

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In The Matter of:)
)
THE ANNUAL COST RECOVERY FILING) Case No. 2022-00398
FOR DEMAND SIDE MANAGEMENT BY)
DUKE ENERGY KENTUCKY, INC.)

FILING OF THE ANNUAL STATUS REPORT, ADJUSTMENT OF THE DSM COST RECOVERY MECHANISM, AND AMENDED TARIFF SHEETS FOR GAS RIDER DSMR (SHEET NO. 62) AND ELECTRIC RIDER DSMR (SHEET NO. 78)

Now comes Duke Energy Kentucky, Inc. (Duke Energy Kentucky or the Company) with the consensus of the Residential Collaborative and the Commercial and Industrial Collaborative, and pursuant to prior Orders of the Kentucky Public Service Commission (Commission) relevant to Duke Energy Kentucky’s Demand Side Management (DSM) strategy,¹ and hereby files its Annual Status Report, Adjustment of the DSM Cost Recovery Mechanisms for both gas and electric service (DSM Riders), and Amended Tariff Sheets for Gas Rider DSMR and Electric Rider DSMR (Application).

1. Pursuant to 807 KAR 5:001E, 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. Duke Energy Kentucky is engaged in the business of furnishing

¹ See November 4, 2004 Order in Case No. 2003-00367, February 14, 2005 Order in Case No. 2004-00389, April 4, 2006 Order in Case No. 2005-00402, May 15, 2007 Order in Case No. 2006-00426, May 14, 2008 Order in Case No. 2007-00369, May 12, 2009 Order in Case No. 2008-00473, March 22, 2010 Order in Case No. 2009-00444, June 7, 2011 Order in Case No. 2010-00445, April 13, 2012 Order in Case No. 2011-00448, June 29, 2012 Order in Case No. 2012-00085, April 11, 2013 Order in Case No. 2012-00495, March 28, 2014 in Case No. 2013-00395, May 7, 2015 in Case No. 2014-00388, April 4, 2016 in Case No 2015-00368, March 28, 2017 in Case No. 2016-00382, September 13, 2018 in Case No. 2017-00427, October 2, 2019 in Case No. 2018-00370, April 29, 2020 in Case No. 2019-00406, April 9, 2021 in Case No. 2020-00371, December 22, 2021 in Case No. 2021-00313, and December 27, 2021 in Case No. 2021-00424.

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. 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 October 24, 2022, the Residential Collaborative² and the Commercial & Industrial Collaborative³ met to review the Application. Unless otherwise stated, the Residential Collaborative and the Commercial & Industrial Collaborative are jointly referred to herein as "Collaborative." The Collaborative has received the Company's proposal and had the opportunity to provide comments.

4. In addition to filing the annual status report in this Application, Duke Energy Kentucky respectfully requests a modification of Duke Energy Kentucky's DSM Riders to reflect the reconciliation of planned and actual expenditures, lost revenues, and shared savings.

5. Pursuant to the Commission's Order dated September 13, 2018, in Case No. 2017-00427, the Company's portfolio of programs in effect during the fiscal year covered by this Application were approved. The Company requested and received approval to continue the approved portfolio with the commitment to file the annual cost recovery DSM

² The Residential Collaborative members in attendance were Lawrence Cook (Office of the Kentucky Attorney General), Mary Cook-Reneau (Boone County), and Trisha Haemmerle (Duke Energy).

³ The Commercial & Industrial Collaborative members in attendance were Lawrence Cook (Office of the Kentucky Attorney General), Christine Baker (Kenton County Schools) and Trisha Haemmerle (Duke Energy).

filing and the annual amendment filing.⁴ As a result, this Application serves as the annual true-up of the fiscal year ending June 30, 2022, of programs.

Background

6. The Company's offering of DSM programs dates back close to two decades.⁵ Throughout the years, the Company has offered many enhancements to its portfolio with the purpose of increasing participation and providing customers new and innovative opportunities to control their consumption and impact their utility bill. The portfolio of programs in place during the fiscal year ending June 30, 2022, and that is the subject of this Application was approved by the Commission's September 13, 2018, Order in Case No. 2017-00427.

7. Like the Company's prior annual DSM filings, this Application specifically addresses the requirements in prior Commission Orders⁶ and is being made consistent with the Commission's September 18, 2007, Order in Case 2007-00369 granting Duke Energy Kentucky's request to file annual DSM applications no later than November 15. In the status and reconciliation portion of this report, expenses are reported for the fiscal year period July 1, 2021, through June 30, 2022.

⁴ Order in Case No. 2017-00427

⁵ *In the Matter of the Joint Application Pursuant to 1994 House Bill No. 501 For the Approval of Principles of Agreement, Demand Side Management, The Union Light Heat and Power Company, and for Authority for the Union Light Heat and Power Company to Implement Various Tariffs and Receive Incentives Associated the Demand Side Management Programs*, Case No. 95-312, Order December 1, 1995.

⁶ November 20, 2003 Order in Case No. 2003-00367, February 14, 2005 Order in Case 2004-00389, April 4, 2006 Order in Case No. 2005-00402, May 15, 2007 Order in Case No. 2006-00426, May 14, 2008 Order in Case No. 2007-00369, March 22, 2010 Order in Case No. 2009-00444, June 7, 2011 Order in Case No. 2010-00445, April 13, 2012 Order in Case No. 2011-00448, April 11, 2013 Order in Case No. 2012-495, March 28, 2014 Order in Case No. 2013-00395, May 7, 2015 Order in Case No. 2014-00388, April 4, 2016 Order in Case No 2015-00368, March 28, 2017 in Case No. 2016-00382, September 13, 2018 in Case No. 2017-00427, October 2, 2019 in Case No. 2018-00370, April 29, 2020 in Case No. 2019-00406, April 9, 2021 in Case No. 2020-00371, December 22, 2021 in Case No. 2021-00313, and December 27, 2021 in Case No. 2021-00424.

8. In this Application, Duke Energy Kentucky also requests an Order approving the proposed adjustments to the DSM riders and the revised rate tariffs (Appendices C – D).

Definitions

For the purposes of this Application, the following terms will have the following meanings:

9. **“DSM Revenue Requirements”** shall mean the revenue requirements associated with all Program Costs, Administrative Costs, Lost Revenues (less fuel savings), and the Shareholder Incentive.

10. **“Program Costs”** shall mean the costs incurred for planning, developing, implementing, monitoring, and evaluating the DSM programs that have been reviewed with the Collaborative

11. **“Administrative Costs”** shall mean the costs incurred by or on behalf of the collaborative process and that are approved by the Collaborative, including, but not limited to, costs for consultants, employees, and administrative expenses.

12. **“Lost Revenues”** shall have the same meaning as “LR” as described in Rider DSM - Demand Side Management Cost Recovery Rider, Sheet No. 75.

13. **“Shareholder Incentive”** shall have the same meaning as “PI” as described in Rider DSM - Demand Side Management Cost Recovery Rider, Sheet No. 75.

14. **“DSM Cost Recovery Mechanism”** shall refer to Rider DSM - Demand Side Management Cost Recovery Rider, Sheet No. 75.

Status of Prior Portfolio of DSM Programs

15. Through June 30, 2022, Duke Energy Kentucky offered the following programs, the costs of which are recoverable through the DSM Cost Recovery Rider

mechanism approved by the Commission in prior proceedings:

- Program 1: Residential Smart Saver[®] Energy Efficient Residences Program;
- Program 2: Residential Smart Saver[®] Energy Efficient Products Program;⁷
- Program 3: Residential Energy Assessments Program (Residential Home Energy House Call);
- Program 4: Low Income Services Program;
- Program 5: Residential Direct Load Control- Power Manager[®] Program;
- Program 6: Smart Saver[®] Prescriptive Program;
- Program 7: Smart Saver[®] Custom Program;
- Program 8: Peak Load Manager (Rider PLM) - PowerShare[®] Program;
- Program 9: Low Income Neighborhood Program;
- Program 10: My Home Energy Report Program;
- Program 11: Small Business Energy Saver Program;
- Program 12: Non-Residential Pay for Performance;⁸ and
- Program 13: Peak Time Rebate Pilot Program.

16. This section of the Application provides a brief description of each current program, a review of the status of each program, and information on any changes that may

⁷ The Smart Saver[®] Residential Energy Efficient Products Program and the Energy Efficient Residences Program are individual measures that are part of a single and larger program referred to and marketed as Residential Smart Saver[®]. For ease of administration and communication with customers the two measures have been divided into separate tariffs even though they are a single program.

⁸ Marketed as Smart Saver[®] Performance

have been made to the programs. The following table provides a summary of the load impacts achieved and level of participation obtained during this filing period.

Summary of Load Impacts July 2021 Through June 2022				
	1	Incremental Participation	kWh	kW
Residential Programs				
Low Income Neighborhood		272	101,731	30
Low Income Services		171	220,462	47
My Home Energy Report		8,052	1,733,860	502
Residential Energy Assessments		2,079	675,452	75
Residential Smart Saver®		33,907	2,061,006	176
Power Manager®	2	12,323	-	12,755
Peak Time Rebate Pilot Program		792	-	195
Total Residential		57,596	4,792,511	13,780
Non-Residential Programs		Incremental Participation	kWh	kW
Small Business Energy Saver		3,381,324	3,347,511	592
Smart Saver® Non-Residential		7,340	2,919,346	684
Power Manager® for Business		-	-	-
PowerShare®	3	12	-	12,638
Total Non-Residential		3,388,676	6,266,856	13,915
Total		3,446,272	11,059,367	27,694
<p>1 - Impacts are net of freeriders, without losses and reflected at the customer meter point. 2 - Cumulative number of controlled devices installed. Impacts reflect average capability over the contract period. 3 - Impacts reflect average capability over the contract period.</p>				

17. Results of the current cost-effectiveness test results for each of the programs are provided in Appendix A.

Programs 1 and 2: Residential Smart Saver® Energy Efficient Residences and Products Programs

18. The purpose of the Residential Smart Saver® Energy Efficient Residences portion of the Residential Smart Saver® Program is to offer customers prescriptive incentives for a variety of energy conservation measures designed to target the largest energy consumption equipment and increase energy efficiency in their homes. The

program utilizes a network of participating contractors to encourage the installation of high efficiency equipment and the implementation of energy efficient home improvements with eligible customers. Equipment and services to be incentivized include:

- Installation of high efficiency air conditioning (AC) and heat pump (HP) systems;
- Implementation of attic insulation and air sealing services;
- Implementation of duct sealing services; and
- Installation of efficient heat pump water heaters.

