## BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION

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In The Matter Of:

## THE ANNUAL COST RECOVERY FILING FOR DEMAND SIDE MANAGEMENT BY DUKE ENERGY KENTUCKY, INC.

Case No. 2013-00395

# 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. Duke Energy Kentucky is a Kentucky corporation in good standing<sup>2</sup> and, as a public utility as that term is defined in KRS 278.010(3), is subject to the Commission's jurisdiction. Duke Energy Kentucky is engaged in the business of furnishing gas and electric services to various municipalities and unincorporated areas in Boone, Campbell, Gallatin, Grant, Kenton and Pendleton Counties in the Commonwealth of Kentucky.

<sup>&</sup>lt;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, and April 11, 2013 Order in Case No. 2012-00495.

<sup>&</sup>lt;sup>2</sup> See Duke Energy Kentucky, Inc.'s Certificate of Existence attached hereto as Appendix C.

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.

3. Duke Energy Kentucky has been incorporated since March 20, 1901 and its 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).

4. On October 22, 2013, the Residential Collaborative<sup>3</sup> and the Commercial & Industrial Collaborative<sup>4</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 and the Commercial & Industrial Collaborative and the Residential Collaborative and the Residential Collaborative and the Residential Collaborative and the Residential Collaborative and the Commercial & Industrial Collaborative are jointly referred to herein as "Collaborative."

5. 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.

6. 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

<sup>&</sup>lt;sup>3</sup> The Residential Collaborative members in attendance were: Jennifer Black Hans (Office of the Kentucky Attorney General-by telephone), Staci O'Leary (People Working Cooperatively), Florence Tandy (Northern Kentucky Community Action Commission), Laura Pleiman (Boone County), Carl Melcher and Pete Nienaber (Northern Kentucky Legal Aid), Pam Proctor (Kentucky NEED Project), Lee Colten (Department of Energy Development and Independence), Jeremy Faust (Greater Cincinnati Energy Alliance), Andrew Issacs (KY Home Performance), Ashley Pate (NKY Community Action), and Tim Duff and Trisha Haemmerle (Duke Energy).

<sup>&</sup>lt;sup>4</sup> The Commercial & Industrial Collaborative members in attendance were: Jennifer Black Hans (Office of the Kentucky Attorney General), Staci O'Leary (People Working Cooperatively), Pam Proctor (Kentucky NEED Project), Lee Colten (Department of Energy Development and Independence), 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 trueup of the fiscal year ending June 30, 2013 of programs.

### Background

7. The Company's offering of DSM programs dates back close to two decades.<sup>5</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>6</sup> The portfolio of programs in place during the fiscal year ending June 30, 2013 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.

8. 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

<sup>&</sup>lt;sup>5</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>&</sup>lt;sup>6</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>&</sup>lt;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, and April 11, 2013 Order in Case No. 2012-495.

reconciliation portion of this report, expenses are reported for the fiscal year period July 1, 2012 through June 30, 2013.

9. In this Application, Duke Energy Kentucky also requests an Order approving the proposed adjustments to the DSM riders and the revised tariffs (Appendices D - H).

### **Definitions**

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

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

11. **"Program Costs"** shall mean the costs incurred for planning, developing, implementing, monitoring and evaluating the DSM programs that have been approved by the Collaborative.

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

13. "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:

14. **"Shareholder Incentive"** shall have the meaning in Section IV of the Principles of Agreement, Demand Side Management.

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

16. "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

17. Through June 30, 2013, 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 \$aver<sup>®</sup> Energy Efficient Residences Program
- Program 2: Residential Smart \$aver<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
- Program 7: Smart \$aver<sup>®</sup> Prescriptive Program
- Program 8: Smart \$aver<sup>®</sup> Custom Program
- Program 9: Smart \$aver<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

18. 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

<sup>&</sup>lt;sup>8</sup> The Smart \$aver<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 \$aver.<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.

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.

