



DUKE ENERGY CORPORATION

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**VIA OVERNIGHT DELIVERY**

January 16, 2013

Mr. Jeff Derouen  
Executive Director  
Kentucky Public Service Commission  
211 Sower Blvd  
Frankfort, KY 40601

RECEIVED

JAN 17 2013

PUBLIC SERVICE  
COMMISSION

**Re: Case No. 2012-00495  
The Application of Duke Energy Kentucky, Inc. For The Annual Cost  
Recovery Filing for Demand Side Management**

Dear Mr. Derouen:

Enclosed please find an original and twelve copies of *Duke Energy Kentucky, Inc. 's Responses to Commission Staff's First Set of Data Requests* in the above captioned case.

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

Sincerely,

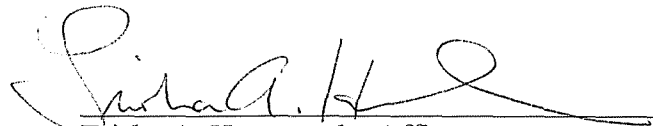
Kristen Cocanougher

cc: Dennis Howard II (w/ enclosures)  
Richard Raff (w/ enclosures)  
Florence W. Tandy (w/ enclosures)  
Carl Melcher (w/ enclosures)

VERIFICATION

State of Ohio )  
 )  
County of Hamilton ) SS:

The undersigned, Trisha A. Haemmerle, being duly sworn, deposes and says that she is the Manager, Midwest Strategy & Collaboration, Duke Energy Business Services LLC, that she has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of her knowledge, information and belief, after reasonable inquiry.

  
Trisha A. Haemmerle, Affiant

Subscribed and sworn to before me by TRISHA A. HAEMMERLE on this 3<sup>rd</sup> day of January 2013.

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

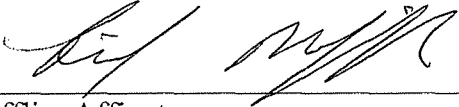
  
NOTARY PUBLIC

My Commission Expires: 1/5/2014

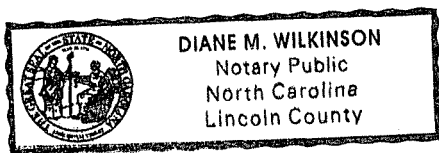
VERIFICATION

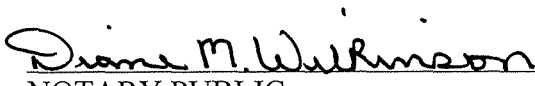
State of North Carolina    )  
  )  
County of Mecklenburg    )    SS:

The undersigned, Rick Mifflin, being duly sworn, deposes and says that he is the Sr. Manager, Marketing, that he has supervised the preparation of the responses to the foregoing information requests; and that the matters set forth in the foregoing responses to information requests are true and accurate to the best of his knowledge, information and belief, after reasonable inquiry.

  
\_\_\_\_\_  
Rick Mifflin, Affiant

Subscribed and sworn to before me by Rick Mifflin on this 10<sup>th</sup>  
day of January 2013.



  
\_\_\_\_\_  
NOTARY PUBLIC

My Commission Expires: 12 July 2014





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**Duke Energy Kentucky**  
**Case No. 2012-495**  
**Staff First Set Data Requests**  
**Date Received: December 28, 2012**

**STAFF-DR-01-001**

**REQUEST:**

Refer to the table labeled “Summary of Load Impacts July 2011 Through June 2012,” page 6, of the Application.

- a. Provide by program similar information, including program costs, for the period beginning July 2012 through December 2012.
- b. State, for each program, whether Duke Kentucky is on track to meet its goal regarding customer participation with the new DSM portfolio.

**RESPONSE:**

- a. Duke Energy Kentucky has provided the requested data for the new DSM portfolio. The numbers provided are the most up to date data available but are subject to change when compiling the data for the true-up of the filing period ending June 30, 2013. The information for the demand response programs, PowerShare<sup>®</sup> and Power Manager, is currently unavailable until later in first quarter 2013.



