

**BEFORE THE  
KENTUCKY PUBLIC SERVICE COMMISSION**

In The Matter Of:	)	
	)	
THE ANNUAL COST RECOVERY FILING	)	Case No. 2015-00368
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 (TWELFTH REVISED SHEET NO. 62) AND ELECTRIC RIDER DSMR (THIRTEENTH REVISED 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,<sup>1</sup> and hereby files its Annual Status Report, Adjustment of the DSM Cost Recovery Mechanism, and Amended Tariff Sheets for Gas Rider DSMR and Electric Rider DSMR (Application).

1. Pursuant to 807 KAR 5:001, Section 14(2), Duke Energy Kentucky is a Kentucky corporation that was originally incorporated on March 20, 1901, is in good standing and, as a public utility as that term is defined in KRS 278.010(3), is subject to the Commission's jurisdiction. The Company's articles of incorporation are on file with the Commission in Case No. 2013-00097 and are incorporated by reference herein pursuant to 807 KAR 5:001, Section 14(2). Duke Energy Kentucky is engaged in the business of furnishing natural gas and electric

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<sup>1</sup> 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 and May 7, 2015 in Case No. 2014-00388.

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 Envision Center, 4580 Olympic Boulevard, Erlanger, Kentucky 41018. Duke Energy Kentucky's email address is KYfilings@duke-energy.com.

3. On November 5, 2015, the Residential Collaborative<sup>2</sup> and the Commercial & Industrial Collaborative<sup>3</sup> met to review the Application. With the exception of the Office of the Kentucky Attorney General, which reserves the right to reflect its opinion at a later date, the members of both the Residential Collaborative and the Commercial & Industrial Collaborative agreed with this Application. Unless otherwise stated, the Residential Collaborative and the Commercial & Industrial Collaborative are jointly referred to herein as "Collaborative."

4. In addition to filing the annual status report in this Application, Duke Energy Kentucky and the Collaborative respectfully request a modification of Duke Energy Kentucky's DSM Riders to reflect the reconciliation of planned and actual expenditures, lost revenues, and shared savings. For this filing, Duke Energy Kentucky will be using results of recent impact evaluation studies to provide estimates of lost revenues and shared savings.

5. Pursuant to the Commission's Order dated June 29, 2012, in Case No. 2012-00085, the Company's portfolio of programs in effect during the fiscal year covered by this Application

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<sup>2</sup> The Residential Collaborative members in attendance were: Angela Goad (Office of the Kentucky Attorney General - by telephone), Nina Creech (People Working Cooperatively), Allyn Reinecke (Campbell County - by telephone), Laura Pleiman (Boone County), Pete Nienaber (Legal Aid of the Bluegrass), Pam Proctor (Kentucky NEED Project), Bill Lunsford (Department of Energy Development and Independence), Jeremy Faust (Greater Cincinnati Energy Alliance), Ashley Pate (Northern Kentucky Community Action), Jennifer Wiley (Brighton Center), and Tim Duff and Trisha Haemmerle (Duke Energy).

<sup>3</sup> The Commercial & Industrial Collaborative members in attendance were: Angela Goad (Office of the Kentucky Attorney General - by telephone), Nina Creech (People Working Cooperatively), Pam Proctor (Kentucky NEED Project), Bill Lunsford (Department of Energy Development and Independence), Allyn Reinecke (Campbell County - by telephone), Chris Baker (Kenton County Schools) and Tim Duff and Trisha Haemmerle (Duke Energy).

were approved through December 31, 2016. As a result, this Application serves as the annual true-up of the fiscal year ending June 30, 2015 of programs.

### **Background**

6. The Company's offering of DSM programs dates back close to two decades.<sup>4</sup> 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.<sup>5</sup> The portfolio of programs in place during the fiscal year ending June 30, 2015 and that is the subject of this Application was approved by the Commission's June 29, 2012 Order in Case No. 2012-00085. That Order approved continuation of all programs through December 31, 2016. In Duke Energy Kentucky's 2012 DSM cost recovery Order, Case No. 2012-00495, the Commission ordered that any new program evaluations, program expansions or new programs be filed by August 15<sup>th</sup> each year. Duke Energy Kentucky has been filing this amendment filing since 2013<sup>6</sup> to enhance the DSM portfolio and react to market changes

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<sup>4</sup> 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.

<sup>5</sup> See e.g. December 17, 2002, the Commission issued its Order in Case No. 2002-00358 approving Duke Energy Kentucky's plan to continue the following DSM programs: Residential Conservation and Energy Education, Residential Home Energy House Call, and Residential Comprehensive Energy Education for a three-year period ending December 31, 2005; to continue to fund the expansion and improvement of existing programs and the development of new programs; and to implement a revised low-income home energy assistance program as a pilot through May 31, 2004. These programs were extended through 2009 by the April 4, 2006 Order in Case No. 2005-00402. The Commission, in its November 30, 2003 Order in Case No. 2003-00367, also approved the implementation of Power Manager, a residential direct load control program, through 2007. The Commission's April 4, 2006 Order in Case No. 2005-00402 authorized the Personalized Energy Report (PER) program as a pilot program. The Commission's May 14, 2008, Order in Case No. 2007-00369 approved the Company's Power Manager program through 2012 and approved the PER program for recovery of lost revenues and shared savings.

<sup>6</sup> The Commission's December 19, 2013 Order in Case No. 2013-00313 approved residential Heat Pump Water Heaters, Energy Efficiency Pool Pumps, Single Family and Multi-Family Water Measures, and updated the measures available within the Smart Saver® Prescriptive Program. The Commission's January 28, 2015 Order in Case No. 2014-00280 approved adding additional lighting options to the Smart Saver® Residential Program, offer the My Home Energy Report as an online channel, and approved a new Non-Residential Small Business Energy Saver program. Duke Energy Kentucky also filed for additional program changes in pending Case No. 2015-00277.

and customer needs. This filing has given Duke Energy Kentucky the opportunity to refresh the portfolio on an annual basis.

7. Like the Company's prior annual DSM filings, this Application specifically addresses the requirements in prior Commission Orders<sup>7</sup> 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, 2014 through June 30, 2015.

8. In this Application, Duke Energy Kentucky also requests an Order approving the proposed adjustments to the DSM riders and the revised 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 approved by 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,

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<sup>7</sup> 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 and May 7, 2015 Order in Case No. 2014-00388.

costs for consultants, employees and administrative expenses.

12. **“Lost Revenues”** shall have the meaning in Section IV of the Principles of Agreement, Demand Side Management, Exhibit 1 to the Application in Case No. 95-312, dated July 15, 1995, (hereinafter referred to as Principles of Agreement, Demand Side Management:

13. **“Shareholder Incentive”** shall have the meaning in Section IV of the Principles of Agreement, Demand Side Management.

14. **“DSM Cost Recovery Mechanism”** shall have the meaning in Section IV of the Principles of Agreement, Demand Side Management.

15. **“Voucher”** shall mean the credit receipt the customer receives from a social service agency. The voucher can be used by the customer as a partial payment toward the utility bill.

#### **Status of Prior Portfolio of DSM Programs**

16. Through June 30, 2015, 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<sup>®</sup> Energy Efficient Residences Program
- Program 2: Residential Smart Saver<sup>®</sup> Energy Efficient Products Program<sup>8</sup>
- Program 3: Residential Energy Assessments Program (Residential Home Energy House Call)
- Program 4: Energy Efficiency Education Program for Schools Program
- Program 5: Low Income Services Program
- Program 6: Residential Direct Load Control- Power Manager Program

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<sup>8</sup> The Smart Saver<sup>®</sup> 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.<sup>®</sup> For ease of administration and communication with customers the two measures have been divided into separate tariffs even though they are a single program.

- Program 7: Smart Saver<sup>®</sup> Prescriptive Program
- Program 8: Smart Saver<sup>®</sup> Custom Program
- Program 9: Smart Saver<sup>®</sup> Energy Assessments Program
- Program 10: Peak Load Manager (Rider PLM) - PowerShare<sup>®</sup> Program
- Program 11: Appliance Recycling Program
- Program 12: Low Income Neighborhood Program
- Program 13: My Home Energy Report Program
- Program 14: Small Business Energy Saver Program

17. This section of the Application provides a brief description of each current program, a review of the current status of each program, and information on any changes that may have been made to the programs. The following table provides a brief summary of the load impacts achieved and level of participation obtained during this filing period.