Summary of Load Impacts	July 2012 Through	June 2013*		
	Incremental	Load Impacts Net of Free Riders at Meter		
Residential Programs	Participation	kWh	kW	
Appliance Recycling Program	526	489,958	127	
Energy Efficiency Education Program for Schools	773	89,892	7	
Low Income Neighborhood	109	96,138	25	
Low Income Services	297	281,439	· 50	
My Home Energy Report**	44,372	9,717,468	2,529	
Residential Energy Assessments	504	198,641	134	
Residential Smart \$aver®	539,465	24,467,554	3,477	
Power Manager***	8,956		10,374	
Total Residential	595,002	35,341,089	16,723	
	Incremental	Load Impacts Net of Free Riders at Met		
Non-Residential Programs	Participation	kWh	kW	
Smart \$aver® Prescriptive - Energy Star Food Service Products	3	6,904	1	
Smart \$aver® Prescriptive - HVAC	15,436	666,422	197	
Smart \$aver® Prescriptive - Lighting	24,476	4,135,827	814	
Smart \$aver® Prescriptive - Motors/Pumps/VFD	361	300,097	50	
Smart \$aver® Prescriptive - Process Equipment	140	61,660	15	
Smart \$aver® Custom	1,408	1,034,769	115	
Power Share <sup>®***</sup>	20		26,617	
Total Non-Residential	41,844	6,205,679	27,808	
Total	636,846	41,546,768	44,531	

\*Impacts are without losses and reflected at the customer meter point

\*\*Actual participants are shown as the June 2013 mailings. Impacts reflect additions due to incremental program participation \*\*\*Cumulative number of controlled devices installed

19. 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<sup>®</sup> Energy Efficient Residences and Products

# Programs

20. The purpose of the Residential Smart \$aver<sup>®</sup> Energy Efficient Residences portion of the Residential Smart \$aver<sup>®</sup> 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 services

21. The Residential Smart \$aver<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 \$aver<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.

22. Duke Energy Kentucky currently contracts with GoodCents to administer this program. GoodCents provides services including application processing, trade ally network management, 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 \$aver<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 \$aver<sup>®</sup> Energy Efficient Products portion of

the Residential Smart \$aver<sup>®</sup> Program is to provide high efficiency lighting through various channels.

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
- 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 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.

27. The Residential Smart \$aver<sup>®</sup> lighting program recently 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, 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, live chat, 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. The Property Manager 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 multi-family apartment complexes. The program helps property managers upgrade lighting with energy efficiency 13 watt CFLs, reducing maintenance costs while improving

tenant satisfaction by lowering energy bills. Each apartment may qualify for up to 12 CFLs per unit and the bulbs are installed in permanent fixtures during routine maintenance visits. The program tracks and reports the location and number of bulbs installed in each unit. 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.

30. Duke Energy Kentucky proposes to add new measures to the Residential Smart \$aver<sup>®</sup> program. The measures were approved by the Collaborative and are the same measures included in the August 15, 2013 Application filed in Case No. 2013-00313.

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

31. The Home Energy House Call (HEHC) program is administered by Duke Energy Kentucky contractor Wisconsin Energy Conservation Corporation, Inc. (WECC). WECC has been administering and implementing programs for over 30 years. WECC's knowledge of home energy audits comes from years of experience administering weatherization programs for income The programs are implemented through subcontractor Thermo-Scan eligible customers. Inspections (TSI), located in Carmel, Indiana. TSI has been in the business of providing a wide array of inspection services for commercial and industrial businesses, municipalities, contractors and homeowners to identify, repair and protect homes, buildings, equipment and structures from moisture, leaks, corrosion and inefficient energy usage since 1980. Together, WECC and TSI provide the administration, marketing, staff, tracking, systems, logistics, training, customer service, scheduling and technical support required to support Duke Energy Kentucky's HEHC program. The HEHC program provides a comprehensive walk through in-home analysis by a Building Performance Institute (BPI) Building Analyst certified home energy specialist to identify energy savings opportunities in homes. The energy specialist analyzes the total home