19. The Program includes a tier approach to the level of incentives available for AC and HP system replacements based on the efficiency rating of the system, along with an optional additional incentive if a qualifying smart thermostat is included and installed with the replacement. A referral marketing component for eligible trade allies has also been added as a delivery channel to enhance customer experience as the customer is making the energy efficient purchase decision. The Program continues to experience a steady demand from customers participating in the incentives. During the period July 2021 through June 2022, the Program approved 1,533 individual rebate applications.

20. Duke Energy Kentucky currently contracts with Blackhawk Engagement Solutions (BES) to administer this program. BES provides services including application processing and fulfillment, data reporting, call center services, and IT support for program tools such as the trade ally portal which allows trade allies to register, check customer eligibility, and submit applications online. These Residential Smart Saver[®] services are jointly implemented with the Duke Energy Indiana, Duke Energy Carolinas, and Duke Energy Progress territories to reduce administrative costs and leverage promotion. BES has

experience in delivering similar utility energy efficiency programs.

21. Beginning in 2023, all residential central air conditioners and air source heat pump systems will be required to meet new minimum energy efficiency standards of no less than 15 SEER in the southeast including the state of Kentucky. In addition, the new standards require an increase in the heating efficiency of air source heat pumps heating seasonal performance factor (HSPF). The minimum HSPF will be 8.8 HSPF compared with the 8.2 HSPF required by the current standard which went into effect in 2015.

22. Based on the above-mentioned Federal standard changes, the Program will need to adjust eligibility criteria to remain cost effective. Eligible minimum SEER level will be adjusted to SEER 16 and the Program will pay incentives based on the operating status of the equipment being replaced and the efficiency level of the new equipment as follows:

Replacement on Failure Incentive:

Replacement of measures which are not functioning and cannot be repaired will be considered a Replacement On Failure (ROF). Incentives for ROF will be determined by the Company in an amount not to exceed 50% of the installed cost difference between standard equipment or service and higher efficiency equipment or service. The Company may vary the incentive by type of equipment and differences in efficiency to induce customers to purchase greater levels of efficiency at the minimum necessary incentive amount. The Company may offer multiple levels of incentives corresponding to varied efficiency levels of equipment or service.

Early Replacement Incentive:

Replacement of measures which are functioning or can be repaired will be considered an Early Replacement (ER). Incentives for ER will be determined by

the Company based on an amount commensurate with the projected energy savings.

The Company may vary the incentive by type of equipment and differences in efficiency to induce customers to purchase greater levels of efficiency.

23. The purpose of the Residential Smart Saver[®] Energy Efficient Products portion of the Residential Smart Saver[®] Program is to provide high efficiency lighting through various channels, along with other high efficiency products in new or existing residences, including pool pumps, water measures for single family, and water measures for multifamily.

24. The Residential Smart Saver[®] lighting program launched an online Saving Store for specialty lighting on April 26, 2013. The Savings Store is an extension of the on-demand ordering platform enabling eligible customers to purchase specialty bulbs and have them shipped directly to their homes. The program offers a variety of LEDs including Reflectors (indoor and outdoor), Globes, Candelabra, and 3 ways, and Dimmable bulb options. The incentive levels vary by bulb type and the customer pays the difference, including shipping.

25. In 2020, the program was approved to add smart thermostats, water products, LED fixtures, & small appliance- dehumidifiers & air purifiers. Customer purchase limits are as follows:

- Smart thermostats, 2 total;
- Water measures, 3 total;
- LED fixtures (direct wires, portable, & outdoor photocell), limit 8 total;
- and
- Small appliance, dehumidifiers & air purifiers, limit 2 each total.

26. Customers can check eligibility and shop for a variety of energy efficient products on the Online platform. . The Savings Store was managed by a third-party vendor, Energy Federation Inc. (EFI) until August 2021 and then the program transitioned to a new vendor, Uplight. The Saving Store was shut down during the transition from August 2021 until December 2021. The program successfully relaunched on December 1, 2021 and began offering discounted products on the new and improved Saving Store. Uplight is now responsible for maintaining the Savings Store and fulfilling all customer purchases. The Saving Store landing page provides information about the store, and energy efficient products. Support features include a toll-free number, email, Live Chat, and frequently asked questions. Customers may choose to browse the new site before checking eligibility for incentives. Shipping and order confirmations are included in the email confirmation sent directly to the customer.

27. Educational and product detail information are available on the Saving Store to help assist customers with their purchasing decisions. The information discusses bulb types, application types, benefits of energy efficient products, and understanding watts versus lumens.

28. The Online Savings Store program carefully tracks towards budget by monitoring our marketing activities to customers. The program sold approximately 12,575 LED bulbs, 10 fixtures, 356 smart thermostats and 26 trim kits, 11 air purifiers, 12 dehumidifiers, and 11 water measures.

29. The Multifamily Energy Efficiency Program is an extension of the Residential Smart Saver[®] lighting program and allows Duke Energy Kentucky to use an alternative delivery channel which targets multifamily apartment complexes. The measures

are directly installed in permanent fixtures by the program vendor, Franklin Energy. The target audience for the program is property managers who have properties that are served on an individually metered residential rate schedule. To receive water measures, apartments must have electric water heating.

30. The program helps property managers upgrade lighting with energy efficient LEDs and saves energy by offering water measures such as bath and kitchen faucet aerators, water saving showerheads and pipe wrap. The quantity of lighting measures installed may vary by apartment size but there are no limits on LED installations in permanent fixtures. These measures assist with reducing maintenance costs while improving tenant satisfaction by lowering energy bills.

31. As program implementer, Franklin Energy is responsible for all marketing and outreach for the program. This is primarily done through outbound calls and on-site visits to solicit initial interest in the program from property managers in the Company's service territory. Additionally, program information and supporting documents are available on the Duke Energy Kentucky web site for property managers to learn more about the program and request applications to participate in the program.

32. Duke Energy Kentucky received approval to replace CFLs with LEDs for the lighting offering associated with the Multi-Family Program.⁹ Beginning in July 2017, the program began installing LED lighting. The program also added two additional bulb types to bring the LED offering to three types with unlimited quantities per unit. The three bulbs (A-Line, Candelabras, and Globes) provide more options for tenants, are more aesthetically appealing and create more bill savings. In 2019, the program added new

⁹ *In the Matter of the Application of Duke Energy Kentucky, Inc., to Amend its Demand Side Management Programs*, Case No. 2016-00289, KY. P.S.C. Order January 24, 2017.

4000K LED bulb options for A-lines. These bulbs provide a brighter, whiter light which has been requested by several property management companies. Property managers and owners also receive benefits with the longer lasting bulbs, which reduce maintenance costs for the properties and make the units more marketable to tenants.

33. The program was suspended in mid-March 2020 due to the COVID-19 pandemic and concerns for the safety of customers and program staff. The program remained suspended through July 1, 2020 – June 30, 2021, fiscal year. The program restarted in September of 2021 and the first installs were in November of 2021. A total of 3,439 measures were installed from September 2021 - June 30, 2022. The program installed 219 kitchen and bath aerators, 92 standard showerheads, 435 feet of insulating pipe wrap, and 2,693 bulbs.

34. The Save Energy and Water Kit (SEWK) program is designed to increase the energy efficiency of residential customers by offering customers low flow water devices and water heater pipe insulation wrap to install within their homes. The SEWK offer is available through a business reply card (BRC) or through direct email solicitation, enabling customers to request a kit and have it shipped directly to their homes. A website has been established to provide customers with additional information about the program and instructional videos to assist in the installation of items from the do it yourself (DIY) kit. Additionally, the online platform allowed customers to upgrade the standard showerhead to either a wide spray or hand-held model for a discounted price.

35. The program implementer (Energy Federation Inc.) changed in September 2021 and the program was temporarily shut down while the program transitioned to a new vendor (AM Conservation). AM Conservation began offering the program in February

2022. The relaunch of the program focused on offering kits to customer via email and BRC's. A new online platform will be available in December 2022, allowing customers to upgrade their showerhead to a hand-held model for a discounted price. The wide spray showerhead is now the standard showerhead offered in the kits to allow for higher customer satisfaction and install service rates.

36. To be eligible, customers must have an electric water heater, have not already participated in SEWK or another Duke Energy Kentucky program offering water saving devices, and live in a single-family, owner-occupied home. Eligible customers, who respond to the BRC or email offer, will receive a kit free of charge. There are two kit sizes to accommodate homes with one or more full bathrooms. The kit size available to the customer is predetermined based on the square footage of the home. Customers in homes less than or equal to 1,500 square feet receive a one (1) bath kit. Customers in homes greater than 1,500 square feet receive a two (2) bath kit. The kits contain varying quantities of showerheads, two bath aerators, one kitchen aerator and insulated pipe tape.

37. The SEWK program is an invitation only program where customers are prequalified and then directly solicited for participation. This allows the program to carefully track performance against budget and adjust marketing efforts as needed. The program shipped 1,548 kits containing 4,641 kitchen and bath aerators, 2,032 standard showerheads, 14 hand-held (Wand) showerheads, 160 wide spray showerheads, and 9,111 feet of insulating pipe wrap, for a total of 15,956 measures.

Program 3: Residential Energy Assessments Program

38. 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 several key vendors to administer the program in 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 energy efficient lighting, low flow shower head, low flow faucet aerators, outlet/switch gaskets 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;
 - 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.

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

40. The program was also approved to begin offering additional measures that included a blower door test, handheld low-flow showerheads, smart thermostats, specialty globes and candelabras, and recessed LED bulbs. The program ended the fiscal year completing 605 assessments and installed 14 smart thermostats, 37 additional bathroom aerators, 7 specialty showerheads, 191 specialty globes, 79 LED candelabras, 297 recessed LED bulbs, and 849 feet of pipe insulation.