1 Summary of Load Impacts July 2014 Through June 2015*			
	Incremental Participation	kWh	kW
<b>Residential Programs</b>			
Appliance Recycling Program	779	316,032	35
Energy Efficiency Education Program for Schools	2,213	577,006	166
Low Income Neighborhood	718	557,078	147
Low Income Services	243	351,265	89
My Home Energy Report	2 53,267	10,869,228	3,207
Residential Energy Assessments	577	447,175	88
Residential Smart Saver®	385,099	8,639,278	1,243
Power Manager	3 10,719	-	11,033
<b>Total Residential</b>	<b>453,615</b>	<b>21,757,061</b>	<b>16,007</b>
<b>Non-Residential Programs</b>			
	Incremental Participation	kWh	kW
Smart Saver® Prescriptive - Energy Star Food Service Products	803	519,321	19
Smart Saver® Prescriptive - HVAC	101,560	910,166	247
Smart Saver® Prescriptive - Lighting	37,112	4,435,230	771
Smart Saver® Prescriptive - Motors/Pumps/VFD	572	364,758	34
Smart Saver® Prescriptive - Process Equipment	125	55,054	13
Smart Saver® Custom	1,793	5,071,530	638
Small Business Energy Saver	592,308	528,145	119
Power Share®	4 22	-	21,787
<b>Total Non-Residential</b>	<b>734,295</b>	<b>11,884,203</b>	<b>23,630</b>
<b>Total</b>	<b>1,187,910</b>	<b>33,641,264</b>	<b>39,637</b>
1 - Impacts are net of freeriders, without losses and reflected at the customer meter point. 2 - Actual participants and impact capability shown as of the June 2015 mailings. 3 - Cumulative number of controlled devices installed. Impacts reflect average capability over the contract period. 4 - Impacts reflect average capability over the contract period.			

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

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

19. The purpose of the Residential Smart Saver® Energy Efficient Residences portion of the Residential Smart Saver® Program is to offer customers a variety of energy conservation measures designed to increase energy efficiency in their homes. The program utilizes a network of contractors to encourage the installation of high efficiency equipment and the implementation of energy efficient home improvements. Equipment and services to be incentivized include:

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

20. The Residential Smart Saver<sup>®</sup> Program received approval in the Commission's June 7, 2011 Order in Case No. 2010-00445. Duke Energy Kentucky launched the Residential Smart Saver<sup>®</sup> Program into the market on August 15, 2011 but only offered incentives for the installation of the high efficiency AC and HP systems due to an ongoing vendor selection process. Once the vendor selection process and subsequent transition completed in April 2012, the remaining incentives for the additional products and services were launched into the market and offered to residential Kentucky customers. Note, duct insulation received Commission approval June 29, 2012 and was subsequently added to the program. Heat pump water heaters were approved in December 23, 2013 Order in Case No. 2013-00395, and subsequently launched into the market during third quarter of 2014.

21. The Company has filed to implement modifications to the Program in Case No. 2015-00277. These modifications include adding a tier approach to the level of incentives for AC and HP systems based on the efficiency rating of the system, adding two new optional measures, and a referral component for eligible trade allies as a new delivery channel to enhance customer experience. The two new measures include a smart thermostat and quality installation. This tier approach promotes higher efficiency equipment and allows customers to add on additional services at the time of installation. The referral component of the Program is a



new delivery channel service that simplifies the customer's energy decision-making purchases.

22. Duke Energy Kentucky currently contracts with GoodCents to administer this program. GoodCents provides services including application processing, data reporting, 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<sup>®</sup> services are jointly implemented with the Duke Energy Indiana, Duke Energy Ohio, and Duke Energy Carolinas territories to reduce administrative costs and leverage promotion. GoodCents has experience in delivering programs similar to this and are able to leverage an office in the Midwest to support Duke Energy programs in this region.

23. The purpose of the Residential Smart Saver<sup>®</sup> Energy Efficient Products portion of the Residential Smart Saver<sup>®</sup> 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 Compact Fluorescent Lamps (CFLs) program is designed to increase the energy efficiency of residential customers by offering customers CFLs to install in high-use fixtures within their homes. The CFL offer is available through an on-demand ordering platform, enabling customers to request CFLs and have them shipped directly to their homes.

25. Customers have the flexibility to order and track their shipments through three separate channels; telephone, Duke Energy web site and Online Services.

- Telephone
  - Customers may call a toll free number to access the IVR (Interactive Voice Response) system which provides prompts to facilitate the ordering process. Both English and Spanish speaking customers may

easily validate their account, determining their eligibility and place their CFL order over the phone.

- Duke Energy Web Site
  - Customers can go online to complete the ordering process. Eligibility rules and frequently asked questions are available for reference.
- Online Services (OLS)
  - Customers who participate in the Online Services program are encouraged to order their CFLs through the Duke Energy Kentucky web site, if they are eligible. New OLS customer registrations and eligible customers may be intercepted upon logging in to make them aware of the program.

26. The benefits of providing these three distinct channels include; improved customer experience, advanced inventory management, simplified program coordination, enhanced reporting, increased program participation and reduced program costs.

Duke Energy Kentucky is currently reviewing the benefits of changing the free bulb technology from the currently used CFL to an LED (light emitting diode) bulb.

27. The Residential Smart Saver<sup>®</sup> 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 CFLs and Light Emitting Diode Lamps (LEDs) including: Reflectors (indoor and outdoor), Globes, Candelabra, 3 ways, Dimmables and A-line type bulbs. The incentive levels vary by bulb type and the customer pays the difference, including shipping. The maximum number of incentivized bulbs available for each household

varies by category but customers may choose to order more bulbs without the Duke Energy incentive. Customers can check eligibility and shop for specialty bulbs through the Company Web Site and Online Services (OLS). The Savings Store is managed by a third party vendor, Energy Federation Inc. (EFI). EFI is responsible for maintaining the Savings Store and fulfilling all customer purchases. The Saving Store landing page provides information about the store, lighting products, account information and order history. Support features include a toll free number, package tracking and frequently asked questions.

28. An educational tool is available to help assist customers with their purchasing decisions. The interactive tool provides information on bulb types, application types, savings calculator, lighting benefits, understanding watts versus lumens and recycling/safety tips.

29. Duke Energy Kentucky has recently filed to add the following technologies to the online Savings Store: LED Decorative bulbs, LED Outdoor Reflector bulbs, LED Globes and LED 3 way bulbs.

30. The Multifamily Energy Efficiency Program is an extension of the Residential Smart \$aver<sup>®</sup> lighting program and allows Duke Energy Kentucky to utilize an alternative delivery channel which targets multifamily apartment complexes. The measures are directly installed in permanent fixtures by the program vendor, Franklin Energy, or the property management staff via the DIY (Do It Yourself) option. The target audience for the program is property managers who have properties that consist of four or more units and are served on an individually metered residential rate schedule. In order to receive water measures, apartments must have electric water heating. Properties that have already been served by the Property Manager CFL program are only eligible for water measures.

31. The Program helps property managers upgrade lighting with energy efficient 13

watt CFLs and also 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 is based on apartment size. Franklin Energy may install up to 12 bulbs in a one bedroom apartment, up to 15 bulbs in a two bedroom apartment and up to 18 bulbs in a three bedroom apartment. These measures assist with reducing maintenance costs while improving tenant satisfaction by lowering energy bills.

32. 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 web site for Property Managers to learn more about the program and request applications to participate in the program.

33. 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 insulating pipe tape to install within their homes. The SEWK offer is available through a business reply card (BRC), enabling customers to request a kit and have it shipped directly to their homes.

34. In order to be eligible, customers must have a water heater powered by electricity, have not already participated in SEWK or other Duke Energy Kentucky programs offering low flow water devices and be the resident of a single family home. Eligible customers, who accept the BRC offer, will receive a kit free of charge. There are three kit sizes to accommodate homes with 1, 2 or 3 full bathrooms. The kits contain varying quantities of shower heads, bath aerators, kitchen aerators and insulated pipe tape.

35. 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 DIY kit.

### **Program 3: Residential Energy Assessments Program**

36. 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 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 home with at least 4 months usage history and have 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 kit containing a variety of energy saving measures such as 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 savings 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 thermostat to better manage heating and cooling usage
- Replacing older equipment
- Adding insulation and sealing the home

37. For the period of July 1, 2014 through June 30, 2015, a total of 577 audits were completed in Kentucky. During this filing period the primary communication channel included electronic mail and direct mail brochures that were mailed to customers in an effort to acquire the proposed participation for this program process. However, additional channels have been included to offer online awareness via the Duke Energy website as well as through online services.

**Program 4: Energy Efficiency Education Program for Schools Program**

38. In 2013, the Energy Education Program for Schools began offering two educational interactions: 1) an in depth classroom curriculum through the National Energy Education Development (NEED) project; and 2) a live theatrical production by The National Theatre for Children (NTC).