energy usage, checks the home for air infiltration, and examines insulation levels in different areas of the home, and checks appliances and heating/cooling systems. The auditors carry laptop computers on-site and enter the data collected into the software directly. This eliminates the likelihood of error from third party interpretation, and also allowing a customer to view their energy audit information immediately. A comprehensive report specific to the customer's home and energy usage is then provided to the customer at the time of the audit. 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 kit containing several energy saving measures at no cost. The measures include a low-flow showerhead, kitchen faucet aerator, bathroom aerator, outlet gaskets, and two 13 watt compact fluorescent bulbs, and one 18 watt compact fluorescent bulb. The auditors will offer to install these measures, if approved by the customer, so the customer can begin savings immediately on their electric bill, and to help insure proper installation and use.

32. For the period of July 1, 2012 through June 30, 2013, a total of 504 audits were completed in Kentucky. During this filing period, electronic mail and direct mail brochures were mailed to customers in an effort to acquire the proposed participation for this program process.

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

33. In 2013, the Energy Education Program for Schools began offering two categories: 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).

34. The National Energy Education Development (NEED) Project provides educators with an engaging and exciting energy curriculum for students in classrooms. The Program 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.

35. The Kentucky NEED Project has been active in the Commonwealth's schools for 17 years. 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. In the Fall of 2012, NEED held two teacher workshops with 41 schools and 74 teachers participating in the training. The workshops exceeded the internal target of training 60 teachers for the school year.

36. 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, low-flow shower heads, faucet aerators, water temperature gauge, outlet insulation pads, and a flow meter bag. During the 2012-13 school year, 143 kits were distributed to Duke Energy qualified customers.

37. The live theatrical production category is presented by The National Theatre for Children (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. Cash prizes were awarded for the 2012-2013 school year to schools with the highest participation and 2 winners from Kentucky were selected and awarded prizes in July 2012. During the Spring 2013, NTC performed at 22 schools and delivered 630 kits to Duke Energy qualified customers.

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

#### Weatherization

38. 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 about their energy usage and other opportunities to reduce energy consumption and lower energy costs. The program has provided weatherization services to the following number of customers:

Fiscal Year	Customers Served	
1999 - 2000	251	
2000 - 2001	283	
2001 - 2002	203	
2002 - 2003	252	
2003 - 2004	252	
2004 - 2005	130	
2005 - 2006	232	
2006 - 2007	252	
2007 - 2008	265	
2008 - 2009	222	
2009 - 2010	199	
2010 - 2011	234	
2011 - 2012	220	
2012 - 2013	228	

39. The program is structured so that the 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 specific services provided within each Tier are described below.

The tier structure is defined as follows:

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

\*SIR = Savings - Investment Ratio

#### **Tier One Services**

40. 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 kWh per square foot per year based on the last year of 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 Tune-up & Cleaning
- Furnace replacement if investment in repair over \$500
- 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
- Energy Education

### **Tier Two Services**

41. 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 ≥ 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.

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

42. 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:

Year	Refrigerators Tested	Refrigerators Tested      Refrigerators Replaced        116      47        163      73        115      39        116      52        136      72	
2002 - 2003	116		
2003 - 2004	163		
2004 - 2005	115		
2005 - 2006	116		
2006 - 2007	136		
2007 - 2008	173	85	
2008 - 2009	153	66	
2009 – 2010	167	92	
2010 - 2011	112	76	
2011 – 2012	107	64	
2012 - 2013	206	69	

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**

43. The Payment Plus portion of Low Income Services program was 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 has three parts:

- Energy & 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.
- 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 when they complete the other 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. This allows for approximately 200 homes to participate per year as some customers do not complete all three steps or have already had the weatherization completed prior to the program.

44. 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.

