COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

DUKE ENERGY KENTUCKY, INC.'S APPLICATION	)	
FOR APPROVAL OF A SPECIAL CONTRACT AND	)	CASE NO.
FOR WAIVER OF 807 KAR 5:041, SECTION 6(2)(c)	)	2025-00054

APPLICATION OF DUKE ENERGY KENTUCKY, INC. FOR APPROVAL TO EXTEND SPECIAL AGREEMENT WITH NORTHERN KENTUCKY WATER DISTRICT AND FOR WAIVER OF 807 KAR 5:041, SECTION 6(2)(c)

Comes now Duke Energy Kentucky, Inc., (Duke Energy Kentucky or the Company) pursuant to 807 KAR 5:011, Section 13, 5:006, Section 28, and 5:041, Section 6(6) and hereby respectfully requests the Kentucky Public Service Commission (Commission) extend the term of the previously-approved special contract between Duke Energy Kentucky and Northern Kentucky Water District (NKWD), originally approved on March 4, 2022 in Case No. 2021-00192 (the Agreement) and to grant a continued waiver from 807 KAR 5:041, Section 6(2)(c) to the extent necessary.

By Order dated March 4, 2022, the Commission approved the Agreement for a three-year term, through March 4, 2025.[1] In its Order, the Commission directed the parties, either jointly or separately, to file a report discussing the possible solutions or combination of solutions investigated and among other things, details including expected costs of the solutions and identifying which solution would be most practical and why.

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[1] *In the Matter of Duke Energy Kentucky, Inc.'s Application for Approval of a Special Contract and for Waiver of 807 KAR 5:041, Section 6(2)(c)*, Case No. 2021-00192, Final Order, p. 13 (Mar. 4, 2022).

Pursuant to that Order,[2] Duke Energy Kentucky and NKWD submitted to the Commission a joint report on March 4, 2024. While this report did identify potential solutions and estimated costs, the parties could not agree on which solution should be pursued. Since then, the companies have been in discussions to find a permanent solution, but to date, have reached an impasse on what is the most reasonable solution to resolve the voltage sag caused by NKWD's operation of its pumping stations. Accordingly, Duke Energy Kentucky respectfully requests an extension of its current agreement, which has proven to minimize the impact of NKWD's operations on Duke Energy Kentucky's customers by allowing NKWD to operate its stations at hours where Duke Energy Kentucky's customers are least likely to experience any power quality impacts, and NKWD is not going to experience an adverse impact to its electric rates. The Company requests that this contract and the associated waivers remain in effect until a permanent solution can be implemented. In support of this Application, Duke Energy Kentucky states as follows:

I. INTRODUCTION

1. Duke Energy Kentucky is a Kentucky corporation, and an investor-owned utility engaged in the business of furnishing natural gas and electric services to various municipalities and unincorporated areas in Boone, Bracken, Campbell, Gallatin, Grant, Kenton, and Pendleton Counties in the Commonwealth of Kentucky.

2. Pursuant to 807 KAR 5:001, Section 14(1), Duke Energy Kentucky states that its business address is 139 East Fourth Street, Cincinnati, Ohio 45202, and that its local office in Kentucky is located at Duke Energy Erlanger Ops Center, 1262 Cox Road,

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[2] *Id.*

Erlanger, Kentucky 41018. The Company further states that its electronic mail address for purposes of this matter is KYfilings@duke-energy.com.

3. Pursuant to 807 KAR 5:001, Section 14(2), Duke Energy Kentucky states that it was originally incorporated in the Commonwealth of Kentucky on March 20, 1901, and attests that it is currently in good standing in said Commonwealth.

II. BACKGROUND

4. By Order dated March 4, 2022, the Kentucky Public Service Commission approved an Agreement between Duke Energy Kentucky, Inc., (Duke Energy Kentucky) and the Northern Kentucky Water District (NKWD) and certain waivers of 807 KAR 5:041, Section 6(2)(a) and (c) for a three year period to allow for the reasonable operation of NKWD's Mary Ingles Pumping Station (Agreement).[3] As was explained during the course of the above-styled proceeding, and acknowledged in the Commission's Order, Duke Energy Kentucky serves the Mary Ingles Pumping Station from its Wilder 46 circuit, which is a 12.47 kV electric distribution circuit, that also provides service to other businesses and residences in the Company's Norther Kentucky service territory.[4] NKWD takes service under the terms and conditions of Duke Energy Kentucky's Time-Of-Day Rate for Service at Distribution Voltage, Rate DT. Rate DT includes summer on-peak demand and energy charges, winter on-peak demand and energy charges and an off-peak demand and energy charges.[5]

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[3] *Id*.

