

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF DUKE ENERGY)	
KENTUCKY, INC. TO AMEND ITS)	Case No. 2023-00269
DEMAND SIDE MANAGEMENT)	
PROGRAMS)	

**APPLICATION OF DUKE ENERGY KENTUCKY, INC. TO AMEND ITS
DEMAND SIDE MANAGEMENT PROGRAMS**

Comes now Duke Energy Kentucky, Inc. (Duke Energy Kentucky or the Company), pursuant to KRS 278.285, and other applicable law, and does hereby request the Commission to approve an amendment of the Demand Side Management (DSM) programs as Ordered by this Commission.¹ In support of its Application, Duke Energy Kentucky respectfully states as follows:

Introduction

1. Pursuant to 807 KAR 5:001, Section 14(2), Duke Energy Kentucky is a Kentucky corporation that was originally incorporated on March 20, 1901, is in good standing and, as a public utility as that term is defined in KRS 278.010(3), is subject to the Commission’s jurisdiction. The Company attests that it is currently in good standing and is subject to the Commission’s jurisdiction. A certified copy of Duke Energy Kentucky’s certificate of good standing from the Kentucky Secretary of State and a certificate for the following assumed name: “Duke Energy” is on file with the Kentucky Secretary of State

¹ *In the Matter of the Application of Duke Energy Kentucky, Inc. for the Annual Cost Recovery Filing for Demand Side Management*, Case No. 2012-00495, Order (April 11, 2013) (Order).

and on file with the Commission in Case No. 2022-00372.² In addition, the Company has attached as Exhibit 1 a certified Certificate of Existence dated August 15, 2023. Duke Energy Kentucky is 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. A copy of its articles of incorporation is on file with the Commission in Case No. 2013-00097.

2. Duke Energy Kentucky's business address is 139 East Fourth Street, Cincinnati, Ohio 45202. The Company's local office in Kentucky is Duke Energy Erlanger Ops Center, 1262 Cox Road, Erlanger, Kentucky 41018. Duke Energy Kentucky's email address is: KYfilings@duke-energy.com.

3. On November 15, 2012, Duke Energy Kentucky filed an application for the cost recovery of demand side management programs. The Company's application was docketed as Case No. 2012-00495. On April 11, 2013, this Commission approved that Application and Ordered Duke Energy Kentucky to file an application requesting program expansion(s) and to include: (1) an Appendix A, setting forth the Cost Effectiveness Test Results of all DSM programs with budget changes, (2) an Appendix B, setting forth the recovery of program costs, lost revenues, and shared savings that are used in determining the true-up of proposed DSM factors; and (3) a signed and dated proposed Rider DSMR, Demand Side Management rate, for both electric and natural gas customers, Appendix C, by August 15, annually.³

² *In the Matter of the Electronic Application of Duke Energy Kentucky, Inc. (1) An Adjustment of Electric Rates; (2) Approval of New Tariffs; (3) Approval of Accounting Practices to Establish Regulatory Assets and Liabilities; and (4) All Other Required Approvals and Relief*, Case No. 2022-00372, Application (December 1, 2022).

³ See Order, para. 4.

Current DSM Programs

4. Duke Energy Kentucky has a long history of successful DSM implementation and has been a leader in the industry with respect to energy efficiency (EE) and peak demand reduction (DR) programs, having offered such programs since the mid-90's. Its existing portfolio of DSM programs was approved by the Commission in Case No. 2022-00398,⁴ by Order dated March 7, 2023. This current portfolio of programs are as follows:

- Program 1: Low Income Services Program
- Program 2: Residential Energy Assessments Program
- Program 3: Residential Smart \$aver[®] Efficient Residences Program
- Program 4: Residential Smart \$aver[®] Energy Efficient Products Program
- Program 5: Smart \$aver[®] Prescriptive Program
- Program 6: Smart \$aver[®] Custom Program
- Program 7: Power Manager[®] Program
- Program 8: PowerShare[®]
- Program 9: Low Income Neighborhood
- Program 10: My Home Energy Report
- Program 11: Non-Residential Small Business Energy Saver Program
- Program 12: Non-Residential Pay for Performance⁵
- Program 13: Peak Time Rebate Pilot Program⁶

⁴ *In the Matter of the Electronic Application of Annual Cost Recovery Filing for Demand Side Management by Duke Energy Kentucky, Inc.* Case No. 2022-00398.