45. Duke Energy Kentucky utilizes community action agencies 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.

46. For the filing period beginning in the Fall of 2012, 108 participants attended energy education counseling, 102 participants attended budget counseling and 29 participant homes have been weatherized. There were 109 unique participants.

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

47. 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.

48. 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 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.

49. Duke Energy Kentucky continues to use load control devices manufactured by 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 airconditioning 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.

50. During the past fiscal year, the Company continued the replacement of older Power Manager devices that began in February 2011. In addition to improved operability and load reduction impacts, this replacement effort contributes to Kentucky program cost savings by reducing the expense allocation associated with the systems and hardware for the older device type.

51. Through June 30, 2013, nearly 6,000 new devices had been installed since the inception of the replacement project; less than 90 of the older devices remained. These devices

are located in inaccessible areas of customers' property and require arrangements to complete the replacement. In late April 2013, Duke Energy Kentucky mailed notification letters to 303 remaining customers informing them that if the Company was unable to replace their Power Manager device, they would be removed from the program. Customers were asked to respond by May 13. In June, a postcard was mailed to the 87 customers who did not respond to the first mailing. (Although outside the timeframe of the 2012/13 fiscal year, a final notice postcard was mailed in July and those that did not respond had their Power Manager devices remotely deactivated in August.)

52. The Company continued limited promotion of Power Manager during the past fiscal year. An email solicitation was sent to customers who had opted to receive communications from the Company. There were 31 new Power Manager installations in the past fiscal year. In June, plans were being finalized for an outbound telemarketing campaign to Kentucky customers to begin in July.

53. There were a total of 8,956 air conditioners on the program as of the end of June, 2013; a net decline of 275 during the fiscal year. Despite improved operability driven by the replacement project, overall load reduction decreased by 0.2 MW (after losses) during this period.

54. 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 for demand response resources of this type. The Duke

Energy Kentucky studies comply with all PJM requirements.

55. There were three Power Manager economic cycling events from July 1, 2012 through June 30, 2013. In addition, on September 12, 2012 there was a Power Manager test in conjunction with the regional transmission organization PJM. The unseasonably cool weather through June in the Summer of 2013 resulted in no Power Manager events for that month.

Events		
Date	Time	
7/5/12	2:30 - 6:00	
7/6/12	2:30 - 6:00	
7/17/12	2:30 - 6:00	
9/12/12	1:30 - 3:00	

# Program 7: Smart \$aver® Prescriptive Program

56. The Smart \$aver<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.

57. Commercial and industrial consumers can have significant energy consumption, but may lack knowledge and understanding of the benefits of high efficiency alternatives. Duke 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 \$aver® 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.

58. The program promotes prescriptive incentives for the following technologies – lighting, HVAC, pumps, variable frequency drives, food services and process equipment. Starting in January 2014, Duke Energy proposes to add IT measures to the portfolio as well as additional measures in the lighting, HVAC, food service, and process equipment categories. These measures were approved by the Collaborative and are the same measures included in the August 15, 2013 Application filed in Case Number 2013-00313. Equipment and incentives are predefined based on current market assumptions and Duke Energy's engineering analysis. 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.

59. Prior to 2013, Duke Energy contracted with Wisconsin Energy Conservation Corporation (WECC) to handle the fulfillment responsibilities of the program and to provide training and technical support to our Trade Ally (TA) network. Also, CustomerLink provided call center services to customers who call the program's toll free number. Beginning January 2013, Ecova began providing these services for the program.

60. Getting the TA to support the program has proven to be the most effective way to promote the program to our business customers. At program rollout, Duke Energy and the WECC TA team took an aggressive approach to contacting trade allies associated with the technologies in and around Duke Energy's service territory. Existing relationships continued to be cultivated during 2012 while recruitment of new TAs also remained a focus. TA company names and contact information appears on the TA search tool located on the Smart \$aver<sup>®</sup> 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.