| Summary of Program Performance July 2012 Through December 2012 <sup>1</sup> |                           |  |              |                      |
|---|---------------------------|--|--------------|----------------------|
| Residential Programs  | Incremental Participation | Load Impacts Net of Free Riders at Meter |              | Direct Program Costs |
|   |                           | kWh                                      | kW           |                      |
| Residential Energy Assessments  | 248                       | 97,744                                   | 17           | \$ 123,065           |
| Low Income Services   | 155                       | 100,123                                  | 25           | \$ 319,779           |
| Appliance Recycling Program   | 123                       | 113,389                                  | 33           | \$ 11,828            |
| Power Manager <sup>2</sup>  | NA                        | NA                                       | NA           | NA                   |
| Energy Efficiency Education Program for Schools                             | 70                        | 8,140                                    | 1            | \$ 69,465            |
| Residential Smart Saver <sup>®</sup>  | 285,515                   | 13,026,989                               | 2,500        | \$ 816,293           |
| My Home Energy Report <sup>3</sup>  | 42,477                    | 9,302,463                                | 2,680        | \$ 229,905           |
| Low Income Neighborhood <sup>4</sup>  | NA                        | NA                                       | NA           | NA                   |
| <b>Total Residential</b>  | <b>328,588</b>            | <b>22,648,848</b>                        | <b>5,256</b> | <b>\$ 1,570,335</b>  |
| Non-Residential Programs  | Incremental Participation | Load Impacts Net of Free Riders at Meter |              | Direct Program Costs |
|   |                           | kWh                                      | kW           |                      |
| Smart Saver <sup>®</sup> Custom <sup>5</sup>                                | 1,212                     | 799,363                                  | 121          | \$ 71,440            |
| Smart Saver <sup>®</sup> Prescriptive - Energy Star Food Service Products   | 3                         | 6,904                                    | 1            | \$ 522               |
| Smart Saver <sup>®</sup> Prescriptive - HVAC                                | 6,438                     | 247,725                                  | 97           | \$ 32,492            |
| Smart Saver <sup>®</sup> Prescriptive - Lighting                            | 10,381                    | 1,751,394                                | 464          | \$ 193,313           |
| Smart Saver <sup>®</sup> Prescriptive - Motors/Pumps/VFD                    | 231                       | 200,954                                  | 43           | \$ 23,990            |
| Smart Saver <sup>®</sup> Prescriptive - Process Equipment                   | 40                        | 17,617                                   | 4            | \$ 3,051             |
| Power Share <sup>®2</sup>   | NA                        | NA                                       | NA           | NA                   |
| <b>Total Non-Residential</b>  | <b>18,305</b>             | <b>3,023,957</b>                         | <b>730</b>   | <b>\$ 324,808</b>    |
| <b>Total</b>  |                           | <b>25,672,805</b>                        | <b>5,986</b> | <b>\$ 1,895,143</b>  |

<sup>1</sup>Impacts are without losses and reflected at the customer meter point

<sup>2</sup>The information is not yet available given it pertains to time periods that are outside of the filing of this case

<sup>3</sup>Current Cumulative Capability as of Dec 2012

<sup>4</sup>Program vendor was selected in November so the program was not in progress during this timeframe.

<sup>5</sup>Includes 837 participants, 433,799 kWh, 88 kW, and \$39,744 Direct program costs from the Pilot program approved in Case No. 2011-00471

b. All programs are on track to meet the participation goals except the following:

Low Income Neighborhood Program – This program has recently been approved in multiple Duke Energy jurisdictions. To benefit from the economies of scale, one vendor has been selected to serve all of these jurisdictions. The vendor selection and program contract were finalized in November 2012 and therefore the program did not launch in 2012 and due to ramp up the anticipated start date of this program is March 2013.

Energy Efficiency Education Program for Schools – This program is under the projected target. For a detailed explanation please see STAFF-DR-01-004.

Smart Saver<sup>®</sup> Prescriptive – Although the number of participants, which is based on measures installed, seems to be on target, the cumulative kWh savings are below the desired goal. However, measures were recently added to the portfolio and should have an effect on the customers’ next budget cycles. The first quarter of each year is usually

where we see increased participation and impacts so we expect achievement to be close to the projections by end of the fiscal year.

Appliance Recycling program began in October 2012, three months earlier than anticipated and therefore is above target for 2012.

Smart Saver<sup>®</sup> Custom, is similar to Smart Saver<sup>®</sup> Prescriptive in that kWh savings is a better indicator on how the program is performing. Smart Saver<sup>®</sup> Custom is performing above target based on impacts achieved and has already exceeded the yearend target during the first six months of the program.

**PERSON RESPONSIBLE:** Trisha Haemmerle



**STAFF-DR-01-002**

**REQUEST:**

Refer to the final report attached to the application as Appendix D, “Process and Impact Evaluation of the Low Income Refrigerator Replacement Program in Kentucky 2010-2011.” The “Significant Process Evaluation Findings” section of the Executive Summary, at page 4 of 49, states:

The program could serve more customers and save more energy if it were offered to renters. The program does not expend the available annual budget, yet managers report that the program’s operational rules do not allow them to capture savings in rented units. Managers report that they have the potential to add rental units if the program’s operational rules were adjusted to allow serving rental property. This is the most significant barrier reported by managers.

