

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF DUKE ENERGY KENTUCKY,)	
INC. FOR (1) A CERTIFICATE OF PUBLIC)	
CONVENIENCE AND NECESSITY)	
AUTHORIZING THE CONSTRUCTION OF AN)	CASE NO.
ADVANCED METERING INFRASTRUCTURE; (2))	2016-00152
REQUEST FOR ACCOUNTING TREATMENT;)	
AND (3) ALL OTHER NECESSARY WAIVERS,)	
APPROVAL, AND RELIEF)	

COMMISSION STAFF'S FIRST REQUEST FOR INFORMATION
TO DUKE ENERGY KENTUCKY, INC.

Duke Energy Kentucky, Inc. ("Duke Kentucky"), pursuant to 807 KAR 5:001, is to file with the Commission an original in paper medium and an electronic version of the following information. The information requested herein is due on or before June 7, 2016. Responses to requests for information in paper medium shall be appropriately bound, tabbed and indexed. Each response shall include the name of the witness responsible for responding to questions related to the information provided.

Each response shall be answered 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.

Duke Kentucky shall make timely amendment to any prior response if it obtains information which indicates that the response was incorrect when made or, though correct when made, is now incorrect in any material respect. For any request to which Duke Kentucky fails or refuses to furnish all or part of the requested information, it 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 filing a paper containing personal information, Duke Kentucky 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 the application, pages 1–2. Starting at the bottom of page 1, Duke Kentucky states that it is requesting waivers necessary to implement the metering upgrade. Page 2 lists two waivers, but states that the request is not limited to those listed. Provide a listing of other waivers being requested by Duke Kentucky.

2. Refer to the application, page 7. Numbered paragraph 9 at the top of the page indicates that the proposed metering upgrade would “consist of a new AMI electric meter for all electric customers who do not already have a similar advanced meter already.” Provide the number of electric customers who currently have a “similar advanced meter,” and state how many of these customers are residential customers.

3. Refer to the application, page 8, numbered paragraph 10, regarding the lack of electric Advanced Metering Infrastructure (“AMI”) to provide communication

routes for gas-only customers. Describe the infrastructure that would be required for AMI technology and explain why it is not available to Duke Kentucky's gas-only customers.

4. Refer to the application, page 8, numbered paragraph 11, regarding the selection of Itron as the AMI and Automated Meter Reading ("AMR") vendor. Describe in detail Duke Kentucky's vendor-selection process and how it ultimately chose Itron as the vendor, including, but not limited to, whether Duke Kentucky issued a request for proposals, how the potential vendors were selected, and how Duke Kentucky rated each of the potential vendors.

5. Refer to the application, page 9, numbered paragraph 13, regarding high employee safety and injury incident rates associated with manual meter readings. Provide the employee safety and injury incident rates in connection with manual meter readings for the prior five calendar years.

6. Refer to the application, page 9, numbered paragraph 14. In the first sentence Duke Kentucky states it will install approximately 82,500 gas AMI modules for Combination Customers. The third sentence indicates Duke Kentucky has 79,000 Combination Customers. Explain this discrepancy.

7. Refer to the application, page 10, numbered paragraph 17, regarding the proposal to convert all interior meters to AMI or AMR meters. Explain whether the conversion process will include the change of the physical location of these meters to the exterior of the customers' premises.

8. Refer to the application, page 12, numbered paragraph 23. Duke Kentucky states that it replaces its current residential natural gas meters every nine to

ten years, that the meters are removed from service and tested, and that the meters may or may not be re-deployed. Duke Kentucky also states that “going forward, all gas meters purchased and installed will come already equipped with the AMI/AMR modules.”

a. Nine to ten years after installation of the new meters with attached modules, does Duke Kentucky intend to test and possibly redeploy the meters with the attached modules, or will Duke Kentucky retire the meters and modules?

b. If a module fails, will the meter to which it is attached continue to function properly, or will the meter have to be replaced and possibly retired?