61. During a focus group of lighting and mechanical TAs conducted in December 2011, a suggestion was provided to develop an on-line application submission and status verification system. An on-line application and status verification platform is under development with Ecova. The launch was postponed until first quarter 2014, as development continues.

62. The Company recently completed an automated marketing campaign focused on lighting through the use of emailed newsletters and post cards. The marketing campaign was designed to generate leads based on activity taken by the email recipients to the content received. Personalized follow-up is underway based on the leads generated. A second automated campaign is underway for 2013 focused on HVAC.

63. An Energy Efficiency Store has launched 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 will be consistent with current program incentive levels.

64. As the program has matured, much of the low-hanging fruit is already gathered. In response to this, Duke Energy continues to add measures to the Prescriptive portfolio in order to offer customers additional options for energy savings. Duke Energy also continues to reach those customers who have not yet participated in the Smart \$aver® program.

65. 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. Additionally, evaluations of alternative HVAC incentive designs geared to drive early equipment replacements continue.

66. Upcoming additions to the program include faucet aerators, showerheads, dishwashers, IT measures, ductless mini-split AC/HP units, cool roofs, demand control ventilation, additional LED measures, and additional VSD air compressors. The complete list of measures can be found in Case No. 2013-00313. In this proceeding, the Company proposes moving the Thermal Storage measure from the Smart \$aver<sup>®</sup> Prescriptive program to the Smart \$aver<sup>®</sup> Custom program. Currently the Prescriptive offering is for applications of 1MW or less. All larger projects, such as the Thermal Storage measure, an engineering review is required on these applications and is thus consistent with and a better fit for the Smart \$aver<sup>®</sup> Custom program program process. TAs will be notified of the change and be prepared to help customers with the application process. The Company continues to evaluate the continuation of measures as their viability is impacted by Code and Standard changes.

67. 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.

68. 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.

69. In January 2013, an additional outreach resource was added to the Ohio/Kentucky/Indiana area to perform outreach to unassigned small and medium business customers. This new outreach representative provided to Duke Energy by Ecova follows 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. Duke Energy believes that this type of engagement will increase participation with small and medium business customers.

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

70. 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.

71. 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.

72. During the current reporting period of July 2012 through June 2013, the Kentucky Smart \$aver<sup>®</sup> Custom Incentive program provided incentives totaling \$75,690 to approximately 13 customers.

73. 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>TM 9</sup> to determine an 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.

74. In Case No. 2011-00471, a pilot was approved to expand the program to include all non-residential customers in the Company's electric service area taking service under all non-residential rates, except rate TT, who choose to participate by completing and submitting an application before initiating an energy efficiency project. In Case No. 2012-00085, the program was approved to begin July 1, 2012, superseding the pilot. Several custom applications completed in July 2012 through June 2013 originated with Duke Energy Kentucky's pilot expansion program.

75. No major changes are planned for the Custom Incentives program. However, Duke Energy Kentucky has tested the concept of calculation assistance in other states and will utilize the concept in Kentucky, should an appropriate opportunity present itself. Calculation assistance involves providing engineering resources to perform energy efficiency calculations for Custom projects of sufficient value and complexity but for which the customer's staff and/or vendors do not have the required expertise. The cost of calculation assistance is deducted from

<sup>&</sup>lt;sup>9</sup> DSMore<sup>™</sup> is a financial analysis tool designed to evaluate the costs, benefits, and risks of DSM programs and measures.

the customer's incentive payment so that the Company and other ratepayers do not bear the burden of additional cost.

# Program 9: Smart \$aver<sup>®</sup> Energy Assessments Program

76. 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 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.

77. Assessments are offered in three categories: Standard, SmartBuilding Advantage, and Segment Specific. Standard assessments mirror ASHRAE (American Society of Heating, Refrigeration, and Air-Conditioning Engineers) Level II energy audit criteria by providing general building assessments that consider all aspects of energy usage. SmartBuilding Advantage assessments are tailored toward large commercial office space. Two types of assessments are offered including Initial and Investment Grade. Initial resembles an ASHRAE Level II while Investment Grade is similar to an ASHRAE Level III which includes energy modeling. The last variety of assessment are termed Segment Specific. These assessments focus on targeted business markets or business processes. Examples include critical facilities assessments (data centers, labs, and hospitals), compressed air assessments, and chilled water assessments.

