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VIA OVERNIGHT DELIVERY

November 19, 2009

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

Re: Case No. 2009-00333

Dear Mr. Derouen:

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

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

Sincerely,

Dianne B. Kuhnell
Senior Paralegal

cc: Parties of Record

VERIFICATION

State of Ohio)
)
County of Hamilton)

The undersigned, Michael Dorning being duly sworn, deposes and says that I am employed by the Duke Energy Corporation affiliated companies as Senior Technical Specialist; that on behalf of Duke Energy Kentucky, Inc., I have supervised the preparation of the responses to the foregoing responses to information requests; and that the matters set forth in the foregoing response to information requests are true and accurate to the best of my knowledge, information and belief after reasonable inquire.

Michael Dorning, Affiant

Subscribed and sworn to before me by Michael Dorning on this 19TH day of November, 2009.

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

NOTARY PUBLIC

My Commission Expires: 01-05-2014

VERIFICATION

State of Indiana)
)
County of Hendricks)

The undersigned, Pamela Ball being duly sworn, deposes and says that I am employed by the Duke Energy Corporation affiliated companies as Senior Customer Relationship Specialist; that on behalf of Duke Energy Kentucky, Inc., I have supervised the preparation of the responses to the foregoing responses to information requests; and that the matters set forth in the foregoing response to information requests are true and accurate to the best of my knowledge, information and belief after reasonable inquire.

Pamela Ball

Pamela Ball, Affiant

Subscribed and sworn to before me by Pamela Ball on this 17th day of November, 2009.

Paula M. Roseman

NOTARY PUBLIC Paula M. Roseman
Resident: Hendricks County

My Commission Expires: 3/17/17

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Duke Energy Ohio, Inc.
Case No. 2009-333
1st Set Staff Data Request
Date Received: November 5, 2009

STAFF-DR-01-001

REQUEST:

Refer to page 3 of Duke Kentucky's Reply to Complainant's Response to Duke Kentucky's motion to dismiss ("Reply") filed September 24, 2009, in which Duke Kentucky states that "[t]he inability to receive data electronically [from Complainant's meter] was due to switched leads, causing the electronic AMI [Advanced Metering Infrastructure] device not to function properly."

a. Explain in detail how the switched leads affected the function of the AMI device.

b. Are the leads for Duke Kentucky's residential AMI devices installed during the manufacturing process or by the company?

c. Describe whether the meters that were installed at Complainant's residence are mechanical or solid-state.

d. Is Duke Kentucky aware of any other customers who experienced the same or similar problems with AMI devices installed at their residences? If yes, describe in detail the types of problems experienced, the types and manufacturers of the AMI equipment involved, and the number of AMI devices that have experienced such problems during the period from January 1, 2009 to the present.

RESPONSE:

a. Because of new metering technology, switched leads would not have affected the function of the meter or AMI device. The switched leads would have caused the meter to register reverse flow but the actual meter display would have reflected this as positive usage due to the internal programming. This is known as secure kilowatt hour registration and is designed to prevent energy theft. The AMI device simply transfers the delivered and received watt-hour values back to the billing system for analysis. When the reverse flow was detected in the collection system, a field investigation was issued.

b. The leads were installed and connected by the company.

c. All AMI electric meters installed in the KY AMI pilot area are solid state.

d. In the KY, AMI pilot area there are a total of 26,430 retrofitted gas modules installed and 37,780 electric meters with integrated AMI modules. At present Duke Energy Kentucky is aware of only one other electric customer who experienced the same situation of switched leads on installation. The other customer's installation was completed on the same day and by the same meter technician as Complainant's installation. The switched lead issue was corrected on June 10, 2008. Both installations were Landis & Gyr Focus, 4S meters with integrated TWACS UMT-RF modules.

Additionally, Duke Energy Kentucky experienced an compatability issue with certain types of natural gas meters manufactured by Actaris and AMI modules manufactured by Badger. There were approximately 212 gas customers where RF modules were retrofitted to natual gas meters and a module-meter compatibility issue later surfaced. The compatibility issue resulted in some damaged meters, modules and lost gas consumption registration. All incompatable modules were replaced proactively as soon as the problem was detected.