9. Refer to the application, page 18, numbered paragraph 37. Duke Kentucky states that it requests authority to create a regulatory asset of \$9.7 million for the undepreciated book value of electro-mechanical meters and the automated metering equipment installed as part of a pilot program. Duke Kentucky also states that the \$9.7 million includes \$9 million in net book value of electric meters in service and \$0.7 million in electric and gas inventory.

a. Provide a breakdown of the undepreciated \$9 million between electro-mechanical meters and the automated metering equipment installed under the pilot.

b. Provide a breakdown of the undepreciated \$0.7 million between electric and gas meters.

10. Refer to the application, Exhibit 3.

a. Pages 1–4 of the Exhibit describe the OpenWay Centron Meter and pages 5–8 describe the OpenWay Centron Cellular LTE meter. Confirm that Duke

Kentucky plans to install the OpenWay Centron Meter for the majority of electric and electric/gas combination customers, but will install an OpenWay Centron Cellular LTE meter for customers located far from the neighborhood area network. If this cannot be confirmed, provide Duke Kentucky's plans with regard to the two types of meters.

- b. Provide the cost of each of the two meters.
- c. Provide the cost to install each of the two meters.

11. Refer to the application, Exhibit 4.

a. Confirm that Duke Kentucky plans to install the module shown on pages 1–4 of the exhibit for combination electric/gas customers and the module shown on pages 5–8 of the exhibit for the natural gas only customers. If this cannot be confirmed, state Duke Kentucky's plans with regard to the modules shown in the exhibit.

b. Pages 3, 6, 7, and 8 of the exhibit refer to the modules as being designed for a 20-year life.

(1) Given this information, explain why it is reasonable for the Commission to approve a useful life of nine years, as requested by Duke Kentucky in this proceeding.

(2) Describe the major reasons for the failure of the modules to function as designed.

c. Refer to page 7 of 8 of the exhibit. State which of the Programming Mode Options Duke Kentucky plans to utilize for the 100G DLS Datalogging module.

- d. Provide the cost of each of the two modules.
- e. Provide the cost to install each of the two modules.

12. Refer to the Direct Testimony of Peggy Laub ("Laub Testimony"), page 4, which discusses Duke Kentucky's request for a 15-year depreciable life for the AMI meters. Provide the manufacturer's estimated useful life of the AMI meter.

13. Refer to the Laub Testimony, page 6, the table at the bottom of the page. Explain the reference to Common Meters on the first line.

14. Refer to the Direct Testimony of Laub Testimony, page 8, which discusses generally the savings expected to be realized with the metering upgrade. Given that Duke Kentucky is proposing to establish a regulatory asset for the undepreciated value of the electric meters removed from service and inventories, explain fully why it would not be appropriate for Duke Kentucky to establish a regulatory liability for the quantifiable savings to be achieved upon deployment of the proposed meters.

15. Refer to the Laub Testimony, page 9.

a. Provide the date for the balances that appear in the journal entry on this page.

b. Provide the current amount of annual depreciation for both electric and gas meters.

16. Refer to the Direct Testimony of Donald L. Schneider, Jr. ("Schneider Testimony"), pages 5–6. Beginning at the bottom of page 5, Mr. Schneider states that the metering upgrade proposed for Duke Kentucky is "similar" to that being deployed in other Duke Energy jurisdictions. Provide the differences in technology and why the same technology would not be used in all jurisdictions.

17. Refer to the Schneider Testimony, pages 6–7, regarding the proposed implementation of AMR technology for Duke Kentucky's gas-only customers due to the

lack of electric AMI infrastructure in place to support communications for a gas AMI solution. Explain whether Duke Kentucky considered and evaluated installing an AMI infrastructure in order to implement an AMI solution for its gas-only customers. If Duke Kentucky evaluated this scenario, explain why it elected not to proceed with this option.

18. Refer to the Schneider testimony, page 8, footnote 2.

a. Are the AMI electric meters being installed by Duke Kentucky capable of providing distribution automation and volt/VAR control?

b. What is required by Duke Kentucky to provide these types of functionalities?

c. Why has Duke Kentucky made the decision to bypass this feature?

19. Refer to the Schneider Testimony, page 9, line 6. Confirm that all of the residential electric AMI meters Duke Kentucky installs will have remote connect/disconnect enabled.