78. There are two main customer deliverables for all audits. The first is an Energy Report complete with details on how energy is being used and how efficiently the energy infrastructure operates. Additionally, 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 data collected can be utilized to support a Smart \$aver<sup>®</sup> Prescriptive or Custom Incentive Application.

79. During the current reporting period, July 2012 to June 2013, there has been no participation in the program.

# Program 10: Peak Load Manager (Rider PLM) - PowerShare® Program

80. 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 this Rider, 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 marketbased 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.
- o For the 2012/13 and 2013/14 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.
- 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.
- Only customers able to provide a minimum of 100 kW load response qualify for QuoteOption<sup>®</sup>.

# PowerShare<sup>®</sup> 2012-2013 Summary

81. Duke Energy Kentucky's customer participation goal for 2012 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 2012 through June 2013, as well as MWs enrolled in the program.

	CallC	Option	QuoteOption	
Month	Enrolled Customers*	Summer Capability**	Enrolled Customers*	Summer Capability**
Jul-12	20	28.1	0	0
Aug-12	20	28.1	0	C
Sep-12	19	28.1	0	C
Oct-12	19	28.1	0	C
Nov-12	19	28.1	0	0
Dec-12	19	28.1	0	C
Jan-13	19	28.1	0	C
Feb-13	19	28.1	0	C
Mar-13	19	28.1	0	0
Apr-13	19	28.1	0	C
May-13	19	28.1	0	0
Jun-13	20	26.1	0	0

\*Enrolled Customers represents the number of parent accounts participating. Also note values do not include participant who was removed in September.

\*\*Summer Capability is consistent with the associated program year. Numbers

reported are adjusted for losses.

#June 2013 value is estimated and a true-up process will be applied next year.

(Note that Duke Energy Kentucky has signed 20 contracts for the 2013/2014 PowerShare<sup>®</sup> CallOption<sup>®</sup> program with an estimated 26 MWs of PJM Interconnection, LLC registered capacity for Summer 2013. Measured and verified MW values for the summer of 2013 will be available and presented in next year's update filing.)

82. During the July 2012 through May 2013 period, there were four CallOption<sup>®</sup> events and no QuoteOption<sup>®</sup> events. All CallOption<sup>®</sup> events were economic events. There were no CallOption<sup>®</sup> emergency events. The table below summarizes event participation.<sup>10</sup>

<sup>&</sup>lt;sup>10</sup> "PowerShare<sup>®</sup> CallOption<sup>®</sup> participants are presented with the option to "buy-through" economic events since system reliability is not a concern during economic events. As can be seen in the table, several customers took full advantage or partial advantage of this option given that actual curtailment amounts are less than the available amounts. For energy consumed under this buy-through option, customers pay a market based price for energy. Buy-through is not available during emergency events."

Date	Event Hours	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
July 6, 2012	Noon to 8 PM	19	8	21.8	3.2	3.3
July 17, 2012	Noon to 8 PM	19	12	30.1	6.2	6.5
July 18, 2012	Noon to 8 PM	18	13	30.6	6.9	7.3
July 26, 2012	Noon to 8 PM	18	8	27.4	1.5	1.5
September 12, 2012*	2 PM to 3 PM	20	19	25.8	21.9	23.0
September 27, 2012#	3 PM to 4 PM	1	1	0.7	0.7	0.8

\* PJM Test Event

# PJM Re-test

Event

(Note that for the summer of 2013 through August, four CallOption<sup>®</sup> events have been called. Three of these events were economic events and the fourth was an emergency test event as required by PJM. Information on these events will be available and presented in next year's update filing.)

