



139 East Fourth Street
1212 Main
Cincinnati, OH 45201-0960
Telephone: (513) 287-4315
Facsimile: (513) 287-4385

Kristen Cocanougher
Sr. Paralegal
E-mail: Kristen.cocanougher@duke-energy.com

VIA OVERNIGHT DELIVERY

March 5, 2012

Mr. Jeff Derouen
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard, P.O. Box 615
Frankfort, Kentucky 40602-0615

RECEIVED

MAR 06 2012

PUBLIC SERVICE
COMMISSION

Re: *Case No. 2012-*_____
In the Matter of the Application of Duke Energy Kentucky, Inc., for an Energy Efficiency Cost Recovery Mechanism and for Approval of Additional Programs for Inclusion in its Existing Portfolio

Dear Mr. Derouen:

Enclosed please find an original and twelve copies of *The Application of Duke Energy Kentucky, Inc. for an Energy Efficiency Cost Recovery Mechanism and for Approval of Additional Programs for Inclusion in its Existing Portfolio* for filing in the above referenced matter.

Please date-stamp the two copies of the letter and the filing and return to me in the enclosed envelope.

Sincerely,

Kristen Cocanougher

cc: Larry Cook
Richard Raff
Florence W. Tandy
Carl Melcher

**BEFORE THE
KENTUCKY PUBLIC SERVICE COMMISSION**

RECEIVED

MAR 06 2012

PUBLIC SERVICE
COMMISSION

In the Matter of the Application of Duke)
Energy Kentucky, Inc., for an Energy)
Efficiency Cost Recovery Mechanism) Case No. 2012-xxxx
and for Approval of Additional Programs)
for Inclusion in its Existing Portfolio)

**DUKE ENERGY KENTUCKY, INC.'S APPLICATION
FOR COST RECOVERY MECHANISM AND PROGRAM APPROVAL**

Now comes Duke Energy Kentucky, Inc. (Duke Energy Kentucky or the Company), pursuant to Kentucky Revised Statutes (KRS) 278.285 and with the consensus of the Company's Residential and Commercial and Industrial Collaborative (Collaborative), and hereby respectfully requests from the Kentucky Public Service Commission (Commission) an order approving additional measures and new programs to its current Demand Side Management (DSM) program portfolio and recovery for those measures and programs through the Company's Demand Side Management Rate (Rider DSMR) to begin July 1, 2012.

In support of this Application, Duke Energy Kentucky states as follows:

Introduction

1. Duke Energy Kentucky is a Kentucky corporation with its principal office and principal place of business at 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.

2. Duke Energy Kentucky is a utility engaged in the gas and electric business. Duke Energy Kentucky purchases, sells, stores and transports natural gas in Boone, Campbell, Gallatin, Grant, Kenton and Pendleton Counties, Kentucky. Duke Energy Kentucky also generates electricity, which it distributes and sells in Boone, Campbell, Grant, Kenton and Pendleton Counties.

3. A copy of Duke Energy Kentucky's Articles of Incorporation is on file with this Commission in Case Number 2009-00202 and is hereby incorporated herein by reference.

4. The Commission has recently expressed a desire to see greater development and deployment of DSM programs, stating "[t]he Commission strongly encourages Big Rivers, and all other electric energy providers, to make a greater effort to offer cost-effective DSM and other energy efficiency programs."¹ Duke Energy Kentucky's Application herein proposes both new and expanded DSM programs that further the Commission's goals toward greater development and deployment of DSM programs.

Current DSM Programs

5. Duke Energy Kentucky has a long history of successful DSM implementation and has been a leader in the industry with respect to energy efficiency (EE) and peak demand reduction (DR) programs, having offered such programs since the mid-90's. Its existing portfolio of DSM programs was approved by the Commission in Case No. 2009-00444, by Order Dated March 22, 2010. These programs are as follows:

- o Program 1: Residential Conservation and Energy Education

¹ *In the Matter of Application of Big Rivers Electric Corporation for a General Adjustment in Rates*, Case No., 2011-00036, (Order at 59) (November 17, 2011).

- Program 2: Residential Home Energy House Call
- Program 3: Residential Comprehensive Energy Education Program (NEED)
- Program 4: Program Administration, Development & Evaluation Funds
- Program 5: Payment Plus
- Program 6: Power Manager
- Program 7: Energy Star Products
- Program 8: Energy Efficiency Website
- Program 9: Personalized Energy Report (PER)[®]
- Program 10: C&I High Efficiency Incentive (for Businesses and Schools)
- Program 11: Peak Load Management (Rider PLM) aka PowerShare[®]
- Program 12: Residential Smart Saver[®]

In addition, Duke Energy Kentucky also offers a Home Energy Assistance Program (HEA) that is approved and collected through its Demand Side Management Rate (Rider DSMR).

6. The above-referenced portfolio of programs (Current Portfolio) is approved to continue through December 31, 2012.

7. On July 1, 2011, in Case No. 2011-235, Duke Energy Kentucky filed with the Commission its triennial Integrated Resource Plan (2011 IRP). The 2011 IRP, as with prior IRPs, evaluated the impacts of the array of utility DSM programs as possible resources. As listed in Table 4-A of the 2011 IRP, the portfolio of DSM programs used in the 2011 IRP had cumulative MWh reductions for the period of 2012-2016 of approximately 99,000 MWh. The impact of the new portfolio is consistent with the impacts used in the 2011 IRP and enhances the projected results.

NEW PORTFOLIO OF PROGRAMS

8. In anticipation of the expiration of the Current Portfolio, and in order to synchronize the array of programs available in Duke Energy Kentucky's territory with those of its parent utility, Duke Energy Ohio, Inc. (Duke Energy Ohio), the Company is proposing a new portfolio of DSM programs. In order to achieve immediate impacts for the programs, Duke Energy Kentucky is proposing to implement these programs as soon as possible, and in time to achieve reductions during the peak summer months. As such, Duke Energy Kentucky is requesting approval to implement these programs by July 1, 2012, rather than following the expiration of the current portfolio on December 31, 2012.

9. This Application proposes to modify and expand some of the Company's existing programs by increasing the available measures within, as well as, add some additional new programs to enhance the robustness of the Company's portfolio. Additionally, by proposing this new portfolio, Duke Energy Kentucky will ensure that its customers have access to the same program offerings that are available to Duke Energy Ohio customers. For consistency across Duke Energy jurisdictions, some of the current program names will change. Geographically, Duke Energy Kentucky's service territory in Northern Kentucky is adjacent to that of its parent company Duke Energy Ohio, which is located in Southwest Ohio. As a result, the two utilities share a common media market. It is also common for non-residential customers to have multi-jurisdictional operations in both the Ohio and Kentucky service territories, as well as for residential customers to be exposed to both utility's operations whether by relocation or through acquaintances who may be served by one or the other of the Duke Energy utilities. As a result, there is a level of confusion and customer dissatisfaction that occurs when a program is available

in one jurisdiction but not the other. In order to better serve its customers, and provide consistency and achieve cost savings through shared implementation, not to mention expanding its array of DSM programs to match those of its parent, Duke Energy Kentucky believes this Application is in the public interest.

10. The following programs will continue as part of the Company's portfolio. These programs are described in the Direct Testimony of Casey Mather and Kevin Bright. Mr. Mather and Mr. Bright describe the new features of these programs. Each program is supported by a new analysis for cost effectiveness and is described in the testimonies of Company witnesses Tim Duff, Ashlie Ossege, Casey Mather, James Ziolkowski and Kevin Bright. New measures for Residential Smart Saver[®] and Smart Saver[®] Non Residential will be included within the program.

- Program 1: Smart Saver[®] Energy Efficient Residences Program
- Program 2: Smart Saver[®] Residential Energy Efficient Products Program²
- Program 3: Residential Energy Assessments Program (formerly Residential Home Energy House Call and Personalized Energy Report)
- Program 4: Energy Efficiency Education Program for Schools Program (formerly Residential Comprehensive Energy Education Program (NEED))
- Program 5: Low Income Services Program (formerly Residential Conservation and Energy Education and Payment Plus)
- Program 6: Residential Direct Load Control- Power Manager Program
- Program 7: Smart Saver[®] Prescriptive Program(formerly C&I High Efficiency

² The Smart Saver[®] Residential Energy Efficient Products Program and the Energy Efficient Residences Program are individual measures that are part of a single and larger program referred to and marketed as Residential Smart Saver.[®] For ease of administration and communication with customers the two measures have been divided into separate tariffs even though they are a single program.

Incentive (for Businesses and Schools)

- Program 8: Smart \$aver[®] Custom Program (formerly C&I High Efficiency

Incentive (for Businesses and Schools)

- Program 9: Smart \$aver[®] Energy Assessments Program

- Program 10: Peak Load Manager (Rider PLM) aka PowerShare[®] Program

11. Additionally, in this Application, the Company is proposing the following new programs for inclusion in its Portfolio:

- Program 11: Appliance Recycling Program
- Program 12: Low Income Neighborhood Program
- Program 13: My Home Energy Report Program

12. Information related to the aforementioned thirteen programs (collectively New Portfolio) is included with the individual tariffs and testimony submitted with this Application.

13. The HEA Program will also continue through September 24, 2014, and under its current terms and conditions as approved in Case No. 20111-00109.

14. Consistent with KRS 278.285(1)(a), the New Portfolio is designed to increase customer participation in Company-sponsored DSM by expanding measures and adding new programs that provide more opportunity for residential and non-residential customers to reduce their energy consumption. Pursuant to KRS 278.285(1)(b), Attachments AJO-3 through AJO-6 include the estimated impacts of the new portfolio programs and the cost benefit analysis supporting implementation.

15. Consistent with KRS 278.285(1)(c) and KRS 278.285(2), Duke Energy Kentucky proposes to continue to use the existing Demand Side Management Program formula (Rider

DSM) to recover program costs, lost revenue and shared savings associated with the New Portfolio measures undertaken by its customers. Rider DSM describes the Company's existing (and continuing) mechanism to recover "the full costs of commission-approved demand side management programs and revenues lost by implementing these programs," as well as an incentive "designed to provide financial rewards to the utility for implementing cost-effective demand side management programs."³ The Company will also continue to recover the costs for the portfolio of DSM programs through its Demand Side Management Rate (Rider DSMR) that will be filed and adjusted on an annual basis. Although not specifically called out as a separate DSM program, like the existing DSM model, all measurement and verification costs will be included for recovery in the mechanism Rider DSMR.

16. In accordance with KRS 278.285(1)(d), this new portfolio is consistent with the Company's most recent IRP filed in Case No. 2011-235 and is estimated to increase impacts for the period 2012-2016 beyond those described in the High EE Case in the 2011 IRP by approximately 23 percent or 23,000 MWh, assuming full projected participation in all of the measures offered in the proposed portfolio.

17. Consistent with KRS 278.285(1)(e), this filing does not result in any unreasonable prejudice or disadvantage to any class of customers. The Company is proposing a suite of programs that are available and targeted to residential customers as well as a suite of programs geared to non-residential customers. Attachment JEZ-4 to the Direct Testimony of Company witness James E. Ziolkowski includes the proposed tariff sheets describing the individual DSM programs that will be available to customers. These tariffs describe whether the program is

³ KRS 278.285(2).

targeted and available to low income customers, residential customers, or non-residential customers.

18. In accordance with KRS 278.285(1)(f), this filing, including the proposed programs was developed with the input of the Company's Collaborative. And the Company is proceeding with this Application with the consensus support of this Collaborative.⁴

19. On a whole, these programs are affordable and useful to customers as demonstrated in the cost-effectiveness scores depicted in Attachments AJO-3 through AJO-4 and are thus consistent with KRS 278.285(1)(g).

20. The costs of these programs will only be assigned to the classes of customers who will benefit from the programs in accordance with KRS 278.285(3)

21. In support of its Application, the Company is providing testimony addressing the following: Company witness Timothy J. Duff will provide an overview of the Application and the relevant incentive and recovery mechanism. Company witness Ashlie J. Ossege will describe the details of the newly proposed programs with respect to cost effectiveness and measurement and verification of outcomes. Company witness Mather will explain programs and customer engagement. Company witness Bright will discuss commercial program implementation, and Company witness Ziolkowski will testify concerning revenue requirements, proposed tariffs and rate impacts and implementation.

⁴ On January 30, 2012, the Residential Collaborative and the Commercial and Industrial Collaborative met to review the programs included within this Application. All voting members voted in favor of filing the new portfolio with the exception of the Attorney General's Office abstaining from the vote.

22. In order to encourage future development of DSM programs and innovation, the Company is also requesting the Commission to approve a limited automatic approval process for pilot programs with the following parameters:

- The total pilot program cost including EM&V is projected to be less than \$75,000.
- The pilot program is found to be cost effective under the Total Resource Cost test (TRC) and Utility Cost Test (UCT).
- The pilot program has been vetted and approved by the Collaborative.

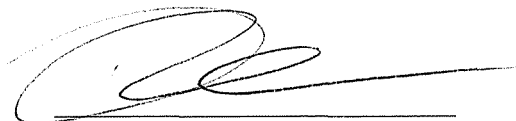
By allowing these small scale tests of new products to avoid the traditional approval process for new programs, the Company will be able to quickly test new and innovative products and services, as well as adapt to and capitalize on market conditions to bring energy savings opportunities to customers. Duke Energy Kentucky would propose to report on any such pilots as part of its annual DSM update filed in November of each year. If the pilot proves successful and the Company decides that a program should be commercialized and offered on a large scale and as part of the broader suite of EE or DR programs, Duke Energy Kentucky will request approval of the Commission and will have actual data based upon the pilot sampling to support such a filing.

23. Duke Energy Kentucky respectfully requests the Commission issue an order approving the New Portfolio so that the Company can implement the programs by July 1, 2012. An implementation of the New Portfolio by July 1, 2012 will allow the Company to continue to offer the programs on the existing fiscal year basis with annual true-ups filed in mid November. The July implementation will also allow the Company to implement these programs in time for the upcoming summer peak season, and will allow Kentucky customers to participate sooner in

the same energy saving opportunities that will be made available to Duke Energy Ohio customers. As such good cause exists to expedite the review of this application so that the Company may implement the new programs for the benefit of customers both in terms of opportunity to participate and for meaningful impacts.

WHEREFORE, consistent with the information provided above as supported by the Company witnesses in testimony included with this Application, Duke Energy Kentucky respectfully requests that the Commission approve the New Portfolio of DSM programs to be implemented on or before July 1, 2012.

Respectfully submitted,



Amy B. Spiller (85309)
Deputy General Counsel
Rocco O. D'Ascenzo (92796)
Associate General Counsel
DUKE ENERGY KENTUCKY
139 East Fourth Street
1303 Main
Cincinnati, OH 45202
Phone: 513-287-4320
Fax: 513-287-4386
Rocco.d'ascenzo@duke-energy.com
Amy.Spiller@duke-energy.com

CERTIFICATE OF SERVICE


I hereby certify that a copy of the foregoing filing was served on the following via ordinary mail, postage prepaid, this 5th day of March 2012:

Larry Cook
Assistant Attorney General
The Kentucky Office of the Attorney General
1024 Capital Center Drive
Frankfort, Kentucky 40602-2000

Richard Raff
Public Service Commission
730 Schenkel Lane
Frankfort, Kentucky 40602

Florence W. Tandy
Northern Kentucky Community Action Commission
P.O. Box 193
Covington, Kentucky 41012

Carl Melcher
Northern Kentucky Legal Aid, Inc.
302 Greenup
Covington, Kentucky 41011




Rocco O. D'Ascenzo

VERIFICATION

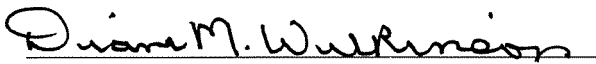
State of North Carolina)
)
County of Mecklenburg) SS:

The undersigned, Tim Duff, being duly sworn, deposes and says that he is the General Manager of Retail Customer & Regulated Strategy, and that the matters set forth in the foregoing testimony are true and correct to the best of his information, knowledge and belief.



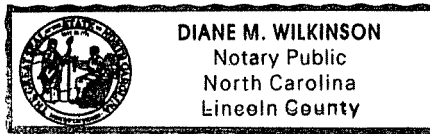
Tim Duff, Affiant

Subscribed and sworn to before me by Tim Duff on this 1st day of March 2012.



NOTARY PUBLIC

My Commission Expires: 12 July 2014



BEFORE

KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of the Application of Duke)
Energy Kentucky, Inc., for an Energy)
Efficiency Cost Recovery Mechanism) Case No. 2012-xxxx
and for Approval of Additional Programs)
for Inclusion in its Existing Portfolio.)

DIRECT TESTIMONY OF

TIMOTHY J. DUFF

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

March 6, 2012

TABLE OF CONTENTS

	PAGES
I. INTRODUCTION AND PURPOSE OF TESTIMONY.....	1
II. DISCUSSION OF THE PROPOSED PROGRAM.....	3
III. ADDITIONAL ELEMENTS OF THE COMPANY'S PROPOSAL	12
IV. CONCLUSION.....	13

I. INTRODUCTION AND PURPOSE OF TESTIMONY

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Timothy J. Duff. My business address is 526 South Church Street,
3 Charlotte, North Carolina 28202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC, an affiliate of Duke
6 Energy Kentucky, Inc., (Duke Energy Kentucky or Company) as General
7 Manager, Retail Customer and Regulatory Strategy, Customer Strategy &
8 Innovation.

9 **Q. PLEASE DESCRIBE YOUR RESPONSIBILITIES AS GENERAL**
10 **MANAGER, RETAIL CUSTOMER AND REGULATORY STRATEGY,**
11 **CUSTOMER STRATEGY AND INNOVATION.**

12 A. I am responsible for the development of strategies and policies related to the
13 Company's product offerings for energy efficiency, smart grid and all other retail
14 services.

15 **Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL**
16 **QUALIFICATIONS.**

17 A. I graduated from Michigan State University with a Bachelor of Arts in Political
18 Economics and a Bachelor of Arts in Business Administration, and received a
19 Master of Business Administration from the Stephen M. Ross School of Business
20 at the University of Michigan. I started my career with Ford Motor Company and
21 worked in a variety of roles within the Company's financial organization. After
22 five years with Ford Motor Company, I began work with Cinergy in 2001,

1 providing business and financial support to plant operating staff. Eighteen
2 months later, I joined Cinergy's Rates Department, where I provided revenue
3 requirement analytics and general rate support for the Company's acquisition of
4 three generating plants. After my time in the Rates Department, I spent a short
5 period of time in the Environmental Strategy Department, and then I joined
6 Cinergy's Regulatory and Legislative Strategy Department. After Cinergy
7 merged with Duke Power in 2006, I worked for four years as Managing Director,
8 Federal Regulatory Policy. In this role, I was primarily responsible for
9 developing and advocating Duke Energy's policy positions with the Federal
10 Energy Regulatory Commission. I assumed my current position in 2010.

11 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**
12 **PUBLIC SERVICE COMMISSION?**

13 A. No. However I have provided testimony in cases before the Indiana Utilities
14 Regulatory Commission, Ohio Public Utilities Commission and the North
15 Carolina Public Utilities Commission.

16 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
17 **PROCEEDING?**

18 A. The purpose of my testimony is to discuss the details of Duke Energy Kentucky's
19 proposal for a new and enhanced portfolio of energy efficiency (EE) and peak
20 demand reduction (DR) programs to be included in the Company's current
21 Demand Side Management Cost Recovery Program (Rider DSM) and the
22 Demand Side Management Rate (Rider DSMR) cost recovery mechanism.

TIMOTHY J. DUFF DIRECT

II. DISCUSSION OF THE PROPOSED PROGRAM

1 **Q. WHY IS DUKE ENERGY KENTUCKY PROPOSING TO CHANGE ITS**
2 **EXISTING PORTFOLIO OF PROGRAMS?**

3 A. The approval of Duke Energy Kentucky's existing suite of DSM programs
4 expires December 31, 2012. In this Application, Duke Energy Kentucky is
5 requesting the Kentucky Public Service Commission (Commission) approve an
6 enhanced portfolio of EE and DR programs to be offered beginning July 1, 2012
7 and on a going forward basis. This enhanced portfolio is updated to offer
8 customers more ways to become energy efficient and align with energy efficiency
9 impacts factored into the Company's most recent Integrated Resource Plan.
10 Additionally, this portfolio will align with the portfolio recently approved for
11 Duke Energy Ohio, which should ease some of the customer confusion and
12 frustration that can arise when customers share a common media market, but have
13 different programs available to them.

14 **Q. HOW DOES THE PROPOSED PORTFOLIO COMPARE TO THE**
15 **COMPANY'S MOST RECENT INTEGRATED RESOURCE PLAN?**

16 A. Assuming full projected participation in all of the measures offered in this
17 proposed portfolio, cumulative net MWh impacts by the end of 2016 would be
18 approximately 122,000 MWh compared to a cumulative achievement for the same
19 time period in the most recent IRP filing of approximately 99,000 MWh.
20

**Cumulative Net MWh
for 2012-2016**

TIMOTHY J. DUFF DIRECT

Proposed Portfolio	122,327
2011 IRP Filing	99,310

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21

Q. PLEASE DEFINE WHAT YOU MEAN BY THE TERMS ENERGY EFFICIENCY (EE) AND DEMAND REDUCTION (DR) PROGRAMS.

A. I use the terms to distinguish the two types of programs that are included under the definition of Demand Side Management in KRS 278.010(17). Specifically, EE is what I consider as any conservation program that is intended to reduce a customer’s level of energy usage or demand. Similarly, DR is a load management program designed to reduce or shift customer energy usage from peak periods. Thus, while I may refer to EE and DR programs specifically, the intention is to be consistent with the broad definition of demand side management in KRS 278.010(17) while offering greater specificity and distinction between the types of programs available.

Q. PLEASE EXPLAIN WHAT YOU MEAN BY THE CUSTOMER CONFUSION AND FRUSTRATION WITH A COMMON MEDIA MARKET.

A. Duke Energy Kentucky’s service territory is adjacent to the service territory of its parent company, Duke Energy Ohio, Inc. (Duke Energy Ohio). As a result, the two companies share a common media market and Duke Energy Kentucky customers are often exposed to advertisements that are specific to Duke Energy Ohio. Although the utility operations may be geographically similar, the services and programs offered are typically different. There are instances where Duke

TIMOTHY J. DUFF DIRECT

1 Energy Kentucky's customers, both residential and non-residential, do not have
2 access to an EE or DR program or incentive that is available in Ohio. The
3 differences in programs are particularly confusing and frustrating for a residential
4 customer who may have simply relocated across the river or to a commercial
5 customer that has operations in both states.

6 **Q. PLEASE DESCRIBE WHAT DUKE ENERGY KENTUCKY IS**
7 **REQUESTING IN THIS APPLICATION.**

8 A. In this Application, Duke Energy Kentucky is requesting approval of an enhanced
9 portfolio that includes the continuation of its existing programs with some
10 enhancements, as well as offering new programs currently not available in KY to
11 offer as part of the Company's existing Rider DSM program. This portfolio of
12 programs is almost double in size (in terms of available measures) to the
13 Company's existing portfolio and will give both its residential and non-residential
14 customers attractive new opportunities to become more efficient and in control of
15 their bills. The Company is also requesting that the timing of this approval be
16 such that the Company can implement these new programs on July 1, 2012, to
17 coincide with the fiscal year upon which the Company reports its programs to the
18 Commission. A July implementation will also afford the Company to have some
19 of these new and enhanced measures implemented in time for the upcoming peak
20 summer months.