39. The NEED project provides educators with an engaging and exciting energy curriculum for students in classrooms. The NEED project is designed to teach energy concepts of force, motion, light, sound, heat, electricity, magnetism, energy transformations, and energy efficiency. Energy curriculum, based upon State standards, and hands-on kits, provided to teachers for use in their classrooms, emphasize science inquiry and application of energy knowledge. Energy Workshops are designed to provide educators (teaching grades K-12) with the content knowledge and process skills to return to their classrooms and communities, energize and educate their students, provide outreach to families and conduct energy education programs

that assist families in implementing behavioral changes that reduce energy consumption. Teachers can utilize the kits and curriculum over many years. In addition, Duke Energy Home Energy Efficiency Kits are delivered to the classrooms to teach students and families to install energy efficiency measures and to record energy savings.

40. Kentucky NEED manages the overall implementation for the Duke Energy Kentucky program and works with individual schools, teachers, and students to gain the maximum impact for the program. Kentucky NEED has received numerous accolades for its support of energy efficiency and conservation in local schools, for its support of Energy Star's Change the World Campaign, and for the integration of a student/family approach to conservation education. To support, recognize and encourage student energy leadership, Kentucky NEED hosts the annual Kentucky NEED Youth Awards for Energy Achievement in Washington, D.C., honoring teams of students who have successfully planned and facilitated energy projects in their schools and communities. NEED held a teacher workshop in fall 2014 and Spring 2015 with almost 40 teachers participating in each of the trainings.

41. To document the energy savings associated with the program, a home survey is provided for use in the classroom and with the Saving Energy at Home and School Kit, which serves as a companion to the Home Energy Efficiency Kits delivered to families in the Duke Energy Kentucky service area. Data collected from the home survey is collected and provided to Duke Energy annually. The data shows that the measures included in the Home Energy Efficiency Kits are being installed and utilized. The Home Energy Efficiency Kits include CFL bulbs, energy efficient shower heads, faucet aerators, water temperature gauge, outlet insulation pads, and a flow meter bag. During the 2014-15 school year, 86 kits were distributed to Duke Energy qualified customers.

42. The live theatrical production category is presented by The NTC and is designed to educate students about energy efficiency via the theatrical production and participating students are eligible to receive a home energy efficiency starter kit that will be sent to the students' homes. This is the same kit offered through NEED. The program provides principals and teachers with innovative curricula that educate students about energy, electricity, ways energy is wasted and how to use resources wisely. Education materials focus on concepts such as energy, renewable fuels, and energy conservation through classroom and take home assignments, enhanced with a live 25 minute theatrical production by two professional actors. NTC performances target students in grades K-8. During the school year 2014-2015, NTC performed at 74 Kentucky schools, gave 107 performances and delivered over 2,600 kits to Duke Energy Kentucky qualified customers.

43. Duke Energy Kentucky requested to continue the live, theatrical production with NTC as part of the approved portfolio along with discontinuing the annual evaluation of the program in Case No. 2015-00277.

## **Program 5: Low Income Services Program**

### ***Weatherization***

44. The Weatherization program portion of Low Income Services is designed to help the Company's income-qualified customers reduce their energy consumption and lower their energy cost. This program specifically focuses on LIHEAP (Low Income Home Energy Assistance Program) customers that meet the income qualification level (*i.e.*, income below 150% of the federal poverty level). This program uses the LIHEAP intake process as well as other community outreach initiatives to improve participation. The program provides direct installation of weatherization and energy-efficiency measures and educates Duke Energy



Kentucky’s income-qualified 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:

<b>Fiscal Year</b>	<b>Customers Served</b>
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

45. 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.” The tiering process allows the agencies to be cost effective while spending the limited budgets where there is the most significant potential for savings. For each home in Tier 2, 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:

	<b>Therm / square foot</b>	<b>kWh use/ square foot</b>	<b>Investment Allowed</b>
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**

46. Tier 1 services are provided to customers by Duke Energy Kentucky, through its subcontractors. 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 last year's usage (weather adjusted) 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;
- Pipe Wrap;
- Cleaning of refrigerator coils;
- Cleaning of dryer vents;
- Compact Fluorescent Light (CFL) 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**

47. 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 last year of usage of Duke Energy Kentucky supplied fuels.

Tier Two services are as follows:

- 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 utility 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 as long as 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.

48. 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 in excess of 1,000 kWh per year.

Refrigerators tested and replaced:

<b>Year</b>	<b>Refrigerators Tested</b>	<b>Refrigerators Replaced</b>
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

The existing refrigerator being replaced is removed from the home and destroyed 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.

***Payment Plus***

49. 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 includes both the early participants and new participants each year.

The program is made up of 3 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 aspects 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 of the requirements are completed, a household could receive up to a total of \$500 towards their arrearage. This allows for approximately 100 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.

50. This program is offered over six winter months per year. Customers are tracked and the energy savings are evaluated to determine if customer energy consumption dropped, and

whether changes in bill paying habits have occurred. Previous participants' energy savings have been evaluated and compared to a control group of customers with similar arrearages and incomes. This analysis is the longest-running impact and process evaluation in the country, looking at both energy savings and arrearages from a single program. From this analysis, there is long-term evidence that the program is effective at reducing energy usage and arrearages.

51. Duke Energy Kentucky utilizes a community action agency to recruit customers to participate in the Payment Plus program. Using a list of potential customers provided by Duke Energy Kentucky, the agency removes any customer who has participated in the program in years past and sends a letter describing the program to the remaining 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 is asked to contact the agency to register for a course. Make-up courses are also offered to those customers who may have missed their initial scheduled time.

52. For the filing period beginning in the Fall of 2014, 83 participants attended energy education counseling, 83 participants attended budget counseling and 54 participants' homes have been weatherized.

#### **Program 6: Residential Direct Load Control - Power Manager Program**

53. 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.

54. Customers participating in this program receive a one-time enrollment incentive and a bill credit for each Power Manager event. Customers, who select to have their air conditioner cycled to achieve a 1 kilowatt (kW) reduction in load, receive a \$25 credit at installation. Customers selecting to have their air conditioner cycled to achieve a 1.5 kW load reduction, receive a \$35 credit at installation. For both options, an incentive credit is applied to participants' bills for each cycling event. The credit varies based on marginal costs and the length of each event. Participants receive a minimum seasonal total of \$5 or \$8 in event incentives (for the 1.0 kW or 1.5 kW load reduction respectively). A settle-up credit for the balance of actual event credits to the seasonal minimum is applied following the end of the event season, if warranted.

55. 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 safe guards 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.

56. The Company continued promotion of Power Manager during the past fiscal year via email to customers who had opted to receive communications from the Company, and outbound telemarketing. With telemarketing bringing in the vast majority of enrollments, there were over 280 new Power Manager switches installed in the past fiscal year. There were 10,719 air conditioners on the program as of the end of June, 2015; a net increase of 266 during the past year.

57. Ongoing measurement and verification (M&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.

58. There were three Power Manager test events that took place on April 21<sup>st</sup> of 2015 from 1:30 PM to 2:00 PM, Wednesday May 27<sup>th</sup> in 2015 from 10:30 AM to 11:00 AM and August 28<sup>th</sup> 2014 from 4:00 to 5:00 PM. The primary reason for these test events was to verify functionality of the switches and program changes made to the “head-end” system that launches Power Manager events. Due to cooler weather and lower energy prices in the summer of 2014, there were no economic cycling events in 2014 through June of 2015.

#### **Program 7: Smart Saver<sup>®</sup> Prescriptive Program<sup>9</sup>**

59. The Smart Saver<sup>®</sup> Non-residential Prescriptive 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 in order 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.

60. Commercial and industrial consumers can have significant energy consumption, but may lack knowledge and understanding of the benefits of high efficiency alternatives. Duke

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<sup>9</sup> All measure additions and removals mentioned for Smart Saver<sup>®</sup> Prescriptive were filed in Case No. 2015-00277



Energy Kentucky's program provides financial incentives to customers to reduce the cost of high efficiency equipment. This allows customers to realize a quicker return on investment. The savings on utility bills, allows customers to reinvest in their business. The Smart Saver® program also increases market demand for high efficiency equipment. Because of the increased demand, dealers and distributors will stock and provide high efficient alternatives as they see increased demand for the products. Higher demand can result in lower prices.

61. The program promotes prescriptive incentives for the following technologies – lighting, HVAC, pumps, variable frequency drives, food services, process equipment, and IT measures. The eligible measures, incentives and requirements for both equipment and customer eligibility are listed in the applications posted on Duke Energy's Business and Large Business websites for each technology type.

62. Getting the Trade Allies (TA) to support the program has proven to be the most effective way to promote the program to our business customers. The Smart Saver outreach team provides training and technical support to the Trade Ally 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.

63. Duke Energy launched on an online application portal for customers and trade allies. The portal allows customers and trade allies to submit applications and review the status of applications and payments. The portal is currently being tested by select customers and trade allies with a full launch scheduled for 2016.

64. Duke Energy continues to offer the Energy Efficiency Store on the Duke Energy website. The site provides customers the opportunity to take advantage of a limited number of incentive measures by purchasing qualified products from an on-line store and receiving an instant incentive that reduces the purchase price of the product. The incentives offered in the store are consistent with current program incentive levels.