## **Program 11: Appliance Recycling Program**

83. The Appliance Recycling program will encourage customers to responsibly dispose of older, functioning but inefficient refrigerators and freezers. These are typically second or third units in the home. 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 presentations and publications like newsletters. Point of sale messaging will also be pursued with prominent appliance retailers.

ARP Participants	July 1 – December 31, 2012	January 1 <sup>st</sup> – June 30, 2013	Total
Refrigerator	91	318	409
Freezer	32	85	117

#### **Program 12: Low Income Neighborhood Program**

84. The Duke Energy Kentucky 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 the customer on better ways to manage 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 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 in the defined neighborhood. 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.

85. A community-based kick-off event is held in targeted neighborhoods. The kick-off events feature local community leaders and energy experts that will explain program components. The purpose of the kick-off event is to rally the neighborhood around EE and to help customers understand steps needed to lower their energy bills. Following the kick-off event, energy assessments are completed in the customers' homes 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.

86. To date, we have completed more than 150 homes in Duke Energy Kentucky territory and continue to work in the area. The first kickoff was in Covington, Kentucky on March 28, 2013. Additionally, three tent events were held, partnering with local business to allow residents to gain information about the program. The Company has partnered with St. Elizabeth Medical Center and other community businesses to help promote and rally customers around our efforts. The Company is still performing work in the area. The program is slowly gaining momentum and there is an increased interest in participation.

### Program 13: My Home Energy Report Program

87. The My Home Energy Report (MyHER) compares household electric usage to similar, neighboring homes, and provides recommendations to lower energy consumption. The report also promotes the Company's other energy efficiency programs when applicable. These normative comparisons are intended to induce an energy consumption behavior change. The MyHER 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, customers must be living in a single metered, single family home with 13 months usage history and are not on a budget billing customers. Kentucky customers started receiving reports in September 2012 and have received eight reports between September 2012 and June 2013.

88. 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 74 customers out of roughly 44,000 KY customers participating in the program have chosen to opt out.

89. In August 2013, a revised MyHER was introduced to customers. Previously the report showed customer comparisons in dollar amounts. The dollar amounts were derived using a customer's actual usage and a rate factor for each state. Unfortunately, this dollar amount did not always match the dollar amount on the customer's bill and was causing customer confusion. The August 2013 report showed customer comparison in kWh figures which are an exact match to the customer's bill. To date, only a few customers have reacted negatively to the change. Many customers requested the change. This change to kWh comparisons also allows the Company to open this program to customers on payment plans. These customers were not included previously because the dollar amount on their report would not match their bill amount. Now that the Company is only displaying kWh figures, these will now match payment plan customers' bills. The Company is also evaluating the possibility of providing the report to customers via on-line or through mobile channels.

### Calculation of the 2013 DSM Cost Recovery Mechanism, Rider DSMR

90. 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 \$9.39 million. The projected level of expenditures was \$9.56 million.

91. 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.

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

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

93. The Company is also offering the Home Energy Assistance (HEA) Program as approved by the Commission in its September 30, 2008 Order in Case No. 2008-00100 and approved to continue for another three year period as ordered by the Commission on August 18, 2011 in Case No. 2011-00109. The program reconciliation is in this application in Appendix B. This program began collecting funds in November of 2008. A total of \$243,401.80 was collected from Duke Energy customers (\$145,587.80 electric and \$97,814 gas) from July 2012 -June of 2013. For this reporting period, the HEA program provided assistance to approximately 989 customers. The total disbursement between electric and gas accounts was approximately \$136,766.67 (electric) and \$91,887.48 (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 (2012-2013) totaled \$29,824.45.<sup>11</sup>

#### 2013 DSM Riders

94. In accordance with the Commission's Order in Case No. 95-312, the Joint

<sup>&</sup>lt;sup>11</sup> Administrative costs are based on funds distributed.