Program 4: Low Income Services Program

Weatherization

41. The Weatherization program portion of Low-Income Services is designed to help income-qualified customers that are below 200 percent of the federal poverty level to reduce their energy consumption and lower their energy cost. The program works with local weatherization agencies using Federal DOE/LIHEAP funds as well as other community outreach initiatives for participation. The program provides the agencies incentives for installing energy efficient measures in qualified customers' homes. Agencies also educate customers on their energy usage and other opportunities that can help reduce energy consumption and lower energy costs. The program has provided weatherization services to the following number of customers:

Fiscal Year	Customers Served
1999 - 2000	251
2000 - 2001	283
2001 - 2002	203
2002 - 2003	252
2003 - 2004	252
2004 - 2005	130
2005 - 2006	232
2006 - 2007	252
2007 - 2008	265
2008 - 2009	222
2009 - 2010	199
2010 - 2011	234
2011 - 2012	220
2012 - 2013	228
2013 - 2014	143
2014 - 2015	203
2015 - 2016	162
2016 - 2017	166
2017 - 2018	127
2018 - 2019	120
2019 - 2020	99
2020 - 2021	81
2021 - 2022	127

42. The program is structured so that homes needing the most work, and having the highest energy use per square foot, receive the most funding. The program accomplishes this by placing each home into one of two “Tiers.” For each home, the field auditor uses the National Energy Audit Tool (NEAT) to determine which specific measures are cost effective for that home.

The tier structure is defined as follows:

	Therm / square foot	kWh use/ square foot	Investment Allowed
Tier 1	0 < 1 therm / ft2	0 < 7 kWh / ft2	Up to \$600
Tier 2	1 + therms / ft2	7 + kWh / ft2	All SIR* \geq 1.5 up to \$4K

*SIR = Savings - Investment Ratio

Tier One Services

43. Tier 1 services are provided to customers through weatherization agencies. Customers are considered Tier 1 if they use less than 1 therm per square foot per year or less than 7-kilowatt hour (kWh) per square foot per year, based on a year's usage of Company supplied fuels. Square footage of the dwelling is based on conditioned space only, whether occupied or unoccupied. It does not include unconditioned or semi-conditioned space (non-heated basements). The total program dollars allowed per home for Tier One services is \$600.00 per home. Tier One services are as follows:

- Furnace / Heating system Tune-up & Cleaning;
- Furnace repair up to \$600;
- Venting check & repair;
- Water Heater Wrap and Pipe Wrap;
- Cleaning of refrigerator coils;
- Cleaning of dryer vents;
- Energy Efficient Light Bulbs;
- Low-flow shower heads and aerators;
- Weather-stripping doors & windows;
- Limited structural corrections that affect health, safety, and energy up to \$150; and,
- Energy Education.

Tier Two Services

44. Duke Energy Kentucky will provide Tier Two services to a customer if they use at least 1 therm or at least 7 kWh per square foot per year based on the annual usage of

Duke Energy Kentucky supplied fuels.

Tier Two services are as follows:

- All Tier One services; plus
- Additional cost-effective measures (with $SIR \geq 1.5$) based upon the results of the NEAT audit. Through the NEAT audit, the agency can determine if energy saving measures pay for themselves over the life of the measure as determined by a standard heat loss/economic calculation (NEAT audit) utilizing the cost of gas and electric as provided by Duke Energy Kentucky. Such items can include but are not limited to attic insulation, wall insulation, crawl space insulation, floor insulation and sill box insulation. Safety measures applying to the installed technologies can be included within the scope of work considered in the NEAT audit if the SIR is greater than 1.5 including the safety changes; and
- Replacement of heating system if cannot be repaired.

Regardless of placement in a specific tier, Duke Energy Kentucky provides energy education to all customers in the program.

45. Refrigerator replacement is also a component of this program. To determine replacement, the program weatherization provider performs a two-hour meter test of the existing refrigerator unit. If it is a high-energy consuming refrigerator, as determined by this test, the unit is replaced. Replacing with a new Energy Star qualified refrigerator, with an estimated annual usage of 400 kWh, results in an overall savings to the average customer typically more than 1,000 kWh per year.

Refrigerators tested and replaced:

Year	Refrigerators Tested	Refrigerators Replaced
2002 – 2003	116	47
2003 – 2004	163	73
2004 – 2005	115	39
2005 – 2006	116	52
2006 – 2007	136	72
2007 – 2008	173	85
2008 – 2009	153	66
2009 – 2010	167	92
2010 – 2011	112	76
2011 – 2012	107	64
2012 – 2013	206	69
2013 – 2014	112	37
2014 – 2015	42	24
2015 – 2016	60	22
2016 – 2017	92	54
2017 - 2018	48	18
2018 – 2019	43	12
2019 – 2020	66	15
2020 - 2021	19	15
2021 - 2022	32	17

The existing refrigerator being replaced is removed from the home and recycled in an environmentally appropriate manner to assure that the units are not used as a second refrigerator in the home or do not end up in the secondary appliance market.

46. In recognition of the COVID-19 environment that now exists, proper safety protocols are being adhered to, to ensure everyone’s safety always.

Payment Plus

47. The Payment Plus portion of Low-Income Services program is designed to impact participants’ behavior (e.g., encourages utility bill payment and reducing arrearages) and to generate energy conservation impacts.

The program is made up of three components:

- Energy Education & Budget Counseling – to help customers understand

how to control their energy usage and how to manage their household bills, a combined education/counseling approach is used;

- Weatherization – to increase the energy efficiency in customers’ homes, participants are required to have their homes weatherized as part of the normal Residential Conservation and Energy Education (low-income weatherization) program unless weatherized in past program years; and,
- Bill Assistance – to provide an incentive for these customers to participate in the education and weatherization, and to help them get control of their bills. Payment assistance credits are provided to each customer once they complete each aspect of the program. The credits are: \$200 for participating in the EE counseling, \$150 for participating in the budgeting counseling, and \$150 for participating in the Residential Conservation and Energy Education program (weatherization services). If all the requirements are completed, a household could receive up to a total of \$500 towards their arrearage. This allows for approximately 200 homes to participate per year. Some customers do not complete all three steps or may have already had weatherization services completed prior to the program.

48. This program is normally offered twice over six winter months per year (October-March). With the continuing existence of Covid-19, the program has been offered quarterly to accommodate smaller class sizes.

49. Duke Energy Kentucky utilizes a community action agency to recruit customers to participate in the Payment Plus program. The Payment Plus program is

designed to help income-qualified customers that are below 200 percent of the federal poverty level to reduce their energy consumption and lower their energy cost. Using a list of potential customers provided by Duke Energy Kentucky, the agency sends a letter describing the program to eligible customers. Included in this letter are various dates, times, and locations of scheduled classes. The courses are designed to accommodate customers with varied schedules and widespread locations. The customer contacts the agency to register for a course. Make-up courses are also offered to those customers who may have missed their initial scheduled time.

50. For the filing period, 72 participants attended energy education counseling. Of those 72, 71 participants also attended budget counseling and 15 participants' homes have been weatherized. With the continuing Covid-19 relief funds still available in 2021, participation in the program was lower, regardless of best efforts made.

Program 5: Residential Direct Load Control - Power Manager[®] Program

51. 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.

52. 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.

53. 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 receives 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 each year they are on the program.

54. 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.

55. The Company continued its primary Power Manager[®] marketing during the past fiscal year through outbound telephone calling. Providing customers with an opportunity to ask questions before deciding to participate has proven to be a significant attribute in making this the most effective sales channel.

56. Ongoing evaluation, measurement, and verification (EM&V) is conducted through a sample of Power Manager[®] customers with devices that record hourly run-time of the air conditioner unit and with load research interval meters that measure the household kWh usage. Operability studies are also used to measure the performance of Power Manager[®] load control devices in Kentucky. In addition, Duke Energy Kentucky has reviewed the statistical sampling requirements of PJM Interconnection, LLC (PJM) for demand response resources of this type. The Duke Energy Kentucky studies comply with

all PJM requirements.

57. There were no Power Manager[®] events that took place from July 2021 through June 2022 event season. There was a PJM required one-hour test on September 2, 2021.

Programs 6 and 7: Smart Saver[®] Prescriptive Program and Smart Saver[®] Custom Program is now Smart Saver[®] Non-Residential¹⁰

58. The Smart Saver[®] 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.

59. Commercial and industrial consumers can have significant energy consumption but may lack knowledge and understanding of the benefits of high efficiency alternatives. The program provides financial incentives to help reduce the cost differential between standard and high efficiency equipment, offer a quicker return on investment, save money on customers' utility bills that can be reinvested in their business, and foster a cleaner environment. In addition, the program encourages dealers and distributors (or market providers) to stock and provide these high efficiency alternatives to meet increased demand for the products. The Program provides incentives through prescriptive measures, custom measures, and assessment/ technical assistance.

¹⁰ Smart Saver[®] Prescriptive & Custom program management have collaborated the program to be consolidated as Non-Residential Smart Saver[®] as filed in Case No. 2021-00313.

60. 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.

61. Custom Measures: The Smart Saver[®] Custom Program is designed for customers with electrical energy-saving projects involving more complicated or alternative technologies or measures not covered by the Non-Residential Smart Saver[®] Prescriptive Program. The intent of the Program is to encourage the implementation of energy efficiency projects that would not otherwise be completed without the Company’s technical or financial assistance. Unlike the Non-Residential Smart Saver[®] Prescriptive Program, the custom program may require pre-approval prior to the project initiation. Proposed energy efficiency measures may be eligible for customer incentives if they clearly reduce electrical consumption and/or demand. The Company contracts with AESC to perform technical reviews of custom applications. All other Program implementation and analysis is performed by Duke Energy employees or direct contractors.

62. The program has developed multiple approaches to reaching the very broad and diverse audience of business customers. In 2021-22, this consisted of incentive payment applications, with paper and online options, and instant incentives offered through the Online Energy Savings Store.

