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VIA OVERNIGHT DELIVERY

October 2, 2014

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

RECEIVED

OCT 03 2014

**PUBLIC SERVICE
COMMISSION**

Re: Case No. 2012-00428
In the Matter of Consideration of the Implementation of Smart Grid and Smart Meter
Technologies

Dear Mr. Derouen:

Enclosed please find an original and twelve copies of Duke Energy Kentucky's responses to Staff's Second Request for Information. Please date-stamp the extra two copies of the letter and filing and return to me in the enclosed overnight envelope.

Sincerely,

Rocco D'Ascenzo
Associate General Counsel

VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

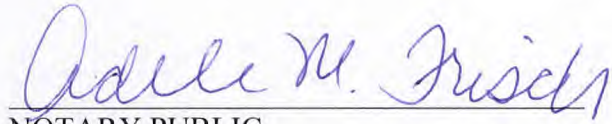
The undersigned, Rocco D'Ascenzo, Associate General Counsel, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.



Rocco D'Ascenzo, Affiant

Subscribed and sworn to before me by Rocco D'Ascenzo on this 2ND day of October, 2014.


ADELE M. FRISCH
Notary Public, State of Ohio
My Commission Expires 01-05-2019




NOTARY PUBLIC

My Commission Expires: 1/5/2019

VERIFICATION

STATE OF NORTH CAROLINA)
)
COUNTY OF MECKLENBURG) **SS:**

The undersigned, Justin Brown, Manager Grid Mod Regulatory Planning & Strategy, Planning & Regulatory Support, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.


Justin Brown, Affiant

Subscribed and sworn to before me by Justin Brown on this 30th day of September, 2014.


NOTARY PUBLIC

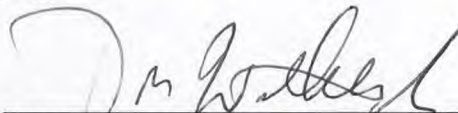
My Commission Expires:
October 31, 2018



VERIFICATION

STATE OF OHIO)
) **SS:**
COUNTY OF HAMILTON)

The undersigned, William Don Wathen Jr., Director of Rates & Regulatory Strategy-OH/KY, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing data requests, and that the answers contained therein are true and correct to the best of his knowledge, information and belief.



William Don Wathen Jr., Affiant

Subscribed and sworn to before me by William Don Wathen Jr. on this 29TH day of September, 2014.



NOTARY PUBLIC

ADELE M. FRISCH
Notary Public, State of Ohio
My Commission Expires 01-05-2019

My Commission Expires: 1/5/2019

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STAFF-DR-02-006

REQUEST:

In the Report, the Joint Utilities state that no opt-outs should be permitted from AMR deployments.¹ Explain why the Joint Utilities believe that there should be no opt-outs for AMR meters (that only provide for one-way communication).

RESPONSE:

Duke Energy Kentucky (the Company) believes that customers should not have the option of opting out of Automated Meter Reading (AMR). AMR meters provide only one-way communication functionality, so Duke Energy Kentucky does not consider them a component of the smart grid.

AMR meters have been in place throughout the country for various utilities for decades without eliciting calls for opt-out. Opt-out proponents only began voicing concerns about data privacy, data security, meter accuracy, meter safety, and health concerns related to radio-frequency emission exposure once AMI meter deployments ramped up in recent years. There are even fewer, if any, opt-out proponents concerned with AMR meters as compared to the vocal minority that oppose AMI meter installation.

For utilities that already have fully deployed AMR metering and want to upgrade to AMI metering, allowing customers to opt-out of AMR meters as well as AMI meters would

¹ *Id.* At 17.

require those utilities to offer at least 3 separate metering programs and incur significant costs for maintaining all the different processes and inventory to do so.