21 **Q. PLEASE BRIEFLY DESCRIBE HOW THE NEW PORTFOLIO WILL**
22 **DIRECTLY AND INDIRECTLY IMPACT CUSTOMERS' BILLS.**

TIMOTHY J. DUFF DIRECT

1 A. The enhancements to Duke Energy Kentucky's portfolio of demand side
2 management programs will impact customers' bills both directly and indirectly.
3 The obvious direct impact of the larger portfolio will be changes in the monthly
4 charge on a customer's bill for EE. Duke Energy Kentucky Witness James E.
5 Ziolkowski more fully explains the calculation of rates and the bill impacts to
6 customers in his direct testimony. Initially, there will be an increase from the
7 current DSM rate because the cost structure of the enhanced portfolio is included.
8 However, because the mechanism will be trued-up and adjusted on an annual
9 basis, the magnitude of any cost increase or decrease will vary. Another direct
10 impact will come in the form of a lower bill due to the reduction in usage that
11 comes from a customer's participation in the enhanced EE portfolio programs.
12 The indirect savings are the bill savings that customers will realize over time from
13 the avoided system costs associated with the overall reduction in energy
14 consumption and demand. The enhanced portfolio of programs, based on
15 projected participation and cost, has a Utility Cost Test score of 4.41, which
16 indicates that the utility system benefits or avoided costs will be over four times
17 the costs that the utility will incur and include in Rider DSMR.

18 **Q. PLEASE BRIEFLY SUMMARIZE RIDER DSM AND RIDER DSMR.**

19 A. Rider DSM describes the Company's DSM program and is the regulatory
20 mechanism that contains a formula designed to allow the Company to recover
21 costs and receive an incentive associated with implementing EE and peak DR
22 programs.

TIMOTHY J. DUFF DIRECT

1 Rider DSMR, as it was explained to me by counsel, is the rate adjustment
2 mechanism permitted under KRS 278.285 that allows Duke Energy Kentucky to
3 recover EE and DR program costs, evaluation, measurement and verification
4 costs, lost revenues and a shared savings incentive. The shared savings incentive
5 is equivalent to 10% of the net benefits customers receive from the Company's
6 EE and DR offering. The Company is permitted to collect its portion of the shared
7 savings in addition to recovery for program costs and 36 months of lost margins.

8 **Q. DO YOU BELIEVE THE COMPANY'S COST RECOVERY**
9 **MECHANISM UNDER RIDER DSM IS FAIR, JUST AND**
10 **REASONABLE?**

11 A. Yes. The Company believes that the cost recovery mechanism under which it
12 currently operates is not only fair, just and reasonable, but is appropriate. As I
13 understand, Kentucky statutes (KRS 278.285) allow the Commission to approve a
14 utility's request to recover the full costs of Commission-approved demand-side
15 management programs and revenues lost by implementing these programs, as
16 well as allow the utility to obtain incentives designed to provide financial rewards
17 to the utility for implementing cost-effective demand-side management programs.
18 Rider DSM was most recently approved by the Commission in the Company's
19 energy efficiency portfolio case (Case No. 2004-00389) in February 2005. This
20 mechanism has provided Duke Energy Kentucky with the necessary incentive to
21 encourage it to offer EE.

TIMOTHY J. DUFF DIRECT

1 **Q. IS DUKE ENERGY KENTUCKY PROPOSING ANY CHANGES OR**
2 **MODIFICATION TO THE EXISTING COST RECOVERY AND**
3 **INCENTIVE MECHANISM UNDER RIDER DSM?**

4 A. No. The Company is proposing to continue its current shared savings incentive
5 mechanism. The only changes being proposed in this filing are to the suite of
6 programs to be offered.

7 **Q. PLEASE EXPLAIN DUKE ENERGY KENTUCKY'S SHARED SAVINGS**
8 **INCENTIVE IN GREATER DETAIL.**

9 A. The incentive that the Company is eligible to earn will be calculated based upon a
10 percentage of the net system benefits that are delivered by Duke Energy
11 Kentucky's approved portfolio of programs. For example, if the Company
12 delivers \$10.5 million dollars of avoided cost benefits to customers as a result of
13 \$6.0 million dollars of EE expenditures, the Company's incentive would be \$450
14 thousand dollars, as illustrated in the following calculation shown in Table 2
15 below.

Table 2

	<u>Millions</u>
Avoided Cost Benefit	\$10.5
<u>Utility Energy Efficiency Costs</u>	<u>6.0</u>
Net System Benefit	\$4.5
Incentive Level	10%
Utility Incentive Earned	<u>\$0.450</u>

TIMOTHY J. DUFF DIRECT

1 Q. PLEASE EXPLAIN WHY THE COMMISSION SHOULD CONTINUE
2 THIS ENERGY EFFICIENCY AND PEAK DEMAND REDUCTION COST
3 RECOVERY MECHANISM.

4 A. The shared savings incentive is a well-recognized model that is fair and
5 reasonable. Under the shared savings mechanism, the Company is only rewarded
6 for delivering cost effective EE to its customers, not simply spending money. By
7 using a mechanism that ties the Company's potential incentive to the net system
8 benefits delivered by the energy efficiency offerings, the Company is
9 appropriately incentivized to maximize the cost effectiveness of the programs.
10 Thus, the shared savings mechanism creates alignment between the utility
11 incentive and potential benefits for the customer.

12 Q. WHY IS IT IMPORTANT FOR THE COMPANY TO CONTINUE TO
13 OFFER AND EXPAND ITS ENERGY EFFICIENCY AND PEAK
14 DEMAND REDUCTION PROGRAMS?

15 A. In Governor Beshear's comprehensive energy plan for the Commonwealth of
16 Kentucky, *Intelligent Energy Choices for Kentucky's Future*, the first aspirational
17 goal is to have EE offset at least 18 % of Kentucky's projected 2025 energy
18 demand. The energy plan recognizes that one of the most effective ways to
19 control Kentucky customers' energy bills, enhance energy independence and
20 foster economic growth is for the Commonwealth to embrace an increase in
21 utility-sponsored EE. Additionally, Duke Energy Kentucky believes that the
22 proposed expansion of its portfolio is consistent with the Commission's October
23 6, 2011, Order in Case No. 2008-00408 that "requires that utilities make energy

TIMOTHY J. DUFF DIRECT

1 efficiency resources a priority.” Beyond being consistent with both the aims of
2 the Governor and the Commission, Duke Energy Kentucky believes that electric
3 utilities are uniquely qualified and in the best position to systematically capture
4 productivity gains in the use of electricity through EE and maximize those gains
5 for the benefit of all customers. Duke Energy Kentucky has provided EE
6 programs to its customers since the mid-1990’s and, in turn, its customers have
7 come to rely upon Duke Energy Kentucky to offer energy savings opportunities.
8 Moreover, Duke Energy Kentucky is well-positioned to understand changes in
9 customer preferences and EE advancements that will allow the Company to
10 accelerate the development of new technologies and new programs. Finally,
11 Duke Energy Kentucky is best positioned to use the energy savings generated
12 through its EE and peak DR measures and programs to cost effectively optimize
13 the Company’s resource needs for the benefit of its customers.

14 **Q. PLEASE DISCUSS THE ROLE OF THE DUKE ENERGY KENTUCKY**
15 **RESIDENTIAL AND COMMERCIAL AND INDUSTRIAL**
16 **COLLABORATIVE.**

17 A. The Collaborative is comprised of various parties and stakeholders who have a
18 vested interest in Duke Energy Kentucky’s ability to offer cost-effective DSM
19 programs. The Collaborative has a long and successful history with DSM
20 programs in Kentucky. Duke Energy Kentucky currently engages the
21 Collaborative to review program changes, as well as to preview program additions
22 to its portfolio.

TIMOTHY J. DUFF DIRECT

1 Duke Energy Kentucky expects to continue to work with this
2 Collaborative to create a transparent EE process and to realize the benefits of
3 input from the diverse perspectives of the group.

4 **Q. DID THE COLLABORATIVE REVIEW AND APPROVE THE**
5 **COMPANY'S APPLICATION TO OFFER NEW AND ENHANCED EE**
6 **AND DR PROGRAMS?**

7 A. Yes. Duke Energy Kentucky discussed this filing with the Collaborative and
8 received its approval to make the filing.

9 **Q. PLEASE DESCRIBE INFORMATION BY OTHER WITNESSES IN**
10 **SUPPORT OF THE COMPANY'S APPLICATION IN THIS**
11 **PROCEEDING?**

12 A. Duke Energy Kentucky witnesses filing direct testimony in support of this case
13 are:

14 **Casey Mather**, Managing Director Mass Market Strategy and Market Planning,
15 who will provide a description of the mass market (residential) customer
16 programs that are presently approved and included in the Company's portfolio.
17 Additionally, Mr. Mather will discuss several new and innovative programs that
18 the Company believes will be successful in the market place;

19 **Kevin A. Bright**, Managing Director Large and Small Business Market Strategy
20 and Products, will address the non-residential energy efficiency and peak demand
21 reduction programs and components of the Company's Application.

22 **Ashlie J. Ossege**, Manager, Market Analytics, will explain the Company's
23 utilization of a robust evaluation, measurement and verification process that is

TIMOTHY J. DUFF DIRECT

1 based on the work of an independent third party. She also discusses the financial
2 modeling for cost effectiveness using DSMore™; and
3 **James E. Ziolkowski**, Rates Manager, Ohio/Kentucky Rates, will discuss the
4 calculation of the initial Rider DSMR beginning in July, 2012. This calculation is
5 based upon the projected energy efficiency costs and associated achievements and
6 incentive levels. Mr. Ziolkowski will also explain the procedure for annual
7 applications to reconcile Rider DSMR.

III. ADDITIONAL ELEMENTS OF THE COMPANY'S PROPOSAL

8 **Q. OTHER THAN ALLOWING DUKE ENERGY KENTUCKY THE RELIEF**
9 **DESCRIBED ABOVE, WHAT OTHER ACTIONS COULD THE**
10 **COMMISSION TAKE THAT WOULD ENHANCE THE COMPANY'S**
11 **ABILITY TO COST EFFECTIVELY OFFER ITS CUSTOMERS**
12 **ATTRACTIVE OFFERINGS?**

13 A. It would be beneficial if the Commission would approve an automatic approval
14 process for pilot programs with the following parameters:

- 15 • The total pilot program cost including EM&V is projected to be less than
16 \$75,000.
- 17 • The pilot program is found to be cost effective under the Total Resource Cost
18 test (TRC) and Utility Cost Test (UCT).
- 19 • The pilot program has been vetted and approved by the Collaborative.

20 By allowing these small scale tests of new products to avoid the
21 traditional approval process for new programs, the Company will be able to
22 quickly test new and innovative products and services, as well as adapt to and

TIMOTHY J. DUFF DIRECT

1 capitalize on market conditions to bring energy savings opportunities to
2 customers. Duke Energy Kentucky would propose to report on any such pilots as
3 part of its annual DSM update filed in November of each year. If the pilot proves
4 successful and the Company decides that a program should be commercialized
5 and offered on a large scale and as part of the broader suite of EE or DR
6 programs, Duke Energy Kentucky will request approval of the Commission and
7 will have actual data based upon the pilot sampling to support such a filing.

IV. CONCLUSION

8 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

9 **A. Yes.**

TIMOTHY J. DUFF DIRECT

BEFORE

KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of the Application of Duke)
Energy Kentucky, Inc., for an Energy)
Efficiency Cost Recovery) Case No. 2012-xxxx
Mechanism and for Approval of)
Additional Programs for Inclusion in)
its Existing Portfolio.)

DIRECT TESTIMONY OF

ASHLIE J. OSSEGE

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

March 6, 2012

TABLE OF CONTENTS

	<u>PAGE</u>
I. INTRODUCTION.....	1
II. OVERVIEW OF EVALUATION, MEASUREMENT AND VERIFICATION....	4
III. MODELING AND COST EFFECTIVENESS RESULTS	13
IV. COST-EFFECTIVENESS TESTS.....	16
V. CONCLUSION.....	21

ATTACHMENTS

- AJO-1 – Evaluation, Measurement and Verification by Program
- AJO-2 – Schedule of Evaluation, Measurement and Verification
- AJO-3 – Program Cost Effectiveness Tests – Current Programs
- AJO-4 – Program Cost Effectiveness Tests- New Programs
- AJO-5 - Estimated impacts of the current portfolio programs
- AJO-6 - Estimated impacts of the new portfolio programs

I. INTRODUCTION

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 **A.** My name is Ashlie J. Ossege, and my business address is 139 East Fourth Street,
3 Cincinnati, Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 **A.** I am employed by Duke Energy Business Services LLC, an affiliate of Duke
6 Energy Kentucky, Inc., (Duke Energy Kentucky, or Company) as Manager,
7 Market Analytics.

8 **Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL**
9 **EXPERIENCE.**

10 **A.** I graduated from the University of Cincinnati with a Bachelor's Degree in
11 Marketing and Real Estate. I have completed additional course work at the
12 graduate level in quantitative analysis. I am an Instructor in the Graduate
13 Economics Department at the University of Cincinnati, teaching Applied
14 Statistical Programming Methods for Economists.

15 From 1994 to 1997, I was employed by various real estate brokers,
16 including Comey & Shepherd Realtors as a certified Realtor in Ohio. From 1997
17 to 2006, I worked for Cinergy and Duke Energy Ohio as a Lead Market Analyst
18 developing and managing product/program design activities as well as market
19 research projects. Since 2006, I have been employed by Duke Energy Business
20 Services, currently in the role of Manager, Market Analytics.

21 **Q. PLEASE DESCRIBE YOUR DUTIES AS MANAGER OF MARKET**
22 **ANALYTICS.**

1 **A.** As Manager, Market Analytics, I have responsibilities for a variety of analytical
2 functions including market research data collection and analysis, marketing
3 design testing, energy load analysis, demand side management (DSM) cost
4 effectiveness analysis, impact evaluation studies, and product design research. In
5 this role, I also provide services for other Duke Energy affiliates, including Duke
6 Energy Ohio, Duke Energy Indiana, and Duke Energy Carolinas. Additionally, I
7 participated on behalf of the Company at public forums related to analysis of
8 DSM measures and programs.

9 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**
10 **PUBLIC SERVICE COMMISSION?**

11 **A.** No. However I have provided testimony in cases before the Indiana Utilities
12 Regulatory Commission, the Public Utilities Commission of Ohio and the North
13 Carolina Public Utilities Commission.

14 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
15 **PROCEEDING?**

16 **A.** The purpose of my testimony is to explain the rationale for program evaluation, as
17 well as the processes by which Duke Energy Kentucky evaluates its DSM
18 programs. My testimony also discusses how the results from the Evaluation,
19 Measurement and Verification (EM&V) process will be used in the Company's
20 Demand Side Management Program (Rider DSM) and the calculation of this
21 Demand Side Management Rate (Rider DMSR). In addition, I will review: (1)
22 the DSMore™ model that the Company uses to evaluate the cost-effectiveness of
23 DSM programs; (2) the assumptions underlying the modeling; and (3) the cost-

1 effectiveness tests utilized along with the results of these cost-effectiveness
2 analyses. Finally, I sponsor Attachments AJO-1 through 6.

3 **Q. PLEASE IDENTIFY ATTACHMENT AJO-1.**

4 A. Attachment AJO-1 includes the evaluation plan that summarizes the proposed
5 specific energy efficiency evaluation studies and activities

6 **Q. PLEASE IDENTIFY ATTACHMENT AJO-2.**

7 A. Attachment AJO-2 includes the evaluation, measurement and verification schedule
8 for each program within the portfolio.

9 **Q. PLEASE IDENTIFY ATTACHMENT AJO-3.**

10 A. Attachment AJO-3 includes the program cost effectiveness test results for current
11 DSM programs.

12 **Q. PLEASE IDENTIFY ATTACHMENT AJO-4.**

13 A. Attachment AJO-4 includes the program cost effectiveness test results for new
14 DSM programs.

15 **Q. PLEASE IDENTIFY ATTACHMENT AJO-5.**

16 A. Attachment AJO-5 includes the projected impacts, costs, and participation
17 anticipated for the current DSM programs.

18 **Q. PLEASE IDENTIFY ATTACHMENT AJO-6.**

19 A. Attachment AJO-6 includes the projected impacts, costs, and participation
20 anticipated for the new DSM programs.

II. OVERVIEW OF EVALUATION, MEASUREMENT AND VERIFICATION

1 **Q. WHAT IS EVALUATION, MEASUREMENT & VERIFICATION?**

2 A. Evaluation, measurement and verification of DSM programs, referred to as
3 EM&V, determines both program and project impacts. Evaluation studies and
4 activities determine not only the impacts of energy efficiency programs but also
5 the effectiveness of those programs from the utility and customer perspective and
6 can include free ridership and spillover effects. Measurement and verification
7 encompasses data collection, monitoring, and analysis associated with the
8 calculation of gross energy and demand savings from individual sites or projects.

9 **Q. PLEASE EXPLAIN WHAT YOU MEAN BY FREE RIDERSHIP AND**
10 **SILLOVER EFFECTS.**

11 A. A free rider is a program participant who would have implemented the program
12 measure or practice in the absence of the program. “Spillover effects” refer to
13 reductions in energy consumption and/or demand in a utility’s service area caused
14 by the presence of the energy efficiency program, beyond program related gross
15 savings of participants. These effects could result from: (a) additional energy
16 efficiency actions that program participants take outside the program as a result of
17 having participated; (b) changes in the array of energy-using equipment that
18 manufacturers, dealers, and contractors offer all customers as a result of program
19 availability; and (c) changes in the energy use of non-participants as a result of
20 utility programs, whether direct (e.g., utility program advertising, or peer
21 education) or indirect (e.g., stocking practices of energy-using equipment, or
22 changes in consumer buying habits). Free ridership and spillover effects are

1 estimated as part of the process evaluation and used in the impact evaluation.

2 **Q. WHY IS EM&V AN IMPORTANT COMPONENT OF ENERGY**
3 **EFFICIENCY PROGRAMMING?**

4 **A.** Duke Energy Kentucky believes that successful, reliable and cost-effective energy
5 efficiency programs require EM&V activities for several reasons. First and
6 foremost, reliably measuring savings achieved from energy efficiency provides
7 certainty for resource planning and provides accountability to ratepayers and
8 shareholders. Second, properly executed evaluation activities provide insights
9 and support for program improvements. Accurately understanding savings
10 estimates and program efficacy enables Duke Energy Kentucky to drive increased
11 energy savings through improved design as well as provide insights for the
12 targeting and marketing of specific programs that will improve overall
13 participation. Reliable EM&V also enables the Company to understand how best
14 to cost effectively generate kilowatt (kW) and kilowatt-hour (kWh) yield from our
15 DSM investments.

16 **Q. WHAT DIFFERENT TYPES OF EVALUATION DOES DUKE ENERGY**
17 **KENTUCKY UTILIZE?**

18 **A.** There are five types of evaluation that the Company relies upon. First, there is
19 cost effectiveness evaluation, which requires establishing a set of assumptions
20 around impacts and market potential *ex-ante*, or before the program
21 implementation. Second, there is impact evaluation, which strives to estimate the
22 actual energy and demand load reductions realized from a program through
23 billing analysis, engineering analysis, or statistically adjusted engineering models.

1 Third, the Company relies upon measurement, which typically refers to the
2 metering, sub-metering, hours-of-use logger metering, statistical pre- and post-
3 analyses or other modes of measuring load reduction. Usually, measurement is a
4 subset of an impact evaluation. Fourth, there is verification, which refers to the
5 confirmation that customers actually installed the intended measures, that vendors
6 are performing to expectation and that operational factors on the customer site are
7 occurring such that the expected load savings are being realized. Finally, there
8 are also process evaluations that refer to a set of review and auditing methods that
9 ascertain program effectiveness, customer satisfaction and experience, vendor
10 satisfaction and other factors that contribute substantially to program success. We
11 propose to conduct these five types of evaluations through the use of the
12 approaches set forth in Duke Energy Kentucky's EM&V Plans, provided in
13 Attachment AJO-1. In just the past year, Duke Energy Kentucky has been able to
14 uncover, through active evaluation research, several insights that the Company
15 believes will improve the ability to cost effectively capture DSM savings for
16 customers. For example, by targeting Compact Fluorescent Lamps (CFLs) efforts
17 to households that have not yet adopted CFLs, we are able to improve the speed at
18 which the lighting market undergoes a transformation and ensure that we deliver
19 those programs to households that will benefit the most, and yield the greatest
20 impacts, *e.g.* those who have not yet tried CFLs (or only a few CFLs). Evaluation
21 activities also help us understand which programs might not be as well understood
22 as the market believes; for example, we are learning that households do not
23 respond uniformly to behavioral interventions, such as requests to raise thermostat

1 settings for air conditioning, reduce hours of use for lighting, and lower
2 temperatures for water heaters. Evaluating impacts carefully across different
3 segments can contribute substantially to savings for customers.

4 **Q. HOW DOES DUKE ENERGY KENTUCKY PLAN TO MEASURE,**
5 **MONITOR AND VERIFY THE KENTUCKY DSM PROGRAMS?**

6 **A.** In general, the following approach will be used for monitoring and verification of
7 Kentucky DSM programs:

8 Paper and Electronic Verification

- 9 • Paper or electronic verification will be completed on all applications for
10 energy efficiency incentives by customers. As part of the application
11 process, specific customer and measure data will be requested from
12 applicants. Data requested will vary depending on the program, the
13 measure, the equipment and the delivery of the application. Customers
14 and/or contractors will be contacted for clarification and completion of the
15 application if they fail to provide necessary information. The Company
16 will only process incentives once verification is complete and information
17 is entered into the electronic tracking systems. Duke Energy Kentucky
18 Field Verification and Monitoring Staff will maintain all customer
19 applications for incentives. Paper verification also serves as a key
20 component of our marketing effectiveness efforts. Our research is
21 beginning to show that the very order in which we offer programs to
22 customers affects the uptake and participation rate. If we carefully
23 evaluate our successes in program offerings, we are able to more cost

1 effectively target energy efficiency resources.

2 Field Verification and Monitoring

- 3 • Consistent with industry standard, in most cases, randomly selected
- 4 samples of approximately 5% of the installations will be field verified and
- 5 monitored. On-site field visits verify the installation of the claimed
- 6 equipment in the proper manner, confirm appropriate contractor or vendor
- 7 processes and performance, and bring to light potential discrepancies or
- 8 process improvements for the programs. Sample size will be larger for
- 9 very large projects with significant incentives or energy impacts at risk.
- 10 The size of such samples will be commensurate with the increased load
- 11 savings as determined by Duke Energy Kentucky. The Company will
- 12 provide field training and support to auditors performing assessments, to
- 13 ensure quality both for communication and technical capabilities.

14 Customer Satisfaction Surveys

- 15 • Duke Energy Kentucky will use customer satisfaction surveys to monitor
- 16 satisfaction with program delivery and design, seek additional
- 17 improvements to the program, analyze experimental designs in market
- 18 messaging, and potentially uncover latent problems or issues with the
- 19 measure/installation. These surveys will be administered via telephone,
- 20 web survey instruments, or mail surveys.

21 System Performance Tests

- 22 • System performance tests, called “operability studies” for load control
- 23 resources will be conducted periodically to ensure that operational systems

1 are working correctly, and that the projected load reductions are reliably
2 available when needed. Load research metering samples and tracking may
3 also be used to verify energy reductions.

4 Early Feedback

- 5 • Early feedback is an important element in EM&V for all components,
6 including process and impact evaluations, but is also specifically relevant
7 for system performance tests. If a problem is found with the installations
8 or operations, the contractor and customer will be notified to correct the
9 problem. In addition, subsequent work or projects performed by that
10 contractor will be monitored until Duke Energy Kentucky is satisfied that
11 the installations or projects are being completed according to program
12 specifications and operational standards. If the problems are not resolved
13 to the satisfaction of Duke Energy Kentucky, that contractor, at the
14 Company's discretion, may be eliminated from the program.