63. Over the years, the program has worked closely with Trade Allies (TA) to promote the program to our business customers at the critical point in time when customers are considering standard or high efficiency equipment options. The Smart Saver[®] outreach

team provides training and technical support to the TA network. The outreach team also recruits new TAs to participate in the program. TA company names and contact information appears on the TA search tool located on the Smart Saver[®] website. This tool was designed to help customers who do not already work with a TA, to find someone in their location who can serve their needs. The Company continues to look for ways to engage the TAs in promotion of the program as well as more effective targeting of TAs based on market opportunities.

64. Duke Energy Kentucky continues to evaluate changes to existing measures, to take into consideration changes to market conditions and energy efficiency standards, and the addition of measures to offer customers additional options for energy savings. Any future measure changes will be presented to the Commission in accordance with the applicable review and approval processes and procedures.

65. For the 2021-2022 fiscal year, Smart Saver[®] incentive funds were limited for the majority of the period due to rebate payments being made to some very large projects completed early in the fiscal year. These projects utilized the Program's prequalification feature in the previous fiscal year to reserve incentive funds. This led to incentive funds being fully reserved for the majority of the 2021-2022 fiscal year, with a waitlist being used to manage incentive applications for the balance of the year. During the reporting period of July 2021 through June 2022, the Kentucky Smart Saver[®] Non-Residential program provided either Prescriptive or Custom incentives to 16 total customers.

66. The internal marketing channel is comprised of assigned Large Business Account Managers, Segment Managers, and Local Government and Community Relations, and Business Energy Advisors, who all identify potential opportunities as well as distribute

program collateral and informational material to customers and TAs. In addition, the Economic and Business Development groups also provide a channel to customers who are new to the service territory. Program marketing activities were paused for the majority of 2021-22 due to incentive funding being fully reserved.¹¹

Program 8: Peak Load Manager (Rider PLM) - PowerShare® Program

67. PowerShare® is the brand name given to Duke Energy Kentucky's Peak Load Management Program (Rider PLM, Peak Load Management Program KY.P.S.C. Electric No. 2, Sheet No. 77). Rider PLM was approved pursuant as part of the settlement agreement in Case No. 2006-00172. In the Commission's Order in Case No. 2006-00426, approval was given to include the PowerShare® program within the DSM programs. The PLM program is voluntary and offers customers the opportunity to reduce their electric costs by managing their electric usage during the Company's peak load periods. Customers and the Company will enter into a service agreement under Rider PLM, specifying the terms and conditions under which the customer agrees to reduce usage. There are two product options offered for PowerShare® - CallOption® and QuoteOption®:

- CallOption®:
 - A customer served under a CallOption® product agrees, upon notification by the Company, to reduce its demand;
 - Each time the Company exercises its option under the agreement, the Company will provide the customer a credit for the energy reduced;
 - For the 2021/2022 program year, there was one type of event;

¹¹ See November 15, 2021, Application in Case No. 2021-00424, pg. 26.

- Emergency events are implemented due to reliability concerns.

Participants are required to curtail during emergency events.

- In addition to the energy credit, customers on the CallOption® will receive an option premium credit;
- For the 2021/2022 PowerShare® programs associated with the fiscal year of this filing, there were three enrollment choices for customers relative to CallOption. The first choice, “Limited Summer”, required participants to be able to curtail during the months of June through September 2021, with a maximum event length of 8 hours and maximum number of curtailments of 10 during the program year. The second choice, “Summer Period”, required participants to be able to curtail during the months of June through October 2021 and May 2022, with a maximum event length of 12 hours and no maximum number of curtailment events. The third choice, “Annual”, requires participants to be able to curtail during the full contract term of June 2021 through May 2022, with a maximum event length of 12 hours during the months of June through October 2021 and May 2022, and with a maximum event length of 15 hours during the months of November 2021 through April 2022 and no maximum number of curtailment events. Duke Energy Kentucky discontinued its “Limited Summer” program option effective May 31, 2022. Resources with a limited number of curtailment events are no longer eligible for registration and therefore hold no value with

PJM.

- Only customers able to provide a minimum of 100 kW load response qualify for CallOption[®].
- QuoteOption[®]:
 - Under the QuoteOption[®] products, the customer and the Company agree that when the average wholesale market price for energy during the notification period is greater than a pre-determined strike price, the Company may notify the customer of a QuoteOption[®] event and provide a price quote to the customer for each event hour;
 - The customer will decide whether to reduce demand during the event period. If they decide to do so, the customer will notify the Company and provide an estimate of the customer's projected load reduction;
 - Each time the Company exercises the option, the Company will provide the participating customer who reduces load an energy credit;
 - There is no option premium for the QuoteOption[®] product since customer load reductions are voluntary; and
 - Only customers able to provide a minimum of 100 kW load response qualify for QuoteOption[®].

PowerShare[®] 2021-2022 Summary

68. Duke Energy Kentucky's customer participation goal for 2021 was to retain all customers that currently participate and to promote customer migration to the

CallOption[®] program. The table below displays monthly account participation levels for July 2021 through June 2022, as well as MWs enrolled in the program.

Kentucky PowerShare[®] Participation Update				
Month	CallOption [®]		QuoteOption [®]	
	Enrolled Customers*	Summer Capability**	Enrolled Customers*	Summer Capability**
Jul-21	12	13.95	0	0
Aug-21	12	13.95	0	0
Sep-21	12	13.95	0	0
Oct-21	12	10.73	0	0
Nov-21	12	10.73	0	0
Dec-21	12	10.73	0	0
Jan-22	12	10.73	0	0
Feb-22	12	10.73	0	0
Mar-22	12	10.73	0	0
Apr-22	12	10.73	0	0
May-22	12	10.73	0	0
Jun-22	12	13.71***	0	0
*Enrolled Customers represents the number of parent accounts participating. **Summer Capability is consistent with the associated program year. Numbers reported are adjusted for losses. ***Estimated Summer capability				

(Note that Duke Energy Kentucky has signed 12 contracts for the 2022/2023 PowerShare[®] CallOption[®]. Measured and verified MW values for the summer of 2021 will be available and presented in the update filing.)

69. During the July 2021 through June 2022 period, there were zero PowerShare[®] CallOption[®] or QuoteOption[®] events. There were curtailment tests performed to meet PJM requirements. The table below summarizes event participation.

Duke Energy Kentucky - PowerShare CallOption and QuoteOption Economic, Emergency, and Test Events July 2021 - June 2022 Activity - Reduction Values in MWs							
Date	Event Hours (EDT)	Event Type	Event Participants	Participants Reducing Load Partially or Fully	Average Hourly Load Reduction Expected - At the Meter	Average Hourly Load Reduction - At the Meter	Average Hourly Load Reduction - At the Plant
9/2/2021	4 pm to 5 pm	PJM Test	12	12	13.817	17.983	19.371
9/29/2021	4 pm to 5 pm	PJM Re-Test	1	1	0.527	0.118	0.127

(Note that for the summer period of June 2021 through September 2021, zero PowerShare® events have been called. The annual, required, PJM test event was conducted on September 2, 2021, at 4 pm. Information on these events will be available and presented in next year’s update filing.)

Program 9: Low Income Neighborhood Program

70. The Duke Energy Kentucky Neighborhood Energy Saver (NES) Program takes a non-traditional approach to serve income-qualified areas of the Duke Energy Kentucky service territory through the direct installation of energy efficiency measures in customer homes. This customer-facing program allows for the direct engagement in a familiar setting to reduce energy consumption with the installation of energy efficient measures. In addition, Duke Energy Kentucky uses this opportunity to educate and work with customers to efficiently manage and lower their energy bills. Examples of direct installed measures include energy efficient light bulbs, water heater and pipe wrap, low flow shower heads/faucet aerators, window and door air sealing and a year supply of HVAC filter replacements.

71. As low-income neighborhoods are identified for the program, if at least 50 percent of the households are at or below 200 percent of the federal poverty guidelines, a community with an average size of about 900 customers is selected. Duke Energy Kentucky

analyzes census and internal data to select and prioritize neighborhoods that have the greatest need and propensity to participate. While the goal is to serve neighborhoods where most residents are low income, the program is available to all Duke Energy Kentucky customers within the selected boundary. This program is available to both homeowners and renters occupying single family and multi-family dwellings in the target neighborhoods that have electric service provided by Duke Energy Kentucky.

72. In the past, community-based kick-off events have been held in targeted neighborhoods. Kick-off events have featured local community leaders, community-based organization representatives, local weatherization program managers, the installation vendor, and the technical crew. The Duke Energy Kentucky program manager and vendor provide attendees detailed information about NES along with a tentative neighborhood schedule.

73. The purpose of the kick-off event has been to rally the neighborhood around energy efficiency and educate customers on actions they can take to help lower their energy bills and save energy. Additionally, attendees have had the opportunity to meet technical staff and view measures. In days, or a few weeks, shortly following the kick-off event, customers are contacted by the technical crew to receive the free in-home energy assessments (walk-through) and the appropriate energy saving measures are installed if the customer elects to have the work completed. Direct mail and call center support supplement community-based outreach efforts.

74. For fiscal year 2021-2022, with a participation goal of 600 homes, we have completed 272 homes in Duke Energy Kentucky territory. With the lingering existence of COVID-19, hesitation to allow technicians into one's home still remained an issue. With this challenge, Duke Energy Kentucky continues to collaborate with organizations such as the

Northern Kentucky Community Action Commission, People Working Cooperatively and other local agencies, businesses, and government-backed programs to rally around efforts of the NES program. Duke Energy Kentucky's NES program provides residents information about the service and helps leverage additional services available in their communities. The program has been well-received, and neighbors regularly share the benefits of their experience with others.

75. Duke Energy Kentucky has expanded the NES program by adding NES 2.0. In addition to the current 16 measures offered to customers, Duke Energy will qualify customers of the neighborhood for NES 2.0 measures, which include attic insulation, air sealing, duct sealing, and smart thermostats to address customers high energy use. Eligibility of the revised measures (NES 2.0) will be made available to customers that the Company deems a high-energy user.

Program 10: My Home Energy Report Program

76. The My Home Energy Report (MyHER) compares household electric usage to similar, neighboring homes, and provides recommendations and actionable tips to lower energy consumption. The report also informs a customer of the Company's other energy efficiency programs when applicable. These normative comparisons are intended to induce customers to adopt more efficient energy consumption behavior. MyHER is delivered in printed and email form. The reports are distributed up to 12 times per year (2 printed reports and 12 electronic reports if the customer provides their email address). Currently, to qualify to receive the report, customers must be living in a single metered, single-family home with 13 months usage history.