[4] *Id*.

[5] *Id.,* p. 2.; The off-peak hours under Rate DT are 8 p.m. to 11 a.m. in the summer and 9 p.m. to 9 a.m. and 2 p.m. to 5 p.m. in the winter.

5. NKWD primarily operates the pumps at the Mary Ingles Pumping Station during off-peak hours to manage its energy costs so to take advantage of the off-peak pricing and avoid the on-peak pricing. When NKWD's pumps draw a large amount of power during their start-up cycles until reaching normal operating levels, causing a voltage drop on Wilder 46 circuit of typically six to eight percent. The pump station in its current form has been in place since 1997. The pump station pumps raw water from the Ohio River up a substantial elevation to NKWD's Fort Thomas Treatment Plant.

6. To mitigate the effects of these pump starts on the Mary Ingles Pumping Station, Duke Energy Kentucky and NKWD developed the Agreement and submitted it for Commission approval. Among other things, the Agreement set forth agreed upon operating conditions to mitigate these voltage impacts during pump start-up in a way that does not also penalize NKWD from a rate impact perspective under Rate DT. While the Agreement provided a way to mitigate the voltage impacts, it did not eliminate them altogether. As such, the Company also requested and was granted specific waivers to enable the Agreement to go into effect.

7. The Commission granted the requested relief for a three-year period to provide Duke Energy Kentucky and NKWD to investigate potential permanent solutions to the voltage drops.[6] In doing so, the Commission directed the companies to investigate all potential solutions to the voltage drops, including conducting any engineering analysis necessary to determine the effectiveness and cost of motor soft start controls and voltage compensation mitigation.[7] Further, the Commission directed the companies to file a

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[6] *Id.,* p. 12.

[7] *Id.*

report (either jointly or separately) discussing these potential solutions (or combination thereof) that were investigated, and explain whether the solutions are expected to be effective, detailing the expected costs and identify and explain which solution would be the most practical.[8]

8. As required in the Commission's Order and filed on March 4, 2024, the companies worked together to develop the report of potential solutions to resolve voltage drop issue.[9] In doing so, the companies engaged an independent third party, McGill Power S&E Inc., to gather data and create a basis for a final evaluation and mitigation of the voltage issue caused by the water pump operations (McGill Study). The McGill Study considered three solutions to reduce and/or mitigate the voltage drop issue: 1) Alternate Electric Utility Distribution Feeder; 2) Dynamic Reactive Energy Devices; and 3) Variable Frequency Drive (VFD)/Drive Sync Transfer Scheme (DSTS).

9. Following the completion of the McGill Study, NKWD proceeded to further investigate the Variable Frequency Drive (VFD)/Drive Sync Transfer Scheme (DSTS). NKWD retained HDR Engineering to do a further analysis and report on the viability and costs of installing a solution in Mary Ingles Pumping Station and submitted this as part of a Technical Manual Report.

10. Additionally, Duke Energy Kentucky has since further examined the potential for an alternative Electric Utility Distribution Feeder to serve the NKWD pumping station. The Company's analysis shows that moving the NKWD station to its own, new, separate, and isolated feeder would not eliminate the voltage sag on the system

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[8] *Id.,* p. 13.

[9] Case No. 2021-00192, Post Case Correspondence, Confidential Joint Report (March 4, 2024).

when NKWD operates its pumps because of the initial draw of power necessary to start these pumps.

11. The companies continue to disagree about the best course of action to resolve the voltage sag. Issue. Duke Energy Kentucky continues to believe that the most likely solution to resolve the voltage sag issue lies in enhancements to NKWD's equipment, while NKWD maintains that Duke Energy Kentucky should take action to fix the issue.

12. Duke Energy Kentucky has continued to monitor the voltage on the Wilder 46 circuit when NKWD starts its pumps. NKWD has been complying with the pump starting requirements under the Agreement resulting in the timing of the drops to occur during less impactful times of day and the frequency of these drops reducing as intended. While timing voltage drops have shifted to periods less impactful to customers, and the frequency of such system impacts have been reduced under the Agreement, there has been no measurable reduction in the percentage of voltage drop during NKWD's pump start-up process. Such was not the purpose of the Agreement. The pumps continue to cause the voltage on the circuit to fall below the minimum amount set forth under regulations during pump start up.

III. REQUEST FOR EXTENSION

13. Duke Energy Kentucky respectfully requests an extension of its current agreement, which minimizes the impact of NKWD's operations on Duke Energy Kentucky's customers by allowing NKWD to operate its stations at hours where Duke Energy Kentucky's customers are least likely to experience any power quality impacts.