There were also 8 gas customers whose Badger modules were programmed incorrectly by the field installer. The result was that the module only accumulated usage at half the rate of the meter index causing the customer to be billed at half the amount they actually used.

PERSON RESPONSIBLE:

Mike Dorning

Duke Energy Ohio, Inc.
Case No. 2009-333
1st Set Staff Data Request
Date Received: November 5, 2009

STAFF-DR-01-002

REQUEST:

Refer to page 3 of Duke Kentucky's Reply, in which Duke Kentucky states that "[a]fter Complainant's October 6, 2008 billing period, the AMI device stopped functioning and the Company was not able to receive an electronic reading."

a. Explain in detail why the AMI device stopped functioning after October 6, 2008.

b. Did the AMI device experience the same problem as the previous AMI device installed at the Complainant's residence, as described in Item 1 of Commission Staff's First Data Request, above?

RESPONSE:

a. Duke Energy Kentucky does not know why the AMI module on Complainant's meter stopped functioning. AMI meters and modules are electronical devices and occasionally they fail.

b. No. Complainant's first AMI device did not fail. The issue with the first device was due to an improper installation whereby leads were switched. The Company replaced the first device because it was registering reverse flow due to the switched leads. To stop reverse flow readings from being transferred to the Duke Energy billing sytem, the meter technicaian corrected the switched leads and then elected to install a new meter registering zero.

PERSON RESPONSIBLE:

Mike Dorning

Duke Energy Ohio, Inc.
Case No. 2009-333
1st Set Staff Data Request
Date Received: November 5, 2009

STAFF-DR-01-003

REQUEST:

The AMI meter originally installed at the Complainant's residence in September 2007 was replaced in June 2008 and again in February 2009.

a. Please provide the type and manufacturer of each meter and AMI device installed at Complainant's residence, and describe in detail how the problems experienced with each of these devices were similar or different.

b. If the meters were of the same type, how many meters in total have been installed? If not the same type, how many of each type have been installed?

c. Explain whether the necessity for AMI meter replacement is a common occurrence or if this is an isolated incident.

d. What steps does Duke Kentucky plan to take in order to determine if the same or similar problems experienced with the AMI devices installed at Complainant's residence are likely to occur with other customers' AMI equipment installed throughout its system?

RESPONSE:

a. All three meters were Landis & Guy, Focus meters with integrated TWACS, UMTR-F modules. All three meters were form 4S meters that are compatible with transformer rated installations. The problems experienced with the modules were different. The first AMI device was installed improperly. The second was installed properly, but for an unknown reason failed after installation. The third installation is functioning properly.

b. The meters were all of the same type. Landis and Guy Focus, form 4S meters. Duke Energy Kentucky has installed 52 meters of this type in its AMI pilot. This customer's installation is not typical of a residential installation.

c. The need for replacement is not typical. As stated above, the customer's installation is not typical of a residential meter installation. There are over 35,000 Form 2S, 240 volt Focus meters with integrated TWACS, UMTR-F modules installed in the Kentucky pilot area. While there have been a normal amount of meter and module failures in this population, meter replacements for the previously identified issue are not common.

d. Duke Energy is currently investigating all the 52 Form 4S installations to ensure that the leads are not switched and reverse flow is being registered. Even assuming additional meters are discovered to have switched leads, the measurement of electricity should remain accurate. With the new solid state meters and the internal programming, reverse flow is still registered as positive usage.

PERSON RESPONSIBLE:

Mike Dorning

Duke Energy Ohio, Inc.
Case No. 2009-333
1st Set Staff Data Request
Date Received: November 5, 2009

STAFF-DR-01-004

REQUEST:

Refer to page 4 of Duke Kentucky's Reply, wherein Duke Kentucky states:

> For three months following the February 11, 2009 installation, Complainant continued to receive estimated bills for consumption until Duke Energy Kentucky's system programming caught up and began receiving the new electronic signal. The estimated periods included billing periods ending March 10, 2009, April 8, 2009, and May 8, 2009. Once the AMI system was reprogrammed to pick up Complainant's new AMI signal, actual readings were used to determine monthly bills. This occurred in time for the June 9, 2009 meter reading.