- a. Has Duke Kentucky considered the merits of expanding the Low Income Refrigerator Replacement Program to be made available to renters? If so, explain the advantages and disadvantages if this program were made available to renters.
- b. Provide a detailed description of this program that is being offered by Duke Energy Ohio, including how this program is being marketed in Ohio.
- c. Explain why the program does not expend the available annual budget.

**RESPONSE:**

- a. Duke Energy Kentucky, Inc. (Duke Energy Kentucky) continues to analyze the ability to provide refrigerator replacements to renters. While offering the program to customers in rental units may increase the eligible customer base and assist more income qualified customers, the rental units may negatively impact the energy savings over the life of the refrigerator. There are three scenarios being reviewed:
  - i. Renters who own their refrigerator;

- ii. Landlords who own the refrigerator in a rental unit; and
- iii. Landlords who own the refrigerator in Assisted Housing developments.

The renter must be responsible for the payment of the electric utility bill to be eligible for the program. In the case of renters who own their refrigerator, renters often do not remain in a specified location for an extended period of time and may move multiple times over the life of the equipment. The potential movement of the refrigerator complicates tracking and evaluation of the program.

When the landlord owns the refrigerator, an agreement may be required to keep the refrigerator in the same location for some period of time. Qualification for the program is based on the tenant income, so if units are moved between properties it would be difficult to track energy savings over the life of the equipment.

Allowing refrigerator replacement to renters in Assisted Housing developments may be the most beneficial for the program. Duke Energy Kentucky can be certain that all renters will be income qualified and agreements can be made with the landlords to keep the refrigerator in the specified location.

- b. The Duke Energy Ohio, Inc. (Duke Energy Ohio) Low Income Refrigerator Replacement Program (Program) in the approved energy efficiency portfolio is similar to the Kentucky program. Duke Energy Ohio is evaluating changes that would include renters in the program, other in home partner agencies and streamlined qualification process by using a database of refrigerator efficiencies rather than metering.

Qualifications and procedures for the program include the following:

- Must be a Duke Energy Ohio residential electric customer currently receiving electric service;
- Must have a household income less than 200% of Federal Poverty levels;
- Must be a homeowner;
- When a home is being weatherized, the refrigerator in the home is metered for at least two hours to determine replacement eligibility;
- If the refrigerator qualifies, the replacement refrigerator is a like-size Energy Star model; and
- A third-party refrigerator supplier delivers the new refrigerator and recycles the old unit.

The program is marketed through the local assistance agencies that offer services to income qualified families.

- c. The Low Income Refrigerator Replacement Program has piggy-backed with whole-home weatherization programs, sponsored by both Duke Energy Kentucky and the State of Kentucky. Because refrigerator replacement is directly tied to the number of homes, resident selection and metering results from the weatherization programs, the budget for the KY Low Income is not always expended.

**PERSON RESPONSIBLE:** Rick Mifflin



**STAFF-DR-01-003**

**REQUEST:**

Refer to Appendix A of the final report on the Low Income Refrigerator Replacement Program. The program makes available to eligible participants three sizes and two brands of replacement refrigerator units: 15, 18-, or 21-cubic-foot Frigidaire or Whirlpool Energy Star top-mounted freezer models.

- a. The Energy Guides attached to Appendix A at pages 26, 27, and 28 of 49, refer to Electrolux refrigerators on the labels. Confirm that the Frigidaire product category is a part of the Electrolux brand and that the consumption ratings on these Energy Guide labels are reflective of the Frigidaire 15, 18-, and 21-cubic-foot refrigerator models.
- b. The Energy Guides attached to Appendix A, at pages 30 and 31 of 49, refer to Frigidaire 18-cubic-foot and Frigidaire 21-cubic-foot refrigerators, respectively, at the top of the page, although the Energy Guide labels refer to Whirlpool refrigerators of the same capacity. Confirm that the reference at the top of page 30 and page 31 should be to Whirlpool 18-cubic-foot and Whirlpool 21-cubic-foot units, respectively.

**RESPONSE:**

- a. Yes, the Frigidaire product category is a part of the Electrolux brand, and the consumption ratings on the Energy Guide labels are reflective of the Frigidaire 15, 18 and 21 CF models respectively.
- b. The reference at the top of page 30 and 31 (of 49) should be “Whirlpool” 18-cubic foot and 21 cubic foot, respectively.