15 Evaluation Studies

- 16 • Evaluation studies will generally include methods such as loggers to
17 capture appliance usage times, load research metering for hourly load
18 analysis, statistical pre- and post-billing analysis using comparison control
19 groups, engineering analysis and modeling, reference and comparisons to
20 impact studies conducted in other regions for similar programs, phone and
21 online interviews, and other methods reviewed within the International
22 Performance Measurement and Verification Protocols, the California
23 Evaluation Framework, and the Model Energy Efficiency Program Impact

1 Evaluation Guide prepared as part of the National Action Plan for Energy
2 Efficiency.

3 **Q. WILL DUKE ENERGY KENTUCKY'S PROGRAMS ALSO BE**
4 **REVIEWED BY AN INDEPENDENT THIRD PARTY AND WHAT IS**
5 **THEIR ROLE?**

6 **A.** Yes. Duke Energy Kentucky has provided for the independent review and
7 evaluation of its proposed programs by our existing program evaluation
8 contractor TecMarket Works. The initial evaluation plan that summarizes the
9 proposed specific energy efficiency evaluation studies and activities has been
10 developed and approved by Nicholas P. Hall, President and owner of TecMarket
11 Works and set forth in Attachment AJO-1, which provides an initial design for
12 the EM&V analysis for the proposed energy efficiency programs.

13 In addition to developing the evaluation plans, TecMarket Works and their
14 subcontractors will perform the duties set forth in Attachment AJO-1 regarding
15 the measurement, monitoring and verification of Duke Energy Kentucky's
16 programs. TecMarket Works is an independently owned, operated, and managed
17 business with more than 30 years experience in the EE evaluation field.
18 TecMarket Works provides EE program evaluation services to governments,
19 regulatory agencies, and utility companies.

20 **Q. ARE DUKE ENERGY KENTUCKY'S DSM PROGRAM EVALUATION**
21 **SUMMARIES CONSISTENT WITH STATE-OF-THE-ART**
22 **EVALUATION PROTOCOLS?**

23 **A.** Yes. Duke Energy Kentucky's DSM program evaluation summaries employ the

1 kinds of evaluation efforts, studies, and activities that are associated with state-of-
2 the-art evaluation research and comply with the approaches described in the
3 California Evaluation Protocols, the National Action Plan for Energy Efficiency
4 Protocols, and the International Performance Measurement and Verification
5 Protocol (IPMVP). The Company's independent evaluator, TecMarket Works is
6 responsible for making sure these studies are reliable.

7 **Q. WHAT IS THE ESTIMATED COST AND TIMEFRAME FOR THE**
8 **EVALUATION, MONITORING AND VERIFICATION FOR THE**
9 **KENTUCKY DSM PROGRAMS?**

10 A. Duke Energy Kentucky estimates that 5% of total program costs at the portfolio
11 level will be required to adequately and efficiently perform evaluation,
12 monitoring and verification. Historical industry experience suggests that
13 evaluation costs are typically 3% to 8% of total program spending, with more
14 funding attributed to pilot programs, and less on established programs, thus the
15 Company believes that 5% is reasonable and appropriate because the Company is
16 committed to obtaining reliable and cost-effective estimates of the load impacts
17 from the programs.

18 Attachment AJO-2, attached hereto generally outlines the expected
19 timeframes and completion of evaluations for the Kentucky Demand Side
20 Management Programs; however, final scheduling will be based on actual
21 program approval, initiation and realized participation rates and as such
22 Attachment AJO-2 may be modified or revised accordingly.

23 **Q. HOW WILL THE EVALUATION, MEASUREMENT, AND**

1 **VERIFICATION RESULTS BE UTILIZED IN DEVELOPING**
2 **ESTIMATES OR ANNUAL TRUE-UPS FOR THE COMPANY'S RIDER**
3 **DSMR?**

4 A. The results of the EM&V process are designed to be used in future projections as
5 well as the calculation of annual true-ups to be included in future Rider DSMR.
6 The EM&V process utilizes statistically valid samples to verify customer
7 participation and provide prospective load impacts. The initial estimates of
8 participation and initial estimates of measure/program level load impacts are used
9 to develop the projected benefits (avoided costs) to determine the incentive
10 amounts included in the proposed rider. If EM&V has not been completed for a
11 measure/program, the initial estimates of the measure/program level load impacts
12 along with actual participation will be used in the annual true-up of projected
13 shared savings included in the proposed rider. Once EM&V has been conducted
14 and finalized for any particular program, the estimates of measure/program level
15 load impacts and free ridership levels, which are an output of this EM&V process,
16 will be used prospectively to adjust load impact assumptions for subsequent filing
17 periods until the next applicable EM&V results are available.

18 Actual EM&V measure/program level load impacts will be applied to
19 participation and reflected in updates to Rider DSMR starting with the first day of
20 the month following the month in which the final EM&V results are received
21 from the independent third party evaluator. These results will also be used to
22 estimate future target achievement levels for development of estimated incentives
23 in the rider going forward. For example, if a report is available on February 15 of

1 a rider period, the impacts would be applied beginning March 1 through the
2 remainder of the rider period as well as to calculate the estimated incentives for
3 the next rider period.

4 **III. MODELING AND COST EFFECTIVENESS RESULTS**

5 **Q. WHAT IS THE DSMTM MODEL?**

6 A. DSMTM is a financial analysis tool designed to evaluate the costs, benefits, and
7 risks of DSM programs and measures. DSMTM is used as a planning tool to
8 forecast the value of a DSM measure across distributions of weather and/or
9 energy costs or prices. By examining DSM performance and cost effectiveness
10 over a wide variety of weather and cost conditions, the Company is in a better
11 position to measure the risks and benefits of employing DSM measures in the
12 same way traditional generation capacity additions are vetted, and further, to
13 ensure that demand-side resources are compared to supply-side resources on a
14 level playing field. DSMTM can also be used to include the benefits of
15 reductions in natural gas usage as a result of the implementation of energy
16 efficiency measures/programs.

17 The analysis of DSM cost-effectiveness has traditionally focused primarily
18 on the calculation of specific metrics, often referred to as the California Standard
19 tests: Utility Cost Test (UCT), Ratepayer Impact Measure (RIM) Test, Total
20 Resource Cost (TRC) Test, and Participant Test. DSMTM provides the results
21 of those tests for any type of energy efficiency program (demand response and/or
22 energy saving).

23 The DSMTM model has been used for DSM program cost-effectiveness

1 evaluation by the Company for several years, including for the calculation of
2 projected lost revenues for inclusion in certain of the cost effectiveness tests. It
3 was a key component in the process of developing revenue requirements in the
4 Company's current DSM program.

5 DSMore™ is currently used in 30 States by utilities and regulators alike
6 and is widely used due to the fact that it produces more accurate valuations on
7 avoided electric costs and lost revenues than alternative approaches which over-
8 rely on the simplistic averaging of hourly load reductions and hourly avoided
9 costs. The DSMore™ model's hourly level analysis is consistent with the hourly
10 modeling process employed in developing the Company's Integrated Resource
11 Plan (IRP).

12 Generally, the DSMore™ model requires the user to input specific
13 information regarding the DSM measure or program to be analyzed as well as the
14 cost and rate information of the utility. These inputs enable one to then analyze
15 the cost effectiveness of the measure or program.

16 **Q. WHAT DSM PROGRAM OR MEASURE INFORMATION IS INPUT**
17 **INTO THE MODEL?**

18 A. The information required for a DSM program or measure includes, but is not
19 limited to:

- 20 ■ Number of program participants, including free ridership or free
21 drivers;
- 22 ■ Projected program costs, contractor costs and/or administration
23 costs;

- 1 ▪ Customer incentives, demand response credits or other incentives;
- 2 ▪ Measure life, incremental customer costs and/or annual
- 3 maintenance costs;
- 4 ▪ Load impacts (kWh, kW and the hourly timing of reductions);
- 5 ▪ Hours of interruption, magnitude of load reductions or load floors;
- 6 and
- 7 ▪ Monthly gas load impacts if applicable.

8 **Q. WHAT UTILITY INFORMATION IS INPUT INTO THE MODEL?**

9 A. The utility information required for the model includes, but is not limited to:

- 10 ▪ Discount rate;
- 11 ▪ Loss ratio, either for annual average losses or peak losses;
- 12 ▪ Rate structure, or tariff appropriate for a given customer class for a
- 13 given jurisdiction;
- 14 ▪ Avoided electric costs of energy, capacity, transmission &
- 15 distribution; and cost escalators
- 16 ▪ Avoided natural gas energy costs and cost escalator

17 **Q. HOW ARE PROGRAMS OR MEASURES MODELED?**

18 A. An analyst or program manager develops the inputs for the program or measure
19 using information for expected program costs, load impacts, customer incentives
20 necessary to drive customers' participation, free rider expectations, and expected
21 number of participants. This information is used in initial runs of the model to
22 determine cost-effectiveness and whether adjustments need to be made to a
23 program or measure in order for it to pass the participant test, the first critical test.

1 The electric load impacts of the program or measure may be analyzed as a
2 percent of savings reduction from the current level of use, as proportional to the
3 load shape for the customer, or as an hourly reduction in kWh and/or kW. These
4 approaches apply to energy saving programs and measures. For demand response
5 programs, the analyst must provide information on the amount of the expected
6 load reduction and the expected timing of the reduction.

7 The natural gas load impacts of the program or measure may be analyzed
8 as a percent of savings reduction from the current level of use or as a monthly
9 reduction in ccf.

10 **Q. WHAT IS THE SOURCE OF THE DATA FOR THE PROGRAM OR**
11 **MEASURE?**

12 A. Program managers and analysts develop the inputs for each program or measure
13 from industry information derived from sources such as Electric Power Research
14 Institute (EPRI), Energy Star, E-Source, other utility program information and
15 evaluations contiguous to or within Kentucky, contiguous state Technical
16 Reference Manuals (TRMs), engineering building simulation models, as well as
17 from external experts in the industry. Over time, as impact and process
18 evaluations (EM&V) are performed on Kentucky programs, information and input
19 specifically related to Kentucky customers will begin to emerge and be used
20 within future cost-effectiveness analyses.

21 **IV. COST-EFFECTIVENESS TESTS**

22 **Q. PLEASE DESCRIBE HOW DSM PROGRAMS AND MEASURES ARE**
23 **ANALYZED.**

1 A. The net present value of the financial stream of benefits versus costs is assessed,
2 *i.e.*, the savings or avoided costs are valued against the costs to implement the
3 measures. The resultant benefit/cost ratios, or tests, provide a summary of the
4 measure's cost-effectiveness relative to the benefits of its projected load impacts.
5 As previously mentioned, the Participant Test is the first screen for a program or
6 measure to make sure a program makes economic sense for the individual
7 consumer. Duke Energy Kentucky also uses the UCT, the TRC, and the RIM Test
8 for a comprehensive screening of energy efficiency measures.

- 9 • The Participant Test compares the benefits to the participant through bill
10 savings, electric and gas (if applicable), and incentives from the utility,
11 relative to the costs to the participant for implementing the energy efficiency
12 measure. The costs can include incremental equipment and installation costs
13 as well as increased annual operating cost, if applicable.
- 14 • The UCT compares utility benefits (avoided energy and capacity related
15 costs) to utility costs incurred to implement the program such as
16 administration; marketing, customer incentives, and measure offset costs,
17 and does not consider other benefits such as participant savings or societal
18 impacts. This test compares the cost (to the utility) to implement the
19 measures with the savings or avoided costs (to the utility) resulting from the
20 change in magnitude and/or the pattern of electricity and gas consumption
21 caused by implementation of the program. Avoided costs are considered in
22 the evaluation of cost-effectiveness based on the projected cost of power,
23 including the projected cost of the utility's environmental compliance for

1 known regulatory requirements, as well as the avoided natural gas costs (if
2 applicable). The cost-effectiveness analyses also incorporate avoided
3 electric transmission and distribution costs, and load (line) losses.

- 4 • The TRC test compares the total benefits to the utility and to participants
5 relative to the costs to the utility to implement the program along with the
6 costs to the participant. The benefits to the utility are the same as those
7 computed under the UCT. The benefits to the participant are the same as
8 those computed under the Participant Test, however, customer incentives are
9 considered to be a pass-through benefit to customers. As such, customer
10 incentives or rebates cancel each other out in the calculation and are not
11 included in the TRC.
- 12 • The RIM Test, or non-participants test, indicates if rates increase or decrease
13 over the long-run as a result of implementing the program.

14 The use of multiple tests can ensure the development of a reasonable set of
15 DSM programs and indicate the likelihood that customers will participate. It
16 should also be noted that none of the tests described above include external
17 benefits to participants and non-participants that can also offset the costs of the
18 programs.

19 **Q. WHAT WERE THE RESULTS OF THE ANALYSIS OF THE PROPOSED**
20 **PROGRAM?**

21 A. The Company analyzed and has been approved to offer the following set of cost-
22 effective Kentucky DSM programs:

23 **RESIDENTIAL CUSTOMER PROGRAMS**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

Residential Conservation

- Energy Efficiency Education Program for Schools
- Low Income Services
- Residential Energy Assessments
- Residential Smart Saver[®]

Residential Demand Response

- Power Manager

NON-RESIDENTIAL CUSTOMER PROGRAMS

Non-Residential Conservation

- Smart Saver[®] Energy Assessments
- Smart Saver[®] Prescriptive
- Smart Saver[®] Custom

Non-Residential Demand Response

- PowerShare[®]

The Company analyzed and is seeking approval for the following set of cost-effective Kentucky DSM programs:

RESIDENTIAL CUSTOMER PROGRAMS

- Appliance Recycling Program
- Low Income Neighborhood
- My Home Energy Report

The table attached hereto as Attachment AJO-3, contains the cost-effectiveness test results for each program in the approved portfolio. In general, the customer programs pass the UCT, TRC, and the RIM test. Development of

1 these programs involved analyzing numerous measures. The programs with
2 natural gas load impacts are Energy Efficiency Education Program for Schools,
3 Low Income Services, Residential Energy Assessments, and Residential Smart
4 Saver[®].

5 Details regarding the three newly proposed programs are provided in Duke
6 Energy Kentucky witnesses Casey Mather's direct testimony, and cost-
7 effectiveness test results for these programs are provided in Attachment AJO-4.

8 **Q. WHAT ARE THE PROJECTED LOAD IMPACTS FROM THE**
9 **APPROVED PORTFOLIO OF PROGRAMS?**

10 A. The projections of five year cumulative annual impacts from the DSMore[™]
11 valuation process are outlined in Attachment AJO-5.

12 **Q. WHAT ARE THE PROJECTED LOAD IMPACTS FROM THE**
13 **PORTFOLIO OF PROPOSED PROGRAMS?**

14 A. The projections of five year cumulative annual impacts from the DSMore[™]
15 valuation process are outlined in Attachment AJO-6.

16 **Q. WHAT DATA WAS USED IN THE CALCULATION OF THE REVENUE**
17 **REQUIREMENT PROVIDED TO WITNESS ZIOLKOWSKI?**

18 A. The revenue requirement was calculated using both data inputs and outputs from
19 the DSMore[™] model including estimated energy savings, program costs and
20 avoided costs. In addition, measurement and verification costs, which are not part
21 of the DSMore[™] model, are also included in the calculation of revenue
22 requirements.

23

V. CONCLUSION

1

2 **Q. WERE ATTACHMENTS AJO-1 THROUGH 6 PREPARED BY YOU OR**
3 **AT YOUR DIRECTION?**

4 A. Yes, they were.

5 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

6 A. Yes, it does.

Proposed Evaluation Approach for Duke Energy Kentucky's Programs

Residential Programs

Residential Smart Saver[®] Program (includes programs formerly known as Residential Smart Saver[®] and Energy Star Products):

The HVAC component of this program provides incentives for high efficiency central air conditioners and electric heat pumps. For new construction installations, prototypical customer homes will be modeled using an engineering simulation model designed for residential applications calibrated to post measure installation usage. Building energy simulations will be conducted for retrofit applications as well, augmented by a statistical billing analysis. A comparison of estimates derived under the two methods will form the basis for insights into the predictive power of the statistical and engineering models. To maximize the estimation power of the billing analysis, a statistically adjusted engineering model will be developed that uses prior engineering estimates as explanatory variables, plus weather normalization and household-specific usage factors. Participant (and non-participant surveys, as needed) will be conducted, along with vendor satisfaction surveys or interviews, to estimate free ridership and uncover potential vendor issues that might impact customer satisfaction or program effectiveness. These surveys will also provide inputs to the statistical adjusted engineering models (e.g, equipment that was replaced, any changes in usage or house occupancy). A process evaluation of this program will be conducted annually within the Residential Programs Process Review. This evaluation plan is consistent with IPMVP Options C (retrofit) and D (new construction).

The tune up, insulation, and sealing measures within Residential Smart Saver[®] are available through partnerships with HVAC dealers. These offers provide a partial offset to the cost of HVAC tune up, duct and air sealing, and attic and duct insulation for residential customers. Program impacts will be computed using billing analysis if the participant population is large enough to provide statistically sound analysis. Energy impacts will be based on field verification of contractor performance combined with weather-adjusted engineering algorithms and building energy simulations. Customer surveys will also gather information related to free ridership and customer satisfaction with the program. A process evaluation of this program will be conducted annually within the Residential Programs Process Review. This evaluation plan is consistent with IPMVP Option C if the participant population is large enough for billing analysis, IPMVP Option A or D for the engineering analysis.

The Residential Smart Saver[®] lighting offer currently focuses on the efficient and cost effective delivery of compact fluorescent bulbs through innovative promotional channels. Since savings from this measure type typically will be small relative to total load, impact evaluations must be based on prior engineering-based estimates of kWh savings for the affected categories of lighting. Here, engineering algorithms for the installed lighting measures are reasonably well known. Further, the Energy Star program is a widespread and well studied program, which will allow for additional extrapolation of results from other studies for use in estimation of impacts for this program. Selective short term spot metering will be performed within randomly selected

homes to confirm the expected engineering results and to ascertain the wattages of replaced bulbs. In addition, data loggers will be left within some of these homes to monitor the hourly usage patterns for the installed lights. The sampling of homes will be conducted such that results are representative of the participant population at large. Net savings estimation will be based in part using data from surveys for the program. These participant surveys will gather information about lighting products that were replaced, delivery channel satisfaction and effectiveness, free ridership, spillover, persistence and satisfaction. A process evaluation of this program will be conducted annually within the Residential Programs Process Review. This evaluation plan is consistent with IPMVP Protocol B.

The Property Manager CFL measure under the Residential Smart \$aver[®] program provides incentives to multifamily property managers to install CFLs in permanent, landlord-owned light fixtures. Duke Energy will pay for the CFLs and the Property Manager will pay for the shipping costs and will install CFLs into the permanent fixtures during their routine maintenance visits and provide tracking for each unit and the number of bulbs installed. Property Managers will complete a survey before receiving the bulbs so that Duke Energy will be able to assess the number of sockets available for CFLs, their vacancy rate, the number of buildings, operating hours for common area lighting fixtures, and number of units in each building. Program impacts will be computed using engineering-based estimation of energy savings for the installed CFLs informed by installation and operating hours from participants, in conjunction with a more robust statistical assessment of energy use differences (bill savings) for the period of time before and after the CFLs were installed if savings can be isolated to building meters capable of differentiating consumption for the CFL use areas. Customer surveys will be conducted with Property Managers to determine whether there were changes in occupancy, satisfaction with the program, and to ascertain how many of the CFLs were installed and/or removed. This evaluation plan is consistent with IPMVP Option C if billing analysis can be conducted. This is also consistent with IPMVP Option A for engineering analysis if loggers are able installed.

Residential Energy Assessments (formerly Residential Home Energy House Call):

Residential Energy Assessments - Home Energy House Call is an energy audit program. The program provides a report to the occupants recommending energy savings measures for their home. The service also provides measures that can be directly installed in the home, such as compact fluorescent bulbs and weather stripping. Program impacts will be computed using engineering-based estimation of energy savings for the installed measures, in conjunction with a more robust statistical assessment of energy use differences (savings) for the period of time before and after recommendations have been made. The post-retrofit period occurs after participants have had time to install the measures provided and/or to follow up on the auditor's recommendations regarding additional measures. Customer surveys will be conducted to determine whether there were changes in household occupancy and to ascertain which of the recommended energy savings measures were implemented by the customers one to twelve months following the audit. The focus of the impact assessments will be on kWh savings more than kW, given the complexity and variety of possible measures and energy savings recommendations. Customer surveys also will gather information related to free ridership and customer satisfaction with the audit and the auditor. A process evaluation of this program will be conducted annually within the Residential Programs Process Review. This evaluation plan is consistent with IPMVP Protocol C.

Energy Efficiency Education Program for Schools (formerly Residential Comprehensive Energy Education Program (NEED))

The **K-12 Energy Efficiency Program** will be offered through two categories – the in-the-school curriculum as well as a live theater production. The curriculum offered through the National Energy Education Development program (**NEED**) is designed to educate students on the value energy efficient behavior, promote onsite school audits and encourage students to install energy efficiency measures. The program includes an in-the-school curriculum component, as well as an energy efficiency kit component that will allow the students' learnings to translate into effective installation of energy efficiency measures in the home. The live theatrical production category is designed to educate students about energy efficiency via the theatrical production presented by the National Theatre for Children (**NTC**) and 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 our 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 performed by two professional actors.

The process evaluation of the program will include program manager, implementer and teacher interviews to assess program operations, and student family surveys to assess program awareness, satisfaction, and compliance with installations and recommendations. For the theater component, the process evaluation will also consist of interviews with school administrators and a review of the theatrical presentation, and will monitor program operations as the partnership with NTC matures. The impact evaluation for both categories of this program will consist of engineering estimates and billing analysis.

Low Income Services Program (formerly Residential Conservation and Energy Education and Payment Plus)

Low Income Weatherization and Refrigerator Replacement (formerly Residential Conservation and Energy Education) is to assist low income customers with installation of energy efficiency measures in their home to reduce energy usage. Funds are available for (i.) weatherization measures, and/or (ii.) refrigerator replacement with an Energy Star appliance. The measures eligible for funding will be determined by an energy audit of the residence at no charge to the customer. Availability of this program will be coordinated through vendors or local agencies that administer weatherization programs. The vendor or agency must certify the household income level according to Duke Energy standards. The process evaluation will include program manager and CAP staff interviews to assess program operations, and participant surveys to assess program satisfaction for the services and measures provided. The impact evaluation will consist of a billing analysis and engineering estimates.

Payment Plus provides energy efficiency and budget counseling to help customers understand how to control their energy usage and how to manage their household bills. Participants are also encouraged to participate in Weatherization and Equipment Replacement Assistance to

increase the energy efficiency in customers' homes. Bill assistance credits are provided to customers upon completion of each component of Payment Plus. The process evaluation will include program manager and CAP staff interviews to assess program operations, and participant surveys to assess program satisfaction for the services and measures provided. The impact evaluation will consist of a billing analysis and engineering estimates.

Residential Demand Response Program

Power Manager provides financial incentives to residential customers who permit periodic cycling and emergency interruption of household air-conditioners during peak hours. The program achieves temporary reductions in usage through cycling, typically for 2-4 hours, for approximately 10 days during a summer season depending on factors such as market prices and weather among others. Impact evaluation will focus on measurement and evaluation of short-term hourly changes in energy usage due to limiting air-conditioner run time on a typical summer peak day. Impact evaluation is conducted using a random sample of participants in each Power Manager region. Data collected for sample households and used in the impact analysis includes hourly air conditioner run time, premise interval usage (15 minute), and rated amps (RLA, FLA) of air-conditioner units. With this data, a statistical model is developed for the natural duty cycle of each air-conditioner unit in the sample as a function of temperature, humidity, and hour of the day. These models provide baselines for air-conditioner unit run time in the absence of load control, from which the impact of Power Manager load control is determined. Participant and non-participant surveys may be conducted to ascertain customer comfort, natural thermostat settings, program satisfaction, vendor satisfaction, and related issues. There is no free ridership to be estimated, in this case, since the estimation of the natural duty cycle of air-conditioners implicitly accounts for what would have happened in the absence of the program. A process evaluation study will be conducted at least every other year. A review of load reduction estimates as well as operational use of the resource within system operation contexts on peak will be performed by the independent third party evaluator. This evaluation plan is consistent with IPMVP Option C.