The Company requests that this contract and the associated waivers remain in effect until a permanent solution can be implemented.

14. This Agreement also provides NKWD greater operational flexibility for its pumping stations in a manner that does not adversely impact its costs of electric service. The Agreement is structured such that NKWD agrees to a revised operating schedule in which it may start its pumps between the hours of midnight and 4:00 am (with an exception for emergency conditions) and run the pumps 24 hours per day. This revised operating schedule will see fewer pump starts and fewer pumps running at any given time under normal conditions. Hence, the revised operating schedule results in fewer instances of voltage drop on Wilder 46, and those voltage drops occur during a period of the night less likely to impact other customers on the circuit.

15. The Agreement mitigates the periodic adverse impacts on the Company's distribution circuit when NKWD starts its pumps and allows NKWD to run their pumps on a more continuous basis, manage their electric demand, and reduces the number of pump starts, thereby reducing their operating costs and mitigating the associated periodic voltage drops impacting Duke Energy Kentucky's distribution system. In return, Duke Energy Kentucky agrees to adjust how it charges NKWD for power at the Ohio River Pumping Station 1 by charging NKWD a fixed demand charge of $3.38 per kW and fixed energy charge of $0.038016 per kWh for all power consumed at 3,000 kW and below and will charge NKWD the normal Rate DT charges for all power consumed greater than 3,000 kW. All other riders associated with Rate DT will be charged per their terms. Further, the fixed rates charged for power below 3,000 kW will be commensurately adjusted with any Commission-approved adjustment to Rate DT. This structure makes

Duke Energy Kentucky whole from an electricity sold perspective and does not penalize NKWD for implementing the revised operating schedule.

16. 807 KAR 5:041, Section 6(2)(c), provides in relevant part: "Where utility distribution facilities supplying customers are reasonably adequate and of sufficient capacity to carry actual loads normally imposed, the utility may require that starting and operating characteristics of equipment on customer premises shall not cause an instantaneous voltage drop of more than four (4) percent of standard voltage nor cause objectionable flicker in other customer's lights."

17. Duke Energy Kentucky's electric facilities are adequate and have sufficient capacity to serve and carry the load of NKWD and other customers on the Wilder 46 circuit. Nonetheless, NKWD's pumps, on start-up, do cause an instantaneous voltage sag of more than four percent and has, in the past, caused a flicker in customers' lights who are also on the same circuit as NKWD's pumps. Despite years of discussions, NKWD has, to date, not corrected the voltage drop caused by its plant start up. And given NKWD's status as a water utility serving the same Northern Kentucky territory and the same customers as Duke Energy Kentucky, Duke Energy Kentucky has not taken action to threaten or exercise its right to disconnect service to NKWD until the problem is resolved.

18. Duke Energy Kentucky respectfully submits that the Agreement and accompanying waiver is a reasonable solution to resolve this situation until a permanent solution can be implemented. The potential for voltage variation as a result of NKWD's pump operation is consistent with 807 KAR 5:041, Section 6 (6), as being in a limited area in and where the business done by NKWD, namely providing adequate water service

to the citizens of Northern Kentucky does not justify close voltage administrative regulation. The companies have worked diligently to find ways to minimize the voltage deviations caused by NKWD's pumping stations and impacts to our common customers. The companies recognize that this contract does not eliminate all future voltage impacts on the circuit, particularly in emergency or maintenance situations where NKWD will need to operate additional pumps. Nonetheless, in order to implement this arrangement, and not find itself in a willful violation of the Commission's regulations, the Company requests a waiver, to the extent necessary, for such voltage deviations, in excess of 807 KAR 5:041 during the hours of midnight to 4:00 am and due to the emergency or maintenance operation of NKWD's pumps within the confines of the Agreement. This waiver will allow NKWD to take necessary actions in maintaining their facilities and respond to emergency situations without resulting in Duke Energy Kentucky to suddenly be in violation.

19. During the initial term of the Agreement, NKWD's pumps operated in accordance with the agreement, and the Company received no complaints from customers about experiencing a voltage drop or light flicker. The Company expects the same to be true with an extension of the Agreement.

20. Duke Energy Kentucky continues to support the result of the McGill Power study and takes no position on the results of NKWD's Technical Manual report. Admittedly, the solutions identified and evaluated are not guaranteed to fully mitigate the momentary voltage drop experienced upon pump startup, but Duke Energy Kentucky continues to believe that upgrades to NKWD's pumps present the best and most likely solution to stop the voltage sag. Nonetheless, a permanent solution, in any form, will take

time to design, construct, and implement, including any necessary certificate of public convenience and necessity approvals that may be required. Duke Energy Kentucky remains willing to meet with the Commission to discuss the reports and work on a solution that is reasonable for all stakeholders, including the customers of both Duke Energy Kentucky and NKWD.