77. The MyHER program, originally an opt out program, has been changed to

an opt in program beginning in 2019-2020, the next fiscal term following the Commission's September 13, 2018, Order. The Company provides information on every report as to how a customer may update their information or request to stop receiving the reports. In 2022, the program has had one opted-in customer decide to opt-out of the program after receiving reports. As of July 31, 2022, there were 8,052 Kentucky MyHER customers receiving reports.

78. The Company has designed an interactive portal and enabled email technology to further engage with customers with the intention of increasing the level of engagement with customers and hence their efficiency. This portal is available online and through mobile channels. The portal was rolled out in March 2015 with a small email campaign for MyHER customers for whom we have an email address. As of June 30, 2022, there were 1,488 Kentucky MyHER customers enrolled in the portal.

79. The Company launched the MyHER program in the Duke Energy mobile app starting in 2019. Customers who have opted into the program are now able to see their My Home Energy Report monthly comparisons and usage disaggregation on the Duke Energy mobile app.

Program 11: Small Business Energy Saver Program¹²

80. The purpose of Duke Energy Kentucky's Small Business Energy Saver program (SBES Program) is to reduce energy usage through the direct installation of energy efficiency measures within qualifying small non-residential Duke Energy Kentucky customer facilities. All aspects of the SBES Program are administered by a single Company-

¹² Small Business Energy Saver and SmartPath are individual sets of measures that are part of a single and larger program referred to as Business Energy Saver beginning July 1, 2023.

authorized vendor. The SBES Program measures address major end-uses in lighting, refrigeration, process, and HVAC applications.

81. The SBES Program participants receive a free, no-obligation energy assessment of their facility followed by a recommendation of energy efficiency measures to be installed in their facility along with the projected energy savings, costs of all materials and installation, and up-front incentive amount from Duke Energy Kentucky. Upon receiving the results of the energy assessment, if the customer decides to move forward with the proposed energy efficiency project, the customer makes the final determination of which measures will be installed. The energy efficiency measure installation is then scheduled at a convenient time for the customer and the measures are installed by electrical subcontractors of the Duke Energy Kentucky-authorized vendor, Lime Energy¹³.

82. The SBES Program is designed as a pay-for-performance offering, meaning that the Duke Energy Kentucky-authorized vendor administering the SBES Program is compensated for kWh energy savings produced through the installation of energy efficiency measures.

83. The SBES Program is available to existing Duke Energy Kentucky non-residential customer accounts with an actual average annual electric demand of 180 kW or less. An individual business entity's participation is limited to no more than five premises on the Company's system during a calendar year.

84. For the July 2021 to June 2022 period, 68 SBES projects were completed in Kentucky, which was approximately the projected volume, and those 68 projects resulted in savings of over 3,347,000 kWh at the meter.

¹³ A Willdan Company

85. While LED lighting measures are expected to remain the primary driver of kWh savings in the Program for the foreseeable future, the Company has been actively working with the vendor Lime Energy to implement initiatives focused on increasing refrigeration, process, and HVAC measure adoption.

86. Duke Energy Kentucky will continue to evaluate the opportunity to add incentivized measures suitable for the small business market to the approved program which fit the direct install program model. The Company would ultimately like to ensure that small business customers are given the opportunity to maximize their energy savings by being offered a comprehensive energy efficiency project through the SBES Program wherever possible.

87. Moving forward, the Company will start offering SmartPath. This option is available to all eligible accounts. SmartPath is meant to build upon the traditional Small Business Energy Saver option by minimizing financial barriers to customer participation by allowing customers to finance and implement energy efficiency upgrades at little to no upfront costs. The program is implemented by a qualified Trade Ally network who complete energy assessments, develops proposals, and implements the turn key projects on the program's behalf. SmartPath offers customers financing through a partnership with the National Energy Improvement Fund (NEIF). All financing is between the customer and NEIF and is offered by the Trade Allies.

Program 12. Smart Saver® Performance

88. Duke Energy Kentucky received approval of this non-residential program: Smart Saver® Non-Residential Performance Incentive Program in Case No 2016-00289. The purpose of this program is to encourage the installation of high efficiency equipment

in new and existing non-residential establishments. The program will provide incentive payments to offset a portion of the higher cost of energy efficient installations that are not offered under either the Smart Saver[®] Non-Residential programs. The types of measures covered by the program include retro-commissioning and projects with some combination of unknown building conditions or system constraints, coupled with uncertain operating, occupancy, or production schedules. The specific type of measures is included in the contract with the Customer.

89. The Company did not market the program due to the high levels of participation in the Smart Saver[®] program. The result was no participation during the 2021-2022 filing period. Similarly, for 2022-2023, unless participation in other Non-Residential programs declines, the Company does not plan to offer the Performance Incentive program.

Program 13. Peak Time Rebate (PTR) Pilot Program

90. The 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 Peak Time Credits and describes CPEs to participants as Peak Day events.

91. The PTR pilot program launched on July 27, 2020, with the original 2-year pilot group, here referenced as Group 1. These initial participants have recently completed the 2-year pilot period and are now participating in year 3. The Company has requested to discontinue Group 1 in Case No. 2022-00251. In accordance with this request, no budget dollars are requested for the PTR pilot program for July 2023 through June 2024. For purposes of counting the number of events each year for Group 1, the Company designates

July 27, 2020, through July 31, 2021, as the first year of the pilot. The second year of the pilot is August 1, 2021, through July 31, 2022. August 1, 2022, starts the third year of the pilot for Group 1. As approved, the Company will continue the pilot until it receives the Commission’s order on its request to discontinue the program in Case No. 2022-00251. The Company enrolled a total of 899 participants in Group 1. As of August 18, 2022, 689 participants remain active in Group 1. Almost all attrition has been from customers moving.

92. Table 1 below displays the dates CPEs were implemented during year 2 of the pilot for Group 1. Table 1 also includes the dates for Groups 2 and 3. An update for these groups is provided below. The EM&V report for Group 1 was submitted to the Commission in Case No. 2022-00251.

Table 1: CPE Dates Since August 1, 2021, for All Pilot Groups

CPE Date	Group 1	Group 2	Group 3
8/10/2021	X		
8/11/2021	X		
8/12/2021	X		
8/23/2021	X		
8/24/2021	X		
8/25/2021	X		
8/26/2021	X		
8/27/2021	X		
1/26/2022	X		
6/14/2022	X	X	X
6/15/2022	X	X	X
6/21/2022		X	X
7/6/2022		X	X
7/20/2022		X	X
7/28/2022		X	X
8/3/2022	X	X	X

93. Starting in May 2022, the Company launched a PTC pilot extension approved by the Commission to test the incentive amount offered to participants to reduce load during

CPEs. This research extension is evaluating the difference in load impacts between a credit of \$0.60 / kWh reduced, Group 2, and a credit of \$1.20 / kWh reduced, Group 3. The EM&V report on the pilot extension will not be available until early 2023. However, the Company can provide participation results to date. Using identical methods for acquiring customers, 667 customers enrolled in the \$1.20 / kWh reduced offer, Group 3. In comparison, 679 customers enrolled in the \$0.60 / kWh reduced offer, Group 2. Current participation levels as of August 18, 2022, for Groups 2 and 3 are 659 and 658 respectively. The incentive amount did not appear to drastically impact the number of customers interested in enrolling in the pilot and participating throughout the summer.

94. In addition, the EM&V report to be filed in August 2023 will include results from a post-CPE participant survey. The focus of the survey will be to collect participant survey responses for comparison between the two incentive research groups. Resource Innovations fielded the surveys on August 10, 2022. EM&V results will be available in January 2023 and filed with the Commission in the Company's August 2023 DSM modifications filing.

95. As filed and approved, the incentive research extension to the pilot ended on September 30, 2022. The Company does not anticipate budget dollars needed for the incentive research extension in the July 2023 through June 2024 period.

96. The Company would like to note that if the Commission requires any portion of the pilot to continue into the next fiscal year (July 2023 or later), a corresponding budget will need to be requested by the Company.

Evaluation, Measurement, and Verification

97. The EM&V schedule for each program for program years 2022 – 2024 is available in Appendix E.

Calculation of the 2021 DSM Cost Recovery Mechanism, Rider DSMR

98. The reconciliation of the cost recovery mechanism (Rider DSMR) involves a comparison of projected versus actual program expenses, lost revenues, and shared savings, as well as inclusion of the prior year's reconciliation. The actual cost of residential and non-residential program expenditures, lost revenues, and shared savings for this reporting period was \$7.11 million. The projected level of program expenditures was \$7.73 million.

99. Lost revenues are computed using the applicable marginal block rate net of fuel costs and other variable costs times the estimated kWh savings for a three-year period from installation of the DSM measure. The estimate of kWh savings is based upon the results from any recently completed impact evaluation studies and actual customer participation. Lost revenues accumulate over a three-year period from the installation of each measure unless a general rate case has occurred. A notice of intent was filed on November 1, 2022, notifying the KYPSC of an impending general electric rate case.¹⁴ Therefore, lost revenues for the forecast timeframe (July 1, 2023 – June 30, 2024) have been set to zero in this Application.

100. With respect to shared savings, Duke Energy Kentucky utilized the shared incentive of 10 percent of the total savings net of the costs of measures, incentives to customers, marketing, impact evaluation, and administration. The savings are estimated by

¹⁴ See Case No. 2022-00372.

multiplying the program spending times the UCT value and then subtracting the program costs. Shared savings are only valued for installation of new DSM measures.

2021 DSM Riders

101. Duke Energy Kentucky submits the proposed adjustments to its Rider DSMR for both electric and gas programs (Appendices C and D respectively). The two Rider DSMRs are intended to recover projected July 1, 2023 – June 30, 2024¹⁵ (fiscal year 2023) program costs, lost revenues, and shared savings and to reconcile the actual DSM revenue requirement, as previously defined, to the revenue recovered under the riders for the period July 1, 2021, through June 30, 2022. The spreadsheet model contained in Appendix B has been used by the Company for a number of years in its Rider DSMR update filings.