Non-Residential Programs/Measures

Smart Saver® Non Residential (formerly C&I High Efficiency Incentive (for Businesses and Schools))

Smart Saver® Prescriptive offers a combination of incentives for various measures including but not limited to: LED lighting for traffic and pedestrian signals, LED exit signs, occupancy sensors, pellet dryer tanks, and programmable thermostats. Statistically representative samples of participants will be selected for review and impact estimation studies. For each, some blend of selective monitoring, site visits and engineering analysis will be performed at a sample of facilities. Participant surveys will be conducted to collect information needed to estimate net impacts. Participants will be asked about equipment that was replaced, energy efficiency actions taken, prior intentions regarding these measures, changes in other major end uses that impact energy consumption, hours of facility operation, persistence and program satisfaction. A process evaluation will be included in the Smart Saver® Prescriptive Program Process Review. This evaluation plan is consistent with IPMVP Options A or C depending on the measure.

Smart \$aver® Custom offers incentives to customers for proposing unique energy savings opportunities that fit their site needs that are not covered within the prescriptive incentive program. Given the uniqueness of each context, this program will be evaluated using a combination of selective monitoring using data loggers, site visits, engineering-based estimation, building simulation modeling and single participant billing analysis. A pooled, population-level billing analysis would be problematic because participants will tend to be large and diverse in terms of measures installed and the characteristics of their operations. Participant surveys will be conducted to collect information on prior intentions regarding equipment that was replaced, changes in other major end uses that impact energy usage, potential spillover, changes in hours of operation, persistence and program satisfaction. A process evaluation will be conducted within the overall Smart \$aver® Program Process Review. This evaluation plan is consistent with IPMVP Options A, C or D depending on the measure.

Non-Residential Energy Assessments provide education and outreach to commercial customers. There are three components—an onsite option, an on-line version and a phone version. Program guidelines limit the use of onsite visits to customers with multiple facilities. For the on-line and phone participants, an engineering-based estimation of savings will be performed. The analysis will leverage survey data collected on the smaller group. Surveys will be conducted to understand energy efficiency actions taken, prior intentions regarding these measures, changes in electric-using technologies or operations that impact usage, persistence of savings, and program satisfaction. Process evaluation will occur within the Non Residential Smart \$aver Program Process Review.

Non -Residential Demand Response Program

The PowerShare Program is a program designed to reduce electric demand within the transmission and distribution system during periods of high market prices or when electric supplies are nearing critical supply levels (emergency conditions). Either of these conditions can trigger PowerShare to launch a system of messages to their participating customers asking or instructing them to lower their electric use in accordance with their participation agreements and participation options. The process evaluation will include program manager interviews to assess program operations. The approach used by Duke Energy for the impact evaluation consists of the use of a statistical model to estimate an M&V baseline load shape (MVB) for each customer, based upon non-event data. The load shed by the customer during an event is estimated by using the MVB to simulate the customer's load during the event period would be if there was no event. This is compared to the actual load curve of the customer to determine the amount of load shed. This evaluation plan is consistent with IPMVP Option C.

New Programs for Inclusion in Portfolio

Appliance Recycling provides appliance recycling services to residential customers by providing an incentive to customers that turn in their primary and/or secondary working refrigerator or freezer for recycling. The program takes inefficient kWhs off the system and also responsibly handles the hazardous materials used in the older refrigerators or freezers. The impact evaluation will use a participant actions-based approach to evaluate the energy impacts of the program, linked to a new and used market effects impact adjustment for estimating net grid-based energy impacts. This assessment will also include an in situ metering assessment to determine the energy consumption of the appliance collected from the home. The process

evaluation will consist of a review of the program operations and practices, including its management practices, marketing materials and efforts, processing of units, including the pick-up and handling of the units, the scheduling systems and approaches and tracking and reporting systems. The evaluation will also assess the participant screening approach used during customer contact and scheduling efforts to make sure that the screening approach filters out or appropriately limits participation from customers who would have effectively disposed of their units without the program. A process evaluation of this program will be conducted annually within the Residential Programs Process Review. This evaluation plan is consistent with IPMVP Option A.

Low Income Neighborhood Program will recruit participants through community engagement activities. A community-based kick-off event will be held for targeted neighborhoods, followed by energy assessments completed in the customers' homes and the appropriate energy saving measures will be installed. Customers will receive education on the proper use of the installed measures, as well as energy saving tips they can adopt to help lower their energy costs. The evaluation of the Low Income Neighborhood Program incorporates two different types of evaluation efforts into one combined, coordinated study which includes a process and impact evaluation. The process evaluation will comply with M&V EE protocols for evaluation and will focus on assessing Duke Energy's Low Income Neighborhood Program operations. The process evaluation will include program management, program implementation staff and any third party contractors assisting with the program operations. Participant surveys will also be conducted to assess customer satisfaction, Duke Energy partner communications and staff, their interactions and expectations with the partners, satisfaction with the services and measures provided and questions about behavioral changes made to reduce consumption. The process evaluation report will then make recommendations for program improvements. This effort includes assessing the way in which the program is designed, marketed, and implemented, drivers for participant satisfaction with the program operations and offerings, and other investigative areas. An impact evaluation will be developed after program participation levels are assessed. With sufficient participants, a billing analysis will be conducted where energy use for each customer will be analyzed before and after their participation. If participation is lower than expected, savings estimates based on engineering algorithms and participant survey responses will be conducted.

My Home Energy Report (MyHER) is a program that provides an energy usage report that compares household usage to similarly situated, neighboring homes and provides recommendations to lower energy usage. By understanding energy consumption patterns at the household level, measure-specific coupons, rebates or audit follow-ups can be more cost-effectively targeted to those customer's most likely to benefit from the measure ensuring that program resources are invested wisely. The energy usage reports are made available regularly. Both on-line and printed forms are anticipated. The evaluation effort will include an energy impact assessment and a process evaluation. The impact evaluation will determine the magnitude and certainty of savings achieved, as well as the persistence of the energy savings over time. The Impact evaluation will include a statistical monthly meter based assessment of consumption changes. Participant's consumption will be monitored over time so that consumption changes over an extended period of time can be assessed. A multivariate regression model will be used to analyze the consumption data. The process evaluation will include surveys of participants to assess program and service satisfaction levels, follow-up interviews with customers to determine what energy efficiency appliances or behaviors were

adopted, and management or vendor interviews designed to diagnose and improve program operations, efficiencies and cost effectiveness. In addition, Duke Energy will collect participant information and equipment appliance data, to help determine which types of customers benefit from this type of energy usage information. The impact analysis will be conducted using consumption data beginning 9 to 12 months prior to the initial report issuance, and continue until 12 months following the final monthly or quarterly report is issued in order, to adequately measure energy savings persistence. The fixed effects billing analysis will focus on month-by-month changes over a 6 to 12 month period following the participation date.

Program	Category	Evaluation Type	Earliest Timeframe for Report – Months after significant participation is available	Latest Timeframe for Report – Months after significant participation is available
Energy Efficiency Education Program for Schools	National Energy Education Development (NEED)	Process	12	24
		Impact	16	24
	Theatrical Production Category	Process	12	24
		Impact	16	24
Low Income Services	Weatherization	Process	12	24
		Impact	16	24
	Refrigerator Replacement	Process	24	24
		Impact	24	24
	Payment Plus	Process	12	24
		Impact	16	24
Residential Energy Assessments	Home Energy House Call	Process	12	24
		Impact	14	24
Residential Smart Saver®	Residential Lighting Offer	Process	12	24
		Impact	12	24
	Property Manager CFLs	Process	12	24
		Impact	12	24
	Residential HVAC	Process	12	24
		Impact	16	24
	Residential Tune Up, Insulation, and Sealing	Process	12	24
		Impact	16	24

Program	Category	Evaluation Type	Earliest Timeframe for Report – Months after significant participation is available	Latest Timeframe for Report – Months after significant participation is available
Power Manager		Process	12	24
		Impact	14	24
Smart \$aver [®] Prescriptive		Process	12	24
		Impact	12	24
Smart \$aver [®] Custom		Process	12	24
		Impact	12	24
Smart \$aver [®] Energy Assessments		Process	12	24
		Impact	16	24
PowerShare [®]		Process	12	24
		Impact	16	24
Appliance Recycling Program		Process	12	24
		Impact	12	24
Low Income Neighborhood Program		Process	12	24
		Impact	18	24
My Home Energy Report		Process	14	24
		Impact	16	24

Program Cost Effectiveness Test Results**				
	Utility Test	TRC Test	RIM Test	Participant Test
RESIDENTIAL CUSTOMER PROGRAMS				
Energy Efficiency Education Program for Schools	0.56	0.63	0.42	NA
Low Income Services	0.55	1.83	0.43	NA
Residential Energy Assessments	1.86	1.93	1.17	NA
Residential Smart Saver®	4.09	4.20	1.36	5.10
Power Manager	5.16	6.39	5.16	NA
NON-RESIDENTIAL CUSTOMER PROGRAMS				
Smart Saver® Prescriptive	9.29	3.90	1.86	3.20
Smart Saver® Custom	7.65	1.43	1.45	1.45
Power Share®	4.59	29.62	4.59	NA
**Cost Effectiveness is calculated on NPV for life of measure				

Program Cost Effectiveness Test Results**				
	Utility Test	TRC Test	RIM Test	Participant Test
RESIDENTIAL CUSTOMER PROGRAMS				
Appliance Recycling Program	3.52	4.07	1.37	NA
Low Income Neighborhood	1.09	1.62	0.73	NA
My Home Energy Report	2.22	2.22	1.04	NA

**Cost Effectiveness is calculated on NPV for life of measure

Program Name	Gross Cumulative Summer Coincident kW w/losses				
	2012	2013	2014	2015	2016
Energy Efficiency Education Program for Schools	15	29	44	58	73
Low Income Services	47	94	141	188	235
Residential Energy Assessments	139	279	418	557	697
Residential Smart \$aver®	4,200	5,790	7,331	8,821	10,441
Power Manager	12,395	12,312	12,634	13,067	13,517
Smart \$aver® Prescriptive	1,997	4,618	7,395	10,241	13,371
Smart \$aver® Custom	30	442	875	1,330	1,808
Power Share®	26,285	23,099	25,202	27,305	27,305

Program Name	Gross Cumulative kWh w/losses				
	2012	2013	2014	2015	2016
Energy Efficiency Education Program for Schools	183,403	366,805	550,208	733,611	917,014
Low Income Services	276,994	553,989	830,983	1,107,978	1,384,972
Residential Energy Assessments	207,195	414,390	621,585	828,780	1,035,975
Residential Smart \$aver®	31,415,083	38,677,612	44,911,315	50,068,812	55,691,813
Power Manager	-	-	-	-	-
Smart \$aver® Prescriptive	9,854,255	22,079,654	35,009,347	48,386,837	63,101,862
Smart \$aver® Custom	261,986	3,875,205	7,669,085	11,652,658	15,835,411
Power Share®	-	-	-	-	-

Program Name	Cumulative Participants				
	2012	2013	2014	2015	2016
Energy Efficiency Education Program for Schools	1,500	3,000	4,500	6,000	7,500
Low Income Services	303	606	909	1,212	1,515
Residential Energy Assessments	500	1,000	1,500	2,000	2,500
Residential Smart Saver®	512,391	594,207	650,509	685,084	726,260
Power Manager	9,538	9,474	9,722	10,055	10,401
Smart Saver® Prescriptive	29,270	61,598	94,646	126,848	162,269
Smart Saver® Custom	46	680	1,347	2,046	2,780
Power Share®	25	22	24	26	26

Program Name	Annual Total Utility Costs				
	2012	2013	2014	2015	2016
Energy Efficiency Education Program for Schools	\$ 171,174	\$ 153,182	\$ 151,808	\$ 152,370	\$ 152,942
Low Income Services	\$ 636,470	\$ 637,989	\$ 639,516	\$ 641,069	\$ 642,647
Residential Energy Assessments	\$ 157,120	\$ 159,785	\$ 161,080	\$ 161,499	\$ 161,920
Residential Smart Saver®	\$ 2,542,062	\$ 1,114,471	\$ 1,118,613	\$ 1,067,107	\$ 1,145,572
Power Manager	\$ 285,197	\$ 294,040	\$ 391,541	\$ 400,175	\$ 418,791
Smart Saver® Prescriptive	\$ 607,845	\$ 808,478	\$ 880,224	\$ 958,956	\$ 1,045,367
Smart Saver® Custom	\$ 32,979	\$ 346,138	\$ 379,392	\$ 415,954	\$ 456,159
Power Share®	\$ 889,742	\$ 776,586	\$ 817,566	\$ 858,631	\$ 862,127

	Gross Cumulative Summer Coincident kW w/losses				
Program Name	2012	2013	2014	2015	2016
Appliance Recycling Program	-	456	1,018	1,626	2,233
Low Income Neighborhood	145	290	434	579	724
My Home Energy Report	2,183	2,199	2,217	2,235	2,257

	Gross Cumulative kWh w/losses				
Program Name	2012	2013	2014	2015	2016
Appliance Recycling Program	-	1,751,228	3,913,033	6,248,004	8,582,975
Low Income Neighborhood	556,406	1,112,812	1,669,219	2,225,625	2,782,031
My Home Energy Report	8,388,964	8,450,971	8,519,786	8,588,968	8,674,895

	Cumulative Participants				
Program Name	2012	2013	2014	2015	2016
Appliance Recycling Program	-	1,050	2,350	3,750	5,150
Low Income Neighborhood	600	1,200	1,800	2,400	3,000
My Home Energy Report	45,593	45,930	46,304	46,680	47,147

	Annual Total Utility Costs				
Program Name	2012	2013	2014	2015	2016
Appliance Recycling Program	\$ -	\$ 242,767	\$ 288,557	\$ 307,740	\$ 308,254
Low Income Neighborhood	\$ 292,264	\$ 283,259	\$ 285,086	\$ 285,747	\$ 286,419
My Home Energy Report	\$ 478,668	\$ 357,179	\$ 354,955	\$ 351,908	\$ 352,558

VERIFICATION

State of North Carolina)
)
County of Mecklenburg) **SS:**

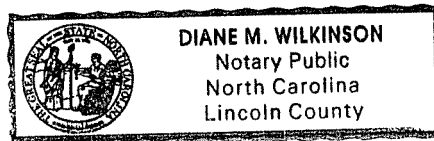
The undersigned, Casey Mather, being duly sworn, deposes and says that he is the Managing Director, Mass Market Strategy & Market Plans, and that the matters set forth in the foregoing testimony are true and accurate to the best of his knowledge, information and belief.

Casey Mather
Casey Mather, Affiant

Subscribed and sworn to before me by *Casey Mather* on this *1st* day of March 2012.

Diane M. Wilkinson
NOTARY PUBLIC

My Commission Expires: *12 July 2014*



BEFORE
KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of the Application of)	
Duke Energy Kentucky, Inc., for)	
an Energy Efficiency Cost Recovery)	Case No. 2012-xxxx
Mechanism and for Approval of)	
Additional Programs for Inclusion)	
in its Existing Portfolio.)	

DIRECT TESTIMONY OF
CASEY MATHER
ON BEHALF OF
DUKE ENERGY KENTUCKY, INC.

March 6, 2012

TABLE OF CONTENTS

	PAGE
I. INTRODUCTION.....	1
II. PROGRAM INFORMATION.....	2
III. CONCLUSION.....	8

I. INTRODUCTION

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 **A.** My name is Casey Mather and my business address is 526 Church Street,
3 Charlotte, North Carolina, 28201.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 **A.** I am employed by the Duke Energy Business Services LLC, an affiliate of Duke
6 Energy Kentucky, Inc., (Duke Energy Kentucky or Company) as Managing
7 Director, Mass Market Strategy and Market Planning.

8 **Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL**
9 **EXPERIENCE.**

10 **A.** I graduated from North Carolina State University with a Bachelor of Science in
11 Mechanical Engineering and joined Duke Energy Corp. in 1980. At Duke Energy
12 Corp., I have held numerous positions in areas related to Generation, Distribution,
13 Planning, Customer Care and Marketing. For the past ten years, I have worked in
14 marketing management with a focus on our mass market customers.

15 **Q. PLEASE DESCRIBE YOUR DUTIES AS MASS MARKET STRATEGY**
16 **AND MARKET PLANNING MANAGER.**

17 **A.** As Managing Director of Mass Market Strategy and Market Planning, my team
18 and I oversee the management of our demand side management (DSM) programs
19 to ensure cost effective delivery, the achievement of planned energy and load
20 impacts and the delivery of an experience that meets our customers' expectations.
21 Achieving these outcomes requires us to manage the performance of our
22 contracted vendors, and we develop and execute a marketing plan to achieve

1 customer adoption. In addition, we work with external consulting and
2 engineering firms to assist with development of cost, impact and participation
3 assumptions for our programs.

4 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**
5 **PUBLIC SERVICE COMMISSION?**

6 **A.** No.

7 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
8 **PROCEEDING?**

9 **A.** The purpose of my testimony in this proceeding is to explain the current DSM
10 portfolio offered by Duke Energy Kentucky and to explain some of the marketing
11 strategies the Company employs to raise awareness and adoption of our programs.
12 In addition, I will cover three new proposed programs and new extensions to
13 existing programs. The new programs are: 1) Appliance Recycling Program; 2)
14 Low Income Neighborhood Program; and 3) My Home Energy Report. The new
15 program extensions include the addition of a live theatrical performance component
16 to the energy education program and new measures added to the Residential Smart
17 Saver[®] Program.

II. PROGRAM INFORMATION

18 **Q. WHAT DSM PROGRAMS DOES DUKE ENERGY KENTUCKY**
19 **CURRENTLY OFFER TO RESIDENTIAL CUSTOMERS?**

20 **A.** Duke Energy Kentucky's residential DSM portfolio consists of our Residential
21 Conservation and Energy Education, Residential Home Energy House Call,
22 Residential Comprehensive Energy Education Program (NEED), Payment Plus,

1 Power Manager, Energy Star Products, Energy Efficiency Website, Personalized
2 Energy Report (PER)[®], and Residential Smart Saver[®] programs. These programs
3 were previously approved by the Commission in Duke Energy Kentucky's portfolio
4 application Case No. 2004-00389 in 2004, with the addition of Residential Smart
5 Saver approved in Case No. 2010-00445 in 2011. A brief description of each
6 program is provided below for convenience. Please see Attachments AJO-3
7 through AJO-6, attached to the testimony of Company Witness Ashlie J. Ossege, for
8 a summary of cost and impact assumptions for both existing and proposed programs.

9 **Duke Energy Kentucky's Approved Portfolio:**

10 **Residential Smart Saver[®]**

11 The Residential SmartSaver[®] is broad category of measures that for ease of use for
12 customers, has been divided into two discrete program tariffs: 1) Energy Efficient
13 Residences; and 2) Energy Efficient Products. The Smart Saver[®] program provides
14 incentives to customers, builders, heating, ventilation and air conditioning (HVAC)
15 dealers and weatherization contractors to promote and install high-efficiency air
16 conditioners and heat pumps with electronically commutated fan motors (ECMs), as
17 well as attic insulation and air sealing, duct sealing, HVAC tune ups and lighting.
18 Additional measures new to this program include duct insulation and property
19 manager lighting. These programs are promoted through trade ally outreach and
20 direct communication to customers using numerous channels such as direct mail,
21 community presentations and website promotions. Currently, Duke Energy
22 Kentucky's lighting program is Energy Star Products that offer customers discount
23 coupons for the purchase of compact fluorescent lamps (CFLs). Moving forward,

1 lighting offers will be included within the Residential Smart Saver[®] program and can
2 include discounts, as well as, free bulbs. Online promotions and social media have
3 been particularly effective in other jurisdictions. In addition, the Company is
4 evaluating additional bulb types for the home such as indoor floodlighting. The new
5 property manager measure provides energy efficient lighting to be installed in
6 permanent fixtures within residential residences.

7 **Residential Energy Assessments**

8 Duke Energy Kentucky provides an in-home assessment called Home Energy House
9 Call. Home Energy House Call is promoted primarily through direct mail and
10 targets owner-occupied, single family residences. The assessors are certified by the
11 Building Performance Institute, Inc., and spend sixty to ninety minutes with
12 customers as they evaluate the home and explain ways to save energy and money.
13 The assessors offer low cost/no cost recommendations that encourage behavioral
14 changes and inform customers about energy efficiency considerations for higher cost
15 investment decisions like new HVAC or appliances. The assessors also install
16 measures from an energy efficiency kit while in the home.

17 **Energy Efficiency Education Program for Schools (currently Residential**
18 **Comprehensive Energy Education Program (NEED)**

19 The program is designed to increase energy awareness among educators and
20 students. This program educates students about sources of energy and energy
21 efficiency through classroom activities. To reinforce lessons learned in the
22 classroom, students and families install measures from a Duke Energy Kentucky
23 provided Home Energy Efficiency Starter Kit, creating an environment that

1 encourages further discussion about their own energy usage. Duke Energy Kentucky
2 partnered with the organization National Energy Education Development (NEED) to
3 conduct regional workshops with the intent to recruit educators to implement energy
4 education programs into their classrooms. In addition to the current Energy
5 Efficiency Education program, Duke Energy Kentucky is adding a live, theatrical
6 production category to the program. Each performance is performed by two
7 professional actors and lasts approximately 25 minutes. The performances enforce
8 lessons learned in the classroom. Students and their families will continue to be
9 encouraged to order and employ the Home Energy Efficiency Starter Kit.

10 **Low Income Services (currently Residential Conservation and Energy Education)**

11 The Company offers weatherization and refrigerator replacement services to
12 income-qualified customers through Community Action Agencies and Non-
13 Governmental Organizations. Weatherization services may include low cost/no
14 cost energy efficiency measures, air infiltration reduction, insulation, heating
15 system repair or replacement, and health and safety improvements.

16 The Payment Plus program targets customers who have received LIHEAP
17 assistance and allows eligible customers to participate in energy efficiency and
18 budget counseling courses. Upon completion of the courses, customers are
19 encouraged to register for the weatherization and refrigerator replacement
20 programs. As an incentive, customers receive monetary credits towards their
21 Duke Energy bill arrearage for attending the courses and having weatherization
22 services performed on their home.

23 **Residential Direct Load Control- Power Manager**

1 This program offers incentives to single family residential customers who allow the
2 Company to cycle their outdoor central air conditioning compressor during peak
3 load periods between May and September. The program is promoted using various
4 channels with an emphasis on direct mail, email and web based promotions.

5 **Q. PLEASE DESCRIBE DUKE ENERGY KENTUCKY'S PROPOSAL FOR**
6 **NEW RESIDENTIAL DSM PROGRAMS.**

7 A. With this Application, Duke Energy Kentucky proposes the following three new
8 programs to be included in its portfolio of programs and to be introduced in 2012.

9 **Appliance Recycling Program**

10 The Appliance Recycling program will encourage customers to responsibly dispose
11 of older, functioning but inefficient refrigerators and freezers. These are typically
12 second or third units in the home. Customers will have the old unit picked up at
13 their home at no charge and will receive an incentive for participating. Disposed
14 units will have 95 percent of material recycled with only 5 percent entering landfills.
15 Program marketing will consist of direct mail, social media, and community
16 presentations and publications like newsletters. Point of sale messaging will also be
17 pursued with prominent appliance retailers.

18 **My Home Energy Report**

19 The My Home Energy Report compares household electric usage to similar,
20 neighboring homes, and provides recommendations to lower energy consumption.
21 The report also promotes the Company's other energy efficiency programs when
22 applicable. These normative comparisons are intended to induce an energy
23 consumption behavior change. The My Home Energy Report will be delivered in

1 printed or online form to targeted customers with desirable characteristics who are
2 likely to respond to the information. The printed reports are distributed up to 12
3 times per year; however delivery may be interrupted during the off-peak energy
4 usage months in the fall and spring.