PERSON RESPONSIBLE: Justin C. Brown

STAFF-DR-02-007

REQUEST:

The Report includes the following statements: “This section does not address opt-outs from AMR metering. The Joint Utilities believe no opt-outs should be permitted from AMR deployments, and a number of utilities have already deployed AMR system-wide”¹ and “...[t]he Joint Utilities oppose any across-the-board, one-size-fits-all opt-out requirement for smart-meter deployments, but support each utility’s ability to propose opt-outs appropriate for their customers and systems.”² Do you agree that opt-outs should not be permitted for AMR meters (that only provide for one-way communication)? If not, explain why.

RESPONSE:

Duke Energy Kentucky (the Company) believes that customers should not have the option of opting out of Automated Meter Reading (AMR). AMR meters provide only one-way communication functionality, so Duke Energy Kentucky does not consider them a component of the smart grid.

AMR meters have been in place throughout the country for various utilities for decades without eliciting calls for opt-out. Opt-out proponents only began voicing concerns about data privacy, data security, meter accuracy, meter safety, and health concerns related to radio-frequency emission exposure once AMI meter deployments ramped up in recent

¹ *Id.*

² *Id.* at 27.

years. There are even fewer, if any, opt-out proponents concerned with AMR meters as compared to the vocal minority that oppose AMI meter installation.

For utilities that already have fully deployed AMR metering and want to upgrade to AMI metering, allowing customers to opt-out of AMR meters as well as AMI meters would require those utilities to offer at least 3 separate metering programs and incur significant costs for maintaining all the different processes and inventory to do so.

PERSON RESPONSIBLE: Justin C. Brown

Duke Energy Kentucky
Case No. 2012-00428
Staff Second Set Data Requests
Date Received: September 18, 2014

STAFF-DR-02-008

REQUEST:

Do you believe that opt-outs should be allowed for AMI or smart meters? Has your response changed from your original position which may have been set forth in your testimony or in response to earlier data requests? If so, explain.

RESPONSE:

Duke Energy Kentucky maintains its stance on AMI meter opt-out that it provided in its response to Staff-DR-01-116 in Case No. 2012-00428:

“Generally, the Company would oppose an opt-out provision as such a provision will undermine the Company’s ability to achieve much of the savings contemplated in the program. As an example, for any customer who opts-out, the Company must continue to dispatch meter readers on a monthly basis to read those meters. Inasmuch as eliminating the expense of meter reading is an integral component of the projected savings for grid modernization, allowing customers to opt-out could jeopardize the cost-effectiveness of the program.”

PERSON RESPONSIBLE: Justin C. Brown

Duke Energy Kentucky
Case No. 2012-00428
Staff Second Set Data Requests
Date Received: September 18, 2014

STAFF-DR-02-009

REQUEST:

If opt-outs are granted, should the customer electing to opt out be required to bear the cost of the opt-out? Explain your response.

RESPONSE:

Yes, Duke Energy Kentucky believes that all opt-out provision costs should be borne wholly by those customers who choose a non-standard opt-out service. This ensures that all customers are not unfairly burdened by customers that choose to opt out and most closely aligns with the long-standing principle of cost causation in ratemaking.

PERSON RESPONSIBLE: Justin C. Brown

Duke Energy Kentucky
Case No. 2012-00428
Staff Second Set Data Requests
Date Received: September 18, 2014

STAFF-DR-02-010

REQUEST:

Describe and estimate the costs that would be incurred to provide customer opt-out.

RESPONSE:

Duke Energy Kentucky has not performed a cost analysis related to an AMI opt-out for Kentucky customers. If an opt-out were considered, cost categories could include, but not be limited to the following categories:

IT Systems/Processes – Costs associated with updating IT systems and business processes necessary to bill for a non-standard meter service and track customers who elect a non-standard meter service.

Metering Services – Costs associated with manual meter reading for monthly on-cycle reads, off-cycle reads, and revenue assurance.

Distribution Maintenance – Costs associated with purchasing, locating, and installing additional communication devices to read stranded meters caused by opt-out customers.