102. Appendix B, page 1 of 7, tabulates the reconciliation of the DSM revenue requirement associated with the prior reconciliation, Duke Energy Kentucky's program costs, lost revenues, and shared savings between July 1, 2021, and June 30, 2022, and the revenues collected through the DSMR Riders over the same period. The true-up adjustment is based upon the difference between the actual DSM revenue requirement and the revenues collected during the period July 1, 2021, through June 30, 2022.

103. The DSM revenue requirement for the period July 1, 2021, through June 30, 2022, consists of: (1) program expenditures, lost revenues, and shared savings; and (2) amounts approved for recovery in the previous reconciliation filing.

104. Appendix B, page 6 of 7, contains the calculation of the 2021 – 2022 residential cost allocation factors for gas and electric, as approved in Case No. 2014-00388.

¹⁵ The projected July 1, 2023 – June 30, 2024, program expenditures used in this filing will be trued-up as part of the 2023 annual status report and will be described as 2023 throughout the document.

These factors are the Electric Percent of Total Percent of Sales, and the Gas Percent of Total Percent of Sales, and are calculated by program. The calculation includes the residential kWh and ccf sales for July 2021 – June 2022, along with the kWh and ccf savings achieved for July 2021 – June 2022. The factors are used in Appendix B, page 1 of 7, to calculate columns 5 and 6.

105. Appendix B, page 7 of 7, contains the calculation of the 2023–2024 residential cost allocation factors for gas and electric, as approved in Case No. 2014-00388. These factors are the Electric Percent of Total Percent of Sales, and the Gas Percent of Total Percent of Sales, and are calculated by program. The calculation includes the projected Rate RS kWh and ccf sales found in Appendix B, page 4 of 7, along with the projected kWh and ccf savings for July 2023 – June 2024. The factors are used in Appendix B, page 2 of 7, Residential Program Summary, columns G and H (Allocations of Costs).

106. Appendix B, page 5 of 7 contains the calculation of the 2022 Residential DSMR Riders. The calculation includes the reconciliation adjustments calculated in Appendix B, page 1 of 7 and the Residential DSM revenue requirement for 2022. The Projected Residential DSM revenue requirement for 2023 includes the costs associated with the Residential DSM programs: My Home Energy Report, Low Income Neighborhood, Low Income Services, Residential Energy Assessments, Residential Smart Saver[®], Power Manager[®], and any applicable net lost revenues and shared savings (Appendix B, pages 2 and 3 of 7). Total revenue requirements are incorporated along with the projected electric and gas volumes (Appendix B, page 4 of 7) in the calculation of the Residential DSM Rider.

107. Appendix B, page 5 of 7 also contains the calculation of the 2022 Commercial and Industrial DSM Rider. The calculation includes the reconciliation adjustments calculated

in Appendix B, page 1 of 7 and the DSM revenue requirement for 2022. The Commercial & Industrial DSM revenue requirement for 2023 includes the costs associated with the Commercial and Industrial DSM programs: Smart \$aver[®] Non-Residential, Small Business Energy Saver, Smart \$aver[®] Non-Residential Performance Incentive Program, and PowerShare[®] the associated net lost revenues and shared savings (Appendix B, pages 2 and 3 of 7). The 2022 Commercial and Industrial DSMR Rider is calculated in two parts. One part (Part A) is based upon the revenue requirements for Smart \$aver[®] Non-Residential, Small Business Energy Saver, Power Manager[®] for Business and PowerShare[®]. This part is only recovered from all non-residential rate classes except rate TT. The other part (Part B) is based upon the revenue requirements for the PowerShare[®] program and is recovered from all non-residential rate classes including rate TT.

108. Total revenue requirements are incorporated along with the projected electric volumes (Appendix B, page 4 of 7) in the calculation of the Commercial and Industrial DSM Rider.

109. The Company's proposed DSMR Riders, shown as Appendices C and D, replace the current DSMR Riders. The latest version of DSMR was issued on December 27, 2021, in Case No. 2021-00424. The electric DSMR rider, proposed to be effective with the first billing cycle in the month following Commission approval, is applicable to service provided under Duke Energy Kentucky's electric service tariffs as follows:

- Residential Electric Service provided under:
 - Rate RS, Residential Service, Sheet No. 30.
- Non-Residential Electric Service provided under:
 - Rate DS, Service at Secondary Distribution Voltage, Sheet No.

40;

- Rate DT, Time-of-Day Rate for Service at Distribution Voltage, Sheet No. 41;
- Rate EH, Optional Rate for Electric Space Heating, Sheet No. 42;
- Rate SP, Seasonal Sports, Sheet No. 43;
- Rate GS-FL, Optional Unmetered General Service Rate for Small Fixed Loads, Sheet No. 44;
- Rate DP, Service at Primary Distribution Voltage, Sheet No. 45;
- Rate RTP-M, Real Time Pricing – Market-Based Pricing, Sheet No. 59;
- Rate RTP, Experimental Real Time Pricing Program, Sheet No. 99; and,
- Rate TT, Service at Transmission Voltage, Sheet No. 51.

The gas DSM rider is applicable to service provided under the following residential gas service tariff:

- Rate RS, Residential Service, Sheet No. 30.

Calculation of the Residential Charge

110. The proposed residential charge per kWh for 2022 was calculated by dividing the sum of: (1) the reconciliation amount calculated in Appendix B, page 1 of 7; and (2) the DSM revenue requirement associated with the DSM programs projected for 2023, by the projected sales for calendar year 2023. DSM program costs for 2023 include the total

implementation costs plus program rebates, lost revenues, and shared savings. The calculations in support of the residential recovery mechanism are provided in Appendix B, page 5 of 7. Based on the updated rider amounts, the estimated annual cost for the average residential customer is a charge of approximately \$37.52 for electric, and a refund of about \$3.16 for gas.¹⁶

Calculation of the Non-Residential Charge

111. The proposed non-residential charge per kWh for 2022 was calculated in two parts. The first part (Part A), applicable to all non-residential rate classes except Rate TT, is calculated by dividing the sum of: (1) the reconciliation amount calculated in Appendix B, page 1 of 7; and (2) the DSM revenue requirement associated with the Smart Saver[®] Non-Residential, and Small Business Energy Saver, programs projected for 2023, by the respective projected sales for calendar year 2023. The second part (Part B), applicable to all non-residential rate classes including Rate TT, is calculated by dividing the DSM revenue requirement associated with the PowerShare[®] program projected for 2023, by total non-residential projected sales for calendar year 2023. DSM program cost for 2023 includes the total implementation costs plus program rebates, lost revenues, and shared savings.

112. The rider applicable to all non-residential rate classes except Rate TT is the sum of Part A and Part B. The rider applicable to all non-residential rate classes including Rate TT is only Part B.

Allocation of the DSM Revenue Requirement

113. As required by KRS 278.285(3), the DSM Cost Recovery Mechanism

¹⁶ The cost for average customer was calculated by using the 2023 forecasted sales of Appendix B page 4 divided by the number of residential electric or gas customers multiplied by the cost per kWh or cost per CCF respectively of Appendix B page 5. The costs are estimates and will vary by customer based on usage.

attributes the costs to be recovered to the respective class that benefits from the programs. The costs for the Power Manager program are fully allocated to the residential electric class, since this is the class benefiting from the implementation of the program. As required, qualifying industrial customers are permitted to “opt-out” of participation in, and payment for, Smart Saver[®] Non-Residential and Small Business Energy Saver. All of Duke Energy Kentucky’s Rate TT customers met the “opt-out” requirements prior to the implementation of the DSM riders in May 1996 and are not subject to this portion of the DSM Cost Recovery Mechanism (*i.e.*, Rider DSMR). However, all non-residential customers, including Rate TT customers, will be charged for the PowerShare[®] program.

WHEREFORE, Duke Energy Kentucky respectfully requests that the Commission review and approve this Application and Duke Energy Kentucky gives notice that the new rates will take effect 30 days from the date of this Application.

Respectfully submitted,

/s/Larisa M. Vaysman
Rocco O. D’Ascenzo (92796)
Deputy General Counsel
Larisa M. Vaysman (98944)
Senior Counsel
Duke Energy Kentucky, Inc.
139 East Fourth Street, 1303-Main
Cincinnati, Ohio 45202
(513) 287-4010
(513) 370-5720 (f)
Larisa.vaysman@duke-energy.com
Counsel for Duke Energy Kentucky, Inc.

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 November 15, 2022; 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.¹⁷

John G. Horne, II
The Office of the Attorney General
Utility Intervention and Rate Division
700 Capital Avenue, Ste 118
Frankfort, Kentucky 40601
John.Horne@ky.gov

Catrena Bowman-Thomas
Northern Kentucky Community Action Commission
P.O. Box 193
Covington, Kentucky 41012
cbowman-thomas@nkcac.org

Peter Nienaber
Northern Kentucky Legal Aid, Inc.
302 Greenup
Covington, Kentucky 41011
pnienaber@lablaw.org

/s/Larisa M. Vaysman
Larisa M. Vaysman

¹⁷*In the Matter of Electronic Emergency Docket Related to the Novel Coronavirus COVID-19, Order, Case No. 2020-00085 (Ky. P.S.C. July 22, 2021).*

Appendix A

Cost Effectiveness Test Results

Program Name	UCT	TRC	RIM	PCT
Residential Programs				
Low Income Neighborhood	0.99	0.99	0.59	1.56
Low Income Services	0.40	0.37	0.28	1.69
My Home Energy Report	2.84	2.84	0.81	
Residential Energy Assessments	1.96	1.88	0.60	49.42
Residential Smart \$aver®	1.40	1.01	0.55	2.70
Power Manager	3.17	4.52	3.17	
Peak Time Rebate Pilot Program	0.16	0.18	0.16	
Total	1.61	1.48	0.83	3.20
Non-Residential Programs				
Small Business Energy Saver	2.32	1.57	0.71	2.79
Smart \$aver® Non-Residential	1.90	2.85	0.64	6.08
PowerShare®	2.03	4.25	2.03	
Total	2.04	2.47	0.81	4.46
Overall Portfolio Total	1.86	1.98	0.82	3.93