5 **Low Income Neighborhood Program**

6 The Duke Energy Kentucky Neighborhood Program takes a non-traditional
7 approach to serving income-qualified areas of the Duke Energy Kentucky service
8 territory. The program engages targeted customers with personal interaction in a
9 familiar setting while ultimately reducing energy consumption by directly installing
10 measures and educating the customer on better ways to manage their energy bills.
11 Examples of direct installed measures include CFLs, water heater and pipe wrap,
12 low flow shower heads/faucet aerators, window and door air sealing and HVAC
13 filter replacements. Targeted low income neighborhoods qualify for the program if
14 at least 50% of the households are at or below 200% of the federal poverty
15 guidelines. Duke Energy Kentucky will analyze electric usage data and previous
16 program participation to prioritize neighborhoods that have the greatest need and
17 propensity to participate. While the goal is to serve neighborhoods where the
18 majority of residents are lower income, the program is available to all Duke Energy
19 Kentucky customers in the defined neighborhood. This program will be available to
20 both homeowners and renters occupying single family and multi-family dwellings in
21 the target neighborhoods that have electric service provided by Duke Energy
22 Kentucky.

23 A community-based kick-off event will be held for targeted neighborhoods.

1 These kick-off events will feature local community leaders and energy experts that
2 will explain program components. The purpose of the kick-off event is to rally the
3 neighborhood around EE and to help customers understand steps needed to lower
4 their energy bills. Following the kick-off event, energy assessments will be
5 completed in the customers' homes and the appropriate energy saving measures will
6 be installed if the customer elects to have the work completed. Direct mail and call
7 center support will supplement community based outreach. This program will be
8 used as a lead generation source for other Duke Energy Kentucky and external
9 energy efficiency programs.

10 **Q. ARE THESE PROGRAMS DESIGNED TO DELIVER ENERGY**
11 **EFFICIENCY AND PEAK DEMAND REDUCTION IN A COST**
12 **EFFECTIVE MANNER?**

13 **A. Yes.**

14 **Q. HAVE THESE PROGRAMS AND EXPANSIONS BEEN PRESENTED TO**
15 **THE DUKE ENERGY RESIDENTIAL AND COMMERCIAL AND**
16 **INDUSTRIAL COLLABORATIVE?**

17 **A. Yes.**

18 **Q. DO YOU RECOMMEND THESE PROGRAMS AND EXTENSIONS FOR**
19 **ADOPTION?**

20 **A. Yes.**

III. CONCLUSION

21 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

22 **A. Yes.**

VERIFICATION

State of Ohio)
)
County of Hamilton) **SS:**

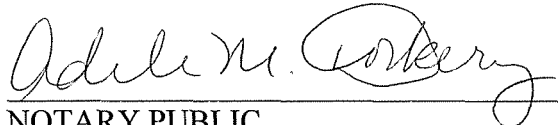
The undersigned, Kevin Bright, being duly sworn, deposes and says that he is the Managing Director, Large & Small Business Market Strategy & Products, and that the matters set forth in the foregoing testimony are true and accurate to the best of his knowledge, information and belief, after reasonable inquiry.



Kevin Bright, Affiant

Subscribed and sworn to before me by KEVIN BRIGHT on this 2ND day of March 2012.

ADELE M. DOCKERY
Notary Public, State of Ohio
My Commission Expires 01-05-2014



NOTARY PUBLIC

My Commission Expires: 1/5/2014

BEFORE

KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of the Application of)
Duke Energy Kentucky, Inc., for an)
Energy Efficiency Cost Recovery) Case No. 2012-xxxx
Mechanism and for Approval)
of Additional Programs for Inclusion)
in its Existing Portfolio.)

DIRECT TESTIMONY OF

KEVIN A. BRIGHT

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

March 6, 2012

TABLE OF CONTENTS

	<u>PAGE</u>
I. INTRODUCTION.....	1
II. DISCUSSION.....	3
III. CONCLUSION.....	9

I. INTRODUCTION

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Kevin A. Bright, and my business address is 139 East Fourth Street,
3 Cincinnati, Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by Duke Energy Business Services LLC (DEBS) as Managing
6 Director of Large and Small Business Marketing Strategy and Product
7 Management. DEBS provides various administrative and other services to Duke
8 Energy Kentucky, Inc., (Duke Energy Kentucky or the Company) and other
9 affiliated companies of Duke Energy Corporation (Duke Energy).

10 **Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL**
11 **EXPERIENCE.**

12 A. I received a Bachelor of Science degree in Marketing from Northern Kentucky
13 University, a Master of Business Administration from Northern Kentucky
14 University, and also am a Certified Energy Manager through the Association of
15 Energy Engineers. I have held various positions throughout Duke Energy and its
16 predecessor companies, including roles in Strategic Planning, Corporate
17 Development, Budget & Forecasting, Customer Service and Non-Regulated
18 Operations. I joined the Marketing organization in 2008 to manage Duke
19 Energy's commercial and industrial demand response programs. In 2009, I
20 assumed managerial responsibility for all energy efficiency products. In 2010, I
21 took over management of all non-residential products and strategy, which is still

1 my current area of responsibility.

2 **Q. PLEASE DESCRIBE YOUR DUTIES AS MANAGING DIRECTOR OF**
3 **LARGE AND SMALL BUSINESS MARKETING STRATEGY AND**
4 **PRODUCT MANAGEMENT.**

5 A. My team and I oversee the operation of our demand side management (DSM)
6 products to ensure they are delivered to customers cost effectively and efficiently.
7 This involves managing contracts with external parties, monitoring the mix of
8 incentives included in the portfolio, and planning strategies for raising customer
9 awareness of the incentives offered. We work with external engineering firms to
10 assist with developing costs for incentive measures, as well as guidance on
11 incentives offered by other utilities to aid in the evaluation of cost effectiveness.
12 We are constantly evaluating the number of incentive applications being
13 submitted, types of technologies customers are employing, and evaluating
14 strategies to increase adoption rates by customers. This also includes periodic
15 reviews of the measures included in offerings to customers to ensure our portfolio
16 of offers stays current with technology changes in the marketplace and updated
17 efficiency standards.

18 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**
19 **PUBLIC SERVICE COMMISSION?**

20 A. No. However I have provided testimony in cases before the Ohio Public Utilities
21 Commission.

II. DISCUSSION

1 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS
2 PROCEEDING?

3 A. The purpose of my testimony in this proceeding is to explain the current commercial
4 and industrial DSM portfolio offered by Duke Energy Kentucky.

5 Q. WHAT ENERGY EFFICIENCY (EE) AND DEMAND RESPONSE (DR)
6 PROGRAMS DOES DUKE ENERGY KENTUCKY CURRENTLY OFFER
7 TO NON-RESIDENTIAL CUSTOMERS?

8 A. Duke Energy Kentucky's non-residential EE offers consist of our Smart \$aver® for
9 Non-Residential Customers, Non-Residential Energy Assessments and the non-
10 residential DR offer is PowerShare®. These programs were previously approved by
11 the Commission in Case No. 2009-00444. A brief description of each program is
12 provided below for convenience. Throughout this document, Smart \$aver® for Non-
13 Residential Customers will be referred to as Smart \$aver® Prescriptive and/or Smart
14 \$aver® Custom, formerly known as C&I High Efficiency Incentive (for
15 Businesses and Schools). Non-Residential Energy Assessments will be referred to
16 as Smart \$aver® Energy Assessments. The program naming convention being used
17 throughout this document is consistent with the naming conventions used internally
18 and externally with customers.

19 **Smart \$aver® Prescriptive**

20 Duke Energy Kentucky seeks to expand the measures included in the Smart \$aver®
21 Prescriptive program to include over 220 measures covering the five broad
22 technology categories of: Lighting, HVAC, Motors/Pumps/Drives, Energy Star

1 Food Service Equipment, and Process Equipment. Prior to this filing, Duke Energy
2 Kentucky offered only a subset of these measures. The incentives offered are
3 designed to offset a portion of the capital cost of moving to higher efficiency
4 equipment. The incentive amounts are known to the customer before they undertake
5 their project, so the customer can proceed with their project and submit
6 documentation after installation. Cost effectiveness for the entire portfolio of
7 incentives is included in Attachment AJO-3 and participant & cost data is provided
8 in Attachment AJO-5 for reference.

9 **Smart Saver® Custom**

10 The Smart Saver® Custom program is intended to capture quantifiable energy
11 savings from projects that do not fit into the Prescriptive portfolio. A key difference
12 between the Prescriptive and Custom programs is that the Custom program requires
13 that the customer submit an application before they begin their project. Once a
14 project is submitted, it undergoes a technical review to validate the viability of the
15 technology and the reasonableness of the energy savings claims. After the technical
16 review, the energy savings are modeled against the customers load profile (or a
17 representative load profile) to calculate the avoided energy and avoided capacity
18 associated with the installation. At this point, the customer is tendered an incentive
19 offer. Provided the customer acknowledges acceptance of the offer and completes
20 the project, upon verification of the installation, the customer is issued an incentive
21 check in the amount originally tendered. Duke Energy Kentucky reserves the right
22 to adjust the incentive amount paid either up or down should the installation deviate
23 from what was originally submitted. Potential incentive amounts are unbounded and

1 are based on the avoided energy and avoided capacity produced by the measure(s).
2 Prior to this filing, the Smart Saver® Custom program was only offered to K-12
3 Schools in Kentucky. Duke Energy Kentucky recently filed an application to
4 implement this program as a pilot in Case No. 2011-00471. Now, with this filing
5 requesting to expand the entire portfolio of EE and DR programs, Duke Energy
6 Kentucky seeks to expand this program to all eligible commercial and industrial
7 customers on a more permanent basis.

8 Both the Smart Saver® Prescriptive and Custom programs allow for
9 customers to either receive their incentive checks directly, or to assign them to a
10 vendor, provided the vendor reduces the amount invoiced to the customer by the
11 amount of the incentive.

12 **Smart Saver® Energy Assessments**

13 Duke Energy Kentucky offers several different types of assessments to help
14 nonresidential customers identify energy efficiency opportunities. The Online
15 Assessment tool is available for all non-residential customers through the Duke
16 Energy Kentucky website. This tool is available free of charge. For customers with
17 a peak demand over 500 kW, we offer a telephone assessment for free. The assessor
18 will gather basic data from the customer and provide recommendations over the
19 phone based on experience and information provided during the interview. Lastly,
20 Duke Energy Kentucky offers an on-site assessment wherein an assessor will spend
21 one or more days at a customer's site identifying opportunities for increased energy
22 efficiency. After the audit is completed, the customer receives a written report of the
23 audit findings. The cost of the on-site assessment varies depending on the length of

1 time an assessor spends at a customer's facility. The cost of the audit is shared by
2 Duke Energy Kentucky and the customer. The customer pays 50% of the cost, and
3 Duke Energy Kentucky pays 50%, but the customer's cost can be further reduced if
4 they proceed with adopting the recommendations made in the audit.

5 After evaluating the success of the current audits, Duke Energy Kentucky is
6 trying new approaches to drive adoption of energy efficiency through audits. Duke
7 Energy Kentucky is testing technology specific audits. The purpose is to help
8 customers identify strategies targeted at their most energy intensive processes,
9 provide them with concrete cost estimates to implement the recommendations, and
10 connect the customer with vendors that deliver the energy efficiency improvements.

11 **PowerShare®**

12 PowerShare® is Duke Energy Kentucky's DR program offered to commercial and
13 industrial customers. The program offers various options for customers to choose
14 from. PowerShare® QuoteOption is offered for customers who only want to reduce
15 their load when power prices are high. In this program, customers receive notice of
16 a price offer from Duke Energy Kentucky to reduce load. Based on the price
17 offered, the customer makes the decision as to whether or not they will reduce load.
18 If a customer elects not to reduce load, there are no penalties for declining
19 participation in the event. Participation is purely voluntary. The customer only
20 receives a credit for the number of kilowatt-hours they reduced during the event,
21 multiplied by the price offered by Duke Energy Kentucky.

22 Customers may also participate in the CallOption program. Under the
23 CallOption program, customers receive a monthly credit for providing Duke Energy

1 Kentucky with the right to call on the customers load during emergency situations.
2 Each of the CallOption offers contain an emergency provision wherein the customer
3 agrees to provide a minimum number of interruptions for curtailments initiated by
4 the Regional Transmission Operator (PJM Interconnection LLC). The minimum
5 number of events is dictated by PJM Interconnection LLC. But the customer also
6 has the option to agree to provide load for economic events. Under the CallOption
7 program, the customer agrees to a predetermined price at which Duke Energy
8 Kentucky has the right, but not the obligation, to initiate an event. If an economic
9 event is called, the customer receives an energy credit for reducing load during the
10 event that is equal to the predetermined price for energy, less the base cost of energy
11 that is embedded in their rate. The minimum contractual load reduction
12 commitment allowed under the program is 100 kW.

13 Duke Energy Kentucky is exploring a possible program expansion to include
14 an automated demand response offer for Kentucky customers. This program is still
15 in the early stages of development and would be added if the program proves cost
16 effective.

17 **Q. DOES DUKE ENERGY KENTUCKY ENVISION ANY CHANGES TO**
18 **INCENTIVE OFFERINGS BEING PROPOSED IN THIS FILING IN THE**
19 **FUTURE?**

20 Yes, Duke Energy Kentucky continues to believe that it is prudent to monitor and
21 take action to improve the performance of measures, so it is possible that Duke
22 Energy Kentucky may need to change incentives in the future which would be
23 filed in a revised tariff. At this time, two programs in particular are expected to

1 be impacted in the 2012/2013 fiscal year. The portfolio contains incentives for
2 replacing T-12 fluorescent lamps that will no longer be allowed by law to be
3 produced after July 15, 2012. There is participation projected for 2012 as customers
4 complete the conversion from T-12 to T-8 lamps. Duke Energy Kentucky does not
5 project participation or intend to offer incentives for these conversions effective
6 1/1/2013. In order to qualify for an incentive in 2012, the customer must be able to
7 provide documentation showing that the replacement equipment was purchased on
8 or before July 15, 2012. The customer will have until October 15, 2012 to install the
9 lamps, and they must submit their application for an incentive by January 15, 2013
10 to receive the incentive payment.

11 The other program that may have changes to incentives as proposed in this
12 filing is the PowerShare® program. Duke Energy Kentucky monitors the prices for
13 capacity as offered in the PJM market on an annual basis and may adjust the
14 incentive up or down to reflect movements in the value of capacity in the PJM
15 market. Since customers sign an annual contract for PowerShare®, customers are
16 notified of any pricing changes before they make a decision to participate in the
17 program.

18 **Q. WHAT CUSTOMER RATE CLASSES ARE ELIGIBLE FOR THE NON-**
19 **RESIDENTIAL PROGRAMS DESCRIBED IN YOUR TESTIMONY?**

20 A. The programs I described are available to non-residential Commercial and
21 Industrial customer under the following rates:

- Rate DS, Service at Distribution Voltage
- Rate DT, Time-of-Day Rate for Service at Distribution Voltage
- Rate EH, Optional Rate for Electric Space Heating
- Rate SP, Seasonal Sports Service
- Rate GS-FL, General Service Rate for Small Fixed Loads
- Rate DP, Service at Primary Distribution Voltage
- Rate TT, Time of Day Service for Transmission Voltage

1 It is my understanding based upon advice of counsel that Kentucky's Demand
2 Side Management Statute KRS 278.285, which authorizes the implementation of
3 EE and DR programs and the cost recovery, also allows for the ability of
4 individual industrial customers with energy intensive processes to implement their
5 own cost-effective programs and avoid or opt-out of the utility programs. Today,
6 industrial customers with energy intensive processes under Duke Energy
7 Kentucky's rate TT are able to avoid the Company's EE and DR programs. This
8 ability will continue going forward in accordance with Kentucky law.

III. CONCLUSION

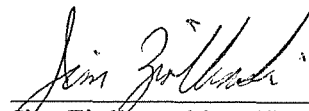
9 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

10 A. Yes.

VERIFICATION

State of Ohio)
)
County of Hamilton) **SS:**

The undersigned, Jim Ziolkowski, being duly sworn, deposes and says that he is the Rates Manager, and that the matters set forth in the foregoing testimony are true and accurate to the best of his knowledge, information and belief.



Jim Ziolkowski, Affiant

Subscribed and sworn to before me by JIM ZIOLKOWSKI on this 2ND
day of March 2012.

ADELE M. DOCKERY
Notary Public, State of Ohio
My Commission Expires 01-05-2014



NOTARY PUBLIC

My Commission Expires: 1/5/2014

BEFORE

KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of the Application of)
Duke Energy Kentucky, Inc., for an)
Energy Efficiency Cost Recovery) Case No. 2012-xxxx
Mechanism and for Approval of)
Additional Programs for Inclusion)
in its Existing Portfolio.)

DIRECT TESTIMONY OF

JAMES E. ZIOLKOWSKI

ON BEHALF OF

DUKE ENERGY KENTUCKY, INC.

March 6, 2012

TABLE OF CONTENTS

	<u>PAGE</u>
I. INTRODUCTION	1
II. CALCULATION OF RIDER DSMR	3
III. RIDER DSMR UPDATES	6
IV. CONCLUSION	7

ATTACHMENTS:

Attachment JEZ-1 – Work papers showing the calculation of Rider DSMR rates

Attachment JEZ-2 – Proposed Rider DSM tariff sheet

Attachment JEZ-3 – Proposed Rider DSMR tariff sheet

Attachment JEZ-4 - Proposed Tariffs for DSM Programs

I. INTRODUCTION

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is James E. Ziolkowski, and my business address is 139 East Fourth
3 Street, Cincinnati, Ohio 45202.

4 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5 A. I am employed by the Duke Energy Business Services LLC (DEBS) as Rates
6 Manager. DEBS provides various administrative and other services to Duke
7 Energy Kentucky, Inc., (Duke Energy Kentucky or the Company) and other
8 affiliated companies of Duke Energy Corporation (Duke Energy).

9 **Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL**
10 **EXPERIENCE.**

11 A. I received a Bachelor of Science degree in Mechanical Engineering from the U.S.
12 Naval Academy in 1979 and a Master of Business Administration degree from
13 Miami University in 1988. I am also a licensed Professional Engineer in the state
14 of Ohio.

15 After graduating from the Naval Academy, I attended the Naval Nuclear
16 Power School and other follow-on schools. I served as a nuclear-trained officer
17 on various ships in the U.S. Navy through 1986. From 1988 through 1990, I
18 worked for Mobil Oil Corporation as a Marine Marketing Representative in the
19 New York City area.

20 I joined The Cincinnati Gas & Electric Company (CG&E) in 1990 as a
21 Product Applications Engineer, in which capacity I designed and managed some
22 of CG&E's demand side management programs, including Energy Audits and

1 Interruptible Rates. From 1996 until 1998, I was an Account Engineer and
2 worked with large customers to resolve various service-related issues, particularly
3 in the areas of billing, metering, and demand management. In 1998, I joined
4 Cinergy Services, Inc.'s, Rate Department, where I focused on rate design and
5 tariff administration. I was significantly involved with the initial unbundling and
6 design of CG&E's retail electric rates. I was appointed to my current position in
7 January 2008.

8 **Q. PLEASE DESCRIBE YOUR DUTIES AS RATES MANAGER.**

9 A. As Rates Manager, I am responsible for certain rider filings, tariff administration,
10 billing, and revenue reporting issues in Ohio and Kentucky. I also prepare filings
11 to modify charges and terms in retail tariffs of Duke Energy Ohio and Duke
12 Energy Kentucky and develop rates for new services. During major rate cases, I
13 help with the design of the new base rates. Additionally, I frequently work with
14 customer contact and billing personnel of Duke Energy Ohio and Duke Energy
15 Kentucky to answer rate-related questions and to apply the retail tariffs to specific
16 situations. Occasionally, I meet with customers and Company representatives to
17 explain rates or provide rate training. I also prepare reports that are required by
18 regulatory authorities.

19 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY**
20 **PUBLIC SERVICE COMMISSION?**

21 A. Yes. Most recently, I provided testimony before the Kentucky Public Service
22 Commission (Commission) in support of Duke Energy Kentucky's gas base rate
23 case, filed under Case Number 2009-00202.

1 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
2 **PROCEEDING?**

3 A. The purpose of my testimony in this proceeding is to: (1) support the Company's
4 Demand Side Management Program tariff (Rider DSM); (ii) describe the calculation
5 of the Demand Side Management Rate (Rider DSMR) beginning July 2012; and (iii)
6 address annual applications to reconcile Rider DSMR. Finally I also sponsor the
7 tariff sheets that will describe the Company's various demand side management
8 (DSM) programs to be included in its DSM portfolio.

9 **Q. WHAT ARE THE ATTACHMENTS AND SCHEDULES FOR WHICH**
10 **YOU ARE RESPONSIBLE?**

11 A. I am sponsoring the following items:
12 • Attachment JEZ-1 – Work papers showing the calculation of Rider DSMR rates
13 • Attachment JEZ-2 – Proposed Rider DSM tariff sheet
14 • Attachment JEZ-3 – Proposed Rider DSMR tariff sheet
15 • Attachment JEZ-4- Proposed Tariff Sheets for the DSM Programs

II. CALCULATION OF RIDER DSMR

16 **Q. WHAT IS THE PURPOSE OF RIDER DSM?**

17 A. Rider DSM describes the Company's DSM program and the formula used to
18 recovery costs, lost margins and an incentive for the Company to offer cost-
19 effective energy efficiency and DSM programs. Rider DSM describes the process
20 for calculating the DSMR recovery rates. The Company is not proposing any
21 changes to the Rider DSM formula and it is identical to the existing formula that
22 the Company has been using for more than a decade.

1 **Q. PLEASE DESCRIBE RIDER DSMR?**

2 A. Rider DSMR shows the actual recovery charges to be billed among customer
3 classes. Rider DSMR will be adjusted on an annual basis. This tariff structure
4 (i.e., two separate tariff sheets) is similar to the existing Riders DSM and DSMR.
5 Rider DSMR will recover costs and lost revenues associated with implementing
6 the Company's energy efficiency and peak demand reduction programs providing
7 a performance-based incentive to the Company.

8 **Q. PLEASE DESCRIBE HOW THE PROPOSED RIDER DSM RECOVERY**
9 **RATES WERE CALCULATED.**

10 A. Attachments JEZ-1, JEZ-2, and JEZ-3 are the work papers and proposed Riders.
11 Attachment JEZ-1 page 1 summarizes the revenue requirement to be recovered
12 through Rider DSMR. The revenue requirement recovers program costs, lost
13 revenues, measurement and verification costs, and incentives. Attachment JEZ-1
14 page 2 and page 3 shows the calculated lost revenues for the programs. Company
15 witness Ashlie J. Ossege discusses the DSMore™ model, which includes both
16 input and output data which are incorporated in the calculation of the revenue
17 requirements.

18 Attachment JEZ-1 page 4 shows the kilowatt-hour (kWh) sales forecast
19 for July 2012 – June 2013 by customer class, and Attachment JEZ-1 page 5 shows
20 the residential gas MCF forecast for that period. Attachment JEZ-1 page 6 shows
21 the residential and non-residential revenue requirement, carried over from pages 1
22 and 2, to be recovered through Rider DSMR. Attachment JEZ-1 page 7
23 summarizes the kWh billing determinants, residential and non-residential, to be

1 used in the rate calculations. The billing determinants were obtained from page 7.
2 Lastly, page 8 of Attachment JEZ-1 shows the calculation of the 2012 Rider
3 DSMR recovery rates. Because this is a new program, there are no prior period
4 true-up amounts in this initial filing.

5 The rates calculated on page 8 of Attachment JEZ-1 are carried forward to
6 Attachment JEZ-3, Rider DSMR.

7 **Q. HOW DOES THE COMPANY PROPOSE TO MERGE THE COST**
8 **RECOVERY ASSOCIATED WITH THE CURRENT PROGRAMS WITH**
9 **THE COSTS ASSOCIATED WITH THIS NEW PORTFOLIO OF**
10 **PROGRAMS?**

11 A. As I previously mentioned, this filing contains no prior period true-up dollars
12 because this is a new portfolio. Duke Energy Kentucky currently has a DSM
13 update filing pending before the Commission in Case No. 2011-00448. The
14 proposed Rider DSMR rates in the 2011-00448 case consist of program costs and
15 reconciliation dollars. Depending upon when the Commission issues an Order in
16 that case, the reconciliation amounts might only be effective for a couple of
17 months. This is because those rates would be replaced by the DSMR rates from
18 this Case. To minimize future reconciliation balances and associated swings in
19 the Rider DSMR rates, Duke Energy Kentucky proposes to add the reconciliation
20 portion of the rates stemming from the 2011-00448 case to the rates approved in
21 this current new portfolio filing. As discussed below, the Company will make its
22 annual update filing in November 2012.