⁵ Marketed as Smart \$aver[®] Performance.

⁶ Approved in Case No. 2019-00277.

5. Consistent with the Commission's previous Orders, the Company is proposing programmatic changes in this year's annual amendment filing, and budgetary management proposals to target funding more effectively between programs based upon customer interest mid-stream, which will then be reflected in the financial true-ups and forecasts to be included in the annual cost recovery filing for demand side management:

- This Application proposes to expand the scope and adjust program budgets to respond to market conditions and enhance the robustness of the following:

- Residential Energy Assessments
- My Home Energy Report
- Low Income Neighborhood
- Low Income Services
- Power Manager[®]
- Non-Residential Smart Saver[®]
- Peak Time Rebate

6. Additionally, the Company proposes minor changes to certain program names, as detailed below.

7. The Residential Collaborative⁷ and the Commercial and Industrial Collaborative⁸ have received the Company's proposed changes and had the opportunity to provide comments.

⁷ The Residential Collaborative members receiving the information: John Horne and Lawrence Cook (Office of the Kentucky Attorney General), Jock Pitts (People Working Cooperatively), Catrena Bowman-Thomas (Northern Kentucky Community Action Commission), Laura Pleiman (Boone County), Peter Nienaber (Northern Kentucky Legal Aid), Kenya Stump (Kentucky Energy and Environment Cabinet), and Tim Duff and Trisha Haemmerle (Duke Energy).

⁸ The Commercial & Industrial Collaborative members receiving the information: John Horne and Lawrence

Amendments to Existing Programs

8. Duke Energy Kentucky is seeking approval to expand the scope of the Residential Energy Assessments Program (Home Energy House Call).

The primary goal for Home Energy House Call (HEHC) is to empower customers to better manage their energy usage and cost. Duke Energy Kentucky partners with Franklin Energy to administer the program which an energy specialist completes a 60 to 90-minute walk through assessment of the home and analyzes energy usage to identify energy savings opportunities. The Building Performance Institute (BPI) building certified energy specialist discusses behavioral and equipment modifications that can save energy and money with the customer. The program targets Duke Energy Kentucky residential customers that own a single-family residence that has electric water heater and/or electric heat, or central air. The energy specialist analyzes energy usage, checks air infiltration, examines insulation levels, checks appliances, and inspects the heating/cooling system(s). The report focuses on the building envelope improvements as well as low-cost and no-cost improvements to save energy. At the time of the home audit, the customer receives a free efficiency kit containing a variety of energy saving measures, low flow shower head, low flow kitchen and bath faucet aerators, and weather stripping. The auditors will install these measures, if approved by the customer, so the customer can begin saving immediately, and to help insure proper installation and use. Example recommendations might include the following:

- Turning off vampire load equipment when not in use.

Cook (Office of the Kentucky Attorney General), Jock Pitts (People Working Cooperatively), Kenya Stump (Kentucky Energy and Environment Cabinet), Christine Baker (Kenton County Schools), and Tim Duff and Trisha Haemmerle (Duke Energy).

- Turning off lights when not in the room.
- Using energy efficient lighting in light fixtures.
- Using a programmable/smart thermostat to better manage heating and cooling usage.
- Replacing older equipment with more energy efficient equipment; and
- Adding insulation and sealing the home.

The program primarily targets participants through online channels, electronic mail, and direct mail to acquire the participation for this program.