65. Duke Energy continues to evaluate additional measures for the Prescriptive portfolio in order to offer customers additional options for energy savings. Existing measures are also modified to take into consideration changes to market conditions and energy efficiency standards.

66. The following measure additions were identified for the Food Service technology category:

- Addition of Floating Head Pressure Controls to take advantage of free cooling/external air temperatures for grocery store refrigeration;
- Addition of Floating Suction refrigeration controls to reduce evaporating temperature based on refrigeration load; and
- Addition of Zero Energy Doors containing Argon gas to prevent fog for grocery stores without heated doors.

67. The following food service measures were modified to take into consideration changes in market conditions and energy efficiency standards: ovens, fryers, dishwashers, and icemakers. Energy Star Vending Machines are removed from the portfolio. Most machines are leased rather than owned. Duke Energy Kentucky continues to offer incentives for vending equipment controllers which are a plug and play device that reduces the energy consumption of the vending machines.

68. Duke Energy is revising the format of the incentives for chillers as well as updating the minimum requirements based on current ASHRAE minimum efficiency requirements. Similar updates are included for rooftop/unitary air conditioning and heat pumps systems, mini-split systems, and PTAC units. The Smart \$aver program will introduce incentives for three new HVAC technology measures:

- Automated Rooftop Controls including VFDs, economizers, CO2 sensors, fault detection, diagnostic sensors, software, real time energy consumption monitoring;
- Rooftop Unit Tune-ups for customers without prior maintenance contracts. The tune-ups include checking, adjusting, and resetting equipment to factory conditions so that it performs comparable to a new unit; and
- ECMs for PTAC unit fans.

69. The Smart \$aver Prescriptive lighting technology will expand to include LED tubes replacing fluorescent tubes. These are in addition to the incentives currently offered for LED panels replacing fluorescent fixtures. The following LED measures are revised to reflect efficiency of products currently available in the market: LED case lighting; canopy and exterior flood lighting; panels; high bay; low bay; task; track; and shelf mounted lighting. LED bollards will be dropped from the Prescriptive offerings.

70. A review of the information technology offerings resulted in the following portfolio modifications:

- EC plug fans for data centers;
- Changes to controlled plug strip, PC power management, and VFDs for data centers to reflect market standards and baseline changes; and

- Discontinue Prescriptive incentives for server virtualization, Energy Star 6.0 small scale servers, Energy Star 2.0 servers, and Energy Star 6.0 desktop computers.

71. In an effort to increase the number of customers that the Duke Energy Smart \$aver program can help and motivate to purchase energy efficient equipment, Duke Energy Kentucky plans to increase the incentive cap from 50% to 75%. The maximum incentive that a customer can receive is listed on the application forms. Incentives are currently capped at 50% of the customer's incremental cost for the equipment. Duke Energy Kentucky proposes to increase the cap to 75% of the customer's incremental cost for the equipment.

72. Duke Energy also continues to reach out to those customers who have not yet participated in the Smart \$aver® program.

73. The Company continues to work with outside consultants and internal resources to develop strategies to understand equipment supply/value chains and increase awareness of these measures going forward.

74. Nonresidential customers are informed of programs via targeted marketing material and communications. Information about incentives is also distributed to TAs, who in turn sell equipment and services to all sizes of nonresidential customers. Large business or assigned accounts are targeted primarily through assigned Duke Energy Kentucky account managers. Accounts that do not have an assigned account manager receive information about the program through direct mail, electronic mail and other direct marketing efforts including outbound call campaigns.

75. The internal marketing channel is comprised of assigned Large Business Account Managers, Segment Managers, and Local Government and Community Relations, 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.

76. The Company added two business energy advisors to the team to perform outreach to unassigned small and medium business customers. The business energy advisors follow up on customer leads to assist with program questions and steer customers to the TA search tool who are not already working with a TA. In addition, the business energy advisors are contacting customers with revenue between \$60,000 and \$250,000 to promote the Smart Saver programs.

**Program 8: Smart Saver® Custom Program**

77. The purpose of this program is to encourage the installation of high efficiency equipment in new and existing nonresidential establishments. The program provides incentive payments to offset a portion of the higher cost of energy efficient equipment.

78. Duke Energy Kentucky contracts with Ecova to provide the back office support for implementation of this program. This program is jointly implemented with the Duke Energy Indiana, Duke Energy Ohio, and Duke Energy Carolinas territories to reduce administrative costs and leverage promotion.

79. During the current reporting period of July 2014 through June 2015, the Kentucky Smart Saver® Custom Incentive program provided incentives totaling \$306,051 to approximately 16 customers.

80. Upon receiving a Custom Incentive application, Duke Energy Kentucky reviews the application and performs a technical evaluation as necessary to validate energy savings. Measures submitted by the customer are then modeled in DSMore™<sup>10</sup> to determine an

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<sup>10</sup> DSMore™ is a financial analysis tool designed to evaluate the costs, benefits, and risks of DSM programs and measures.

acceptable incentive that ensures cost effectiveness to the program overall, given the energy savings, and improves a customer's payback to move them to invest in energy efficiency. Evaluation follow-up and review includes application review, site visits and/or onsite metering and verification of baseline energy consumption, customer interviews, and/or use of loggers/sub-meters. As use of Custom Incentives increases, Duke Energy Kentucky will evaluate applications and determine if additional measures can be included in the Prescriptive Incentives program. Including measures that repeatedly arise in Custom Incentive applications into the Prescriptive Incentives makes planning and applying for measure incentives easier for customers.

81. Duke Energy Kentucky has launched a suite of simplified calculation tools. Such tools are intended to provide a relatively easy to use, but accurate means of estimating the savings of small, yet complex scopes of work. Additionally, the Company is investigating the feasibility of enhancements that will improve program transparency as well as enable participation of customer projects that are on fast track schedules or for which energy savings are difficult to quantify. More work and investigation is needed before these changes can be effectively presented.

**Program 9: Smart Saver<sup>®</sup> Energy Assessments Program**

82. The purpose of this program is to assist customers with the evaluation of energy usage within a specific building(s) and to provide recommendations for energy savings projects. The program may provide up to a 50% subsidy for an energy efficiency audit completed in partnership with a Duke Energy contracted professional engineering organization. This program is jointly implemented within the Duke Energy Indiana, Duke Energy Ohio, and Duke Energy Carolinas territories to reduce administrative costs and leverage resources.

83. Various types of assessments are offered and tailored to the customer's needs as

well as the type and complexity of the facility to be audited. The standard assessment offered mirrors the ASHRAE (American Society of Heating, Refrigeration, and Air-Conditioning Engineers) Level II energy audit criteria. Additionally, ASHRAE Level III assessments (Investment Grade) are also offered when warranted. Other varieties of assessments are available that focus on specific types of buildings or systems. Examples include critical facilities assessments (data centers, labs, and hospitals), compressed air assessments, refrigeration system assessments, and chilled water assessments.

84. There are two main customer deliverables for all assessments. The first is an energy report complete with details on how energy is being used and how efficiently the energy infrastructure operates. The report provides Energy Conservation Measures (ECM) that recommend specific projects that can save energy. Each ECM includes estimated energy savings, estimated cost to implement, and estimated payback period. The second deliverable provided by the assessment is the engineering data that is collected and can be utilized to support a Smart Saver<sup>®</sup> Prescriptive or Smart Saver<sup>®</sup> Custom Incentive application. The Duke Energy contracted professional engineering firm will assist the customer in completing the Smart Saver<sup>®</sup> application.

85. During the current reporting period, July 2014 to June 2015, there is currently one customer participating in the program.

**Program 10: Peak Load Manager (Rider PLM) - PowerShare<sup>®</sup> Program**

86. PowerShare<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> - CallOption<sup>®</sup> and QuoteOption<sup>®</sup>:

- CallOption<sup>®</sup>:
  - A customer served under a CallOption<sup>®</sup> 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;
  - There are two types of events;
    - Economic events are primarily implemented to capture savings for customers and not necessarily for reliability concerns. Participants are not required to curtail during economic events. However, if participants do not curtail, they must pay a market based price for the energy not curtailed. This is called "buy through energy."
    - Emergency events are implemented due to reliability concerns. Participants are required to curtail during emergency events.
  - If available, the customer may elect to buy through the reduction at a market-based price. The buy through option is not always available as specified in the PowerShare<sup>®</sup> Agreements. During PJM Interconnection, LLC-declared emergency events, customers are not



provided the option to buy through;

- In addition to the energy credit, customers on the CallOption<sup>®</sup> will receive an option premium credit;
- For the 2014/15 PowerShare<sup>®</sup> programs associated with the fiscal year of this filing, there were three different enrollment choices for customers to select among. All three choices require curtailment availability for up to ten emergency events per PJM requirements for capacity participation. Economic events vary among the choices. Customers can select exposures of zero, five, or ten economic events; and
- Only customers able to provide a minimum of 100 kW load response qualify for CallOption<sup>®</sup>.