23 **Q. PLEASE DESCRIBE ATTACHMENT JEZ-4.**

1 A. Attachment JEZ-4 are the various program tariffs that will make up the
2 Company's DSM portfolio. Going forward, Duke Energy Kentucky will include
3 these separate tariffs as part of its tariff book on file with the Kentucky Public
4 Service Commission. While I am sponsoring the tariffs themselves, the actual
5 programs are supported by other witnesses in this proceeding. The tariffs
6 describe who is eligible for the specific program (e.g. residential vs. non-
7 residential customers) and a summary of the program. The charges for these
8 various programs will be recovered through Rider DSMR in accordance with the
9 program and formula set forth in Rider DSM. As I previously mentioned, the
10 Company will file an annual reconciliation of these charges, at which time the
11 Commission will have an opportunity to review the portfolio performance and the
12 Company's adjustments to recover costs, lost margins and the allowed incentive.

III. RIDER DSMR UPDATES

13 **Q. HOW OFTEN WILL RIDER DSM AND RIDER DSMR BE UPDATED?**

14 A. The Company proposes to follow the same process as it currently does for annual
15 updates for its Rider DSM and Rider DSMR. Duke Energy Kentucky will make
16 an update filing on or about November 15th each year as it does currently.

17 **Q. WHAT PROCESS DOES THE COMPANY PROPOSE TO UPDATE
18 RIDER DSMR?**

19 A. Subsequent DSMR update filings are planned to be made annually in November
20 of each year using estimated costs for the upcoming calendar year and with rates
21 to be effective within thirty days of filing unless the Commission suspends the
22 application for the usual six month period to review the filing. These update

1 filings will include a reconciliation of the prior year costs, collections, and
2 customer participation. Prior year over- or under-collection of incentives will be
3 reflected in the annual update filing, and appropriate adjustments will be made to
4 the Rider DSMR rates to reflect those true-ups.

III. CONCLUSION

5 **Q. HOW DOES THE COMPANY PROPOSE THAT ITS TARIFFS,**
6 **INCLUDING THE PREVIOUSLY DISCUSSED RATES AND CHARGES,**
7 **BE IMPLEMENTED?**

8 A. Duke Energy Kentucky proposes that the revised tariffs, including the rates and
9 charges complying with the Commission's Order in this case, be effective July 1,
10 2012, for all customers on a bills rendered basis.

11 **Q. WERE ATTACHMENTS JEZ-1 THROUGH JEZ-4 DISCUSSED ABOVE**
12 **PREPARED BY YOU OR UNDER YOUR SUPERVISION?**

13 A. Yes.

14 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

15 A. Yes.

DUKE ENERGY KENTUCKY
NEW PORTFOLIO
KENTUCKY REVENUE REQUIREMENT (excluding Lost Revenues) WORKPAPER

in \$

Discount Rate	7.330%	adder to program cost and overhead
M&V cost estimate	5.0%	
Shared Savings Rate	10.0%	

SUMMARY REVENUE REQUIREMENT, excluding Lost Revenue	1	2	3	4	5	Total
Res from Portfolio	\$5,745,727	\$3,938,770	\$4,113,887	\$4,134,250	\$4,314,316	\$22,246,950
NonRes from Portfolio	2,385,881	3,132,190	3,448,029	3,793,130	4,081,895	16,841,126
Total	8,131,609	7,070,960	7,561,916	7,927,380	8,396,211	39,088,076

TOTAL PORTFOLIO	1	2	3	4	5	Total
Total Avoided Costs	\$23,427,642	\$21,557,793	\$23,669,938	\$26,062,826	\$28,550,923	\$123,269,123
Program Costs & Overhead	(6,093,521)	(5,173,874)	(5,468,339)	(5,601,156)	(5,832,757)	(28,169,646)
Shared Savings	17,334,121	16,383,919	18,201,599	20,461,671	22,718,166	95,099,476
x Utility Sharing Rate	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Utility Share	1,733,412	1,638,392	1,820,160	2,046,167	2,271,817	9,509,948
+ Program Cost & Overhead Recovery	6,093,521	5,173,874	5,468,339	5,601,156	5,832,757	28,169,646
+ M&V Cost Recovery	304,676	258,694	273,417	280,058	291,638	1,408,482
Total Revenue Requirement	8,131,609	7,070,960	7,561,916	7,927,380	8,396,211	39,088,076

RES CONSERVATION	1	2	3	4	5	Total
NPV Avoided Costs: T&D	\$2,169,268	\$1,301,422	\$1,342,284	\$1,383,792	\$1,495,872	\$7,692,637
NPV Avoided Costs: Energy	8,240,794	4,099,960	4,242,429	4,444,658	4,929,765	25,957,605
NPV Avoided Costs: Capacity	1,841,621	1,278,585	1,336,464	1,397,835	1,509,293	7,363,797
NPV Avoided Costs: Gas Production	0	0	0	0	0	0
NPV Avoided Costs: Gas Capacity	202,503	220,238	235,446	254,679	273,294	1,186,160
Total Avoided Costs	12,454,185	6,900,205	7,156,624	7,480,963	8,208,223	42,200,200
Program Costs & Overhead	(4,277,758)	(2,948,632)	(2,999,616)	(2,967,440)	(3,050,313)	(16,243,758)
Shared Savings	8,176,428	3,951,573	4,157,008	4,513,523	5,157,910	25,956,442
x Utility Sharing Rate	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Utility Share	817,643	395,157	415,701	451,352	515,791	2,595,644
+ Program Cost & Overhead Recovery	4,277,758	2,948,632	2,999,616	2,967,440	3,050,313	16,243,758
+ M&V Cost Recovery	213,888	147,432	149,981	148,372	152,516	812,188
Total Revenue Requirement	5,309,289	3,491,221	3,565,298	3,567,164	3,718,619	19,651,590

NONRES CONSERVATION	1	2	3	4	5	Total
NPV Avoided Costs: T&D	\$804,688	\$1,303,527	\$1,453,807	\$1,621,973	\$1,810,196	\$6,994,191
NPV Avoided Costs: Energy	3,855,117	6,842,912	7,904,543	9,106,237	10,265,471	37,974,280
NPV Avoided Costs: Capacity	888,855	1,439,235	1,604,375	1,789,080	1,995,719	7,717,264
NPV Avoided Costs: Gas Production	0	0	0	0	0	0
NPV Avoided Costs: Gas Capacity	0	0	0	0	0	0
Total Avoided Costs	5,548,660	9,585,674	10,962,725	12,517,290	14,071,387	52,685,736
Program Costs & Overhead	(640,824)	(1,154,616)	(1,259,616)	(1,374,910)	(1,501,526)	(5,931,492)
Shared Savings	4,907,836	8,431,058	9,703,109	11,142,380	12,569,861	46,754,244
x Utility Sharing Rate	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Utility Share	490,784	843,106	970,311	1,114,238	1,256,986	4,675,424
+ Program Cost & Overhead Recovery	640,824	1,154,616	1,259,616	1,374,910	1,501,526	5,931,492
+ M&V Cost Recovery	32,041	57,731	62,981	68,745	75,076	296,575
Total Revenue Requirement	1,163,649	2,055,453	2,292,908	2,557,893	2,833,588	10,903,491

RES DEMAND RESPONSE	1	2	3	4	5	Total
1-Year Avoided Costs: T&D	\$785,326	\$798,387	\$838,540	\$887,642	\$939,764	\$4,249,659
1-Year Avoided Costs: Capacity	869,689	883,722	927,713	981,557	1,038,686	4,701,366
Total Avoided Costs	1,655,014	1,682,109	1,766,252	1,869,199	1,978,450	8,951,025
Program Costs & Overhead	(285,197)	(294,040)	(391,541)	(400,175)	(418,791)	(1,789,745)
Shared Savings	1,369,817	1,388,069	1,374,711	1,469,025	1,559,658	7,161,280
x Utility Sharing Rate	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Utility Share	136,982	138,807	137,471	146,902	155,966	716,128
+ Program Cost & Overhead Recovery	285,197	294,040	391,541	400,175	418,791	1,789,745
+ M&V Cost Recovery	14,260	14,702	19,577	20,009	20,940	89,487
Total Revenue Requirement	436,439	447,549	548,590	567,086	595,697	2,595,360

NONRES DEMAND RESPONSE	1	2	3	4	5	Total
1-Year Avoided Costs: T&D	\$1,788,810	\$1,608,919	\$1,796,639	\$1,992,292	\$2,039,111	\$9,225,771
1-Year Avoided Costs: Capacity	1,980,972	1,780,886	1,987,698	2,203,082	2,253,752	10,206,391
Total Avoided Costs	3,769,782	3,389,805	3,784,337	4,195,374	4,292,863	19,432,162
Program Costs & Overhead	(889,742)	(776,586)	(817,566)	(858,631)	(862,127)	(4,204,651)
Shared Savings	2,880,041	2,613,219	2,966,771	3,336,742	3,430,737	15,227,511
x Utility Sharing Rate	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Utility Share	288,004	261,322	296,677	333,674	343,074	1,522,751
+ Program Cost & Overhead Recovery	889,742	776,586	817,566	858,631	862,127	4,204,651
+ M&V Cost Recovery	44,487	38,829	40,878	42,932	43,106	210,233
Total Revenue Requirement	1,222,233	1,076,737	1,155,121	1,235,237	1,248,307	5,937,635

KENTUCKY LOST REVENUE ESTIMATE WORKPAPER

in \$

Line Losses	5.141%
VOM rate, \$/KWH	\$0.0019

SUMMARY

	1	2	3	4	5	6	7	8	Total
Half-year Convention									
Res	\$842,456	\$1,892,305	\$2,295,959	\$1,988,678	\$1,470,980	\$1,061,069	\$507,615	\$174,958	\$10,234,019
NonRes	138,603	536,898	1,083,083	1,534,328	1,790,890	1,597,005	986,167	330,512	7,997,486
Total	981,058	2,429,203	3,379,041	3,523,007	3,261,870	2,658,073	1,493,782	505,469	18,231,504
Start of Fiscal Year Convention									
Res	1,684,911	2,099,698	2,492,219	1,485,137	1,456,824	665,314	349,916	n/a	10,234,019
NonRes	277,206	796,591	1,369,575	1,699,082	1,882,698	1,311,311	661,023	n/a	7,997,486
Total	1,962,117	2,896,289	3,861,794	3,184,219	3,339,522	1,976,625	1,010,939	0	18,231,504

RES CONSERVATION

	1	2	3	4	5	6	7	Total
Lost Revenues with VOM from DSMore								
Vintage 1	1,749,300	1,365,396	1,393,933	0	0	0	0	4,508,629
2	0	812,837	397,401	405,706	0	0	0	1,615,944
3	0	0	792,125	363,623	371,223	0	0	1,526,970
4	0	0	0	769,025	327,049	333,884	0	1,429,958
5	0	0	0	0	809,648	354,270	361,674	1,525,593
Total Lost Revenues with VOM	1,749,300	2,178,233	2,583,458	1,538,354	1,507,920	688,155	361,674	10,607,094
KWH at Meter, Net FR from DSMore								
Vintage 1	33,888,681	25,909,906	25,909,906	0	0	0	0	85,708,492
2	0	15,424,487	7,386,737	7,386,737	0	0	0	30,197,960
3	0	0	14,723,721	6,620,521	6,620,521	0	0	27,964,762
4	0	0	0	14,001,712	5,832,712	5,832,712	0	25,667,136
5	0	0	0	0	14,439,561	6,188,836	6,188,836	26,817,233
Total KWH at Meter, Net FR	33,888,681	41,334,392	48,020,363	28,008,969	26,892,794	12,021,548	6,188,836	196,355,583
Variable O&M								
Vintage 1	64,388	49,229	49,229	0	0	0	0	162,846
2	0	29,307	14,035	14,035	0	0	0	57,376
3	0	0	27,975	12,579	12,579	0	0	53,133
4	0	0	0	26,603	11,082	11,082	0	48,768
5	0	0	0	0	27,435	11,759	11,759	50,953
Total Variable O&M	64,388	78,535	91,239	53,217	51,096	22,841	11,759	373,076
Lost Revenues net VOM								
Vintage 1	1,684,911	1,316,167	1,344,704	0	0	0	0	4,345,782
2	0	783,531	383,366	391,672	0	0	0	1,558,568
3	0	0	764,150	351,044	358,644	0	0	1,473,837
4	0	0	0	742,422	315,967	322,802	0	1,381,191
5	0	0	0	0	782,213	342,511	349,916	1,474,640
Total Lost Revenues net VOM	1,684,911	2,099,698	2,492,219	1,485,137	1,456,824	665,314	349,916	10,234,019
Implicit \$/KWH								
Vintage 1	\$0.0497	\$0.0508	\$0.0519	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0507
2	\$0.0000	\$0.0508	\$0.0519	\$0.0530	\$0.0000	\$0.0000	\$0.0000	\$0.0516
3	\$0.0000	\$0.0000	\$0.0519	\$0.0530	\$0.0542	\$0.0000	\$0.0000	\$0.0527
4	\$0.0000	\$0.0000	\$0.0000	\$0.0530	\$0.0542	\$0.0553	\$0.0000	\$0.0538
5	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0542	\$0.0553	\$0.0565	\$0.0550
Implicit \$/KWH	\$0.0497	\$0.0508	\$0.0519	\$0.0530	\$0.0542	\$0.0553	\$0.0565	\$0.0521

NONRES CONSERVATION

	1	2	3	4	5	6	7	Total
Lost Revenues with VOM from DSMore								
Vintage 1	288,772	294,807	287,298	0	0	0	0	870,877
2	0	534,314	545,481	506,468	0	0	0	1,586,262
3	0	0	591,534	603,897	559,904	0	0	1,755,335
4	0	0	0	655,180	668,874	619,276	0	1,943,330
5	0	0	0	0	726,000	741,173	685,267	2,152,440
Total Lost Revenues with VOM	288,772	829,121	1,424,312	1,765,545	1,954,778	1,360,449	685,267	8,308,244
KWH at Meter, Net FR from DSMore								
Vintage 1	6,087,659	6,087,659	5,811,138	0	0	0	0	17,986,456
2	0	11,033,367	11,033,367	10,034,534	0	0	0	32,101,267
3	0	0	11,964,876	11,964,876	10,866,160	0	0	34,795,912
4	0	0	0	12,980,945	12,980,945	11,772,357	0	37,734,247
5	0	0	0	0	14,089,600	14,089,600	12,760,153	40,939,353
Total KWH at Meter, Net FR	6,087,659	17,121,025	28,809,382	34,980,355	37,996,705	25,861,957	12,760,153	163,557,236
Variable O&M								
Vintage 1	11,567	11,567	11,041	0	0	0	0	34,174
2	0	20,963	20,963	19,066	0	0	0	60,992
3	0	0	22,733	22,733	20,646	0	0	66,112
4	0	0	0	24,664	24,664	22,367	0	71,695
5	0	0	0	0	26,770	26,770	24,244	77,785
Total Variable O&M	11,567	32,530	54,738	66,463	72,080	49,138	24,244	310,759

NONRES CONSERVATION

	1	2	3	4	5	6	7	Total
Attachment JEZ-1								
Page 3								
Lost Revenues net VOM								
Vintage	1	2	3	4	5	6	7	
	277,206	283,241	276,257	0	0	0	0	836,703
	0	513,350	524,517	487,402	0	0	0	1,525,270
	0	0	568,801	581,164	539,259	0	0	1,689,223
	0	0	0	630,517	644,210	596,909	0	1,871,635
	0	0	0	0	699,229	714,403	661,023	2,074,655
Total Lost Revenues net VOM	277,206	796,591	1,369,575	1,699,082	1,882,698	1,311,311	661,023	7,997,486
Implicit \$/KWH								
Vintage	1	2	3	4	5	6	7	
	\$0.0455	\$0.0465	\$0.0475	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0465
	\$0.0000	\$0.0465	\$0.0475	\$0.0486	\$0.0000	\$0.0000	\$0.0000	\$0.0475
	\$0.0000	\$0.0000	\$0.0475	\$0.0486	\$0.0496	\$0.0000	\$0.0000	\$0.0485
	\$0.0000	\$0.0000	\$0.0000	\$0.0486	\$0.0496	\$0.0507	\$0.0000	\$0.0496
	\$0.0000	\$0.0000	\$0.0000	\$0.0000	\$0.0496	\$0.0507	\$0.0518	\$0.0507
Implicit \$/KWH	\$0.0455	\$0.0465	\$0.0475	\$0.0486	\$0.0496	\$0.0507	\$0.0518	\$0.0489

Workpaper Notes:

Lost Revenues have been shown for 36 months.

The Lost Revenue and KWH shown assume a fiscal year start date for all participants. In practice, participation for lost margins would be tracked on a monthly basis.

DUKE ENERGY KENTUCKY
 RIDER DSM NEW PORTFOLIO FILING
 KWH SALES FORECAST JULY 2012 THROUGH JUNE 2013

Fall 2011 Forecast - Mwh	Before EE		Industrial	Street Lighting	OPA	Interdepartmental	Company Use	Other	Total Retail
Residential	Commercial								
Jul-12	145,236	135,929	70,648	1,285	23,215	71	71	-	376,385
Aug-12	151,966	133,034	73,767	1,435	24,803	82	71	-	385,087
Sep-12	135,619	131,981	73,009	1,270	26,486	67	66	-	368,433
Oct-12	98,105	113,082	67,187	1,354	23,051	61	61	-	302,839
Nov-12	96,227	108,189	65,835	1,307	20,178	52	53	-	291,789
Dec-12	136,525	121,206	67,411	1,317	21,493	94	88	-	348,046
Jan-13	166,817	125,159	70,169	1,340	23,775	93	81	-	387,353
Feb-13	147,458	114,460	65,720	1,341	22,193	77	58	-	351,249
Mar-13	129,120	112,900	67,905	1,356	22,514	92	85	-	333,886
Apr-13	105,120	110,904	66,066	1,340	21,701	65	58	-	305,194
May-13	92,607	112,361	67,992	1,332	22,376	69	70	-	296,737
Jun-13	118,582	129,142	71,024	1,351	24,712	62	57	-	344,872
Total	1,523,382	1,448,347	826,733	16,028	276,497	885	819	-	4,091,870

**DUKE ENERGY KENTUCKY
RIDER DSM NEW PORTFOLIO FILING
MCF SALES FORECAST JULY 2012 THROUGH JUNE 2013**

Fall 2011 Forecast - Mcf

	RES MCF FULL	RES MCF FIRM TOTL.
Jul-12	118,799	118,799
Aug-12	104,221	104,221
Sep-12	114,930	114,930
Oct-12	170,889	170,889
Nov-12	387,650	387,650
Dec-12	932,117	932,117
Jan-13	1,265,331	1,265,331
Feb-13	1,190,554	1,190,554
Mar-13	1,012,591	1,012,591
Apr-13	537,120	537,120
May-13	241,523	241,523
Jun-13	154,274	154,274
		6,229,999
		62,299,990

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

July 2012 through June 2013

	Program Costs (A)	Lost Revenues	Total
<u>Electric Rider DSM</u>			
Residential Rate RS	\$ 5,150,692	\$ 842,456	\$ 5,993,148
Distribution Level Rates Part A DS, DP, DT, GS-FL, EH & SP	\$ 1,163,649	\$ 138,603	\$ 1,302,252
Transmission Level Rates & Distribution Level Rates Part B	\$ 1,222,233	\$ -	\$ 1,222,233
<u>Gas Rider DSM</u>			
Residential Rate RS	\$ 595,035	\$ -	\$ 595,035
Total Utility Costs of Residential Programs With Gas Impacts From Sheet R1	\$ 937,063		
Allocation of Program Costs to Gas (63.5%)	\$ 595,035		

<u>Cost Allocation Between Gas and Electric</u>		
Elec. Only	52,212	36.50%
Gas + Combo	90,955	63.50%

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

**Attachment JEZ-1
Page 7**

Year	July 2012 - June 2013
Projected Annual Electric Sales kWh	
Rates RS	1,523,382,000
Rates DS, DP, DT, GS-FL, EH, & SP	2,325,304,804
Rates DS, DP, DT, GS-FL, EH, SP, & TT	2,551,577,000
Projected Annual Gas Sales CCF	
Rate RS	62,299,990

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

July 2012 through June 2013

Rate Schedule Riders	True-Up Amount (A)	Revenue Requirement (B)	Total DSM Revenue Requirements	Estimated Billing Determinants (C)	DSM Cost Recovery Rider (DSMR)
<u>Electric Rider DSM</u>					
Residential Rate RS	\$ -	\$ 5,993,148	\$ 5,993,148	1,523,382,000 kWh	\$ 0.003934 \$/kWh
Distribution Level Rates Part A DS, DP, DT, GS-FL, EH & SP	\$ -	\$ 1,302,252	\$ 1,302,252	2,325,304,804 kWh	\$ 0.000560 \$/kWh
Transmission Level Rates & Distribution Level Rates Part B TT	\$ -	\$ 1,222,233	\$ 1,222,233	2,551,577,000 kWh	\$ 0.000479 \$/kWh
Distribution Level Rates Total DS, DP, DT, GS-FL, EH & SP					\$ 0.001039 \$/kWh
<u>Gas Rider DSM</u>					
Residential Rate RS	\$ -	\$ 595,035	\$ 595,035	62,299,990 CCF	\$ 0.009551 \$/CCF
Total Rider Recovery			\$ 9,112,667		
Customer Charge for HEA Program <u>Electric No.4</u>			Annual Revenues	Number of Customers	Monthly Customer Charge
Residential Rate RS			\$ 144,085	120,071	\$ 0.10
<u>Gas No. 5</u>					
Residential Rate RS			\$ 103,979	86,649	\$ 0.10
Total Customer Charge Revenues			\$ 248,064		
Total Recovery			\$ 9,360,731		

(A) No true-up associated with this new portfolio filing
(B) Includes Lost Revenues
(C) From Sales Summary Sheet

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

KY.P.S.C. Electric No. 2
First Revised Sheet No. 75
Cancels and Supersedes
Original Sheet No. 75
Page 1 of 4

RIDER DSM

DEMAND SIDE MANAGEMENT COST RECOVERY RIDER

APPLICABILITY

Applicable to service rendered under the provisions of Rates RS (residential class), DS, DP, DT, EH, GS-FL, SP, and TT (non-residential class).

CHARGES

The monthly amount computed under each of the rate schedules to which this rider is applicable shall be increased or decreased by the DSM Charge at a rate per kilowatt-hour of monthly consumption and, where applicable, a rate per kilowatt of monthly billing demand, in accordance with the following formula:

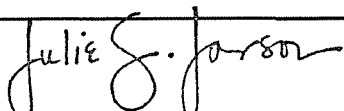
$$\text{DSM Charge} = \text{PC} + \text{LR} + \text{PI} + \text{BA}$$

Where: **PC = DSM PROGRAM COST RECOVERY.** For each twelve month period, the PC shall include all expected costs for demand-side management programs which have been approved by a collaborative process. Such program costs shall include the cost of planning, developing, implementing, monitoring, and evaluating DSM programs. Program costs will be assigned for recovery purposes to the rate classes whose customers are directly participating in the program. In addition, all costs incurred by or on behalf of the collaborative process, including but not limited to costs for consultants, employees and administrative expenses, will be recovered through the PC. Administrative costs that are allocable to more than one rate class will be recovered from those classes and allocated by rate class on the basis of the estimated avoided capacity and energy costs resulting from each program.

