

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF DUKE ENERGY)	
KENTUCKY, INC. FOR APPROVAL OF A)	CASE NO.
SPECIAL CONTRACT AND FOR WAIVER OF 807)	2021-00192
KAR 5:041, SECTION 6(2)(C))	

COMMISSION STAFF'S SECOND 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 electronic version of the following information. The information requested is due on January 14, 2022. The Commission directs Duke Kentucky to the Commission's July 22, 2021 Order in Case No. 2020-00085¹ regarding filings with the Commission. Electronic documents shall be in portable document format (PDF), shall be searchable, and shall be appropriately bookmarked.

Each response shall include the question to which the response is made, and shall include the name of the witness responsible for responding to the 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.

¹ Case No. 2020-00085, *Electronic Emergency Docket Related to the Novel Coronavirus COVID-19* (Ky. PSC July 22, 2021), Order (in which the Commission ordered that for case filings made on and after March 16, 2020, filers are NOT required to file the original physical copies of the filings required by 807 KAR 5:001, Section 8).

Duke Kentucky shall make timely amendment to any prior response if Duke Kentucky 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 Duke Kentucky fails or refuses to furnish all or part of the requested information, Duke Kentucky 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, 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 Duke Kentucky's responses to Staff's First Request for Information (Staff's First Request), Items 1c and 2c.
 - a. If Duke Kentucky and Northern Kentucky Water District (NKWD) have known about the voltage drop since 2017, explain why the Commission was not made aware until Duke Kentucky's application on May 6, 2021.
 - b. Explain each basis for Duke Kentucky's belief that each pump start causes a voltage drop in excess of 4 percent on Wilder 46.
 - c. Explain in detail how voltage variations are currently monitored on Wilder 46 on an ongoing basis.

d. Explain how Duke Kentucky monitored voltage variations on Wilder 46 when it determined that the voltage drops were caused by NKWD starting its pumps.

2. Refer to Duke Kentucky's responses to Staff's First Request, Item 2a. Describe all of the alternatives NKWD has evaluated or proposed to Duke Kentucky to alleviate the voltage drops on Wilder 46 caused by the initiation of NKWD's water pumps.

3. Refer to Duke Kentucky's responses to Staff's First Request, Item 2c.

a. Provide current cost estimates of the two substation solutions.

b. Explain why the voltage drops would still occur even if Duke Kentucky or NKWD constructed a new substation, and explain the extent to which, if any, Duke Kentucky would expect a new substation to mitigate the voltage drops.

4. Refer to Duke Kentucky's responses to Staff's First Request, Item 3.

a. State whether Duke Kentucky or NKWD will continue to track voltage variations following an approval of the special contract.

b. If so, explain how Duke Kentucky will track voltage variations.

c. If not, explain why Duke Kentucky will not track voltage variations.

5. Refer to Duke Kentucky's responses to Staff's First Request, Item 4.

a. Explain in detail what "soft start controls" and "voltage compensation" refer to and how they would be implemented.

b. Provide the cost estimates of soft start controls and voltage compensation mitigation.

c. Confirm that either of these two solutions would completely alleviate the voltage drops of more than 4 percent on Wilder 46, and explain in detail if it cannot be confirmed.

6. Provide the highest voltage drop recorded since 2017 on Wilder 46 when NKWD starts its pumps.

7. Provide the typical voltage drop recorded on Wilder 46 when NKWD starts its pumps, and explain how Duke Kentucky determined the typical voltage drop.

8. Provide the standard nominal voltage for Wilder 46.

9. State whether and, if so, how often NKWD's pumps result in variations in voltage that exceed 5 percent of the nominal voltage adopted for Wilder 46 in violation of 807 KAR 5:041, Section 6(2)(a), and explain each basis for Duke Kentucky's response.

10. State whether NKWD's pumps result in total variations of voltage from minimum to maximum that exceed 6 percent of the nominal voltage for Wilder 46 in violation of 807 KAR 5:041, Section 6(2)(a), and explain each basis for Duke Kentucky's response.

11. State whether Duke Kentucky contends that the requirement in 807 KAR 5:041, Section 6(2)(a) that the total variation of voltage from minimum to maximum shall not exceed 6 percent of the nominal voltage applies at all hours of the day or only between 5 p.m. and 11 p.m., and explain each basis for Duke Kentucky's contention.

12. State how often, if ever, Duke Kentucky has recorded voltage on Wilder 46 that exceeds the standard nominal voltage for that circuit by 2 percent or more in each year since 2017.

13. Identify each complaint Duke Kentucky has received since 2017 from any customer served by Wilder 46 other than NKWD regarding voltage variation issues by identifying the type of customer that made the complaint, the date of the complaint, a description of the complaint, and how the complaint was resolved.



Linda C. Bridwell, PE
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Public Service Commission
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DATED DEC 27 2021

cc: Parties of Record

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