Opt-out customers could create holes or “islands” in mesh AMI networks requiring re-engineering and additional hardware installations.

PERSON RESPONSIBLE: Justin C. Brown

**Duke Energy Kentucky
Case No. 2012-00428
Staff Second Set Data Requests
Date Received: September 18, 2014**

STAFF-DR-02-011

REQUEST:

Are there any circumstances under which utilities should have the right to refuse to honor a customer's request to opt-out of AMI meters? Explain your response.

RESPONSE:

Duke Energy Kentucky believes utilities should have the right to refuse to provide AMI opt-out service under circumstances including but not limited to the following:

- (a) If such a service creates a safety hazard to consumers or their premises, the public, or the electric utility's personnel or facilities;
- (b) If a customer does not allow the electric utility's employees or agents access to the meter (which could be indoors) at the customer's premises; or
- (c) If a customer has a history of meter tampering or theft.

PERSON RESPONSIBLE: Justin C. Brown

STAFF-DR-02-012

REQUEST:

Refer to page 21 of the Report, paragraph 10. Describe how smart meters identify their malfunctioning early.

RESPONSE:

The answer to this question depends on the AMI meter technology being deployed. AMI meters provide a two-way communication path with the utility, so that metering issues can be detected remotely and when issues occur. Discovering those issues require a physical visit to the meter for detection without AMI technology.

PERSON RESPONSIBLE: Justin C. Brown

**Duke Energy Kentucky
Case No. 2012-00428
Staff Second Set Data Requests
Date Received: September 18, 2014**

STAFF-DR-02-013

REQUEST:

Refer to page 24 of the Report which gives the example of a customer's finding that daily meter reading is a privacy problem. State whether daily meter reading is the default or the normal occurrence.

RESPONSE:

The AMI metering solution deployed by Duke Energy collects interval usage data from the previous 24 hours on a daily basis. Daily collection of interval usage data from AMI meters is becoming a standard in the industry.

PERSON RESPONSIBLE: Justin C. Brown

**Duke Energy Kentucky
Case No. 2012-00428
Staff Second Set Data Requests
Date Received: September 18, 2014**

STAFF-DR-02-014

REQUEST:

Refer to page 26, paragraph 5. Confirm whether smart meters measure demand for residential customers.

RESPONSE:

The current TWACS AMI metering solution deployed by Duke Energy Kentucky cannot capture demand for residential customers. Residential AMI meters deployed by Duke Energy in other jurisdictions can measure demand for residential customers, but that data is not collected unless the residential customer is on a demand rate.

PERSON RESPONSIBLE: Justin C. Brown

STAFF-DR-02-015

REQUEST:

Refer to CAC's comments on page 28 of the Report regarding the instantaneous remote disconnects. Do you believe that the ability to instantaneously and remotely disconnect a customer for non-payment is an advantage only to the utility, or does it also benefit other customers? Explain your response.

RESPONSE:

The ability to remotely disconnect customers for non-payment without a truck roll would mean the utility would not incur the cost for a truck roll. Those cost savings would be shared with all the utility customers, not only for the utility.

It should also be noted that a customer that was disconnected for non-payment could also be reconnected remotely, instead of being required to wait for the utility to send someone out to reconnect service (this eliminates a truck roll).

PERSON RESPONSIBLE: Justin C. Brown

**Duke Energy Kentucky
Case No. 2012-00428
Staff Second Set Data Requests
Date Received: September 18, 2014**

STAFF-DR-02-016

REQUEST:

If the Commission does not require the adoption of the EISA 2007 Smart Grid Investment Standard or a derivative thereof, do you anticipate submitting an application for a CPCN for any smart grid or smart meter deployment? Explain your answer.

RESPONSE:

Duke Energy Kentucky will file a CPCN in accordance with KRS 278.020 and 807 KAR 5:001 Section 15 if such an investment does not constitute an ordinary extension of an existing system in the ordinary course.