21. To address the ambiguity and uncertainty of a permanent solution, the companies request that Commission extend the term of the special agreement for at least three years, or to until a permanent solution is implemented and to grant a continued waiver of 807 KAR 5:041, Section 6(2)(c).

22. Exhibit 1 to this Application is a copy of the existing, executed, special agreement. Upon approval of its extension by the Commission, the companies propose to execute an addendum that modifies paragraph 6 as follows:

> **Term:** The term of this Agreement shall be extended and commence on March 1, 2025, and shall continue for a term of three (3) years, unless terminated earlier by the Parties in accordance with the terms of this Agreement. Upon expiration of this term, unless extended by written agreement of the Parties, the Agreement shall continue on a month-to-month basis until terminated by either Party by providing not less than thirty (30) days written notice.

23. Exhibit 2 to this Application includes screen shots of voltage monitoring showing the voltage sag when the NKWD pump starts, ramps up, and begins running.

IV. CONCLUSION

WHEREFORE, Duke Energy Kentucky respectfully requests that the Commission grant its request to extend the current special agreement through March 1, 2028.

Respectfully submitted,

/s/Rocco D'Ascenzo

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CERTIFICATE OF SERVICE

This is to certify that the foregoing electronic filing is a true and accurate copy of the document being filed in paper medium; that the electronic filing was transmitted to the Commission on March 4th, 2025; and there are currently no parties that the Commission has excused from participation by electronic means in this proceeding.

/s/Rocco D'Ascenzo
Counsel for Duke Energy Kentucky, Inc.

RATES AND SCHEDULING AGREEMENT

This RATES AND SCHEDULING AGREEMENT (hereinafter referred to as "**Agreement**") is entered into as of the 19th day of March, 2024 (the "**Effective Date**"), by and between Duke Energy Kentucky, Inc. a Kentucky corporation ("**Duke Energy**") and Northern Kentucky Water District, a public water district established pursuant to KRS Chapter 74 (the "**NKWD**"). Duke Energy and the NKWD may be hereinafter referred to individually as a "**Party**" and collectively as the "**Parties**."

RECITALS

A. NKWD operates the Ohio River Pumping Station 1 (ORPS 1), also known as the Mary Ingalls Pumping Station, located on Mary Ingalls Highway, Ft. Thomas Kentucky (the "**Pumping Station**") where a total of six 1,250 HP pumps are installed, all 6 of which are currently in service, at the Pumping Station (collectively, the "**Pumps**").

B. The current practice of NKWD is to operate the Pumps during off-peak hours to take advantage of Duke Energy's time of use distribution rate, Rate DT ("**Normal Operating Schedule**").

C. The current operating practice of NKWD results in the Pumps being cycled on and off at least once per day, which due to the frequent on-off cycling, reduces the life of the pumps. In addition, when the Pumps are turned on there is a significant drop in voltage on Duke Energy's circuit serving the Pumping Station which has resulted in complaints from other Duke Energy customers on the circuit.

D. Based on the foregoing, Duke Energy and NKWD desire to enter into this Agreement to implement a special contract rate and scheduling arrangement for the operation of the Pumps, which the Parties intend to be cost and revenue neutral to both Parties and which will allow NKWD to run their Pumps on a more continuous basis and reduce the number of pump starts and associated voltage drops, all in accordance with the terms of this Agreement ("**Stated Purpose**").

NOW, THEREFORE, in consideration of the recitals, the mutual promises in the Agreement and other good and valuable consideration, the receipt and sufficiency of which the Parties acknowledge, the Parties agree as follows:

1. Special Contract Rate. A special contract rate as detailed in Exhibit A attached hereto (the "**Contract Rate**") shall be applicable to the Pumping Station subject to the terms and conditions of this Agreement. The rate design assumes a monthly average of 2,566 kW. The maximum peak demand for the special contract rate will be 3,000 kW (the "**Demand Limit**") which is based on the estimated energy usage over 15 minutes of 3 Pumps operating at any one time. All electricity used at the Pumping Station in excess of the Demand Limit shall be considered excess demand ("**Excess Demand**") and shall not qualify for the Contract Rate. All Excess Demand used in any billing period shall be billed at Duke Energy's then current Rate DT. The Contract Rate shall be applicable only to the Pumping Station as defined in Recital A of this Agreement and shall in no way limit or affect any other service provided or

offered by Duke Energy to NKWD or any other customer whatsoever. During the Term of this Agreement, each time a change in Duke Energy's base rates is approved by the Kentucky Public Service Commission (the "**Commission**"), the Contract Rate shall be adjusted by Duke Energy accordingly. If NKWD does not agree with the adjusted rate and the Parties are unable to resolve their differences with respect to the adjusted rate, then either Party may terminate this Agreement by providing 30 days written notice to the other Party.

