enter into the 20-year SQF PPA price.

b. Provide empirical data that supports customers within KU's territory not providing generation for a 20-year period.

7. Refer to the Supplemental Seelye Testimony, page 9, lines 11–12. Provide all studies and workpapers that substantiate the claim that “nearly all customer-generators taking service under NMS-2 will most likely have Fixed-Tilt Solar installations.”

8. Refer to the Supplemental Seelye Testimony, page 10, lines 5–11.

- a. Explain how KU distinguished variable transmission losses from core transmission losses.
- b. Provide the percentage of total losses accounted for by each type of loss.
- c. Provide all workpapers, engineering studies, and calculations that substantiate this estimate and identify the page number or location of the relevant information.

9. Refer to the Supplemental Seelye Testimony, page 11, lines 2–4. Explain if KU agrees whether it is also true that line losses incurred to serve customer load vary by location, even when taking service at the same voltage level of the distribution system. If yes, explain why KU does not charge customer locational specific rates for line losses. If not, provide quantitative justification to support the assertion.

10. Refer to the Supplemental Seelye Testimony, page 11, lines 5–7. Explain why, and provide a quantitative example in support of, reducing total energy supplied from a bulk power/centralized generator would not reduce total line losses, including core and load losses, at the customer meter.

11. Refer to the Supplemental Seelye Testimony, page 11, footnotes 8 and 9.
- a. Explain each step of the calculation in each footnote, and explain the source of each number used in the calculation.
 - b. Clarify exactly which electronic page of the referenced 2010 Analysis of System Losses from KU's response to Commission Staff's Fifth Request for Information (Staff's Fifth Request), Item 20, corresponds to each number in the calculation.

12. Refer to the Supplemental Seelye Testimony, page 12, footnotes 10 and 11.

a. Explain each step of the calculation in each footnote and explain the source of each number used in the calculation.

b. Clarify exactly which electronic page of the referenced 2010 Analysis of System Losses from KU's response to Staff's Fifth Request, Item 20, corresponds to each number in the calculation.

13. Refer to the Supplemental Seelye Testimony, page 12, lines 3–4. Explain how KU determined that distribution variable losses represent 80 percent of total primary line losses. Provide all workpapers, engineering studies, and calculations that substantiate this estimate and identify the page number or location of the relevant information.

14. Refer to the Supplemental Seelye Testimony, page 12, lines 3–8. Explain how KU determined that 10 percent of the energy delivered by customer-generators would be transmitted through the primary system. Provide all workpapers, engineering studies, and calculations that substantiate this estimate.

15. Refer to the Supplemental Seelye Testimony, page 13, Section IV, Avoided Ancillary Service Cost.

a. Explain why KU choose to use the ancillary service charges set forth in KU's Open Access Transmission Tariff for the ancillary service cost component.

b. Explain why alternative compensation amounts were not provided for certain schedules.

16. Refer to the Supplemental Seelye Testimony, page 22, lines 19–21. Provide all the options offered by KU that allow residential and commercial customers to provide legally enforceable firm energy and/or capacity to KU. For each offering, provide the number of customers that are currently participating, the total annual energy and capacity enrolled for the past three years, and compensation received for energy and capacity. Provide in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

17. Refer to the Supplemental Seelye Testimony, page 23, lines 3–5. Explain why KU would need assurance that any capacity provided by a customer-generator would be in place and operational for 20 years or more. Provide all workpapers, calculations, planning documents, or financial models that informed the number of 20 years.

18. Refer to the Supplemental Seelye Testimony, page 23, lines 12–14. Provide each net metering tariff throughout the United States that compensates customers for export at a rate (1) less than or equal to solar purchased power agreements, and (2) greater than solar purchased power agreements. For each tariff, provide the applicable commission order with line citations that support your position.