- QuoteOption<sup>®</sup> :

- Under the QuoteOption<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> product since customer load reductions are voluntary; and
- Only customers able to provide a minimum of 100 kW load response qualify for QuoteOption<sup>®</sup>.

**PowerShare<sup>®</sup> 2014-2015 Summary**

87. Duke Energy Kentucky’s customer participation goal for 2014 was to retain all customers that currently participate and to promote customer migration to the CallOption<sup>®</sup> program. The table below displays monthly account participation levels for July 2014 through June 2015, as well as MWs enrolled in the program.

<b>Kentucky PowerShare<sup>®</sup> Participation Update</b>				
Month	CallOption		QuoteOption	
	Enrolled Customers*	Summer Capability**	Enrolled Customers*	Summer Capability**
Jul-14	24	23.25	0	0
Aug-14	24	23.25	0	0
Sep-14	23	22.25	0	0
Oct-14	23	22.25	0	0
Nov-14	23	22.25	0	0
Dec-14	23	22.25	0	0
Jan-15	23	22.25	0	0
Feb-15	23	22.25	0	0
Mar-15	23	22.25	0	0
Apr-15	23	22.25	0	0
May-15	23	22.25	0	0
Jun-15	22	28.3***	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 22 contracts for the 2015/2016 PowerShare<sup>®</sup> CallOption<sup>®</sup>. Measured and verified MW values for the summer of 2015 will be

available and presented in next year's update filing.)

88. During the July 2014 through June 2015 period, there were zero PowerShare events for economic or emergency reasons. However, there were curtailment tests performed to meet PJM requirements. The table below summarizes event participation.

<b>Duke Energy Kentucky - PowerShare CallOption and QuoteOption                      Economic, Emergency, and Test Events                      July 2014 - June 2015 Activity - Reduction Values in MWs</b>							
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
8/26/14	4 pm to 5 pm	PJM Test	24	22	23.9	27.7	29.1
9/26/14	4 pm to 5 pm	PJM Re-Test	5	3	2.3	1.8	1.9

\* PJM Test Event

# PJM Re-test Event

(Note that for the summer period of June 2015 through September 2015, zero CallOption® events have been called. The annual, required, PJM test event was conducted on September 1, 2015 at 4 pm and retest was conducted on September 23, 2015, also at 4 pm. Information on these events will be available and presented in next year's update filing.)

**Program 11: Appliance Recycling Program**

89. The Appliance Recycling program encourages customers to responsibly dispose of older, functioning but inefficient refrigerators and freezers. Customers will have the old unit picked up at their home at no charge and will receive an incentive for participating. Disposed units will have 95 percent of material recycled with only 5 percent entering landfills. Program marketing will consist of direct mail, social media, and community media events, web site, digital media, broadcast, and publications like newsletters. Point of sale messaging may also be pursued with

prominent appliance retailers. There were 779 participants in the program from July 1, 2014 – June 30, 2015.

**Program 12: Low Income Neighborhood Program**

90. The Duke Energy Kentucky Residential Neighborhood Program takes a non-traditional approach to serving income-qualified areas of the Duke Energy Kentucky service territory. The program engages targeted customers with personal interaction in a familiar setting while ultimately reducing energy consumption by directly installing measures and educating customers on ways to manage and lower their energy bills. Examples of direct installed measures include CFLs, water heater and pipe wrap, low flow shower heads/faucet aerators, window and door air sealing and a year supply of HVAC filter replacements. Targeted low income neighborhoods qualify for the program if at least 50% of the households are at or below 200% of the federal poverty guidelines. Duke Energy Kentucky analyzes electric usage data and previous program participation to prioritize neighborhoods that have the greatest need and propensity to participate. While the goal is to serve neighborhoods where the majority of residents are lower 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.

91. A community-based kick-off event is held in targeted neighborhoods. The kick-off events feature local community leaders, energy experts, vendor and technical crew. The program manager and vendor provide attendees detailed information on program components and neighborhood schedule. The purpose of the kick-off event is to rally the neighborhood around energy efficiency and educate customers on steps that will contribute to lowering their energy bills.

Additionally, attendees have the opportunity to meet technical staff and view measures. Following the kick-off event, customers receive 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. The program is used as a lead generation source for other Duke Energy Kentucky and external energy efficiency programs.

92. For fiscal year 2014-2015, we have completed 718 homes in Duke Energy Kentucky territory and continue to work in the area. There were three kickoff events. Services have been completed in neighborhoods located in Covington, Newport and Dayton. Duke Energy Kentucky has partnered with the Northern Kentucky Community Action Commission, the Kentucky Housing Authority and other local businesses to rally around our efforts, provide residents information about the program and capitalize on additional services available in their communities. The Company is still performing work in the area. The program has gained momentum and neighbors are sharing their experience with others, which has produced additional assessments.

**Program 13: My Home Energy Report Program**

93. The My Home Energy Report (MyHER Report) compares household electric usage to similar, neighboring homes, and provides recommendations and actionable tips to lower energy consumption. The report also informs customers 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. The MyHER Report will be delivered in printed or online form to targeted customers with desirable characteristics who are likely to respond to the information. The printed reports are distributed up to 12 times per year; however delivery may be interrupted during the off-peak energy usage months in the fall and spring. Currently to qualify

to receive the MyHER Report, customers must be living in a single metered, single family home with 13 months usage history.

94. The MyHER program is an opt out program and the Company provides information on every report as to how a customer request to stop receiving the reports. Since the program began in September 2012, only 118 customers (29 in this reporting timeframe) out of roughly 56,000 KY customers participating in the program have chosen to opt out.

95. 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, 2015, there were 49 KY MyHER customers enrolled in the portal (167 KY users as of August 26, 2015). Larger marketing campaigns are planned for the remainder of 2015.

#### **Program 14: Small Business Energy Saver Program**

96. The purpose of Duke Energy'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-authorized vendor. The SBES Program measures address major end-uses in lighting, refrigeration, and HVAC applications.

97. 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. 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-authorized vendor.

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

99. The SBES Program is available to existing Duke Energy Kentucky non-residential customer accounts with an actual average annual electric demand of 100 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.

100. The SBES Program launched in late February 2015, after receiving the Order of Approval<sup>11</sup> from the Kentucky Public Service Commission on January 28, 2015. SmartWatt Energy Inc. (SmartWatt), a company that specializes in administering utility energy efficiency programs nationwide similar to Small Business Energy Saver, was awarded the contract to administer the Program in the Duke Energy Ohio & Kentucky territories after a lengthy competitive bid and vendor evaluation process.

101. Due in large part to the fact that the SBES Program launched in Duke Energy Ohio in November 2014 with SmartWatt as the SBES Program administrator, and was fully operational at the time of Kentucky Public Service Commission approval, the SBES Program was able to be implemented in Duke Energy Kentucky relatively quickly and efficiently.

102. However, the SBES Program experienced slightly less participation than

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<sup>11</sup> Case No. 2014-00280

anticipated from January through June 2015. This is primarily due to the fact that the SBES Program did not launch until late February 2015, while SBES Program participation projections were based on a January launch.

103. During the current reporting period, July 2014 to June 2015, there were 26 projects completed for eligible customers through the SBES Program.

104. Currently however, the SBES Program is fully operational and is experiencing a significant amount of interest from Duke Energy Kentucky small business customers. Due to this interest and the upward trending popularity of the program, Duke Energy Kentucky expects the SBES Program to fully meet or exceed the stated kWh impact projections for the July 2015 – June 2016 reporting period. Given the fact the SBES program vendor operates within a “pay-for-performance” agreement wherein Duke Energy compensates the vendor on a per kWh-saved basis, the achievement of additional kWh savings impacts over the amount projected means that there may be additional dollars required to be devoted to the SBES Program.

#### **Calculation of the 2015 DSM Cost Recovery Mechanism, Rider DSMR**

105. 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 \$12.93 million. The projected level of program expenditures was \$11.19 million.

106. 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.

107. With respect to shared savings, Duke Energy Kentucky utilized the shared incentive of 10% of the total savings net of the costs of measures, incentives to customers, marketing, impact evaluation, and administration. The savings are estimated by multiplying the program spending times the Utility Cost Test (UCT) value and then subtracting the program costs. Shared savings are only valued for installation of new DSM measures.