2. New Operating Schedule. NKWD anticipates that, under normal operating conditions, the Pumping Station will run two Pumps at a time, however, additional Pumps may need to be operated in the event of an Emergency Condition (as defined below) and in addition, the remaining unused Pumps will need to be cycled periodically as part of their routine maintenance. Therefore, subject to Section 3 below, under normal operating conditions, NKWD hereby agrees to comply with the following operating schedule (the "**New Operating Schedule**"):

    a. no more than 2 Pumps shall be started per day,
    b. no more than 50 Pump starts shall occur in any calendar month,
    c. all Pump starts shall take place between 12:00 am and 4:00 am.

3. Emergency Conditions. The Parties hereby acknowledge and agree that under Emergency Conditions, the above stated Operating Schedule may need to be temporarily suspended. As used herein the term "**Emergency Condition**" shall mean a condition or an activity affecting or relating to the Pumping Station that, in the commercially reasonable opinion of NKWD, requires immediate attention to: (i) mitigate or prevent imminent damage or injury to the health or safety of any person; (ii) restore necessary lost utility service; (iii) prevent the imminent loss of utility service; or (iv) protect persons, property, or the environment from imminent and substantial harm. In the event of an Emergency Condition NKWD shall promptly notify Duke Energy and shall provide reasonably available details of the event causing the Emergency Condition as soon as reasonably practicable after becoming aware of the occurrence of the event, but in no event later than 5 business days after the initial occurrence of the Emergency Condition. For so long as the Emergency Condition is continuing, the Operating Schedule may be temporarily suspended to the extent and for the duration made necessary by the Emergency Condition only. NKWD shall act in a commercially reasonable manner to remedy the Emergency Condition as soon as practicable and shall keep Duke Energy advised as to the continuance of the Emergency Condition. Notwithstanding the foregoing, during the suspension of the Operating Schedule all other provisions of this Agreement shall remain in full force and effect, including without limitation the provisions of paragraph 1, Special Contract Rate.

4. Disclosure of Pump Operation Data. If requested by Duke Energy, NKWD shall promptly provide the actual Pump operating data for the Pumping Station, as may be reasonably necessary for Duke Energy to determine NKWD's compliance with this Agreement.

5. Termination Due to Suspension of Operating Schedule. If the Operating Schedule has been suspended for any reason for an aggregate of thirty (30) days or more in any year during the Term, Duke Energy shall have the right in its sole discretion to terminate this Agreement by

providing NKWD not less than thirty (30) days written notice.

6. Term. The initial term of this Agreement shall commence on the Effective Date and shall continue for a term of five (5) years unless earlier terminated in accordance with the terms of this Agreement. Upon expiration of the initial term, this Agreement shall continue on a month to month basis until terminated by either Party by providing not less than thirty (30) days written notice to the other Party. The Initial term and any renewal term may be referred to individually or collectively as the "**Term**."

7. Evaluation Period. Approximately 180 days after the Effective Date, the Parties shall meet in good faith to assess the impact of this Agreement on either or both Parties. If, based on the above assessment, it is reasonably determined by either Party that the Agreement has failed to achieve the Stated Purpose the Parties will attempt to negotiate one or more modifications to the Agreement to achieve the Stated Purpose. If the Parties cannot agree on the modifications within sixty (60) days (or such additional time that the Parties may mutually agree), then either Party may terminate the Agreement by providing not less than sixty (60) days written notice to the other Party.

8. Commission Approval. NKWD hereby acknowledges that Duke Energy must file the Agreement (and any necessary additional documentation or information that may be required by the Commission from time to time) with the Commission and shall have received approval from the Commission ("Commission Approval") prior to the Agreement becoming effective. After execution of this Agreement by both parties Duke Energy will submit the Agreement for filing with the Commission for consideration and approval. Duke Energy shall have sole discretion over all aspects of such submittal, including without limitation, the form and substance of the submittal, confidentiality, procedure, responding to any data requests, and providing any information to the Commission. If the Commission issues an order or any other directive to modify or condition any aspect of this Agreement as a condition to the Commission's approval that negatively impacts either Party as determined in such Party's reasonable discretion, then this Agreement may be terminated by the negatively affected Party by providing not less than 10 business day's written notice to the other Party, and upon any such termination neither Party shall have any obligation, duty, or liability to the other Party under this Agreement.