19. Refer to the Supplemental Seelye Testimony, page 23, lines 18–19. Provide the contract for the referenced PPA.

20. Refer to the Supplemental Seelye Testimony, page 26.

a. Explain whether KU's projected 2022 through 2031 total transmission plant additions for retail load growth include (1) transmission expansions that may be needed for new generation or (2) any federal policy that may be adopted in over the projected period.

b. Explain if, by only focusing on transmission plant additions needed for retail load growth, KU is suggesting that non-wires transmission alternatives cannot be partly enabled through distributed energy resources, including distributed generation. Provide support for that assertion.

c. Provide all research and internal documents that KU has for developing and implementing a non-wires transmission alternatives framework.

21. Refer to the Supplemental Seelye Testimony, page 27.

a. Provide the assumptions related to electric vehicle growth within both service territories and how much of the total distribution plant addition estimates are related to electric vehicle growth over the 2022 through 2031 period.

b. Provide all research and internal documents KU has for developing and implementing a non-wires distribution alternatives framework.

22. Refer to the Supplemental Seelye Testimony Exhibits. Provide in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

23. Refer to the Supplemental Testimony of David S. Sinclair (Supplemental Sinclair Testimony), page 7, lines 16–22, which discusses the method KU uses to determine the avoided generation capacity costs. Explain why the levelized cost of a simple cycle combustion turbine is listed instead of the levelized cost of a natural gas combined cycle station.

24. Refer to the Supplemental Sinclair Testimony, page 11. Provide all research KU has conducted, or has been conducted on KU's behalf on the impacts of increasing penetrations of renewable energy.

25. Refer to the Supplemental Sinclair Testimony, page 11, lines 16–22.

- a. Explain if it is a common practice for KU to ignore significant uncertainties within its planning practices, including EV and customer load requirements.
- b. If so, please provide all examples of KU ignoring significant uncertainties.
- c. If not, explain and provide examples of how uncertainty is dealt with in other planning areas, such as distribution system planning.

26. Refer to the Supplemental Sinclair Testimony, page 12, lines 1–2. Explain whether the contrary could also be true. In other words, explain whether KU's NMS II customers would be underpaid for capacity if stringent federal regulations were passed on carbon or that encourage clean energy procurement.

27. Refer to the Supplemental Sinclair Testimony, page 12, footnote 9.

- a. Provide the intermittent renewable generation penetration levels considered in the report and compare those to KU.
- b. Based on the results of the analysis provided, provide an opinion as to how similarly positioned California and KU are with respect to intermittent renewable generation penetrations.
- c. Explain whether it is the KU's position that California utilities and Kentucky utilities have similar clean energy policies and goals. If so, please provide support for that position.

28. Refer to the Supplemental Sinclair Testimony, page 16, lines 11–16, which states that customers have the option of choosing to execute a 20-year PPS or a 2-year PPA. For those that choose a 2-year PPA, at the end of the 2-year PPA period, explain whether a customer can then choose to enter into a 20-year PPA.

29. Refer to the Supplemental Sinclair Testimony, Exhibit DSS-1, Avoided Energy Cost. Also refer to KU's Response to the Attorney General and KIUC's First Request for Information, Item 172, Attachment 2. Provide updated support for the revised avoided energy cost in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

30. Refer to the Supplemental Sinclair Testimony, Exhibit DSS-2, Avoided Capacity Cost. Provide support for the avoided capacity cost amounts in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

31. Refer to the Supplemental Sinclair Testimony, Exhibit DSS-2, page 3.

a. Explain how various contracting terms can impact PPA prices and provide examples.

b. Provide examples of all other utilities that KU is aware of that use the method to compute avoided capacity costs that the Companies have called "Current Market Price" (PPA price minus avoided energy cost).

c. Provide citations, including page references, to all studies, papers, or other literature that KU is aware of that describe or promote the method to compute avoided capacity costs that the Companies have called "Current Market Price" (PPA price minus avoided energy cost).

d. Describe and provide all research or outreach that KU has conducted to determine that customers are willing to pay more than avoided energy cost because they see some additional value from the PPA.

e. Describe and provide all research or outreach that KU has conducted to determine that customers perceive any relationship between solar PPA prices and avoided energy cost.

f. Describe the process KU used when it “sought a third-party source for renewable PPAs.” List all third-party sources that the Companies encountered in this search, in addition to the LevelTen Energy PPA Price Index.