PERSON RESPONSIBLE: Legal

**Duke Energy Kentucky
Case No. 2012-00428
Staff Second Set Data Requests
Date Received: September 18, 2014**

STAFF-DR-02-017

REQUEST:

Are there any smart-grid deployments for which the Commission should require the submission of a request for a CPCN?

RESPONSE:

The Commission should follow KRS 278.020 and its regulations set forth in 807 KAR 5:001 Section 15.

PERSON RESPONSIBLE: Legal

Duke Energy Kentucky
Case No. 2012-00428
Staff Second Set Data Requests
Date Received: September 18, 2014

STAFF-DR-02-018

REQUEST:

Refer to Appendix B of the Report. For each utility that currently does not offer residential dynamic pricing tariffs, or for those whose only dynamic tariff offerings are Electric Thermal Storage marketing rates, state whether such tariffs are being considered for future implementation subject to Commission approval. If so, state what type(s) of dynamic pricing tariffs are being considered. If not, state what factors caused the utility to decide against proposing to implement such tariffs or cause it to be otherwise unable to implement such tariffs.

RESPONSE:

Duke Energy Kentucky currently does not have specific plans to offer residential dynamic pricing tariffs. Some issues with a full scale deployment of dynamic pricing include but are not limited to the level customer adoption of new dynamic pricing rates, the ability of customers to respond to dynamic prices and the persistence of such response and cost recovery of investments in equipment and systems.

PERSON RESPONSIBLE: Justin C. Brown

Duke Energy Kentucky
Case No. 2012-00428
Staff Second Set Data Requests
Date Received: September 18, 2014

STAFF-DR-02-019

REQUEST:

In the Distribution Smart-Grid Components chapter of the Report, Owen Electric Cooperative mentions the Green Button initiative.¹ In its direct testimony, Kentucky Power Company (“Kentucky Power”) notes its commitment to the Green Button Initiative.² Indicate whether you participate in the Green Button initiative. If you participate in similar but different information efforts, identify those efforts.

RESPONSE:

Duke Energy does not formally participate in the Green Button initiative. However, Duke Energy Kentucky customers can access a secure customer internet portal page and view their available usage information.

PERSON RESPONSIBLE: Justin C. Brown

¹ *Id.* at 50.

² Direct testimony of Lila P. Munsey filed January 28, 2013 at 10.

Duke Energy Kentucky
Case No. 2012-00428
Staff Second Set Data Requests
Date Received: September 18, 2014

STAFF-DR-02-020

REQUEST:

In the Distribution Smart-Grid Components chapter of the Report, Duke states that a pilot of a two-way AMI automatic communications system was installed eight years ago, but was not pursued.¹ Later, Duke states that it considers AMI meters to be integral to the smart grid.² Explain the apparent disparity between these statements.

RESPONSE:

The Company respectfully submits that there is no disparity. The issue with the pilot program not being pursued was due to the technology involved at the time. Duke Energy Kentucky believes AMI meters are an integral part of the smart grid. The Company deployed a pilot program involving a TWACS AMI solution eight years ago. The Company decided not to proceed with a large-scale deployment of this type of technology.

PERSON RESPONSIBLE: Justin C. Brown

¹ *Id.* at 48.

² *Id.* at 53.

**Duke Energy Kentucky
Case No. 2012-00428
Staff Second Set Data Requests
Date Received: September 18, 2014**

STAFF-DR-02-021

REQUEST:

Refer to page 19 of the Report. The second paragraph references advanced meter opt-out tariffs to be filed on or before June 28, 2014, with the Public Utility Commission of Ohio. Provide the tariffs filed pursuant to this requirement by AEP and Duke in Ohio.

RESPONSE:

Please see attachment STAFF DR-02-021 from Public Utilities Commission of Ohio Case No. 14-1160-EL-UNC/14-1161-EL-AAM.

PERSON RESPONSIBLE: William Don Wathen Jr.