9. Grant of Waiver. After the execution of this Agreement by both Parties, Duke Energy shall request that the Commission grant a waiver to Duke Energy from 807 KAR 5:041 Section 6 and any other laws, rules or regulations that pertain to the voltage drop on Duke Energy's circuit serving the Pumping Station caused by operation of the Pumps (the "**Waiver**"). NKWD shall support this request. Duke Energy may, in its sole discretion, immediately terminate this Agreement by providing written notice to NKWD under either of the following conditions: (i) if the Commission denies the Waiver request; or (ii) if within one year after the initial filing date of any action with the Commission to approve this Agreement, the Commission fails to grant the Waiver to the satisfaction of Duke Energy as determined in its sole discretion. Upon any such termination under this Section 9, neither Party shall have any further obligation, duty, or liability to the other Party under this Agreement except for those obligations which expressly survive termination hereof.

10. No Liability by Duke Energy. In no event shall Duke Energy be liable for any interruption or damages attributed to NKWD's failure to conform to the requirements of the terms of this Agreement.

11. Non-Compliance and Early Termination. Non-Compliance and Early Termination. In the event either Party (the "Claiming Party") reasonably determines that the other Party (the "Responding Party") is not in compliance with the terms of this Agreement, the Claiming Party will provide the Responding Party with written notice of such non-compliance (the "**Notice of Non-Compliance**"). Within thirty (30) days after its receipt of the Notice of Non-Compliance, the Responding Party will respond to the Claiming Party's assertions of non-compliance. If the Responding Party fails to cure the non-compliance or if the Parties are unable to resolve their differences with respect to the matters addressed in the Notice of Non-Compliance within sixty (60) days after the date of the Notice of Non-Compliance, or such other timeframe agreed upon by both Parties, then either Party may terminate this Agreement by providing not less than ten (10) business days written notice to the other Party.

12. Effect of Expiration or Early Termination. Upon the expiration or early termination of the Agreement, NKWD shall return to Duke Energy's then current Rate DT in effect at the time of the termination or expiration. Upon termination of this Agreement for any reason, the Parties will promptly schedule a joint meeting to discuss potential remedies and allocation of associated costs and next steps, which may include requesting a meeting within 30 days of termination to jointly approach the Commission to discuss responsibility for implementing such solution(s) and allocation of the associated costs. This Section 12 shall survive termination of this Agreement.

13. No Guaranty. The parties hereby acknowledged and agree that NKWD is solely responsible for the operation of its business including the scheduling and operation of the Pumps and the Pumping Station. Duke Energy makes no representations or warranties under this Agreement whatsoever, including any guaranty of uninterrupted service, or that the arrangements agreed to under this Agreement will result in any efficiencies or extended life of the Pumps.

14. Disclaimer of Warranties. DUKE ENERGY MAKES NO WARRANTIES OR GUARANTEES UNDER THIS AGREEMENT OF ANY KIND WHATSOEVER, WHETHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND ALL SUCH EXPRESS OR IMPLIED WARRANTIES ARE HEREBY WAIVED.

15. No Consequential Damages. In no event shall either Party or their subcontractors or agents be liable under this Agreement, in contract, tort (including negligence), warranty, strict liability or any other legal theory to the other Party for any loss of anticipated profits, or any special, incidental, punitive, exemplary or consequential damages. Notwithstanding the foregoing, nothing precludes either Party from seeking remedies or filing claims with the Commission.

16. Notices. All notices permitted or required under the Agreement shall be deemed given if hand delivered, sent by certified mail, return receipt requested, sent by Federal Express or another

recognized overnight delivery service, or sent by email and confirmed (by physical delivery) to the addresses listed below or the subsequent addresses of which the Parties give each other notice:

To Duke Energy:	Duke Energy Kentucky, Inc. Attn: VP Zone Operations Chris Lange 1262 Cox Avenue Erlanger, KY 41018 Email: Chris.Lange@duke-energy.com
To NKWD:	Northern Kentucky Water District Attn: VP of Engineering, Production & Distribution 2835 Crescent Springs Rd., PO Box 18640 Erlanger, KY 41018 Email: akramer@nkywater.org

17. Assignment. NKWD may not assign, or otherwise transfer this Agreement or any of its rights under this Agreement to any third party, other than an affiliate of NKWD that has agreed to assume the obligations hereunder, without the prior written consent of Duke Energy which consent shall not be unreasonably withheld.