32. Refer to the Supplemental Sinclair Testimony, Exhibit DSS-2, page 7.

a. Provide the specific spreadsheet that KU used from National Renewable Energy Laboratory’s 2020 Annual Technology Baseline to estimate overnight capital and fixed O&M costs, and identify the tab and cell numbers containing the values that the Companies used.

b. Provide the dataset that substantiates the KU’s cost of firm gas transportation for the Trimble County CTs.

33. Refer to the Supplemental Sinclair Testimony, Exhibit DSS-2, page 8. Provide the dataset that indicates the hour in which KU’s monthly peak most commonly occurred over the past 20 years.

34. Refer to the Supplemental Sinclair Testimony, Exhibit DSS-2, page 9. Describe how KU calculated average annual availability factors in Table 8. Provide all workpapers behind those factors, all citations for any assumptions, and all raw datasets that informed the factors and the workpapers in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible

35. Refer to the Supplemental Sinclair Testimony, Exhibit DSS-3, Recommended LQF and SQF Rates.

- a. Provide the avoided capacity prices as per kW prices.
- b. Explain why there is no longer a time-of-day option for the avoided energy costs.

36. Refer to the Supplemental Testimony of John K. Wolfe (Supplemental Wolfe Testimony), page 2, lines 10–16.

- a. Explain whether distributed generation customers are required to have smart inverters.

- b. Explain the reliability implications of distributed generation having smart inverter versus traditional inverters.

37. Refer to the Supplemental Wolfe Testimony, page 2, lines 4–9. Provide all costs that have been incurred by KU (i.e., not a theoretical utility), and the methods for estimating said costs, by distributed generation that are not collected from customers through the interconnection process.

38. Refer to the Supplemental Testimony of Justin R. Barnes (Supplemental Barnes Testimony), page 8, lines 3–4, in which he states that KU’s most recent IRP indicates that the next capacity resource would be a natural gas combined cycle station. Explain whether that statement is still accurate.

39. Refer to the Supplemental Barnes Testimony, page 15, footnote 12, in which he states that he was aware of a situation where a home on which a net-metered solar facility was installed was disenrolled in net metering upon creation of a new electric account for a renter at the same address. Explain whether KU requires new residents of houses with net-metered solar facilities to fill out a new net metering application before providing net metering bill credits.

40. Refer to Case No. 2020-00060,² Direct Testimony of Stuart A. Wilson, Exhibit SAW-1, page 15 of 41. Provide an updated version of Table 14 (Generation Resources Assumptions) for 2023 and 2024 In-Service dates.

41. Provide the contract term and PPA price of all the Companies' solar PPAs signed in the past five years.

42. Refer to Case No. 2018-00348.³

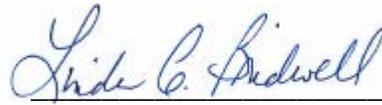
a. Provide KU's annual CO₂ emissions (in tons) associated with all projected energy supply scenarios for each of the next 25 years.

b. Provide KU's anticipated net load (in MWh) for each of the next 25 years. Define net load as provided and include all calculations and data used to isolate net load

43. Where applicable, provide all Supplemental Exhibits for all of the KU's witnesses as well as all supporting workpapers for each exhibit in Excel spreadsheet format with all formulas, columns, and rows unprotected and fully accessible.

² Case No. 2020-00060, *Electronic Application of Kentucky Utilities Company for Approval of Its 2020 Compliance Plan for Recovery by Environmental Surcharge* (filed Mar. 31, 2020).

³ Case No. 2018-00348, *Electronic 2018 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company* (Ky. PSC Oct. 2, 2020).



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DATED JUL 22 2021

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