Explain in detail the reason or reasons why Duke Kentucky was unable to reprogram its AMI system in order to start receiving the AMI signal from Complainant's meter sooner that June 9, 2009.

RESPONSE:

The TWACS collection system was sent a "search-in" batch file from the meter data management system to initiate a "search-in" to locate the customer's meter on the distribution system in March of 2009. For an unknown reason, communication was not established between the collection system and the meter on this first attempt. A second "search-in" was manually initiated by the TWACS system operator using a copy of the initial file which was successful in June of 2009, at which time readings began to flow back to the meter data management system.

PERSON RESPONSIBLE:

Mike Dorning

Duke Energy Ohio, Inc.
Case No. 2009-333
1st Set Staff Data Request
Date Received: November 5, 2009

STAFF-DR-01-005

REQUEST:

Refer to Original Sheet No. 25, Section VI – Billing and Payment of Duke Kentucky's tariff. Duke Kentucky's tariff states that meters are ordinarily read at monthly intervals but may be read more or less frequently at the company's option, but no less than quarterly. Refer also to page 1 of Duke Kentucky's August 25, 2009 Answer, wherein Duke Kentucky admits that the Complainant received estimated bills between November 2008 and May 2009-a period of six months or two quarterly periods. Explain in detail whether Duke Kentucky was in violation of its tariff during this time period.

RESPONSE:

Duke Energy Kentucky did not violate its tariffs. Duke Energy Kentucky read Complainant's meter on October 6, 2008 (4th quarter of 2008). Complainat's October bill was based upon actual data. Complainant received estimated bills in November, December, and January. A new meter was installed on February 11, 2009 (1st quarter of 2009), at which time the old meter was manually read. Complainant was issued a bill credit for the prior estimated readings because of the manual reading that occurred on February 11, 2009. Since February 11, 2009 was the installation of a new meter, the beginning reading was zero. Complainant received estimated bills in March, April, and May because the new meter's signal did not register. Complainant's June bill (read in 2nd quarter 2009) was based upon an actual reading.

PERSON RESPONSIBLE:

Pam Ball.

Duke Energy Ohio, Inc.
Case No. 2009-333
1st Set Staff Data Request
Date Received: November 5, 2009

STAFF-DR-01-006

REQUEST:

Refer to to Attachment 6 to Duke Kentucky's Reply, which consists of copies of Complainant's electric bills from February 2, 2006 to Ocotber 1, 2009. There are seceral instances in which the Complainant's usage is identical during the 45 months' billing history. For example, 720 kWh usage is repeated six times,[1] 840 kWh is repeated four times,[2] and 660 kWh is repeated seven times.[3]

a. Explain in detail whether these occurrences of identical kWh usage are due to Duke Kentucky's method of estimating Complainant's electric bills or some other reason.

b. In the explanation, include a narrative discussion of the process Duke Kentucky used in calculating Complainant's estimated usage when required to do so.

RESPONSE:

a. The meter here has a multiplier of 60 because the size of the service is more than 200 amps. It has what we call transformer type metering typically used on our larger customers. Usage is calculated by a formula that is built into the metering system. On each bill, we subtract the previous reading from the present reading and multiply by 60 which results in each month's usage ending in zero and being somewhat similar. It doesn't have anything to do with the way we estimate usage.

b. Bills are estimated by taking the average daily consumption of the previous month, times (x) the estimation factor, times (x) the number of days in new billing. The estimation factor is the percent of increase or decrease from the previous month, based on the accounts that were actually read.

PERSON RESPONSIBLE: Pam Ball

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[1] February 2, 2006; October 20 2006; July 5, 2007; November 1, 2007; March 3, 2008; and April 3, 2008.

[2] May 31, 2006; August 30, 2007; August 29, 2008; and September 3, 2009.

[3] March 3, 2006; May 31, 2007; June 3, 2008; July 3, 2208; September 30, 2008; October 29, 2008; and December 1, 2008.