The program was also approved to begin offering additional measures for a discounted cost to the customer that included a blower door test, handheld low-flow showerheads, smart thermostats, specialty globes and candelabras, and recessed LED bulbs. Beginning July 1st, 2023, all LED lighting will no longer be available with a Duke Energy Kentucky incentive, however, customers may purchase LED lighting during the audit to continue to upgrade the lighting in their home.

Duke Energy Kentucky is seeking approval to expand the scope of the Residential Energy Assessment Program as follows:

Duke Energy Kentucky is requesting to expand the offer to allow single family renters, condo/townhomes/manufactured homeowners, and renters the ability to choose a virtual, phone or web-based audit for their home. These customers must have electric service provided by Duke Energy Kentucky to participate in the program.

The additional types of energy assessment include:

1. Web-based – Customers complete an online questionnaire to evaluate their homes efficiency.
2. Phone Assisted – Customers collaborate with the vendor customer support specialist and complete an energy evaluation during a schedule phone appointment
3. Virtual – Customers collaborate with the vendor energy advisor, who performs computer assisted, onsite home evaluation.

The new virtual, phone and web-based audits will allow customers to learn more about energy savings options and recommendations for their home and receive a free energy efficiency kit based on the path (channel) they choose. The kits will ship to the home after the audits are complete.

Virtual and phone audits kits will consist of water saving measures including a low-flow showerhead, kitchen and bath aerators, weather stripping, Pipewrap, and a furnace filter whistle. The web-based audit kit will consist of faucet bathroom aerators, weather stripping, Pipewrap, refrigerator thermometer and furnace filter whistle.

Customers will receive a detailed assessment report, based on visual and questionnaire responses, providing extra saving recommendations for how they can opt to take advantage of other products and services to improve their homes efficiency. Eligible customers may choose the path or channel that best fits their schedule and desire to learn more about their home's efficiency.

The Company is requesting an increase to the current approved budget to service the additional eligible customers. This increase and the adjusted cost effectiveness scores are included in Appendix A and Appendix B, respectively. An updated program tariff is

included as Appendix D.

9. Duke Energy Kentucky is seeking approval to change the eligibility for participation in the current My Home Energy Report and a slight program name change – Duke Energy Home Energy Report.

Currently, the Home Energy Report program is exclusively available in Kentucky for single-family residents who “opt in,” *i.e.*, affirmatively elect to participate. The program provides personalized tips and compares customers with other properties using similar property characteristics such as square footage, year-built, heat-type, construction, presence of pool, and relative geographic location. New summer and winter seasonal experiences are sent to the top ~15% of energy users in the winter and summer to provide insights and recommendations when the weather is most harsh.

The Duke Energy Home Energy Report (HER) program is proposing to return to an “opt-out” program design for customers in Kentucky to (1) deliver usage insights and personalized tips to a larger audience, (2) increase program cost effectiveness, (3) maximize behavioral energy savings, and (4) reduce customer acquisition costs and leverage messaging to help participants save through other approved customer offerings, such as, the Peak Time Rebate pilot. Prior to 2018, the HER program was an opt-out program, with 144 of approximately 56,000 customers opting out and with energy reports sent to participating customers monthly (2018 Order).⁹ In 2018, in order to “significantly reduce the budget,” the Commission ordered Duke Energy Kentucky to make two

⁹ See *In the Matter of Electronic Annual Cost Recovery Filing for Demand Side Management by Duke Energy Kentucky, Inc.*, Case No. 2017-00427, Order, p. 17 (September 13, 2018).

modifications to the HER program: (1) make it “an opt-in elective” and (2) send the report only twice per year.¹⁰

Duke Energy Kentucky respectfully proposes that the Commission approve the following modifications to the HER program: (1) return to opt-out structure; (2) provide eight reports per year instead of two; and (3) make the program available to multifamily residents.