18. Service Regulations. Except as modified by this Agreement, retail electric service for the Pumping Station shall be subject to: (a) Duke Energy's Service Regulations contained in Duke Energy's Retail Electric Tariff, including all applicable tariffs, rates and rules as may be revised from time to time with the approval of the Commission; (b) all rules and regulations of the Commission, as such rules and regulations may be revised from time to time by the Commission; and (c) all other applicable local, state, and federal codes and laws, as the same may be in effect from time to time.

19. Governing Law; Venue. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Kentucky without regard to its conflicts of laws principles to the extent such principles would require or permit the application of the laws of another jurisdiction. The Parties agree that any suit, action or other legal proceeding by or against any Party with respect to or arising out of this Agreement shall be brought in the federal or state court of competent jurisdiction located in the Commonwealth of Kentucky.

20. No Joint Venture. Nothing in this Agreement is intended to create an association, partnership, joint venture or other joint enterprise between the Parties and/or any other person.

21. Entire Agreement. The Agreement contains the entire agreement of the Parties relating to the subject matter hereof and supersedes all prior and contemporaneous agreements, understandings, usages of trade and courses of dealing, whether written or oral.

IN WITNESS WHEREOF, the Parties have caused the Agreement to be executed by their duly authorized representatives as of the date first above written.

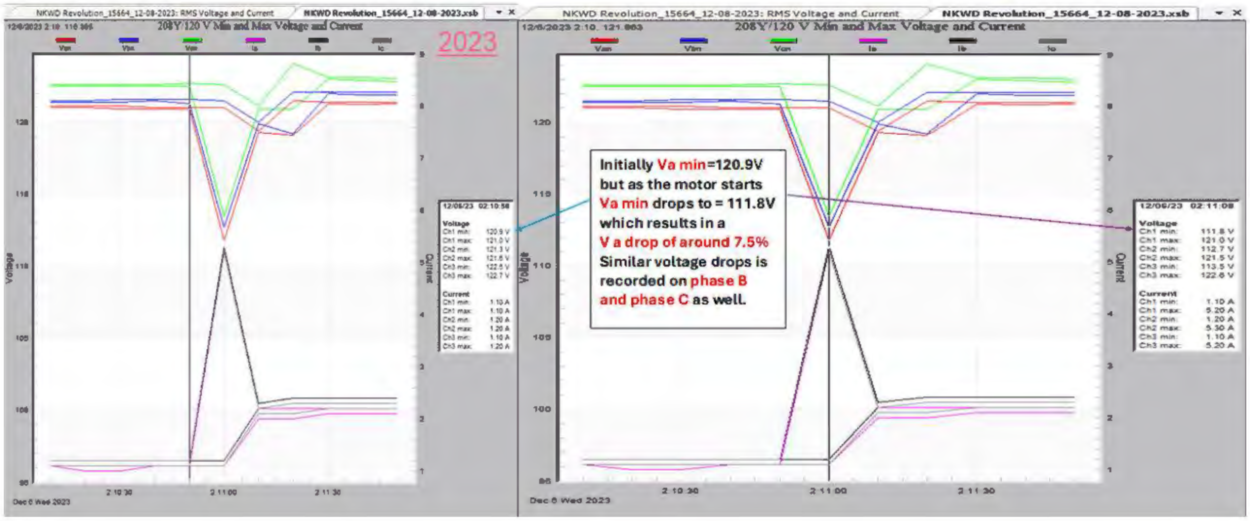
DUKE ENERGY KENTUCKY, INC.	NORTHERN KENTUCKY WATER DISTRICT
By:	By: Amy Kramer
Name: Chris Lange	Name: Amy Kramer
Title: Vice President Zone Operations	Title: V.P. Engineering, Production & Distribution
Date: 3/12/21	Date: 3/19/21

Exhibit A
Contract Rate

The Contract Rate shall be as follows: Customer Charge: $138 per month; Demand Charge (maximum monthly kW): $3.38 per kW; and Energy Charge (all kWh): $0.038016 per kWh; and, as such quantities are measured and calculated in accordance with the Schedule of Rates, Classifications, Rules and Regulations for Electric Service of Duke Energy Kentucky, Inc. as approved by the Commission and as may be amended from time to time.

The Contract Rates specified above shall replace the Demand Charge and the Energy Charge provided in Rate DT, Time-of-Day Rate for Service at Distribution Voltage (Rate DT). All other provisions of Rate DT, including all riders thereto, shall continue to apply.

Notwithstanding anything to the contrary herein the Contract Rate shall not apply to Excess Demand.


