

BEFORE THE
PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of the Commission's)	
Investigation into the Testing and)	
Verification of Advanced Metering)	CASE NO. 10-325-EL-COI
Infrastructure Installations)	
)	

**REPORT OF OHIO EDISON COMPANY, THE CLEVELAND ELECTRIC ILLUMINATING
COMPANY AND THE TOLEDO EDISON COMPANY**

I. INTRODUCTION

Pursuant to the Commission's March 24, 2010 Entry in the above captioned matter ("Entry") Ohio Edison Company, The Cleveland Electric Illuminating Company ("CEI") and The Toledo Edison Company (collectively, "Companies") submit their report on the various issues raised in the Entry regarding the testing and verification of advanced metering infrastructure installations.

II. RESPONSES TO THE COMMISSION'S INQUIRY

At the time of the filing of this report, the Companies have committed to an Ohio Smart Grid DOE pilot project ("Smart Grid Pilot") in CEI's service territory that includes as part of this pilot the installation of smart meters. This project is currently awaiting approval by the Commission. Upon receipt of such approval, the Companies anticipate an initial field deployment of 5,000 meters in 2011. Concurrent with this pilot, the Companies' sister utilities in Pennsylvania are performing a 24-month assessment of Smart Meter technology.¹ The responses set forth below are based on (i) current meter related processes, procedures, and controls; and (ii) other relevant data accumulated

¹ For details surrounding this assessment period, see the Smart Meter Technology Procurement and Installation Plan of Metropolitan Edison Company, Pennsylvania Electric Company, and Pennsylvania Power Company (August 14, 2009) filed with the Pennsylvania Public Utility Commission, Docket No. M-2009-2123950.

during the preparation for the Smart Grid Pilot. Further, these responses are based on the following assumptions:

- The responses set forth below only apply to Smart Meter deployment; not to non-smart meters set or exchanged;
- The Companies will continue to utilize existing monthly meter reading processes to obtain the billing information for the Smart Grid Pilot;
- Smart Meter accuracy is one of many criteria to be evaluated when selecting the appropriate smart meter technology;
- A customer can request a meter test up to 60 days after the meter is removed, thus requiring the Companies to retain the removed meter (as is) for two billing cycles;² and
- Procedures are subject to change based on information obtained during the Smart Grid Pilot.

A. Meter testing and testing procedures for ensuring the accuracy of Advanced Metering Infrastructure (“AMI”).

The Companies ensure that all meters are tested, including proposed Smart Meters purchased from vendors, according to the testing requirements outlined in ANSI C12.1 and ANSI C12.20. The testing is done through statistically valid sampling as outlined in ANSI/ASQC Z1.9. Once installed, smart meters will be subject to yearly sample testing. Meters will be selected for accuracy testing through a program that randomly selects meters by meter type from the installed meter population. This testing is also done in conformance with the parameters set forth in ANSI C12.1, with the test results being traceable to the National Institute of Standards and Technology (NIST).

B. Practices, procedures and standards for ensuring that the information received by the electric utility’s meter data management and billing systems will be accurate and consistent with the data recorded by the AMI meters.

The Companies will utilize a combination of validation procedures to ensure data integrity of the meter information back through the billing system, first through their Meter Data Management system where various validation techniques are performed on each read as it comes into the system. Additional checks, including high/low screening, will occur at the time the meter read data is input into the system.

² The Companies believe that this period is sufficient given that it is twice as long as currently required by Section 4901:1-10-05, Ohio Administrative Code.

C. Practices and procedures for documenting meter readings made at the time of replacing meters and installing AMI equipment, including the verification of the final reading on the replaced meter.

The Companies will install the smart meters and record the meter readings from the removed meter utilizing their existing Work Management/Meter Reading System. The obtained meter reads (both installed and removed reads) are then passed from the Work Management System to the billing system for processing and updating the information on the customer's account. In addition, the field meter read is collected again when the meter is processed through the Companies' meter testing facility.

D. Meter upgrade capabilities of the electric utility's AMI meters and compliance with National Electrical Manufacturers Association Standard SG-AMI 1-2009.

The Companies anticipate that their AMI system will be able to allow a firmware download to upgrade AMI Smart Meters in the field to comply with the SG-AMI1-2009 standard. The Companies plan to select a vendor that provides AMI Smart Meters that will, at a minimum, meet the following standards:

- > FCC standards. These standards are listed in CFR (Code of Federal Regulations) 47:
 - Part 15.107 Conducted emissions – unintentional radiators
 - Part 15.109 Radiated emissions - unintentional radiators
 - Part 15.207 Conducted emissions – intentional radiators
 - Part 15.209 Radiated emissions – intentional radiators
 - Part 15.247 Operation within the bands 902 – 928 MHz, 2400 – 2483.5 MHz, and 5725 – 5850 MHz – intentional radiators
 - Part 15.249 Sec. 15.249 Operation within the bands 902-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.0-24.25 GHz – intentional radiators
- > ANSI standards:
 - ANSI C12.1 – 2008
 - ANSI C12.10 - 2004
 - ANSI C12.18 – 1996
 - ANSI C12.19 – May 2006 Draft Version 2.
 - ANSI C12.20 – 2002
 - ANSI C12.22 – 2006
 - ANSI C12.22 – 2008

E. Any additional practices or procedures for avoiding or addressing any questions or potential disputes that might arise regarding the accuracy of AMI meter data.

A customer that has a question about his meter data will be instructed to contact the Companies' customer service call center where the customer can request that the meter data be reviewed and further analyzed based on various factors, including (i) the number of days in a billing period; (ii) changes in customer usage patterns; (iii) changes in weather patterns; (iv) rate changes; and (v) payment applications and charges. As is currently permitted, the customer may also request that the meter be tested. Upon such a request, the meter will be removed and returned to the Companies' meter testing facility where it will be tested for accuracy. The customer has the option of witnessing the test.

For questions regarding the accuracy of a meter read taken from the meter that was removed, the Companies will retain the meter, as removed, for a minimum of two billing cycles before re-processing the meter. During this two-billing cycle period, the reading on the removed meter will appear as it did on the day that the Companies removed it.

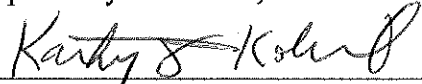
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III. CONCLUSION

The Companies believe that the processes, procedures and controls that they have in place or intend to put into place will be sufficient to maintain the integrity of the meter data accumulated through its meters and processed through its billing systems. Representatives from the Companies are available to address any questions that the Commission Staff have concerning the content of this report, with all such inquiries being directed to:

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Respectfully submitted,



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On behalf of Ohio Edison Company,
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Summary: Report on the Testing and Verification of Advanced Metering Infrastructure Installations electronically filed by Ms. Kathy J Kolich on behalf of Ohio Edison Company and The Cleveland Electric Illuminating Company and The Toledo Edison Company