At the time of the 2018 Order, the projected budget for a full fiscal year¹¹ of opt-out HER programming was \$993,478, which would be \$1,183,677 in 2023 dollars.¹² Currently, for comparison purposes, the Company projects approximately \$1,284,000¹³ for a full year of opt-out HER programming with eight reports per year and reaching approximately 70,000 customers.

Since the 2018 Order¹⁴, the Company has brought management of this program in-house, which improves cost management. Furthermore, improvements to the Company’s billing system make the report more efficient to produce. Finally, returning the program to an opt-out structure will eliminate marketing costs currently being expended. Although the above projection for a full year of budget is comparable to 2018 spend levels, the program will be reaching approximately an additional 14,000 or 25% more customers, which should meaningfully increase total program impact.

¹⁰ *Id.*

¹¹ Includes program costs, lost revenues and shared savings.

¹² According to the CPI Inflation Calculator at bls.gov/data/inflation-calculator (converting July 2019 dollars to July 2023).

¹³ This total includes a 12 month program and lost revenues not included in Appendix B of this proceeding, which is only a six-month review and does not include lost revenues due to the Company’s pending base rate case and lost revenues for the forecast timeframe (July 1, 2023 – June 30, 2024) therefore being set to zero.

¹⁴ See Case No. 2017-00427.

It is more worthwhile to expend funds on serving program participants than on merely marketing programs to potential participants who may or may not join. Opt-in programs require significant expenditures towards marketing campaigns to raise customer awareness and advertise the offering. In the event that the Home Energy Report program returns to an “opt-out” participant accrual approach, the program cost per participant should reduce from the current budget of about \$8.50/participant to about \$5.00/per participant on an annual basis. This adjustment would also result in more Home Energy Reports being delivered to customers each calendar year. The program design would include up to 8 paper reports per year instead of two. Customers with email addresses on file would still receive an email report every month.

Together, expanding the program to more customers and sending reports more often will maximize the energy savings impacts associated with the program and generally enable customers to become more energy efficient.

The Company is requesting an increase to the current approved budget to service the additional eligible customers. This increase and the adjusted cost effectiveness scores are included in Appendix A and Appendix B, respectively. An updated program tariff is included as Appendix E.

10. Duke Energy Kentucky is requesting an increase to the current approved budget for the Low Income Neighborhood program, as well as, a slight program name change to Income Qualified Neighborhood Energy Saver Program.

Inflationary pressures affecting administrative fees and increases in measure costs affecting customer incentive amounts incurred since 2020 are the primary drivers of the request for additional funds. This increase and the adjusted cost effectiveness scores are

included in Appendix A and Appendix B, respectively. An updated program tariff is included as Appendix F.

11. Duke Energy Kentucky is requesting an increase to the current approved budget for the Low Income Services program, as well as a slight program name change to Income Qualified Services Program.

Inflationary pressures affecting administrative fees and increases in measure costs affecting customer incentive amounts incurred since 2020 are the primary drivers of the request for additional funds. This increase and the adjusted cost effectiveness scores are included in Appendix A and Appendix B, respectively. An updated program tariff, reflecting increased per-household allowance limits for weatherization measures, is included as Appendix G.

12. The purpose of the Power Manager[®] program is to reduce demand by controlling residential air conditioning usage during periods of peak demand, high wholesale price conditions and/or generation emergency conditions during the summer months. It is available to residential customers with central air conditioning. Duke Energy Kentucky attaches a load control device to the outdoor unit of a customer's air conditioner. This enables Duke Energy Kentucky to cycle the customer's air conditioner off and on under appropriate conditions.

Customers selecting the option that moderately cycles their air conditioner, receive a \$25 credit at installation. Customers selecting the longer cycling option, receive a \$35 credit at installation.

Customers also receive annual credits during the months of May - September depending on the program they signed-up for. Customers that signed-up for the moderate

control option receive an annual event credit of \$2.40 per month for each year they are on the program and customers that signed-up for the longer control option receive an annual event credit of \$3.60 per month for each year they are on the program.