Kentucky DSM Rider

Comparison of Revenue Requirement to Rider Recovery

Residential Programs	(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)		(10)	(11)	(12)	(13)	(14)
	Projected Program Costs 7/2021 to 6/2022 (A)	Projected Lost Revenues 7/2021 to 6/2022 (A)	Projected Shared Savings 7/2021 to 6/2022 (A)	Program Expenditures 7/2020 to 6/2021 (B)	Program Expenditures (C) Gas Electric		Shared Savings 7/2020 to 6/2021 (B)	Lost Revenues 7/2020 to 6/2021 (B)	Shared Savings 7/2020 to 6/2021 (B)	2021 Reconciliation Gas (D) Electric (E)		Reconciliation	Rider Collection (F) Gas Electric		(Over)/Under Gas (G)	Collection Electric (H)
Low Income Neighborhood	\$ 535,375	\$ 16,582	\$ (18,687)	\$ 104,995	\$ -	\$ 104,995	\$ -	\$ -	\$ (36)							
Low Income Services	\$ 674,774	\$ 13,372	\$ (23,004)	\$ 432,099	\$ 187,632	\$ 244,468	\$ 727	\$ (13,376)								
My Home Energy Report	\$ 92,858	\$ 59,707	\$ 4,925	\$ 50,491	\$ -	\$ 50,491	\$ 11,087	\$ 9,277								
Residential Energy Assessments	\$ 259,935	\$ 20,469	\$ 6,026	\$ 231,275	\$ -	\$ 231,275	\$ 88,419	\$ 22,158								
Residential Smart Saver®	\$ 1,009,464	\$ 138,531	\$ 39,241	\$ 934,741	\$ -	\$ 934,741	\$ 35,996	\$ 35,448								
Power Manager®	\$ 702,947	\$ -	\$ 113,199	\$ 549,189	\$ -	\$ 549,189	\$ 134,593	\$ 119,030								
Peak Time Rebate Pilot Program	\$ 197,549	\$ -	\$ -	\$ 243,802	\$ -	\$ 243,802	\$ -	\$ -								
Revenues collected													\$1,384,977	\$6,830,599		
Total	\$ 3,472,902	\$ 248,660	\$ 121,701	\$ 2,546,593	\$ 187,632	\$ 2,358,961	\$ 270,821	\$ 172,502	\$ 749,237	\$ 6,081,080	\$ 1,384,977	\$ 6,830,599	\$ (448,108)	\$ 2,052,765		

(A) Amounts identified in report filed in Case No. 2021-00313

(B) Actual program expenditures, lost revenues (for this period and from prior period DSM measure installations), and shared savings for the period July 1, 2021 through June 30, 2022.

(C) Allocation of program expenditures to gas and electric in accordance with the Commission's Order in Case No. 2014-00388.

(D) Recovery allowed in accordance with the Commission's Order in Case No. 2012-00085.

(E) Recovery allowed in accordance with the Commission's Order in Case No. 2012-00085.

(F) Revenues collected through the DSM Rider between July 1, 2021 and June 30, 2022.

(G) Column (5) + Column (9) - Column(11).

(H) Column (6) + Column (7) + Column (8) + Column (10) - Column(12).

Commercial Programs	(1)	(2)	(3)	(4)	(5)		(6)	(7)	(8)	(9)
	Projected Program Costs 7/2021 to 6/2022 (A)	Projected Lost Revenues 7/2021 to 6/2022 (A)	Projected Shared Savings 7/2021 to 6/2022 (A)	Program Expenditures 7/2020 to 6/2021 (B)	Lost Revenues 7/2020 to 6/2021 (B)		Shared Savings 7/2020 to 6/2021 (B)	2021 Reconciliation (C)	Rider Collection (D)	(Over)/Under Collection (E)
Small Business Energy Saver	\$ 827,238	\$ 40,699	\$ 105,787	\$ 854,019	\$ 259,488	\$ 109,862				
Smart Saver® Non-Residential	\$ 1,443,155	\$ 121,142	\$ 378,913	\$ 1,591,233	\$ 233,141	\$ 134,761				
Total	\$ 2,270,393	\$ 161,841	\$ 484,700	\$ 2,445,253	\$ 492,629	\$ 244,623	\$ (4,889,472)	\$ (1,934,669)	\$ 227,701	
PowerShare®	\$ 857,738	\$ -	\$ 107,428	\$ 848,940	\$ -	\$ 87,480	\$ (738,460)	\$ 334,692	\$ (136,731)	

(A) Amounts identified in report filed in Case No. 2021-00313

(B) Actual program expenditures, lost revenues (for this period and from prior period DSM measure installations), and shared savings for the period July 1, 2021 through June 30, 2022.

(C) Recovery allowed in accordance with the Commission's Order in Case No. 2012-00085.

(D) Revenues collected through the DSM Rider between July 1, 2021 and June 30, 2022.

(E) Column (4) + Column (5) + Column (6) + Column (7) - Column (8)

Residential Program Summary (A)

	Residential Program Summary (A)				Allocation of Costs (B)			Budget (Costs, Lost Revenues, & Shared Savings)		
	<u>Costs</u>	<u>Lost Revenues</u>	<u>Shared Savings</u>	<u>Total</u>	<u>Electric</u>	<u>Gas</u>	<u>Electric Costs</u>	<u>Electric</u>	<u>Gas Costs</u>	
Low Income Neighborhood	\$ 460,043	\$ -	\$ (21,893)	\$ 438,150	100.0%	0.0%	\$ 460,043	\$ 438,150	\$ -	
Low Income Services	\$ 645,514	\$ -	\$ (25,606)	\$ 619,908	73.5%	26.5%	\$ 474,315	\$ 448,709	\$ 171,199	
My Home Energy Report	\$ 70,814	\$ -	\$ 7,312	\$ 78,126	100.0%	0.0%	\$ 70,814	\$ 78,126	\$ -	
Residential Energy Assessments	\$ 243,191	\$ -	\$ 17,131	\$ 260,322	100.0%	0.0%	\$ 243,191	\$ 260,322	\$ -	
Residential Smart \$aver®	\$ 520,248	\$ -	\$ 39,668	\$ 559,916	100.0%	0.0%	\$ 520,248	\$ 559,916	\$ -	
Power Manager®	\$ 877,258	\$ -	\$ 116,786	\$ 994,044	100.0%	0.0%	\$ 877,258	\$ 994,044	\$ -	
Peak Time Rebate Pilot Program	\$ -	\$ -	\$ -	\$ -	100.0%	0.0%	\$ -	\$ -	\$ -	
Total Costs, Net Lost Revenues, Shared Savings	\$ 2,817,067	\$ -	\$ 133,398	\$ 2,950,466			\$ 2,645,868	\$ 2,779,267	\$ 171,199	

NonResidential Program Summary (A)

	NonResidential Program Summary (A)				Allocation of Costs (B)			Budget (Costs, Lost Revenues, & Shared Savings)		
	<u>Costs</u>	<u>Lost Revenues</u>	<u>Shared Savings</u>	<u>Total</u>	<u>Electric</u>	<u>Gas</u>	<u>Electric Costs</u>	<u>Electric</u>	<u>Gas</u>	
Business Energy Saver (C)	\$ 879,517	\$ -	\$ 126,001	\$ 1,005,518	100.0%	0.0%	\$ 879,517	\$ 1,005,518	NA	
Smart \$aver® Non-Residential (D)	\$ 2,090,665	\$ -	\$ 473,988	\$ 2,564,653	100.0%	0.0%	\$ 2,090,665	\$ 2,564,653	NA	
PowerShare®	\$ 1,063,284	\$ -	\$ 93,220	\$ 1,156,504	100.0%	0.0%	\$ 1,063,284	\$ 1,156,504	NA	
Total Costs, Net Lost Revenues, Shared Savings	\$ 4,033,467	\$ -	\$ 693,208	\$ 4,726,675			\$ 4,033,467	\$ 4,726,675	NA	
Total Program	\$ 6,850,534	\$ -	\$ 826,606	\$ 7,677,140						

(A) Costs, Lost Revenues (for this period and from prior period DSM measure installations), and Shared Savings for Year 10 of portfolio.

(B) Allocation of program expenditures to gas and electric in accordance with the Commission's Order in Case No. 2014-00388.

(C) Small Business Energy Saver and SmartPath are individual sets of measures that are part of a single and larger program referred to as Business Energy Saver beginning July 1, 2023.

(D) Smart \$aver® Non-Residential consists of the following technologies: Energy Efficient Food Service Projects, HVAC, Lighting, IT, Pumps and Motors, and Process Equipment.

Duke Energy Kentucky
Demand Side Management Cost Recovery Rider (DSMR)
Summary of Calculations for Programs

July 2023 to June 2024

	Program Costs (A)
<u>Electric Rider DSM</u>	
Residential Rate RS	\$ 2,779,267
Distribution Level Rates Part A DS, DP, DT, GS-FL, EH & SP	\$ 3,570,171
Transmission Level Rates & Distribution Level Rates Part B	\$ 1,156,504
<u>Gas Rider DSM</u>	
Residential Rate RS	\$ 171,199

(A) See Appendix B, page 2 of 7

Duke Energy Kentucky
Demand Side Management Cost Recovery Rider (DSMR)
Summary of Billing Determinants

Year July 2023 - June 2024

Projected Annual Electric Sales kWh

Rate RS 1,473,213,420

Rates DS, DP, DT,
GS-FL, EH, & SP 2,383,557,890

Rates DS, DP, DT,
GS-FL, EH, SP, & TT 2,607,935,890

Projected Annual Gas Sales CCF

Rate RS 62,655,685

Duke Energy Kentucky
Demand Side Management Cost Recovery Rider (DSMR)
Summary of Calculations

July 2021 to June 2022

Rate Schedule Riders	True-Up Amount (A)	Expected Program Costs (B)	Total DSM Revenue Requirements	Estimated Billing Determinants (C)	DSM Cost Recovery Rider (DSMR)
<u>Electric Rider DSM</u> Residential Rate RS	\$ 2,157,456	\$ 2,779,267	\$ 4,936,723	1,473,213,420 kWh	\$ 0.003351 \$/kWh
Distribution Level Rates Part A DS, DP, DT, GS-FL, EH & SP	\$ 239,314	\$ 3,570,171	\$ 3,809,485	2,383,557,890 kWh	\$ 0.001598 \$/kWh
Transmission Level Rates & Distribution Level Rates Part B TT	\$ (143,705)	\$ 1,156,504	\$ 1,012,799	2,607,935,890 kWh	\$ 0.000388 \$/kWh
Distribution Level Rates Total DS, DP, DT, GS-FL, EH & SP					\$ 0.001987 \$/kWh
<u>Gas Rider DSM</u> Residential Rate RS	\$ (470,962)	\$ 171,199	\$ (299,763)	62,655,685 CCF	\$ (0.004784) \$/CCF
Total Rider Recovery			\$ 9,459,244		

(A) (Over)/Under of Appendix B page 1 multiplied by the average three-month commercial paper rate for 2021 to include interest on over or under-recovery in accordance with the Commission's order in Case No. 95-312. Value is:

1.051000

(B) Appendix B, page 2.