#### **Home Energy Assistance Program**

108. The Company is also offering the Home Energy Assistance (HEA) Program as recently approved by the Commission in its June 4, 2014 Order in Case No. 2014-0094 and approved to continue for a three year period through December 31, 2017. The program reconciliation is in this application in Appendix B. This program was implemented and began collecting funds in November of 2008. During the term of the current reporting period, a total of \$253,804.30 was collected from Duke Energy customers (\$147,094 electric and \$106,710 gas) from July 2014 - June of 2015. For this reporting period, the HEA program provided assistance to approximately 621 customers. The total disbursement between electric and gas accounts was approximately \$86,356 (electric) and \$62,648 (gas) based on the number of electric and gas customers contributing to the fund. These funds are distributed throughout the year by Northern Kentucky Community Action Commission to assist low income customers' energy bill payments. The administrative costs for this period (2014-2015) totaled \$19,435.<sup>12</sup>

#### **2015 DSM Riders**

109. In accordance with the Commission's Order in Case No. 95-312, the Joint Applicants submit the proposed adjustments to its Rider DSMR for both electric and gas

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<sup>12</sup> Administrative costs are based on funds distributed.

programs (Appendices C and D respectively). The two Rider DSMRs are intended to recover projected July 1, 2016 – June 30, 2017<sup>13</sup> (2017) 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, 2014 through June 30, 2015. The spreadsheet model contained in Appendix B has been used by the Company for a number of years in its Rider DSMR update filings.

110. 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, 2014 and June 30, 2015, 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, 2014 through June 30, 2015.

111. The DSM revenue requirement for the period July 1, 2014 through June 30, 2015 consists of: (1) program expenditures, lost revenues, and shared savings; and (2) amounts approved for recovery in the previous reconciliation filing.

112. Appendix B, page 6 of 7, contains the calculation of the 2014 – 2015 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 residential kWh and ccf sales for July 2014 – June 2015, along with the kWh and ccf savings achieved for July 2014 – June 2015. The factors are used in Appendix B, page 1 of 7, columns 5 and 6.

113. Appendix B, page 7 of 7, contains the calculation of the 2016 – 2017 residential

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<sup>13</sup> The projected July 1, 2016 – June 30, 2017 program expenditures used in this filing will be trued-up as part of the 2017 annual status report and will be described as 2017 throughout the document.

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 2016 – June 2017. The factors are used in Appendix B, page 2 of 7, Residential Program Summary, columns G and H (Allocations of Costs).

114. Appendix B, page 5 of 7 contains the calculation of the 2015 Residential DSMR Riders. The calculation includes the reconciliation adjustments calculated in Appendix B, page 1 of 7 and the Residential DSM revenue requirement for 2017. The Residential DSM revenue requirement for 2016 includes the costs associated with the Residential DSM programs: Appliance Recycling Program, Energy Efficiency Education Program for Schools, MyHER, Low Income Neighborhood, Low Income Services, Residential Energy Assessments, Residential Smart Saver<sup>®</sup>, 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.

115. Appendix B, page 5 of 7 also contains the calculation of the 2015 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 2017. The Commercial & Industrial DSM revenue requirement for 2017 includes the costs associated with the Commercial and Industrial DSM programs: Smart Saver<sup>®</sup> Custom, Smart Saver<sup>®</sup> Prescriptive, Small Business Energy Saver<sup>14</sup>, PowerShare<sup>®</sup>, and the associated net lost revenues and shared savings (Appendix B, pages 2 and 3 of 7). The 2015 Commercial and Industrial DSMR Rider is calculated in two parts. One part (Part A) is based upon the revenue requirements for Smart Saver<sup>®</sup> Custom, Smart

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<sup>14</sup> As filed for approval in Case No. 2014-00280

\$aver<sup>®</sup> Prescriptive, Small Business Energy Saver and PowerShare<sup>®</sup>. 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<sup>®</sup> program and is recovered from all non-residential rate classes including rate TT.

116. 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.

117. The Company's proposed DSMR Riders, shown as Appendices C and D, replace the current DSMR Riders, which were implemented in the first billing cycle of June 2015. 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
- 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**

118. The proposed residential charge per kWh for 2015 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 2017, by the projected sales for calendar year 2016. DSM program costs for 2017 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 cost for the average residential customer would be a charge of approximately \$88.53 for electric and \$32.65 for gas.<sup>15</sup> Due to an under collection for electric by over \$5 million dollars during the filing period the average estimated annual cost for electric per customer increased from last year while the estimated average annual cost for gas per customer decreased.

#### **Calculation of the Non-Residential Charge**

119. The proposed non-residential charge per kWh for 2015 was calculated in two parts. The first part (Part A), applicable to all non-residential rate classes except Rate TT, is calculated by

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<sup>15</sup> The cost for average customer was calculated by using the 2016 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.

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 \$aver<sup>®</sup> Custom, Smart \$aver<sup>®</sup> Prescriptive and Small Business Energy Saver programs projected for 2017, by the respective projected sales for calendar year 2016. 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<sup>®</sup> program projected for 2017, by total non-residential projected sales for calendar year 2016. DSM program cost for 2017 includes the total implementation costs plus program rebates, lost revenues and shared savings.

120. 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**

121. As required by KRS 278.285(3), the DSM Cost Recovery Mechanism 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 \$aver<sup>®</sup> Custom and Smart \$aver<sup>®</sup> Prescriptive 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<sup>®</sup> 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,



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## CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing filing was served on the following via electronic mail, this 16<sup>th</sup> day of November, 2015:

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Rocco O. D'Ascenzo



**Appendix A**  
**Cost Effectiveness Test Results**

<b>Program Name</b>	<b>2014-2015</b>			
	<b>UCT</b>	<b>TRC</b>	<b>RIM</b>	<b>Participant</b>
<b>Appliance Recycling Program</b>	<b>0.95</b>	<b>1.15</b>	<b>0.61</b>	
<b>Energy Efficiency Education Program for Schools</b>	<b>1.06</b>	<b>1.22</b>	<b>0.73</b>	
<b>Low Income Neighborhood</b>	<b>1.16</b>	<b>1.50</b>	<b>0.77</b>	
<b>Low Income Services</b>	<b>0.60</b>	<b>0.79</b>	<b>0.48</b>	
<b>My Home Energy Report</b>	<b>1.83</b>	<b>1.83</b>	<b>1.02</b>	
<b>Residential Energy Assessments</b>	<b>3.53</b>	<b>3.55</b>	<b>1.71</b>	
<b>Residential Smart \$aver®</b>	<b>2.87</b>	<b>2.98</b>	<b>1.15</b>	<b>6.10</b>
<b>Power Manager</b>	<b>3.31</b>	<b>3.86</b>	<b>3.31</b>	
<b>Smart \$aver® Custom</b>	<b>7.56</b>	<b>3.46</b>	<b>1.49</b>	<b>3.98</b>
<b>Smart \$aver® Prescriptive - Energy Star Food Service Products</b>	<b>7.96</b>	<b>3.70</b>	<b>1.42</b>	<b>5.51</b>
<b>Smart \$aver® Prescriptive - HVAC</b>	<b>3.67</b>	<b>1.01</b>	<b>1.39</b>	<b>1.38</b>
<b>Smart \$aver® Prescriptive - Lighting</b>	<b>5.02</b>	<b>1.35</b>	<b>1.49</b>	<b>1.72</b>
<b>Smart \$aver® Prescriptive - Motors/Pumps/VFD</b>	<b>6.56</b>	<b>2.35</b>	<b>1.50</b>	<b>3.36</b>
<b>Smart \$aver® Prescriptive - Process Equipment</b>	<b>6.64</b>	<b>4.75</b>	<b>1.80</b>	<b>6.19</b>
<b>Smart \$aver® Prescriptive - IT*</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	
<b>Small Business Energy Saver</b>	<b>3.79</b>	<b>2.42</b>	<b>1.49</b>	<b>2.69</b>
<b>Power Share®</b>	<b>3.98</b>	<b>12.61</b>	<b>3.98</b>	

\*NA = Not Applicable (There was no participation for this measure for July 2014 - June 2015.)