The PC applicable to the residential class shall be determined by dividing the cost of approved programs allocated or assigned to the residential class by the expected kilowatt-hour sales for the upcoming twelve-month period. The cost of approved programs assigned or allocated to the non-residential class shall be allocated as either demand-related or energy-related based on the respective percentage of avoided capacity cost or avoided energy cost to the total avoided cost estimated in the determination of the net resource savings for the program. For purposes of this tariff, net resource savings are defined as program benefits less the cost of the program, where program benefits will be calculated on the basis of the present value of the Company's avoided costs over the expected life of the program, and will include both capacity and energy savings. The demand-related program costs thus determined shall be divided by the expected billing demand in kilowatt-months for the upcoming twelve-month period to determine the demand-related PC. The associated energy-related program costs shall be divided by the expected kilowatt-hour sales for the upcoming twelve-month period to determine the energy-related PC for such rate class.

Issued by authority of an Order of the Kentucky Public Service Commission dated December 21, 2006 in Case No. 2006-00172.

Issued: September 29, 2010


Issued by Julie Janson, President

Effective: September 30, 2010

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

KY.P.S.C. Electric No. 2
First Revised Sheet No. 75
Cancels and Supersedes
Original Sheet No. 75
Page 2 of 4

LR = LOST REVENUE FROM LOST SALES RECOVERY. Revenues from lost sales due to DSM programs will be recovered through the decoupling of revenues from actual sales of the residential class. At the end of each twelve-month period after implementation of the DSM Charge, the non-variable revenue requirement (total revenue requirement less variable costs) for the residential class for ULH&P's most recent twelve month period will be adjusted to reflect changes in the number of customers and the usage per customer as follows: (1) the non-variable revenue requirement will be multiplied by the factor obtained by dividing the twelve month average number of customers at the end of the current twelve-month period by the twelve month average number of residential customers at the end of the twelve-month period ending December 1994, and (2) the non-variable revenue requirement will be multiplied by a factor "F_g" calculated by the following formula:

$$F_g = (1 + g)^{n/12}$$

Where: g = Growth factor - recalculated annually based on the most recent eleven years of actual customer data. Initially "g" shall be set at 0.0175; and
n = the number of months from December 1994 to the end of the current twelve-month period.

At the end of each twelve-month period after implementation of the DSM Charge, the difference between the actual non-variable revenue billed during the twelve-month period and the adjusted non-variable revenue requirement, as described above, will be determined. This difference ("LR amount established for the twelve-month period") will be divided by the estimated kilowatt-hour sales for the upcoming twelve-month period to determine the LR for the residential class.

The LR applicable to the non-residential class shall be computed by 1) multiplying the amount of kilowatt-hour sales and, where applicable, the kilowatt-months of billing demand that will be lost for each twelve-month period as a result of the implementation of the approved programs times the energy charge for the applicable rate schedule, less the variable cost included in the charge, and the demand charges, respectively; and, 2) dividing that product by the expected kilowatt-hour sales or expected billing demand in kilowatt-months for the upcoming twelve-month period. The lost revenue attributable to decreased sales to the non-residential class due to approved programs will be calculated through estimates agreed upon by the collaborative process, which may include engineering estimates, of the level of decreased kilowatt-hour energy sales and billing demand in kilowatt-months. Recovery of revenues from lost sales calculated for a twelve-month period for non-residential rate classes shall be included in the LR until January 1, 2000 or until terminated by the implementation of new rates pursuant to a general rate case, whichever comes first. Revenues from lost sales will be assigned for recovery purposes to the rate classes whose programs resulted in the lost sales.

Issued by authority of an Order of the Kentucky Public Service Commission dated December 21, 2006 in Case No. 2006-00172.

Issued: September 29, 2010


Issued by Julie Janson, President

Effective: September 30, 2010

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

KY.P.S.C. Electric No. 2
First Revised Sheet No. 75
Cancels and Supersedes
Original Sheet No. 75
Page 3 of 4

PI = DSM PROGRAM INCENTIVE RECOVERY. The DSM Program Incentive (PI) amount shall be computed by multiplying the net resource savings expected from the approved programs which are to be installed during the upcoming twelve-month period times fifteen (15) percent. Net resource savings are defined as program benefits less the cost of the program, where program benefits will be calculated on the basis of the present value of the Company's avoided costs over the expected life of the program, and will include both capacity and energy savings. The DSM incentive amount related to programs for the residential class shall be divided by the expected kilowatt-hour sales for the upcoming twelve-month period to determine the PI for that rate class. The PI amount related to programs for the non-residential class rates shall be allocated as either demand-related or energy-related in the same manner as program costs are allocated as demand- or energy related. The demand-related PI amount thus determined shall be divided by the expected billing demand in kilowatt-months for the upcoming twelve-month period to determine the demand-related PI. Similarly, the energy-related incentive amount thus determined shall be divided by the expected kilowatt-hour sales for the upcoming twelve-month period to determine the energy-related PI for such rate class. DSM incentive amounts will be assigned for recovery purposes to the rate classes whose programs created the incentive.

BA = DSM BALANCE ADJUSTMENT. The BA is used to reconcile the difference between the amount of revenues actually billed through the respective DSM Charge components; namely, the PC, LR, and PI and previous application of the BA and the revenues which should have been billed, as follows:

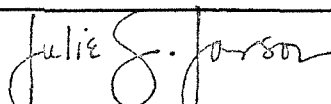
- (1) For the PC, the balance adjustment amount will be the difference between the amount billed in a twelve-month period from the application of the PC unit charge and the actual cost of the approved programs during the same twelve-month period.
- (2) For the LR applicable to the residential class, the balance adjustment amount will be the difference between the amount billed during the twelve-month period from the application of the LR unit charge and the LR amount established for the same twelve-month period.

For the LR applicable to the non-residential class, the balance adjustment amount will be the difference between the amount billed during the twelve-month period from application of the LR unit charge and the amount of lost revenues determined for the actual DSM program, or measures implemented during the twelve-month period.

- (3) For the PI, the balance adjustment amount will be the difference between the amount billed during the twelve-month period from application of the PI unit charge and the incentive amount determined for the actual DSM program, or measures implemented during the twelve-month period.
- (4) For the BA, the balance adjustment amount will be the difference between the amount billed during the twelve-month period from application of the BA and the balance adjustment amount established for the same twelve-month period.

Issued by authority of an Order of the Kentucky Public Service Commission dated December 21, 2006 in Case No. 2006-00172.

Issued: September 29, 2010


Issued by Julie Janson, President

Effective: September 30, 2010

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

KY.P.S.C. Electric No. 2
First Revised Sheet No. 75
Cancels and Supersedes
Original Sheet No. 75
Page 4 of 4

BA = DSM BALANCE ADJUSTMENT (Cont.d)

For the non-residential class, balance adjustment amounts will be separated into both demand and energy-related components. The balance adjustment amounts determined above shall include interest. The interest applied to the monthly amounts, shall be calculated at a rate equal to the average of the "3-month Commercial Paper Rate" for the immediately preceding 12-month period. The total of the demand-related balance adjustment amounts, plus interest, shall be divided by the expected billing demand in kilowatt-months for the upcoming twelve-month period to determine the demand-related BA, while the total of the energy-related balance adjustment amounts shall be divided by the expected kilowatt-hour sales for the upcoming twelve-month period to determine the energy-related BA. DSM balance adjustment amounts will be assigned for recovery purposes to the rate classes to which over or under-recoveries of DSM amounts were realized.

All costs recovered through the DSM Charge will be assigned or allocated to Duke Energy Kentucky, Inc.'s electric or gas customers on the basis of the estimated net electric or gas resource savings resulting from each program.

DSM CHARGE FILINGS

The filing of modifications to the DSM Charge shall be made at least thirty days prior to the beginning of the effective period for billing. Each filing will include the following information as needed:

- (1) A detailed description of each DSM program developed by the collaborative process, the total cost of each program over the twelve-month period, an analysis of expected resource savings, information concerning the specific DSM or efficiency measures to be installed, and any applicable studies which have been performed, as available.
- (2) A statement setting forth the detailed calculation of each component of the DSM Charge.


Each change in the DSM Charge shall be applied to customers' bills with the first billing cycle of the revenue month which coincides with, or is subsequent to, the effective date of such change.

SERVICE REGULATIONS

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as provided by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated December 21, 2006 in Case No. 2006-00172.

Issued: September 29, 2010


Issued by Julie Janson, President

Effective: September 30, 2010

Duke Energy Kentucky, Inc.
4580 Olympic Blvd.
Erlanger, Kentucky 41018

KY.P.S.C. Gas No. 2
Second Revised Sheet No. 61
Cancelling and Superseding
First Revised Sheet No. 61
Page 1 of 4

RIDER DSM

DEMAND SIDE MANAGEMENT COST RECOVERY RIDER

APPLICABILITY

Applicable to service rendered under the provisions of Rates RS (residential class), GS, and FT (non-residential class).

CHARGES

The monthly amount computed under each of the rate schedules to which this rider is applicable shall be increased or decreased by the DSM Charge at a rate per hundred cubic feet (CCF) of monthly consumption in accordance with the following formula:

$$\text{DSM Charge} = \text{PC} + \text{LR} + \text{PI} + \text{BA}$$

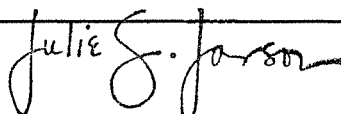
Where: **PC = DSM PROGRAM COST RECOVERY.** For each twelve month period, the PC shall include all expected costs for demand-side management programs which have been approved by a collaborative process. Such program costs shall include the cost of planning, developing, implementing, monitoring, and evaluating DSM programs. Program costs will be assigned for recovery purposes to the rate classes whose customers are directly participating in the program. In addition, all costs incurred by or on behalf of the collaborative process, including but not limited to costs for consultants, employees and administrative expenses, will be recovered through the PC. Administrative costs that are allocable to more than one rate class will be recovered from those classes and allocated by rate class on the basis of the estimated avoided pipeline capacity and commodity costs resulting from each program.

The PC applicable to the residential class shall be determined by dividing the cost of approved programs allocated or assigned to the residential class by the expected CCF throughput for the upcoming twelve-month period. Similarly, the cost of approved programs assigned to the non-residential class shall be divided by the expected CCF throughput for the upcoming twelve-month period to determine the PC applicable to the non-residential rate class.

LR = LOST REVENUE FROM DECREASED THROUGHPUT RECOVERY. Revenues from lost throughput due to DSM programs will be recovered through the decoupling of revenues from actual throughput of the residential class. At the end of each twelve-month period after implementation of the DSM Charge, the non-variable revenue requirement (total revenue requirement less variable costs) for the residential class for Duke Energy Kentucky, Inc.'s most recent twelve month period will be adjusted to reflect changes in the number of customers and the usage per customer as follows: (1) the non-variable revenue requirement will be multiplied by the

Issued by authority of an Order of the Kentucky Public Service Commission dated December 29, 2009 in Case No. 2009-00202.

Issued: September 29, 2010



Effective: September 30, 2010

Issued by Julie Janson, President

Duke Energy Kentucky, Inc.
4580 Olympic Blvd.
Erlanger, Kentucky 41018

KY.P.S.C. Gas No. 2
Second Revised Sheet No. 61
Cancelling and Superseding
First Revised Sheet No. 61
Page 2 of 4

CHARGES (Cont'd)

factor obtained by dividing the twelve month average number of customers at the end of the current twelve-month period by the twelve month average number of residential customers at the end of the twelve-month period ending December 1994, and (2) the non-variable revenue requirement will be multiplied by a factor "F_g" calculated by the following formula:

LR = LOST REVENUE FROM DECREASED THROUGHPUT RECOVERY. (Contd.)

$$F_g = (1 + g)^{n/12}$$

Where: g = Growth factor - recalculated annually based on the most recent eleven years of actual customer data. Initially "g" shall be set at -0.0156; and
n = the number of months from December 1994 to the end of the current twelve-month period.

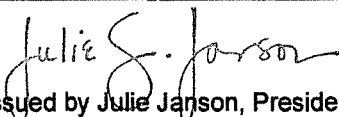
At the end of each twelve-month period after implementation of the DSM Charge, the difference between the actual non-variable revenue billed during the twelve-month period and the adjusted non-variable revenue requirement, as described above, will be determined. This difference ("LR amount established for the twelve-month period") will be divided by the estimated CCF throughput for the upcoming twelve-month period to determine the LR for the residential class.

The LR applicable to the non-residential class shall be computed by 1) multiplying the amount of CCF throughput that will be lost for each twelve-month period as a result of the implementation of the approved programs times the CCF throughput charge for the applicable rate schedule, less the variable cost included in the charge; and, 2) dividing that product by the expected CCF throughput for the upcoming twelve-month period. The lost revenue attributable to decreased throughput to the non-residential class due to approved programs will be calculated through estimates agreed upon by the collaborative process, which may include engineering estimates, of the level of decreased throughput. Recovery of revenues from decreased throughput calculated for a twelve-month period for non-residential rate classes shall be included in the LR until terminated by the implementation of new rates pursuant to a general rate case. Revenues from such decreased throughput will be assigned for recovery purposes to the rate classes whose programs resulted in the decreased throughput.

PI = DSM PROGRAM INCENTIVE RECOVERY. The DSM Program Incentive (PI) amount shall be computed by multiplying the net resource savings expected from the approved programs which are to be installed during the upcoming twelve-month period times fifteen (15) percent. Net resource savings are defined as program benefits less the cost of the program, where program benefits will be calculated on the basis of the present value of Duke Energy Kentucky, Inc.'s avoided gas costs over the expected life of the program, and will include both capacity and

Issued by authority of an Order of the Kentucky Public Service Commission dated December 29, 2009 in Case No. 2009-00202.

Issued: September 29, 2010


Issued by Julie Janson, President

Effective: September 30, 2010

Duke Energy Kentucky, Inc.
4580 Olympic Blvd.
Erlanger, Kentucky 41018

KY.P.S.C. Gas No. 2
Second Revised Sheet No. 61
Cancelling and Superseding
First Revised Sheet No. 61
Page 3 of 4

CHARGES (Cont'd)

commodity savings. The DSM incentive amount related to programs for the residential class shall be divided by the expected CCF throughput for the upcoming twelve-month period to determine the PI for that rate class. The PI amount related to programs for the non-residential class rates shall be divided by the expected CCF throughput for the upcoming twelve-month period to determine the PI for that rate class. DSM incentive amounts will be assigned for recovery purposes to the rate classes whose programs created the incentive.

BA = DSM BALANCE ADJUSTMENT. The BA is used to reconcile the difference between the amount of revenues actually billed through the respective DSM Charge components; namely, the PC, LR, and PI and previous BA, and the revenues which should have been billed, as follows:

- (1) For the PC, the balance adjustment amount will equal the difference between the amount billed in a twelve-month period from the application of the PC unit charge and the actual cost of the approved programs during the same twelve-month period.
- (2) For the LR applicable to the residential class, the balance adjustment amount will equal the difference between the amount billed during the twelve-month period from the application of the LR unit charge and the LR amount established for the same twelve-month period.

For the LR applicable to the non-residential class, the balance adjustment amount will equal the difference between the amount billed during the twelve-month period from application of the LR unit charge and the amount of lost revenues determined for the actual DSM program, or measures implemented during the twelve-month period.

- (3) For the PI, the balance adjustment amount will equal the difference between the amount billed during the twelve-month period from application of the PI unit charge and the incentive amount determined for the actual DSM program, or measures implemented during the twelve-month period.
- (4) For the BA, the balance adjustment amount will equal the difference between the amount billed during the twelve-month period from application of the BA and the balance adjustment amount established for the same twelve-month period.

The balance adjustment amounts determined above shall include interest. The interest applied to the monthly amounts, shall be calculated at a rate equal to the average of the "3-month Commercial Paper Rate" for the immediately preceding 12-month period. The total of balance adjustment amounts shall be divided by the expected CCF throughput for the upcoming twelve-month period to determine the BA. DSM balance adjustment amounts will be assigned for recovery purposes to the rate classes to which over or under-recoveries of DSM amounts were realized.

Issued by authority of an Order of the Kentucky Public Service Commission dated December 29, 2009 in Case No. 2009-00202.

Issued: September 29, 2010


Issued by Julie Janson, President

Effective: September 30, 2010

Duke Energy Kentucky, Inc.
4580 Olympic Blvd.
Erlanger, Kentucky 41018

KY.P.S.C. Gas No. 2
Second Revised Sheet No. 61
Cancelling and Superseding
First Revised Sheet No. 61
Page 4 of 4

CHARGES (Cont'd)

All costs recovered through the DSM Charge will be assigned or allocated to Duke Energy Kentucky, Inc.'s electric or gas customers on the basis of the estimated net electric or gas resource savings resulting from each program.

DSM CHARGE FILINGS

The filing of modifications to the DSM Charge shall be made at least thirty days prior to the beginning of the effective period for billing. Each filing will include the following information as needed:

- (1) A detailed description of each DSM program developed by the collaborative process, the total cost of each program over the twelve-month period, an analysis of expected resource savings, information concerning the specific DSM or efficiency measures to be installed, and any applicable studies which have been performed, as available.
- (2) A statement setting forth the detailed calculation of each component of the DSM Charge.

Each change in the DSM Charge shall be applied to customers' bills with the first billing cycle of the revenue month which coincides with, or is subsequent to, the effective date of such change.

SERVICE REGULATIONS

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as provided by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated December 29, 2009 in Case No. 2009-00202.

Issued: September 29, 2010


Issued by Julie Janson, President

Effective: September 30, 2010

Duke Energy Kentucky
4580 Olympic Blvd.
Erlanger, KY 41018

KY.P.S.C. Electric No. 2
Tenth Revised Sheet No. 78
Cancels and Supersedes
Ninth Revised Sheet No. 78
Page 1 of 1

RIDER DSMR
DEMAND SIDE MANAGEMENT RATE

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

The DSMR to be applied to residential customer bills is \$0.003934 per kilowatt-hour.

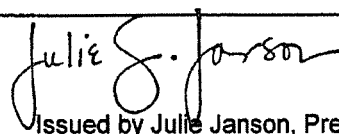
A Home Energy Assistance Program (HEA) charge of \$0.10 will be applied monthly to residential customer bills through September 2014.

The DSMR to be applied to non-residential distribution service customer bills is \$0.001039 per kilowatt-hour.

The DSMR to be applied for transmission service customer bills is \$0.000479 per kilowatt-hour.

Issued by authority of the Kentucky Public Service Commission in Case No.2012-00xxx dated

Issued: March 6, 2012



Effective: July 1, 2012

Issued by Julie Janson, President

Duke Energy Kentucky
4580 Olympic Blvd.
Erlanger, Kentucky 41018

KY.P.S.C. Gas No. 2
Tenth Revised Sheet No. 62
Cancels and Supersedes
Ninth Revised Sheet No. 62
Page 1 of 1

RIDER DSMR

DEMAND SIDE MANAGEMENT RATE

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

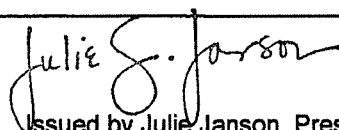
The DSMR to be applied to residential customer bills is \$0.009551 per hundred cubic feet.

A Home Energy Assistance Program (HEA) charge of \$0.10 will be applied monthly to residential customer bills through September 2014.

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

Issued by authority of an Order by the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012



Effective: July 1, 2012

Issued by Julie Janson, President

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 102
Page 1 of 1

APPLIANCE RECYCLING PROGRAM (ARP)

APPLICABILITY

Available to all residential customers in the Company's electric service area who choose to participate in the program and own a qualified refrigerator or freezer.

PROGRAM DESCRIPTION

The Appliance Recycling Program (ARP) is part of Duke Energy Kentucky's portfolio of programs offered through Rider Demand Side Management Program (Rider DSM) and recovered through the Company's Rider DSMR (Demand Side Management Rate). The ARP is designed to prevent the continued use of inefficient, working refrigerators and freezers by taking the units out of homes and recycling them in a very "Environmentally Friendly" manner with approximately 95% of the material recycled and only 5% going to a landfill.

Qualifying units include residential-style refrigerators and freezers ranging from 10-30 cubic feet currently in Duke Energy Kentucky customer's homes. These qualifying units will be removed at "no cost" by a Duke Energy Kentucky-approved third party vendor. The removed units will be dismantled with approximately 95% of materials being recycled. Duke Energy Kentucky residential customers that elect to participate will be paid a cash incentive of up to \$30 dollars per unit with a maximum of two units per year.

Duke Energy Kentucky residential customers can choose to participate in the Appliance Recycling Program by contacting Duke Energy Kentucky by phone or online and filling out a request form. A request form grants approval for Duke Energy Kentucky and Duke Energy Kentucky's contractor to enter the property, verify that the refrigerator or freezer is working and cooling, and remove the unit for transportation to a recycling center.

SERVICE REGULATIONS

The provisions contained in this tariff sheet do not supersede or replace any of the charges and terms contained in the standard base rate and rider tariff sheets. The standard base rate and rider charges apply to all customers.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to the Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as approved by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012

Effective: July 1, 2012


Issued by Julie Janson, President

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 103
Page 1 of 1

ENERGY EFFICIENCY EDUCATION PROGRAM FOR SCHOOLS PROGRAM (EEEPS)

APPLICABILITY

This program is available, at the Company's option, to public and private schools and their teachers that are located in Duke Energy Kentucky's service territory with enrolled K-12 students that reside in households served by Duke Energy Kentucky.

PROGRAM DESCRIPTION

The Energy Efficiency Education Program for Schools is part of Duke Energy Kentucky's portfolio of programs offered through Rider Demand Side Management Program (Rider DSM) and recovered through the Company's Rider DSMR (Demand Side Management Rate). The purpose of the EEEPS program is to educate students about energy efficiency in home and schools through an energy efficiency curriculum.

The Energy Efficiency Education Program for Schools provides an approach that educates students about energy. This program provides eligible students the ability to perform a paper or online energy audit of their home. Each eligible student who completes a home energy audit will receive energy efficiency measures for their home, such as a package of compact fluorescent light bulbs or an energy efficiency starter kit. Duke Energy Kentucky reserves the right to determine eligibility throughout the life of the program.

SERVICE REGULATIONS

The provisions contained in this tariff sheet do not supersede or replace any of the charges and terms contained in the standard base rate and rider tariff sheets. The standard base rate and rider charges apply to all customers.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as approved by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012


Issued by Julie Janson, President

Effective: July 1, 2012

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 104
Page 1 of 2

RESIDENTIAL SMART \$AVER® ENERGY EFFICIENT RESIDENCES PROGRAM

APPLICABILITY

Applicable to residential customers in the Company's electric service area who choose to participate by submitting, or having their contractor submit, a completed incentive application.

PROGRAM DESCRIPTION

Payments are available for heat pumps and central air conditioning systems in new or existing individually-metered residences, condominiums and mobile homes served by Duke Energy Kentucky's residential rate schedules from Duke Energy Kentucky's retail distribution system. Payments are also available for central air conditioner tune-ups and heat pump tune-ups within an existing home.

The new central air conditioning system or heat pump must have a Seasonal Energy Efficiency Ratio (SEER) of 14 or more and also include an electronically commutative fan motor (ECM fan) on the indoor unit. Geothermal heat pumps must have an Energy Efficiency Ratio (EER) of 10.5 or more and include an ECM fan on the indoor unit.

The new Heating Ventilation and Air Conditioning (HVAC) system must include a properly matched outdoor unit and inside coil, which must be listed as such by the Air Conditioning, Heating, and Refrigeration Institute (AHRI). This listing is available at www.ahridirectory.org.

Heat pumps may use natural gas or any fuel for supplemental or backup heating.

Other energy efficiency measures that qualify for payment are:

- Air sealing and attic insulation
- Duct sealing
- Duct insulation
- Heat pump tune-up
- Air conditioner tune-up


All Smart Saver measures must be installed or performed by a Duke Energy Kentucky participating trade ally to be eligible.

All improvements eligible for payment under this program must be installed based on manufacturer's recommendations and the Company's specifications. Detailed requirements are available on the Company's website at www.duke-energy.com.