208Y/120 V Min and Max Voltage and Current
2023
208Y/120 V Min and Max Voltage and Current
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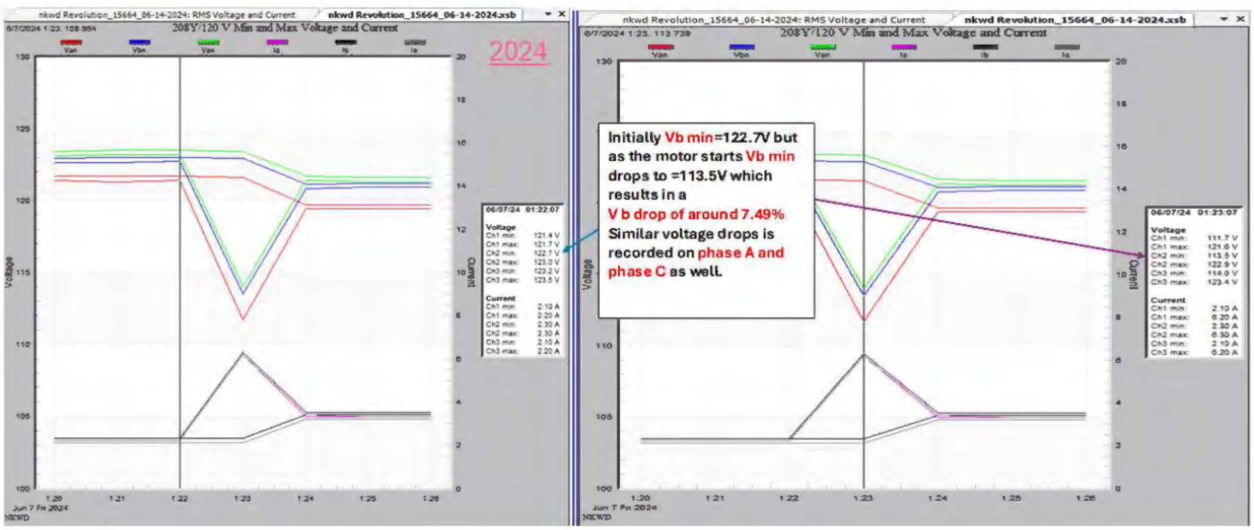
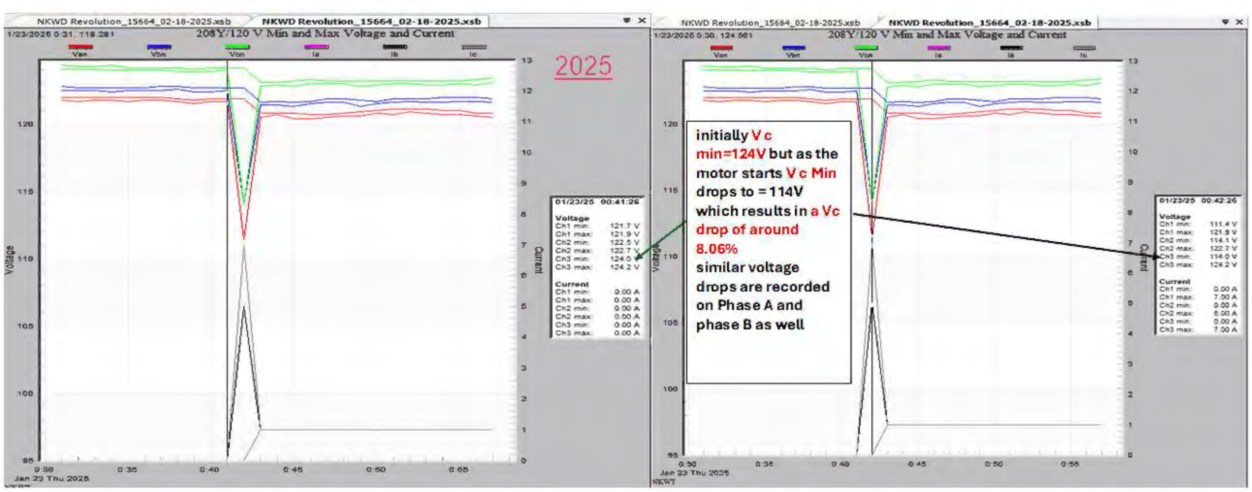

208Y/120 V Min and Max Voltage and Current
2024
208Y/120 V Min and Max Voltage and Current
Initially Vb min=122.7V but as the motor starts Vb min drops to =113.5V which results in a V b drop of around 7.49% Similar voltage drops is recorded on phase A and phase C as well.


208Y/120 V Min and Max Voltage and Current
2025
208Y/120 V Min and Max Voltage and Current
initially V c min=124V but as the motor starts V c Min drops to = 114V which results in a Vc drop of around 8.06% similar voltage drops are recorded on Phase A and phase B as well