Duke Energy Kentucky continues to use load control devices manufactured by Eaton's Cooper Power Systems for new installations and replacement of existing load control devices. The load control devices have built-in safeguards to prevent the "short cycling" of the air-conditioning system. The air-conditioning system will always run the minimum amount of time required by the manufacturer. The cycling simply causes the air-conditioning system to run less, which is no different than what it does on milder days. Additionally, the indoor fan will continue to run and circulate air during the cycling event.

Duke Energy Kentucky would like to enhance the program by introducing Bring Your Own Thermostat (BYOT). BYOT is a residential Demand Response (DR) program leveraging customers "Smart" two-way communicating thermostats instead of traditional load control switches that are installed by the utility. It is intended for customers who have already purchased, installed, and registered a smart thermostat in their home, allowing the utility to avoid the hardware and installation costs associated with traditional direct load control programs. The utility can verify how many thermostats are operable and online at any given time, and determine which thermostats are participating in DR events as opposed to opting-out. Duke Energy Kentucky has partnered with a third-party vendor who has contracts with multiple thermostat manufacturers to offer demand response through aggregation of the different thermostat models. After successfully enrolling, participants will receive a one-time \$75 incentive. In addition, participants will receive a \$25 incentive

each year following the anniversary of their enrollment in the program. Rewards are limited to one per service address.

BYOT will be marketed to customers through participating device manufacturers who offer utility branded marketing and enrollment services. One of the significant advantages of Smart Thermostats is two-way communication. Agreements with the aggregation vendor and their thermostat partners allow them to send marketing messages to device owners inviting them to participate in their utility's DR program. Marketing communication may include, but is not limited to, messages within the manufacturers smart phone application, co-branded email, and text messages. Interested customers are then directed to enroll electronically through the various marketing channels. In addition to the thermostat manufacturer communication, the company may use a number of other channels, such as the utility website and social media.

The Company is requesting an increase to the current approved budget to service the additional eligible customers. This increase and the adjusted cost effectiveness scores are included in Appendix A and Appendix B, respectively. An updated program tariff is included as Appendix H.

13. The Smart \$aver[®] Non-residential Incentive Program provides incentives to commercial and industrial consumers for installation of high efficiency equipment in applications involving new construction, retrofit, and replacement of failed equipment. The program also uses incentives to encourage maintenance of existing equipment to reduce energy usage. Incentives are provided based on Duke Energy Kentucky's cost effectiveness modeling to assure cost effectiveness over the life of the measure.

Prescriptive Measures: The program promotes prescriptive incentives for the

following technologies – lighting, HVAC, pumps, variable frequency drives, food services, and process equipment. The eligible measures, incentives, and requirements for both equipment and customer eligibility are listed in the applications posted on Duke Energy’s website.

Standards continue to change, and new, more efficient technologies continue to emerge in the market. The Company expects to continue to add or alter measures to provide incentives for customers to take advantage of a broader suite of products. The Company undertakes an annual review of technologies and efficiency levels through internal sources and with the assistance of outside technical experts. The review includes the existing technology categories as well as other emerging areas for energy efficiency.

For 2023-24, a total of eighteen measure additions or measure modifications were identified for the Lighting technology category and one measure for the Process technology category. A list of all measures to be added to the program are included in Appendix I.

The Custom portion of the program would also like to enhance the program by offering New Construction Energy Efficiency Design Assistance. New Construction Energy Efficiency Design Assistance (NCEEDA) is a service that caters to new construction projects in the pre-design phase. By offering consulting, energy modeling, and Smart Saver[®] Incentive application support, Duke Energy Kentucky is able to assist customers, developers, and design teams to design and construct buildings that are more efficient than the applicable energy code. Customers are able utilize Non-Residential Smart Saver[®] Incentives to help fund the incremental costs of installing the more efficient equipment. With our partner, Willdan, outreach efforts are made to educate and enroll projects through interaction with key stakeholders such as architecture & engineering firms

and commercial developers. As part of the Non-Residential Smart Saver[®] portfolio of services, Duke Energy Kentucky will begin to offer NCEEDA effective upon approval.