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of Duke)
Energy of Ohio, Inc., for Approval of a Grid) Case No. 13- 1160 -EL-UNC
Modernization Opt-Out Tariff and for a)
Change in Accounting Procedures Including) Case No. 14- 1161 -EL-AAM
a Cost Recovery Mechanism.)

**APPLICATION OF DUKE ENERGY OHIO, INC.,
FOR APPROVAL OF AN ADVANCED METER OPT-OUT TARIFF AND COST
RECOVERY MECHANISM**

Pursuant to R.C. 4905.13, and the Public Utilities Commission of Ohio (Commission) Entry on Rehearing dated December 18, 2013 in Case No. 12-2050-EL-ORD, Duke Energy Ohio, Inc., (Duke Energy Ohio or Company) respectfully requests approval from the Commission to implement a new service to allow residential customers to employ non-standard traditional meters for purposes of metering distribution services provided by the Company. Duke Energy Ohio proposes to create Rider Non-Standard Metering (Rider NSM) and requests accounting authority to: (1) defer and recover costs associated with changes to the Company's billing and customer services systems in order to facilitate this new service; (2) defer and recover costs related to ongoing operations needed to integrate non-standard meters into the Company's systems; and (3) approve the Company's proposed tariff to permit customers to opt-out of receiving Duke Energy Ohio's standard, advanced meter and employ a non-standard, traditional meter.

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

1. Duke Energy Ohio is an Ohio corporation engaged in the business of supplying electric distribution service in Adams, Brown, Butler, Clinton, Clermont, Hamilton, Montgomery, and Warren counties in southwestern Ohio to approximately 690,000 customers.
2. Duke Energy Ohio is a public utility, as defined by R.C. 4905.02 and 4905.03, and an electric distribution company, an electric light company, an electric supplier, and an electric utility, as defined by R.C. 4928.01.
3. Pursuant to R.C. 4905.13 and the Commission's Entry on Rehearing dated December 18, 2013, in Case No. 12-2050-EL-ORD, Duke Energy Ohio files this Application to implement a new advanced meter opt-out program to permit residential electric customers to receive a non-standard, traditional meter instead of an advanced meter, that is deployed as the standard electric meter through the Company's grid modernization program.
4. Duke Energy Ohio seeks to implement the opt-out program, referred to by the Company as the Non-Standard Metering Option (NSM), as requested through this Application, beginning with appropriate Commission approval and cost recovery.
5. As noted by the Commission in its Entry on Rehearing, allowing customers to opt-out from the advanced meter service decreases the effectiveness of grid modernization for all other customers and raises costs not otherwise recovered by the utility. In order to provide an NSMO, the Company is required to change billing systems, customer service operations, metering capabilities, and business operations. Such otherwise unnecessary changes do not inure to the benefit of all customers, but rather serve only those few customers who seek to have a non-advanced meter.

The Commission recognized this fact when it stated that distribution rider service rates, including distribution service riders, should be paid by all customers receiving distribution service.¹ Further, the Commission enacted O.A.C. 4901:1-10-05(J)(5)(e), directing that advanced meter opt-out service costs be borne only by customers who elect to receive advanced meter opt-out service. These costs are then to be recovered by the utility through the advanced meter opt-out service tariff.²

6. Duke Energy Ohio hereby submits that the total cost of the Rider NSM program, broken out between costs for immediate changes and ongoing annual costs, is expected to be approximately \$777,997.50 in one-time costs and \$353,468.68 in ongoing annual costs.
7. Duke Energy Ohio expects 725 customers, or around 0.1 percent of its residential electric customer population, will choose the advanced meter opt-out service. Contingent upon the number of customers electing to opt-out, the cost per customer is expected to total \$1,073.10 in one-time costs and \$40.63 in ongoing monthly costs. Attached hereto as Exhibit 1 is the Company's estimate of total costs for the Rider NSM program.
8. The majority of one-time, up-front costs are attributed to Information Technology (IT) system changes that enable customers to be enrolled in Rider NSM, have associated charges billed to them, and track their meter type to ensure they – and any non-participating customers – maintain the correct meter. Since those costs would result in a significant one-time, up-front fee when spread only among the limited number of anticipated advanced meter opt-out customers, and since the IT system changes can benefit any residential electric customer who may want to eventually take the Rider