20. Refer to the Schneider Testimony, page 9, lines 7–8 regarding the functionality of an AMI gas meter for combination electric and gas customers. Provide an explanation describing the differences in functionality between the AMR gas meter and the AMI gas meter that Duke Kentucky is proposing to implement in this matter.

21. Refer to the Schneider Testimony, page 10, lines 14–17. Provide the number of meters that Duke Kentucky estimates will need to contain their own cellular modem.

22. Refer to the Schneider Testimony, pages 10–11. Beginning at the bottom of page 10, Mr. Schneider states that the Meter Data Management system processes data from the advanced meters and “[p]rocessing involves validating, editing,

estimating, and packaging data for billing and other uses.” Explain what is meant by “editing” and “estimating” the data.

23. Refer to the Schneider Testimony, page 11, lines 10–11, which state, “Some electric meters will transmit voltage, amperage, phase angle, or other data, as needed.”

- a. Provide the reasons for collecting this data.
- b. How many of the proposed meters will have these capabilities?
- c. State which customers would require these type meters.

24. Refer to the Schneider Testimony, page 13, lines 1–3. State whether Duke Kentucky must “ping” an AMI meter in order to determine if a power outage has occurred, or if Duke Kentucky will automatically receive notification of an outage.

25. Refer to the Schneider Testimony, page 15, lines 8–16. Since Duke Kentucky would no longer need to deploy personnel to perform electric disconnections and reconnections with AMI meters, state whether Duke Kentucky plans to reduce its electric reconnection charge currently set at \$25. If not, explain why the charge should not be reduced for customers for whom reconnection is performed remotely.

26. Refer to the Schneider Testimony, page 20, lines 8–9. List the Duke Energy jurisdictions that use the same technology being proposed in this proceeding.

27. Refer to the Schneider Testimony, page 21, lines 3–5, which state that meter readings will be reported to Duke Kentucky daily. Confirm that customers’ electric meters will be read on an hourly basis, but that the meter reading information will be reported to Duke Kentucky once each day. If this cannot be confirmed, explain

the process. If this can be confirmed, state the time of day that the meter readings will be reported to Duke Kentucky.

28. Refer to the Schneider Testimony, page 22.

a. Refer to lines 2–6. State how far in advance Duke Kentucky will inform customers of the installation of the proposed new meters and the manner and method in which the notifications will be made.

b. Refer to lines 6–8. State how customers will be informed that they can access their usage.

29. Refer to the Schneider Testimony, page 25, lines 8–16.

a. State which numbers on Exhibit DLS-3 make up the approximately \$49 million referred to in lines 8–9.

b. State which numbers on Exhibit DLS-3 make up the approximately \$38 million referred to in lines 9–10.

c. State which numbers on Exhibit DLS-3 make up the approximately \$11 million referred to in lines 10–12.

d. State which numbers on Exhibit DLS-3 make up the approximately \$1.2 million referred to in lines 14–15.

30. Refer to the Schneider Testimony, page 26, lines 9–15, which discuss hard-to-quantify benefits that are not included in Duke Kentucky's cost-benefit analysis. State how the following items (listed on lines 12–14) are benefits of the meters being proposed in this proceeding:

- a. Distributed generation;
- b. Energy storage; and
- c. Electric vehicles.

31. Refer to the Schneider Testimony, page 27, line 20, through page 28, line 4, and Exhibits DLS-3 and DLS-4.

- a. Explain in detail what is meant by the Prius Effect.
- b. Confirm that the customer savings (Prius Effect) is a benefit to the customer and not a cost benefit to Duke Kentucky. If this can be confirmed, explain why the Prius Effect is included in the cost-benefit analysis. If this cannot be confirmed, explain how it results in a cost benefit to Duke Kentucky.

32. Refer to Exhibit DLS-3.

- a. Explain how the amounts in the "Increased Revenue" column were calculated. Provide supporting documentation.
- b. Provide the assumptions used in the calculation of the Prius Effect amounts shown in the last two columns.

33. Refer to Exhibit DLS-4, page 2, rows 1–24. Provide a detailed explanation for each item listed in the "Description" column.

34. Provide Exhibits DLS-3 and DLS-4 in Excel spreadsheet format with the formulas intact and unprotected.

DATED **MAY 23 2016**

cc: Parties of Record



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