Applicants submit the proposed adjustments to its Rider DSMR for both electric and gas programs (Appendices D and E respectively). The two Rider DSMRs are intended to recover projected July 1, 2014 – June 30, 2015<sup>12</sup> (2015) 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, 2012 through June 30, 2013. The spreadsheet model contained in Appendix B has been used by the Company for a number of years in its Rider DSMR update filings.

95. Appendix B, page 1 of 5, 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, 2012 and June 30, 2013, 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, 2012 through June 30, 2013.

96. The DSM revenue requirement for the period July 1, 2012 through June 30, 2013 consists of: (1) program expenditures, lost revenues, and shared savings; and (2) amounts approved for recovery in the previous reconciliation filing.

97. Appendix B, page 5 of 5 contains the calculation of the 2013 Residential DSMR Riders. The calculation includes the reconciliation adjustments calculated in Appendix B, page 1 of 5 and the Residential DSM revenue requirement for 2015. The Residential DSM revenue requirement for 2015 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 \$aver<sup>®</sup>,

<sup>&</sup>lt;sup>12</sup> The projected July 1, 2014 – June 30, 2015 program expenditures used in this filing will be trued-up as part of the 2015 annual status report and will be described as 2015 throughout the document.

Power Manager and any applicable net lost revenues and shared savings (Appendix B, pages 2 and 3 of 5). Total revenue requirements are incorporated along with the projected electric and gas volumes (Appendix B, page 4 of 5) in the calculation of the Residential DSM Rider.

98. Appendix B, page 5 of 5 also contains the calculation of the 2013 Commercial and Industrial DSM Rider. The calculation includes the reconciliation adjustments calculated in Appendix B, page 1 of 5 and the DSM revenue requirement for 2015. The Commercial & Industrial DSM revenue requirement for 2015 includes the costs associated with the Commercial and Industrial DSM programs: Smart \$aver<sup>®</sup> Custom, Smart \$aver<sup>®</sup> Prescriptive, PowerShare<sup>®</sup>, and the associated net lost revenues and shared savings (Appendix B, pages 2 and 3 of 5). The 2013 Commercial and Industrial DSMR Rider is calculated in two parts. One part (Part A) is based upon the revenue requirements for Smart \$aver<sup>®</sup> Custom, Smart \$aver<sup>®</sup> Prescriptive, 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.

99. Total revenue requirements are incorporated along with the projected electric volumes (Appendix B, page 4 of 5) in the calculation of the Commercial and Industrial DSM Rider.

100. The Company's proposed DSMR Riders, shown as Appendices D and E, replace the current DSMR Riders, which were implemented in the first billing cycle of May 2013. 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

o 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**

101. The proposed residential charge per kWh for 2013 was calculated by dividing the sum of: (1) the reconciliation amount calculated in Appendix B, page 1 of 5; and (2) the DSM revenue requirement associated with the DSM programs projected for 2015, by the projected sales for calendar year 2014. DSM program costs for 2015 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 5. Based on the updated rider

amounts, the estimated cost for the average customer would be an charge of approximately \$37.10 for electric and \$38.83 for gas.<sup>13</sup>

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

102. The proposed non-residential charge per kWh for 2013 was calculated in two parts. The first part (Part A), applicable to all non-residential rate classes except Rate TT, is calculated by dividing the sum of: (1) the reconciliation amount calculated in Appendix B, page 1 of 5; and (2) the DSM revenue requirement associated with the Smart \$aver<sup>®</sup> Custom and Smart \$aver<sup>®</sup> Prescriptive programs projected for 2015, by the respective projected sales for calendar year 2014. 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 2015, by total non-residential projected sales for calendar year 2014. DSM program cost for 2015 includes the total implementation costs plus program rebates, lost revenues and shared savings.

103. 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

104. 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

<sup>&</sup>lt;sup>13</sup> The cost for average customer was calculated by using the 2014 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.

\$aver<sup>®</sup> Prescriptive. 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  $t^{5}$  day of November, 2013:

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