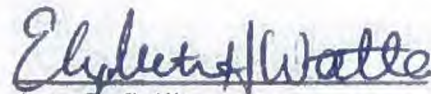
¹ *In the Matter of the Commission's Review of Chapter 4901:1-10, Ohio Administrative Code, Regarding Electric Companies.*, Case No. 12-2050-EL-ORD, Finding and Order, (October 16, 2013).

² *In the Matter of the Commission's Review of Chapter 4901:1-10, Ohio Administrative Code, Regarding Electric Companies.*, Case No. 12-2050-EL-ORD, Finding and Order, (December 18, 2013).

NSM, the Company proposes deferral of the IT system costs. Additionally, the Company seeks deferral authority for the ongoing costs that it will incur in providing the NSM consistent with the Commission's directive

9. If deferral is not approved, the one-time fee per customer would be \$1,073.10 and the monthly fee per customer would be \$40.63. . If deferral is approved, the one-time fee per customer would be \$126.70, and the monthly fee per customer would be the same at \$40.63.
10. Pursuant to R.C. 4905.13, Duke Energy Ohio requests that the Commission grant it authority to defer and recover costs incurred in establishing the necessary facilities to permit the Company to serve customers who wish to use a non-standard meter.
11. This Application will not result in an increase in any rate, joint rate, toll, classification, charge, or rental. Therefore, it is not an application for an increase in rates under R.C. 4909.18 and the Commission may thus approve this Application without a hearing.

Respectfully submitted,



Amy B. Spiller
Deputy General Counsel
Elizabeth H. Watts
Associate General Counsel
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139 East Fourth Street
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Duke Energy Ohio
139 East Fourth Street
Cincinnati, Ohio 45202

P.U.C.O. Electric No. 19
Sheet No. 127
Page 1 of 1

RIDER NSM

NON-STANDARD METER OPTION (NSMO) – RESIDENTIAL

APPLICABILITY

Applicable only to residential customers served under Rate RS, Rate RSLI, Rate RS3P, or Rate ORH who request a traditional meter rather than an advanced meter, i.e. the Company's standard meter for Ohio residential electric customers. Rider NSM is optional and is available subject to the Terms and Conditions below.

BACKGROUND

Section 4901:1-10-05(J) of the Ohio Administrative Code (OAC) states that electric utilities shall provide customers with the option to remove an installed advanced meter and replace it with a traditional meter, and the option to decline installation of an advanced meter and retain a traditional meter.

As defined in OAC 4901:1-10-01:

"Advanced meter" means any electric meter that meets the pertinent engineering standards using digital technology and is capable of providing two-way communications with the electric utility to provide usage and/or other technical data.

"Traditional meter" means any meter with an analog or digital display that does not have the capability to communicate with the utility using two-way communications.

CHARGES

Residential customers who request a traditional meter rather than an advanced meter shall pay a one-time fee of \$1,073.10 and a recurring monthly fee of \$40.63.

TERMS AND CONDITIONS

The Company shall have the right to refuse to provide advanced meter opt-out service in either of the following circumstances:

- (a) If such a service creates a safety hazard to consumers or their premises, the public, or the electric utility's personnel or facilities.
- (b) If a customer does not allow the electric utility's employees or agents access to the meter at the customer's premises.

Rider NSM is not available to customers taking service under a time-differentiated rate.

Rider NSM is not available to customers with a history of tampering or theft

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

Filed pursuant to an Order dated _____ in Case No. 14-XXXX-EL-ATA before the Public Utilities Commission of Ohio.

Issued:

Effective:

Issued by James P. Henning, President