The Company is not requesting a change in the current approved budget. The forecasted budget for July 2024 – June 2025 to accommodate the baseline increases will be reflected in the annual cost recovery filing for demand side management filed in November.

Since there are no requests to increase the budget, the Cost Effectiveness Test Results have not changed from the current scores that were filed in Case No. 2022-00398.

14. The Peak Time Rebate (PTR) pilot program offers participating customers the opportunity to lower their electric bill by reducing their electric usage during Company-designated peak load periods known as Critical Peak Events (CPE). The Company has branded the program to customers under the name of Peak Time Credits and describes CPEs to participants as peak day events. On August 15, 2022, Duke Energy Kentucky requested to discontinue the Peak Time Rebate pilot as described in Case No. 2022-00251. The Commission ordered on June 13, 2023, that Duke Energy Kentucky should continue offering this program. As part of the order, the Commission found that the Company's projected program costs for July 1, 2023 through June 30, 2024, for the PTR Pilot program of \$216,000 to be appropriate for recovery and that Duke Kentucky will also have the authority to adjust this projected budget at such time when the Commission issues an order establishing modified parameters of the PTR Pilot program.¹⁵ The \$216,000 budget is included on page 2 of Appendix B of this proceeding and calculated into the requested new residential electric rate. Duke Energy Kentucky is reviewing the current

¹⁵ *In the Matter of the Electronic Application of Duke Energy Kentucky, Inc., to Amend Its Demand Side Management Programs*, Case No. 2022-00251, Order, p. 12 (June 13, 2023).

status of the program and will provide an update in the Annual Cost Recovery Filing for Demand Side Management to be filed on November 15, 2023.

The adjusted cost effectiveness scores and the inclusion of the approved \$216,000 are included in Appendix A and Appendix B, respectively.

15. Pursuant to KRS 278.285(1)(b) and the Commission's Order, Appendix A includes the Cost Effectiveness Test Results for all programs with budget changes.

16. Pursuant to KRS 278.285(1)(c) and the Commission's Order, Appendix B includes the calculations to recover program costs, lost revenues, and shared shavings, that are used in determining the true-up of proposed DSM factor(s).

17. A signed and dated proposed Rider DSMR, Sheet No. 78 Demand Side Management Rider, for both electric and natural gas customers, is attached hereto as Appendix C.

18. Pursuant to KRS 278.285(1)(c) and the Commission's Order, the Company is filing program evaluations within this application. The following evaluations are included in appendices J – N: Appendix J: Evaluation, Measurement, and Verification Schedule; Appendix K: Low Income Neighborhood Evaluation; Appendix L: Residential Smart Saver[®] - Online Savings Store Evaluation; Appendix M: Small Business Energy Saver; Appendix N: Peak Time Rebate Pilot Evaluation.

19. Finally, Duke Energy Kentucky respectfully requests that the Commission's Order in this proceeding approve any tariff modifications to be effective so to align with the Company's first billing cycle in the month following the Commission's Order. The Company is unable to implement tariff changes immediately upon approval and outside of a billing cycle under its current billing system. The Company needs at least five

business days from the issuance of an Order to implement rate changes and appropriately test the calculations.

WHEREFORE, Duke Energy Kentucky respectfully requests that the Commission grant the relief requested herein.

Respectfully submitted,

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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 in paper medium; that the electronic filing was transmitted to the Commission on August 15, 2023; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and that submitting the original filing to the Commission in paper medium is no longer required as it has been granted a permanent deviation.¹⁶

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¹⁶*In the Matter of Electronic Emergency Docket Related to the Novel Coronavirus COVID-19*, Case No. 2020-00085, Order (July 22, 2021).