**PERSON RESPONSIBLE:** Ashlie Ossege





**Duke Energy Kentucky**  
**Case No. 2012-495**  
**Staff First Set Data Requests**  
**Date Received: December 28, 2012**

**STAFF-DR-01-004**

**REQUEST:**

Provide a preliminary status of the Energy Efficiency Education Program for Schools for the fall semester of 2012-2013 school year.<sup>1</sup>

**RESPONSE:**

The Duke Energy sponsored National Energy Education Development (NEED) Project provides educators with an engaging and exciting energy curriculum for students in classrooms. The NEED program is designed to teach energy concepts of force, motion, light, sound, heat, electricity, magnetism, energy transformations, and energy efficiency. Teachers receive workshop training and kits for classroom explorations and students living in the Duke Energy service territory can receive Home Energy Efficiency Kits which provide energy savings.

In 2012, the NEED program has provided quality education on energy efficiency and reached its goal for teacher training. In the fall, two workshops were held with 41 schools and 74 teachers participating in the training. The workshops exceeded the internal target of training 60 teachers for the year.

The NEED program participation for Home Energy Efficiency Kits provides real-world applications for students and their families to connect the classroom learnings but the given the six month totals, achieving the annual goal of delivering 500 kits may not be met. In the fall 2012, 70 kits were distributed, bringing the total to 189 kits for the year. The main factor hindering fulfillment of kit distribution is that participation is limited to Duke Energy households and a majority of teachers are reluctant to participate if kits cannot be offered to all students. Additionally, kit distribution is determined by the number of signed registration forms received by families and some choose not to participate or may have already received a kit.

Additional activities include the Kentucky NEED Youth Awards Ceremony which was held in June and included representatives from seven Kentucky schools. The NEED National Training Conference was held in July and four northern Kentucky educators attended the five-day

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<sup>1</sup> Case No. 2012-00085, 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, (KyPSC Jun 29, 2012)

professional development workshop in Arlington, Virginia. A total of 28 educators attended the conference.

The Vending Misor (VM) project launched in September as part of the Duke Energy program. The project is typically facilitated by members of the school's Student Energy Team (SET) and works to measure the energy usage and load of one cold drink vending machine before and after the VM is installed. Students report the potential KW savings, the potential dollar savings and the potential reduction of CO2 with the VM. If a decision is made to purchase additional VMs, the school can apply for Duke Energy Kentucky's commercial VM rebate. There are currently 11 schools participating at some level and it is proposed to continue in 2013.

The theatrical performance portion of the program did not have participation for the first six months of the filing period. In an effort to avoid an overlap of NEED and the theatrical performance, Duke Energy Kentucky concentrated the performance portion of the program to grades K-2. However when attempting to schedule, Duke Energy Kentucky found that principals were reluctant to allow performances for only certain grades and preferred to expand the audience. In an effort to increase program reach, accommodate the request for a wider audience, and improve program effectiveness, starting in 2013, the program will be available beyond grade two and allow schools to participate at the discretion of the principal and not based on predetermined selected grades. Duke Energy Kentucky will be diligent in tracking participation by different program channels so a student does not participate in both and receive duplicate energy efficiency kits.

**PERSON RESPONSIBLE:** Rick Mifflin



**Duke Energy Kentucky**  
**Case No. 2012-495**  
**Staff First Set Data Requests**  
**Date Received: December 28, 2012**

**STAFF-DR-01-005**

**REQUEST:**

Explain whether Duke Kentucky is considering any pilot programs through the limited automatic approval process.

**RESPONSE:**

Duke Energy Kentucky currently has firm plans to pursue one pilot program (The Energy and Management Information Services Pilot that is described below) in 2013 under the limited automatic approval process. While still in the very early phases of evaluation, the Company is also considering the potential of piloting a few new residential products and measures such as high efficiency pool pumps, water heaters and new more direct delivery channels for existing measures included in existing approved programs.

Energy Management and Information System Pilot Program Description<sup>1</sup>

This pilot program is designed to test the effectiveness of Duke Energy Kentucky offering its non-residential customers opportunity to increase their building efficiency. It is commonly accepted that, over time, building systems do not operate as optimally as they could and will use more energy than they should in order to satisfy occupant comfort and lighting requirements. Duke Energy's proposed Energy Management and Information Services pilot program is a systematic approach to reducing energy usage at qualified commercial or industrial (C&I) customer facilities and persistently maintaining those savings over time. In order to achieve these goals, the program will utilize a remote or light onsite energy assessment, installation of an energy management and information system (EMIS), implementation of low cost measures by the customer and periodic energy monitoring, analysis and reporting.

**PERSON RESPONSIBLE:** Trisha Haemmerle

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<sup>1</sup> An overview of the Energy Management and Information System Pilot Program was presented to the Residential and Commercial and Industrial Collaborative on October 15, 2012.