(C) Appendix B, page 4.

Allocation Factors based on July 2021-
June 2022

Summary of Load Impacts July 2021 Through June 2022 (1)

	<u>kWh</u>	<u>% of Total Res Sales</u>	<u>ccf</u>	<u>% of Total Res Sales</u>	<u>Elec % of Total Sales</u>	<u>% of Gas % of Total Sales</u>
Residential Programs						
Low Income Neighborhood	101,731	0.0067%	-	0.0000%	100%	0%
Low Income Services	220,462	0.0146%	6,549	0.0112%	57%	43%
My Home Energy Report	1,733,860	0.1145%	-	0.0000%	100%	0%
Residential Energy Assessments	675,452	0.0446%	-	0.0000%	100%	0%
Residential Smart \$aver®	2,061,006	0.1361%	-	0.0000%	100%	0%
Power Manager®	-	0.0000%	-	0.0000%	100%	0%
Peak Time Rebate Pilot Program	-	0.0000%	-	0.0000%	100%	0%
Total Residential	4,792,511	0.3164%	6,549	0.0112%		
 Total Residential (Rate RS) Sales For July 2021 Through June 2022	 1,514,696,464	 100%	 58,620,591	 100%		

(1) Load Impacts Net of Free Riders at Meter

Summary of Load Impacts July 2023 Through June 2024 (1)

Allocation Factors Projected

Residential Programs	kWh	% of Total Res Sales	ccf	% of Total Res Sales	Elec % of Total % of	Gas % of Total % of
					Sales	Sales
Low Income Neighborhood	344,934	0.0234%	-	0.0000%	100%	0%
Low Income Services	255,140	0.0173%	3,917	0.0063%	73.5%	26.5%
My Home Energy Report	1,646,312	0.1117%	-	0.0000%	100%	0%
Residential Energy Assessments	735,753	0.0499%	-	0.0000%	100%	0%
Residential Smart \$aver®	1,526,852	0.1036%	-	0.0000%	100%	0%
Power Manager®	-	0.0000%	-	0.0000%	100%	0%
Total Residential	4,508,991	0.3061%	3,917	0.0063%		
Total Residential (Rate RS) Sales Projected	1,473,213,420	100%	62,655,685	100%		

(1)Load Impacts Net of Free Riders at Meter

Duke Energy Kentucky
1262 Cox Road
Erlanger, Kentucky 41018

KY.P.S.C. Gas No. 2
Thirty-~~Fourth-Fifth~~ Revised Sheet No. 62
Cancels and Supersedes
Thirty-~~Third-Fourth~~ Revised Sheet No. 62
Page 1 of 1

RIDER DSMR

DEMAND SIDE MANAGEMENT RATE

The Demand Side Management Rate (DSMR) shall be determined in accordance with the provisions of Rider DSM, Demand Side Management Cost Recovery Rider, Sheet No. 61 of this Tariff.

The DSMR to be applied to residential customer bills is ~~\$0.014803~~ (\$0.004784) per hundred cubic feet. (R)

A Home Energy Assistance Program (HEA) charge of \$0.30 will be applied monthly to residential customer bills.

The DSMR to be applied to non-residential service customer bills is \$0.00 per hundred cubic feet.

Issued by authority of an Order by the Kentucky Public Service

Commission dated ~~December 28, 2021~~ in Case No. ~~2022-00398~~ 2021-00190 .

Issued: ~~January-November 14, 15~~ 2022

Effective: ~~January 4, December 15~~, 2022

Issued by Amy B. Spiller, President /s/ Amy B. Spiller

Duke Energy Kentucky
1262 Cox Road
Erlanger, Kentucky 41018

KY.P.S.C. Gas No. 2
Thirty-Fifth Revised Sheet No. 62
Cancels and Supersedes
Thirty-Fourth Revised Sheet No. 62
Page 1 of 1

RIDER DSMR

DEMAND SIDE MANAGEMENT RATE

The Demand Side Management Rate (DSMR) shall be determined in accordance with the provisions of Rider DSM, Demand Side Management Cost Recovery Rider, Sheet No. 61 of this Tariff.

The DSMR to be applied to residential customer bills is (\$0.004784) per hundred cubic feet.

(R)

A Home Energy Assistance Program (HEA) charge of \$0.30 will be applied monthly to residential customer bills.

The DSMR to be applied to non-residential service customer bills is \$0.00 per hundred cubic feet.

Issued by authority of an Order by the Kentucky Public Service
Commission dated _____ in Case No. 2022-00398.

Issued: November 15 2022

Effective: December 15, 2022

Issued by Amy B. Spiller, President /s/ Amy B. Spiller

78
 Duke Energy Kentucky
 4580 Olympic Blvd.
 78
 Erlanger, KY 41018

KY.P.S.C. Electric No. 2
 Thirty-~~Second~~Third Revised Sheet No.

Cancels and Supersedes
 Thirty-~~First~~Second Revised Sheet No.

Page 1 of 1

RIDER DSMR

DEMAND SIDE MANAGEMENT RATE

The Demand Side Management Rate (DSMR) shall be determined in accordance with the provisions of Rider DSM, Demand Side Management Cost Recovery Rider, Sheet No. 75 of this Tariff.

The DSMR to be applied to residential customer bills is \$0.~~006975~~003351 per kilowatt-hour. (±R)

A Home Energy Assistance Program (HEA) charge of \$0.30 will be applied monthly to residential customer bills.

The DSMR to be applied to non-residential distribution service customer bills is ~~(\$0.000718)~~\$0.001987 per kilowatt-hour. (I)

The DSMR to be applied for transmission service customer bills is \$0.~~000066~~000388 per kilowatt-hour. (RI)

Issued by authority of an Order by the Kentucky Public Service
 Commission dated ~~December 27, 2021~~ in Case No. ~~2022-00398~~2021-00424.

Issued: ~~December 30~~November 15, 2021~~2022~~
 Effective: ~~January 4~~December 15, 2022
 Issued by Amy B. Spiller, President /s/ Amy B. Spiller

Duke Energy Kentucky
4580 Olympic Blvd.
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
Thirty-Third Revised Sheet No. 78
Cancels and Supersedes
Thirty-Second Revised Sheet No. 78
Page 1 of 1

RIDER DSMR

DEMAND SIDE MANAGEMENT RATE

The Demand Side Management Rate (DSMR) shall be determined in accordance with the provisions of Rider DSM, Demand Side Management Cost Recovery Rider, Sheet No. 75 of this Tariff.

The DSMR to be applied to residential customer bills is \$0.003351 per kilowatt-hour. (R)

A Home Energy Assistance Program (HEA) charge of \$0.30 will be applied monthly to residential customer bills.

The DSMR to be applied to non-residential distribution service customer bills is \$0.001987 per kilowatt-hour. (I)

The DSMR to be applied for transmission service customer bills is \$0.000388 per kilowatt-hour. (I)

Issued by authority of an Order by the Kentucky Public Service
Commission dated ____ in Case No. 2022-00398.

Issued: November 15, 2022

Effective: December 15, 2022

Issued by Amy B. Spiller, President /s/ Amy B. Spiller

Status Update for Duke Energy Kentucky Energy Efficiency and Demand Response Programs; 2022-2024

Planned: Evaluation, Measurement and Verification Activities and Evaluation Reports

Residential Customer Programs	Program/Measure	Last Evaluation completion	Next Evaluation ==>	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	Q4 2024
Low Income Neighborhood	Neighborhood	2/27/2015		M&V	M&V	M&V	Report*								
Low Income Services	Refrigerator Replace		TBD												
	Weatherization/Payment Plus	7/31/2013													
My Home Energy Report	MyHER	2/1/2014					M&V	M&V	Report						
Residential Energy Assessments	HEHC	8/7/2020						M&V	M&V	M&V	M&V	M&V	M&V	Report	
Residential Smart Saver®	HVAC	9/21/2015		M&V	M&V	M&V	Report								
	Specialty Bulbs/Online Savings Store	6/22/2015		M&V	M&V	Report									
	Water Measures	9/25/2020												M&V	M&V
	Multi-Family	12/26/2019						M&V	M&V	M&V	M&V	M&V	Report*		
Power Manager		8/13/2020		M&V	M&V	M&V	M&V	Report							
Peak Time Rebate Pilot	Peak Time Rebate	3/29/2022		Report	M&V	M&V	Report								
Non-Residential Customer Programs															
Non-Residential Customer Programs	Program/Measure			Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023				
Small Business Energy Saver		4/7/2017		M&V	M&V	Report									
Smart Saver® Non-Res, Custom		3/1/2016, 1/18/22		Report											
Smart Saver® Non-Res, Prescriptive		7/24/2019						M&V	M&V	M&V	M&V	Report			
PowerShare		2/14/2017						M&V	M&V	Report					
Pay For Performance		N/A	TBD												

1 Future Evaluation Report dates are projections only. Actual report dates will vary depending on program participation, time to achieve a significant sample and the time needed to collect adequate data.

* Postponed timing due to pandemic program suspension

LEGEND	
M&V	Data collection (surveys, interviews, onsite visits, billing data) and analysis
Report	Evaluation Report