To qualify for payment under this program, qualifying measures must be implemented on or after August 1, 2012 and the application for payment must be made within 90 days of completion.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012


Issued by Julie Janson, President

Effective: July 1, 2012

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 104
Page 2 of 2

Payments will be made for qualifying HVAC equipment or measures as follows:

New Residences

A payment of up to \$650 per unit will be made to the builder or the builder's designee.

Existing Residences

- A payment of up to \$550 per unit will be made to the owner of the residence (or designee), and a payment of up to \$100 per unit will be made to the HVAC dealer (or sales representative) who sells and installs the HVAC system.
- A payment of up to \$500 will be made to the owner of the residence (or designee) for air sealing and attic insulation
- A payment of up to \$300 will be made to the owner of the residence (or designee) for duct sealing
- A payment of up to \$350 will be made to the owner of the residence (or designee) for duct insulation
- A payment of up to \$125 will be made to the owner of the residence (or designee) for heat pump tune-up
- A payment of up to \$80 will be made to the owner of the residence (or designee) for central air conditioner tune-up

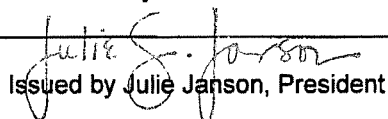
SERVICE REGULATIONS

The provisions contained in this tariff sheet do not supersede or replace any of the charges and terms contained in the standard base rate and rider tariff sheets. The standard base rate and rider charges apply to all customers.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as approved by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012


Issued by Julie Janson, President

Effective: July 1, 2012

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 105
Page 1 of 1

LOW INCOME NEIGHBORHOOD PROGRAM

APPLICABILITY

This program is available only to individually-metered residential customers in neighborhoods selected by the Company, at its sole discretion, which are considered low income based on third party data, which includes income level and household size. Areas targeted for participation in this program will approximately have 50% of the households have income equal to or less than 200% of the federal poverty level established by the U. S. Government.

PROGRAM DESCRIPTION

The Low Income Neighborhood Program is part of Duke Energy Kentucky's portfolio of programs offered through Rider Demand Side Management Program (Rider DSM) and recovered through the Company's Rider DSMR (Demand Side Management Rate). The purpose of this program is to assist low income customers in reducing energy costs through energy education and by installing or providing energy conservation measures for each customer's residence.

Under this program, participating customers will receive the following:

- An energy assessment to identify energy efficiency opportunities in the customer's home;
- One-on-one education on energy efficiency techniques and measures; and
- A comprehensive package of energy conservation measures installed or provided to the extent the measure is identified as an energy efficiency opportunity based on the results of the energy assessment. Energy conservation measures, up to \$210, may include low-cost energy efficiency starter items, such as air infiltration reduction measures, energy efficient lighting, water conservation measures, HVAC filters, or other energy saving devices.

SERVICE REGULATIONS

The provisions contained in this tariff sheet do not supersede or replace any of the charges and terms contained in the standard base rate and rider tariff sheets. The standard base rate and rider charges apply to all customers.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as approved by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012


Issued by Julie Janson, President

Effective: July 1, 2012

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 106
Page 1 of 2

LOW INCOME SERVICES PROGRAM

APPLICABILITY

Available to low income residential customers in the Company's electric service area.

PROGRAM DESCRIPTION

The Low Income Services Program is part of Duke Energy Kentucky's portfolio of programs offered through Rider Demand Side Management Program (Rider DSM) and recovered through the Company's Rider DSMR (Demand Side Management Rate). The purpose of this program is to assist low income customers with installation of energy efficiency measures in their home to reduce energy usage.

Weatherization and equipment replacement assistance is available to income qualified customers on Duke Energy Kentucky's system in existing, individually metered, residences, condominiums, and mobile homes.

- Funds are available for (i.) weatherization measures, and/or (ii.) refrigerator replacement with an Energy Star appliance, and/or (iii.) furnace repair/replacement. The measures eligible for funding will be determined by an energy audit of the residence.
- A home energy audit will be provided at no charge to the customer.
- Availability of this program will be coordinated through vendors or local agencies that administer weatherization programs. The vendor or agency must certify the household income level according to Duke Energy standards.

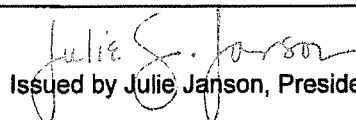
Payment Plus provides energy efficiency and budget counseling to help customers understand how to control their energy usage and how to manage their household bills. Participants are also encouraged to participate in weatherization and equipment replacement assistance to increase the energy efficiency in customers' homes. Bill assistance credits are provided to customers upon completion of each component of Payment Plus.

Participants are not eligible for payments under any other Duke Energy Kentucky Energy Efficiency Programs for the same energy efficiency measure provided under this program.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012

Effective: July 1, 2012


Issued by Julie Janson, President

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 106
Page 2 of 2

PAYMENT

Participants in the weatherization and equipment replacement assistance provision of this program may receive assistance with energy efficiency measures as shown below. Payments will be made to the administering agency on behalf of the customer.

1. Weatherization Tier 1. Homes with energy usage up to 7 kWh or 1 therm per square foot of conditioned space can receive up to \$600 for weatherization measures.
2. Weatherization Tier 2. Homes with energy usage more than 7 kWh or 1 therm per square foot of conditioned space can receive assistance of up to \$4,000 for weatherization measures.
3. Equipment Replacement
 - a) Refrigerator replacement cost
 - b) Furnace replacement cost

To provide an incentive for customers to enroll in Payment Plus, bill assistance is available to help customers gain control of their bills. The credits are as follows:

1. \$200 for participating in the EE counseling.
2. \$150 for participating in the budgeting counseling.
3. \$150 for participating in the Residential Conservation and Energy Education program if enrolled in Payment Plus.

SERVICE REGULATIONS


The provisions contained in this tariff sheet do not supersede or replace any of the charges and terms contained in the standard base rate and rider tariff sheets. The standard base rate and rider charges apply to all customers.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as approved by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012

Effective: July 1, 2012


Issued by Julie Janson, President

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 107
Page 1 of 1

MY HOME ENERGY REPORT PROGRAM

APPLICABILITY

Applicable to residential customers in the Company's electric service area with individually-metered, single-family residences receiving concurrent service from the Company.

PROGRAM DESCRIPTION

The My Home Energy Report is part of Duke Energy Kentucky's portfolio of programs offered through Rider Demand Side Management Program (Rider DSM) and recovered through the Company's Rider DSMR (Demand Side Management Rate). The purpose of this voluntary program is to use comparative household electric usage data for similar residences in the same geographic area to help customers to better manage and reduce energy usage. These normative comparisons are intended to induce an energy consumption behavior change. The program will assist residential customers in assessing their energy usage and provide recommendations for more efficient use of energy in their homes. The program will help identify those customers who could benefit most from investing in new energy efficiency measures, undertaking more energy efficient practices and participating in Duke Energy Kentucky programs.

- Customers will receive periodic comparative usage data reports via direct mail or online channels. Delivery may be interrupted during the off-peak energy usage months in the fall and spring.
- The Company may require a minimum number of months of historical usage data before allowing participation.

Customers can opt out of receiving the report at any time by contacting Duke Energy Kentucky.

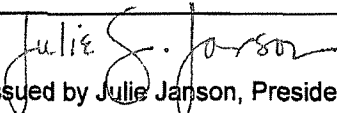
SERVICE REGULATIONS

The provisions contained in this tariff sheet do not supersede or replace any of the charges and terms contained in the standard base rate and rider tariff sheets. The standard base rate and rider charges apply to all customers.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as approved by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012


Issued by Julie Janson, President

Effective: July 1, 2012

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 108
Page 1 of 2

RESIDENTIAL DIRECT LOAD CONTROL - POWER MANAGER PROGRAM

APPLICABILITY

Applicable to residential customers in the Company's electric service area with individually-metered, single-family residences receiving concurrent service from the Company.

This program is available on a voluntary basis, at the Company's option, in areas where the Company operates applicable load control devices.

This program is available for the cycling control of electric central air conditioning (cooling) systems where the following requirements are met:

1. The Customer must agree to enroll all operable central air conditioning units installed in the residence.
2. The Company shall have the right to require satisfactory permission for the installation and operation of load control devices on customer equipment upon entering a program enrollment agreement with the Customer.
3. Neither the Customer nor his agent shall disconnect or otherwise interfere with the Company's equipment required to cycle the Customer's air conditioning system except for the replacement of or service to the air conditioning unit.
4. The Customer shall immediately notify the Company of the removal of, disconnection of or damage to the load control device.

PROGRAM OPTIONS

Customers may elect to enroll in Power Manager by choosing among program options offered by the Company.

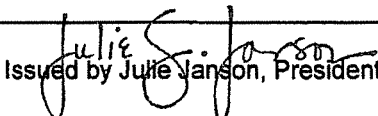
The Company will establish bill credit incentives based on the program chosen by the Customer in the program enrollment agreement. Bill credit incentives will be presented to the customer in the program enrollment agreement.

INTERRUPTION PERIODS

The Company shall have the right to intermittently interrupt (cycle) service to the Customer's central electric air conditioning (cooling) systems during non-holiday weekday peak load and/or high price periods for economic purposes as determined by the Company. The Company will limit the number of these cycling events to no more than 10 during the cooling season from May through October. The duration of each event will not exceed 12 hours and will be restricted to occur between the hours of 6 AM to 11 PM Eastern Daylight Time (EDT).

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012


Issued by Julie Janson, President

Effective: July 1, 2012

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 108
Page 2 of 2

In addition, the Company shall have the right to intermittently interrupt (cycle) service to the Customer's central air conditioning (cooling) systems at any time during the cooling season from May through October in which the Company experiences emergency conditions such as capacity problems related to the generation, transmission and delivery of electricity, or as directed by the regional transmission operator. The number of cycling events for emergency conditions is independent of the implementation of the program for economic conditions as described above.

The Company, at its sole discretion, may limit requests for curtailment to geographic regions.

The Company reserves the right to test the function of the load control provisions at any time.

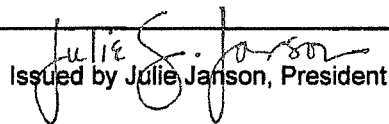
SERVICE REGULATIONS

The provisions contained in this tariff sheet do not supersede or replace any of the charges and terms contained in the standard base rate and rider tariff sheets. The standard base rate and rider charges apply to all customers.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as approved by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012


Issued by Julie Janson, President

Effective: July 1, 2012

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 109
Page 1 of 1

RESIDENTIAL ENERGY ASSESSMENT PROGRAM

APPLICABILITY

Available to residential customers in the Company's electric service area with individually-metered, single-family residences receiving concurrent service from the Company and choose to participate by enrolling through the marketing channels utilized by the program.

PROGRAM DESCRIPTION

The Residential Energy Assessment Program (REA) is part of Duke Energy Kentucky's portfolio of programs offered through Rider Demand Side Management Program (Rider DSM) and recovered through the Company's Rider DSMR (Demand Side Management Rate). The purpose of this program is to assist residential customers in assessing their energy usage and to provide recommendations for more efficient use of energy in their homes. The program will also help identify those customers who could benefit most by investing in new energy efficiency measures, undertaking more energy efficient practices and participating in Duke Energy Kentucky programs.

The Company may require a minimum number of months of historical usage data before performing an analysis to customers as follows:

On-site Audit and Analysis

Duke Energy Kentucky will perform on-site assessments of owner-occupied residences.; Duke Energy Kentucky reserves the right to determine eligibility throughout the life of the program. Duke Energy Kentucky will provide a detailed Residential Energy Assessment including energy efficiency recommendations.

Participating customers will be offered home energy efficiency measures such as an energy efficiency starter kit and/or compact fluorescent light bulbs. The incentive may be delivered in a variety of ways including but not limited to, in-home installation, direct mail, rebates, discount coupons, in-store promotions or online discounts.

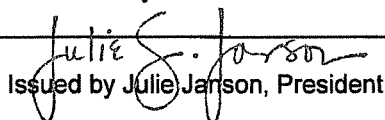
SERVICE REGULATIONS

The provisions contained in this tariff sheet do not supersede or replace any of the charges and terms contained in the standard base rate and rider tariff sheets. The standard base rate and rider charges apply to all customers.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as approved by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012


Issued by Julie Janson, President

Effective: July 1, 2012

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 110
Page 1 of 2

RESIDENTIAL SMART \$AVER® ENERGY EFFICIENT PRODUCTS PROGRAM

APPLICABILITY

Available to residential customers in the Company's electric service area who choose to participate by enrolling through the marketing channels utilized by the program.

PROGRAM DESCRIPTION

The Residential Smart \$aver Energy Efficient Products Program is part of Duke Energy Kentucky's portfolio of programs offered through Rider Demand Side Management Program (Rider DSM) and recovered through the Company's Rider DSMR (Demand Side Management Rate). The purpose of this voluntary program is to encourage the installation of ENERGY STAR or other high efficiency products in new or existing residences. The program will provide incentives to offset a portion of the higher cost of higher efficiency products.

The types of equipment eligible for incentives may include but are not limited to the following:


- High efficiency lighting
- High efficiency clothes washers
- High efficiency refrigerators
- High efficiency dishwashers

- Other high efficiency equipment as determined by the Company on a case by case basis, but not including water heaters, heating or cooling systems.
- Incentives may be offered in a variety of ways including, but not limited to, discount coupons, in-store promotions, on-line discounted purchases, etc.
- The Company's incentive will be an amount up to 50% of the installed cost difference between standard equipment and higher efficiency equipment; however, the incentives for high efficiency lighting may be higher than 50%.
- Incentives under this program are only available for ENERGY STAR or other energy efficiency products for which incentives pass the Company's Utility Cost Test (UCT).
- The Company may vary the incentive by type of equipment and differences in efficiency in order to provide the minimum incentive needed to drive customers to purchase higher efficiency equipment.
- The Company reserves the right to adjust the incentive, for specific equipment, on a periodic basis, as equipment efficiency standards change, and as customers naturally moves to purchase higher efficiency equipment.
- The amount of the incentive payment for various standard types of equipment will be filed with the Commission, for information, and posted to the Company's website at www.duke-energy.com.

Incentives may be limited to one of any product, per residence, under all Duke Energy Kentucky's Energy Efficiency Programs.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012


Issued by Julie Janson, President

Effective: July 1, 2012

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 110
Page 2 of 2


SERVICE REGULATIONS

The provisions contained in this tariff sheet do not supersede or replace any of the charges and terms contained in the standard base rate and rider tariff sheets. The standard base rate and rider charges apply to all customers.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as approved by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012


Issued by Julie Janson, President

Effective: July 1, 2012

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 111
Page 1 of 2

SMART \$AVER® CUSTOM PROGRAM

APPLICABILITY

Available to non-residential customers in the Company's electric service area taking service under all non-residential rates who choose to participate by completing and submitting an application before initiating an energy efficiency project.

PROGRAM DESCRIPTION

The Smart \$aver Custom Program is part of Duke Energy Kentucky's portfolio of programs offered through Rider Demand Side Management Program (Rider DSM) and recovered through the Company's Rider DSMR (Demand Side Management Rate). The purpose of this program is to encourage the installation of high efficiency equipment in new and existing nonresidential establishments. The program will provide incentive payments to offset a portion of the higher cost of energy efficient installations that are not included in the Smart \$aver® Prescriptive program.

Payments are available for a percentage of the incremental cost difference between a standard efficiency installation and a high efficiency installation. For most retrofit projects, incremental costs are equal to project costs. For new construction or major renovation, incremental costs are the difference between the cost of a standard efficiency installation and the cost of a high efficiency installation. The Company may vary the percentage incentive based on project conditions, including differences in efficiency, in order to provide the minimum incentive needed to drive customers to purchase higher efficiency equipment. The Company reserves the right to adjust the incentives and efficiency baselines, for specific equipment on a periodic basis, as equipment efficiency standards change and as customers naturally move to purchase higher efficiency equipment.

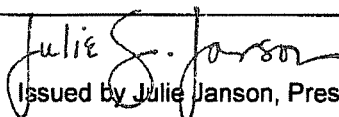
The following types of equipment are eligible for incentives:

- High efficiency lighting
- High efficiency HVAC installations
- High efficiency motors, pumps, and variable frequency drives
- High efficiency food service installations
- High efficiency process equipment installations, including compressed air systems
- Other high efficiency installations as determined by the Company on a case by case basis.

In order to receive payment under this program, the customer must submit an application before making a decision to implement the project. After completing the project, the customer submits documentation and verification that the installed efficiency measures meet the originally approved application. The Company reserves the right to inspect the premises of the customer both before and after implementation of the measure for which payment is requested. Payments will be made only after the equipment has been installed and is operable.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012


Issued by Julie Janson, President

Effective: July 1, 2012

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 111
Page 2 of 2

Multiple incentive payments may be requested for each establishment; however, the Company reserves the right to limit the payments per establishment per year.

The payment to the customer or owner will be an amount up to 50% of the project incremental cost. With Company approval, the customer or owner may designate that payment be made to the vendor or other third party.

SERVICE REGULATIONS

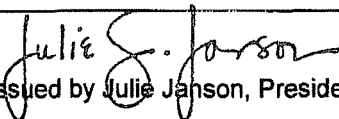
The provisions contained in this tariff sheet do not supersede or replace any of the charges and terms contained in the standard base rate and rider tariff sheets. The standard base rate and rider charges apply to all customers.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as approved by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012

Effective: July 1, 2012


Issued by Julie Janson, President

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 112
Page 1 of 2

SMART \$AVER® ENERGY ASSESSMENTS PROGRAM

APPLICABILITY

Available to non-residential customers in the Company's electric service area taking service under all non-residential rates.

PROGRAM DESCRIPTION

The Smart \$aver Energy Assessment Program is part of Duke Energy Kentucky's portfolio of programs offered through Rider Demand Side Management Program (Rider DSM) and recovered through the Company's Rider DSMR (Demand Side Management Rate). The purpose of this program is to assist nonresidential customers in assessing their energy usage and to provide recommendations for more efficient use of energy. The program will also help identify those customers who could benefit from other Duke Energy Kentucky Nonresidential Energy Efficiency programs.

The Telephone Interview Analysis and the On-site Audit and Analysis options are available only for nonresidential customers where, in the Company's sole opinion, an assessment would result in actionable recommendations applicable to one or more of the customer's facilities on the Duke Energy Kentucky's system.

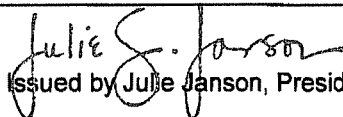
The types of available energy assessments are as follows:

- Online Analysis. The customer provides information about its facility. Duke Energy Kentucky will provide a report including energy saving recommendations. This service is offered free of charge to the customer.
- Telephone Interview Analysis. The customer provides information to Duke Energy Kentucky through a telephone interview after which billing data, and if available, load profile data, will be analyzed. Duke Energy Kentucky will provide an energy analysis report with general recommendations for energy efficiency improvements. A 12-month usage history may be required to perform this analysis. This service is offered free of charge to the customer. Duke Energy Kentucky reserves the right to decline a telephone-based assessment if the resulting report is not expected to yield actionable recommendations for implementation or specific areas for further investigation.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012

Effective: July 1, 2012


Issued by Julie Janson, President

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 112
Page 2 of 2

- **On-site Audit and Analysis.** Duke Energy Kentucky will cover up to 50% of the costs of an on-site assessment. The customer's portion of the assessment may be partially refunded upon payment by the Company of incentives for equipment installed under the Company's Smart \$aver Prescriptive or Smart \$aver Custom programs. Customer cost refunds will not exceed the value of the incentives paid. Duke Energy Kentucky will provide a detailed energy analysis report with recommendations, tailored to the customer's facility and operation, for energy efficiency improvements. Energy analyses are typically based on engineering calculations, but may reflect actual measurements taken at the facility. A 12-month usage history may be required to perform this analysis. Alternately, Duke Energy may elect, at its sole discretion and at the customer's request, to allow a customer's preferred vendor to perform an on-site assessment in lieu of Duke Energy providing such services. The Company reserves the right in its sole discretion, to limit the number of on-site assessments for customers who have multiple facilities on the Duke Energy Kentucky system.

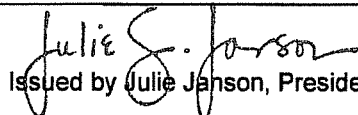
SERVICE REGULATIONS

The provisions contained in this tariff sheet do not supersede or replace any of the charges and terms contained in the standard base rate and rider tariff sheets. The standard base rate and rider charges apply to all customers.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as approved by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012


Issued by Julie Janson, President

Effective: July 1, 2012

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 113
Page 1 of 2

SMART \$AVER® PRESCRIPTIVE PROGRAM

APPLICABILITY

Available to non-residential customers in the Company's electric service area taking service under all non-residential rates who choose to participate by completing and submitting an application.

PROGRAM DESCRIPTION

The Smart Saver Energy Prescriptive Program is part of Duke Energy Kentucky's portfolio of programs offered through Rider Demand Side Management Program (Rider DSM) and recovered through the Company's Rider DSMR (Demand Side Management Rate). The purpose of this program is to encourage the installation of high efficiency equipment in new and existing nonresidential establishments. The program will provide incentive payments to offset a portion of the higher cost of energy efficient equipment. The program also encourages maintenance of existing equipment in order to reduce or maintain energy usage.


Customers may defer incentive payments to trade allies who agree to reduce the customer's cost by the amount of the incentive payments. Incentive payments are available for a percentage of the equipment or project cost difference between standard equipment and higher efficiency equipment. The Company may vary the percentage incentive by type of equipment and differences in efficiency in order to provide the minimum incentive needed to drive customers to purchase higher efficiency equipment. The Company reserves the right to adjust the incentive, for specific equipment, on a periodic basis, as equipment efficiency standards change, and as customers naturally move to purchase higher efficiency equipment. The following types of equipment are eligible for incentives.

- High efficiency lighting
- High efficiency HVAC (cooling) equipment
- High efficiency motors, pumps, and variable frequency drives
- High efficiency food service equipment
- High efficiency process equipment
- Other high efficiency equipment as determined by the Company on a case by case basis
- Maintenance to increase the efficiency of existing equipment

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012

Effective: July 1, 2012


Issued by Julie Janson, President

4580 Olympic Blvd.
Erlanger, Kentucky 41018

Duke Energy Kentucky, Inc.
Original Sheet No. 113
Page 2 of 2

In order to receive an incentive payment under this program, the owner must submit an application before or within ninety (90) days of installation, along with the required documentation and verification that the installed efficiency measures meet the requirements of this program. The Company reserves the right to inspect the premises of the customer both before and after implementation of the measure for which payment is requested. Incentive payments will be made only after the equipment has been installed, and is operable, as verified by the Company. Multiple incentive payments may be requested for each establishment; however, the Company reserves the right to limit the payments per establishment per year. The amount of the incentive payment for various standard types of equipment will be filed with the Commission annually, for information, and posted to the Company's website at www.duke-energy.com.

The incentive payment to the customer or owner will be an amount less than the installed cost difference between standard equipment and higher efficiency equipment or the cost of the maintenance service. With Company approval, the customer or owner may designate that payment be made to the vendor or other third party.

SERVICE REGULATIONS

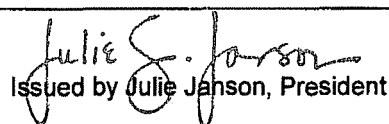
The provisions contained in this tariff sheet do not supersede or replace any of the charges and terms contained in the standard base rate and rider tariff sheets. The standard base rate and rider charges apply to all customers.

The supplying of, and billing for, service and all conditions applying thereto, are subject to the jurisdiction of the Kentucky Public Service Commission, and to Company's Service Regulations currently in effect, as filed with the Kentucky Public Service Commission, as approved by law.

Issued by authority of an Order of the Kentucky Public Service Commission dated xxxxxxxxxxxxxxxx in Case No. 2012-00xxx.

Issued: March 6, 2012

Effective: July 1, 2012


Issued by Julie Johnson, President