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 7/2014 to 6/2015 (A)	Projected Lost Revenues 7/2014 to 6/2015 (A)	Projected Shared Savings 7/2014 to 6/2015 (A)	Program Expenditures 7/2014 to 6/2015 (B)	Program Expenditures (C) Gas	Electric	Lost Revenues 7/2014 to 6/2015 (B)	Shared Savings 7/2014 to 6/2015 (B)	2014 Reconciliation		Rider Collection (F)	(Over)/Under Collection		
									Gas (D)	Electric (E)	Gas	Electric	Gas (G)	Electric (H)
Appliance Recycling Program	\$ 193,426	\$ 104,715	\$ 83,130	\$ 141,855	\$ -	\$ 141,855	\$ 66,389	\$ (774)						
Energy Efficiency Education Program for Schools	\$ 229,075	\$ 18,779	\$ (12,239)	\$ 432,452	\$ 103,405	\$ 329,047	\$ 34,865	\$ 2,644						
Low Income Neighborhood	\$ 356,583	\$ 44,247	\$ 7,374	\$ 388,255	\$ -	\$ 388,255	\$ 53,205	\$ 5,819						
Low Income Services	\$ 886,258	\$ 38,097	\$ (31,172)	\$ 758,219	\$ 319,189	\$ 439,030	\$ 42,434	\$ (14,985)						
My Home Energy Report	\$ 574,536	\$ 468,204	\$ 45,284	\$ 721,822	\$ -	\$ 721,822	\$ 565,621	\$ 59,622						
Residential Energy Assessments	\$ 189,993	\$ 28,311	\$ 12,192	\$ 236,719	\$ 83,281	\$ 153,438	\$ 48,741	\$ 59,151						
Residential Smart Saver®	\$ 1,288,736	\$ 1,575,859	\$ 159,818	\$ 1,909,888	\$ 1,075	\$ 1,908,793	\$ 2,165,542	\$ 341,287						
Power Manager	\$ 566,086	\$ -	\$ 130,088	\$ 547,188	\$ -	\$ 547,188	\$ -	\$ 122,563						
Personal Energy Report Program (I)	\$ -	\$ 2,950	\$ -	\$ -	\$ -	\$ -	\$ 37,620	\$ -						
Home Energy Assistance Pilot Program (J)	\$ 252,236	\$ -	\$ -	\$ 149,004	\$ 62,648	\$ 86,356	\$ -	\$ -						
Revenues collected except for HEA														
<b>Total</b>	<b>\$ 4,536,910</b>	<b>\$ 2,281,961</b>	<b>\$ 394,476</b>	<b>\$ 5,285,361</b>	<b>\$ 569,596</b>	<b>\$ 4,715,764</b>	<b>\$ 3,014,618</b>	<b>\$ 575,328</b>	<b>\$ 5,729,820</b>	<b>\$ 1,769,497</b>	<b>\$ 3,864,560</b>	<b>\$ 5,027,968</b>	<b>\$ 2,404,856</b>	<b>\$ 5,047,241</b>

- (A) Amounts identified in report filed in Case No. 2013-00395.
- (B) Actual program expenditures, lost revenues (for this period and from prior period DSM measure installations), and shared savings for the period July 1, 2014 through June 30, 2015.
- (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, 2014 and June 30, 2015.
- (G) Column (5) + Column (9) - Column(11).
- (H) Column (6) + Column (7) + Column (8) + Column (10) - Column(12).
- (I) Personalized Energy Report is a legacy program which continues to collect lost revenues.
- (J) Revenues and expenses for the Home Energy Assistance Pilot Program.

Commercial Programs	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Projected Program Costs 7/2014 to 6/2015 (A)	Projected Lost Revenues 7/2014 to 6/2015 (A)	Projected Shared Savings 7/2014 to 6/2015 (A)	Program Expenditures 7/2014 to 6/2015 (B)	Lost Revenues 7/2014 to 6/2015 (B)	Shared Savings 7/2014 to 6/2015 (B)	2014 Reconciliation (C)	Rider Collection (D)	(Over)/Under Collection (E)
Smart Saver® Custom	\$ 393,983	\$ 129,375	\$ 101,448	\$ 520,788	\$ 114,090	\$ 338,055			
Smart Saver® Prescriptive - Energy Star Food Service Pro	\$ 18,483	\$ 7,815	\$ 12,013	\$ 55,364	\$ 18,914	\$ 38,548			
Smart Saver® Prescriptive - HVAC	\$ 164,436	\$ 47,807	\$ 80,058	\$ 193,103	\$ (42,282)	\$ 51,312			
Smart Saver® Prescriptive - Lighting	\$ 634,676	\$ 290,867	\$ 310,371	\$ 717,495	\$ 246,378	\$ 288,311			
Smart Saver® Prescriptive - Motors/Pumps/VFD	\$ 43,292	\$ 33,510	\$ 36,876	\$ 59,002	\$ 17,687	\$ 32,817			
Smart Saver® Prescriptive - Process Equipment	\$ 1,630	\$ 1,588	\$ 1,131	\$ 10,935	\$ 3,111	\$ 6,170			
Smart Saver® Prescriptive - IT	\$ 9,919	\$ 1,490	\$ 3,005	\$ 1,891	\$ -	\$ (189)			
Small Business Energy Saver (G)	\$ 243,051	\$ 14,152	\$ 38,275	\$ 140,841	\$ 1,683	\$ 39,360			
<b>Total</b>	<b>\$ 1,509,450</b>	<b>\$ 526,803</b>	<b>\$ 582,976</b>	<b>\$ 1,699,217</b>	<b>\$ 359,580</b>	<b>\$ 794,404</b>	<b>\$ (160,274)</b>	<b>\$ 969,939</b>	<b>\$ 1,722,968</b>
Power Share®	\$ 1,022,924	\$ -	\$ 332,441	\$ 926,071	\$ -	\$ 274,739	\$ (864,129)	\$ 2,019,111	\$ (1,482,429)
Energy Management and Information Services (F)				\$ 459					

- (A) Amounts identified in report filed in Case No. 2013-00395.
- (B) Actual program expenditures, lost revenues (for this period and from prior period DSM measure installations), and shared savings for the period July 1, 2014 through June 30, 2015.
- (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, 2014 and June 30, 2015.
- (E) Column (4) + Column (5) + Column (6) + Column (7) - Column (8)
- (F) Discontinued pilot program does not receive cost recovery.
- (G) Amounts identified in report filed in Case No. 2014-00280.

Kentucky DSM Rider

2016-2017 Projected Program Costs, Lost Revenues, and Shared Savings

Residential Program Summary (A)

	Costs	Lost Revenues	Shared Savings	Total	Allocation of Costs (B)		Budget (Costs, Lost Revenues, & Shared Savings)		
					Electric	Gas	Electric Costs	Electric	Gas Costs
Appliance Recycling Program	\$ 103,625	\$ 53,818	\$ 1,678	\$ 159,121	100.0%	0.0%	\$ 103,625	\$ 159,121	\$ -
Energy Efficiency Education Program for Schools	\$ 289,680	\$ 75,058	\$ 121,340	\$ 486,078	77.4%	22.8%	\$ 224,147	\$ 420,546	\$ 65,532
Low Income Neighborhood	\$ 277,903	\$ 94,535	\$ (14,696)	\$ 357,773	100.0%	0.0%	\$ 277,903	\$ 357,773	\$ -
Low Income Services	\$ 897,034	\$ 82,303	\$ (19,490)	\$ 939,848	60.7%	39.3%	\$ 544,408	\$ 587,222	\$ 352,826
My Home Energy Report	\$ 708,212	\$ 285,212	\$ 91,859	\$ 1,085,284	100.0%	0.0%	\$ 708,212	\$ 1,085,284	\$ -
Residential Energy Assessments	\$ 281,860	\$ 60,228	\$ 27,065	\$ 349,153	70.6%	29.4%	\$ 184,887	\$ 272,180	\$ 76,974
Residential Smart Saver®	\$ 1,215,972	\$ 959,527	\$ 148,228	\$ 2,323,725	100.0%	0.0%	\$ 1,215,972	\$ 2,323,725	\$ -
Power Manager	\$ 441,305	\$ -	\$ 150,822	\$ 592,228	100.0%	0.0%	\$ 441,305	\$ 592,228	\$ -
<b>Total Costs, Net Lost Revenues, Shared Savings</b>	<b>\$ 4,195,593</b>	<b>\$ 1,590,683</b>	<b>\$ 506,835</b>	<b>\$ 6,293,210</b>			<b>\$ 3,700,460</b>	<b>\$ 5,798,078</b>	<b>\$ 495,132</b>
Home Energy Assistance Pilot Program	\$ 253,804							\$ 147,094	\$ 106,710

NonResidential Program Summary (A)

	Costs	Lost Revenues	Shared Savings	Total	Allocation of Costs (B)		Budget (Costs, Lost Revenues, & Shared Savings)		
					Electric	Gas	Electric Costs	Electric	Gas
Smart Saver® Custom	\$ 441,312	\$ 195,829	\$ 197,106	\$ 834,247	100.0%	0.0%	\$ 441,312	\$ 834,247	NA
Smart Saver® Prescriptive - Energy Star Food Service Products	\$ 139,148	\$ 24,549	\$ 48,680	\$ 212,378	100.0%	0.0%	\$ 139,148	\$ 212,378	NA
Smart Saver® Prescriptive - HVAC	\$ 638,628	\$ 48,137	\$ 113,878	\$ 798,441	100.0%	0.0%	\$ 638,628	\$ 798,441	NA
Smart Saver® Prescriptive - Lighting	\$ 1,043,273	\$ 309,385	\$ 272,832	\$ 1,625,459	100.0%	0.0%	\$ 1,043,273	\$ 1,625,459	NA
Smart Saver® Prescriptive - Motors/Pumps/VFD	\$ 47,256	\$ 17,175	\$ 17,489	\$ 81,900	100.0%	0.0%	\$ 47,256	\$ 81,900	NA
Smart Saver® Prescriptive - Process Equipment	\$ 28,558	\$ 2,961	\$ 18,594	\$ 50,114	100.0%	0.0%	\$ 28,558	\$ 50,114	NA
Smart Saver® Prescriptive - IT	\$ 79,342	\$ 8,512	\$ 23,324	\$ 111,177	100.0%	0.0%	\$ 79,342	\$ 111,177	NA
Small Business Energy Saver	\$ 898,976	\$ 96,129	\$ 251,111	\$ 1,246,218	100.0%	0.0%	\$ 898,976	\$ 1,246,218	NA
Power Share®	\$ 1,262,732	\$ -	\$ 351,711	\$ 1,614,443	100.0%	0.0%	\$ 1,262,732	\$ 1,614,443	NA
<b>Total Costs, Net Lost Revenues, Shared Savings</b>	<b>\$ 4,579,227</b>	<b>\$ 700,648</b>	<b>\$ 1,294,503</b>	<b>\$ 6,574,378</b>			<b>\$ 4,579,227</b>	<b>\$ 6,574,378</b>	<b>NA</b>
<b>Total Program</b>	<b>\$ 8,774,819</b>	<b>\$ 2,291,331</b>	<b>\$ 1,801,437</b>	<b>\$ 12,867,588</b>					

(A) Costs, Lost Revenues (for this period and from prior period DSM measure installations), and Shared Savings for Year 5 of portfolio.  
 (B) Allocation of program expenditures to gas and electric in accordance with the Commission's Order in Case No. 2014-00388.

Kentucky DSM Rider

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

July 2016 to June 2017

	Program Costs (A)
<b><u>Electric Rider DSM</u></b>	
Residential Rate RS	\$ 5,798,078
Distribution Level Rates Part A DS, DP, DT, GS-FL, EH & SP	\$ 4,959,935
Transmission Level Rates & Distribution Level Rates Part B	\$ 1,614,443
<b><u>Gas Rider DSM</u></b>	
Residential Rate RS	\$ 495,132

(A) See Appendix B, page 2 of 7.

Kentucky DSM Rider

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

Year	2016
Projected Annual Electric Sales KWH	
Rate RS	1,522,442,000
Rates DS, DP, DT, GS-FL, EH, & SP	2,468,022,000
Rates DS, DP, DT, GS-FL, EH, SP, & TT	2,671,558,000
Projected Annual Gas Sales CCF	
Rate RS	64,884,690

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

July 2015 to June 2016

Rate Schedule Riders	True-Up Amount (A)	Expected Program Costs (B)	Total DSM Revenue Requirements	Estimated Billing Determinants (C)	DSM Cost Recovery Rider (DSMR)
<b>Electric Rider DSM</b>					
Residential Rate RS	\$ 5,053,508	\$ 5,798,078	\$ 10,851,586	1,522,442,000 kWh	\$ 0.007128 \$/kWh
Distribution Level Rates Part A DS, DP, DT, GS-FL, EH & SP	\$ 1,725,127	\$ 4,959,935	\$ 6,685,062	2,468,022,000 kWh	\$ 0.002709 \$/kWh
Transmission Level Rates & Distribution Level Rates Part B TT	\$ (1,484,270)	\$ 1,614,443	\$ 130,173	2,671,556,000 kWh	\$ 0.000049 \$/kWh
Distribution Level Rates Total DS, DP, DT, GS-FL, EH & SP					\$ 0.002757 \$/kWh
<b>Gas Rider DSM</b>					
Residential Rate RS	\$ 2,407,842	\$ 495,132	\$ 2,902,974	64,884,690 CCF	\$ 0.044741 \$/CCF
<b>Total Rider Recovery</b>			\$ 20,569,795		
<b>Customer Charge for HEA Program</b>					
<b>Electric No. 4</b>			Annual Revenues	Number of Customers	Monthly Customer Charge
Residential Rate RS			\$ 147,094	122,578	\$ 0.10
<b>Gas No. 5</b>					
Residential Rate RS			\$ 106,710	88,925	\$ 0.10
<b>Total Customer Charge Revenues</b>			\$ 253,804		
<b>Total Recovery</b>			\$ 20,823,598		

(A) (Over)/Under of Appendix B page 1 multiplied by the average three-month commercial paper rate for 2014 to include interest on over or under-recovery in accordance with the Commission's order in Case No. 95-312. Value is:  
 (B) Appendix B, page 2.  
 (C) Appendix B, page 4.

1.001242

Allocation Factors based on July 2014 -  
 June 2015

Residential Programs	Summary of Load Impacts July 2014 Through June 2015*				Allocation Factors based on July 2014 - June 2015	
	kWh	% of Total Res Sales	ccf	% of Total Res Sales	Elec % of Total Sales	Gas % of Total Sales
Appliance Recycling Program	316,032	0.0214%	-	0.0000%	100%	0%
Energy Efficiency Education Program for Schools	577,006	0.0390%	8,409	0.0123%	76%	24%
Low Income Neighborhood	557,078	0.0377%	-	0.0000%	100%	0%
Low Income Services	351,265	0.0238%	11,844	0.0173%	58%	42%
My Home Energy Report	10,869,228	0.7354%	-	0.0000%	100%	0%
Residential Energy Assessments	447,175	0.0303%	11,258	0.0164%	65%	35%
Residential Smart Saver®	8,639,278	0.5645%	228	0.0003%	100%	0%
Power Manager	-	0.0000%	-	0.0000%	100%	0%
<b>Total Residential</b>	<b>21,757,061</b>	<b>1.4721%</b>	<b>31,735</b>	<b>0.0463%</b>		
<b>Total Residential (Rate RS) Sales For July 2014 Through June 2015</b>	<b>1,477,944,577</b>	<b>100%</b>	<b>68,542,402</b>	<b>100%</b>		

\*Load Impacts Net of Free Riders at Meter

Allocation Factors based on July 2016 -  
 June 2017

Residential Programs	Summary of Load Impacts July 2016 Through June 2017**				Elec % of Total Sales	% of Gas Sales
	.kWh	% of Total Res Sales	ccf	% of Total Res Sales		
Appliance Recycling Program	225,480	0.0148%	-	0.0000%	100%	0%
Energy Efficiency Education Program for Schools	457,458	0.0300%	5,700	0.0088%	77%	23%
Low Income Neighborhood	221,382	0.0145%	-	0.0000%	100%	0%
Low Income Services	346,183	0.0227%	9,556	0.0147%	61%	39%
My Home Energy Report	11,472,988	0.7536%	-	0.0000%	100%	0%
Residential Energy Assessments	656,195	0.0431%	11,643	0.0179%	71%	29%
Residential Smart Saver®	3,354,878	0.2204%	-	0.0000%	100%	0%
Power Manager**	-	0.0000%	-	0.0000%	100%	0%
<b>Total Residential</b>	<b>16,734,542</b>	<b>1.0992%</b>	<b>26,900</b>	<b>0.0415%</b>		
Total Residential (Rate RS) Sales Projected	1,522,442,000	100%	64,884,690	100%		

\*Load Impacts Net of Free Riders at Meter



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KY.P.S.C. Electric No. 2  
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**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 \$0.007128 per kilowatt-hour. (I)

A Home Energy Assistance Program (HEA) charge of \$0.10 will be applied monthly to residential customer bills through December 2017.

The DSMR to be applied to non-residential distribution service customer bills is \$0.002757 per kilowatt-hour. (I)

The DSMR to be applied for transmission service customer bills is \$0.000049 per kilowatt-hour. (R)

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Commission dated \_\_\_\_, 2015 in Case No. 2015-368.

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Issued by James P. Henning, President /s/ James P. Henning

Duke Energy Kentucky  
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KY.P.S.C. Electric No. 2  
~~Seventeenth~~ Revised Sheet No. 78  
Cancels and Supersedes  
~~Sixteenth~~ Revised Sheet No. 78  
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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 \$0.00~~7128~~ per kilowatt-hour.

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A Home Energy Assistance Program (HEA) charge of \$0.10 will be applied monthly to residential customer bills through December 2017.

The DSMR to be applied to non-residential distribution service customer bills is \$0.00~~2757~~ per kilowatt-hour.

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The DSMR to be applied for transmission service customer bills is \$0.000~~049~~ per kilowatt-hour.

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**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 \$0.044741 per hundred cubic feet.

(R)

A Home Energy Assistance Program (HEA) charge of \$0.10 will be applied monthly to residential customer bills through December 2017.

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

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**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 \$0.044741 per hundred cubic feet.

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A Home Energy Assistance Program (HEA) charge of \$0.10 will be applied monthly to residential customer bills through December 2017.

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

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