

FILE

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

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

FAX

**THE DAYTON POWER AND LIGHT COMPANY'S REPORT REGARDING
PROCEDURES TO ENSURE AMI METER ACCURACY**

By entry dated March 24, 2010, the Commission directed that each of the six Ohio electric distribution utilities which proposed the deployment of Advanced Metering Infrastructure ("AMI") file a report by May 31, 2010 describing the policies, practices and procedures which will be implemented relating to the accuracy of AMI meter readings and the data communicated to meter data management and billing systems. The Commission instructed the utilities to provide a report relating to five topics, directing specifically:

As Ohio electric utilities plan for and undertake demonstration projects and the installation of advanced meter systems, the Commission believes that appropriate procedures should be established to ensure the accuracy of AMI meter readings and of the data communicated to meter data management and billing systems. Therefore, the Commission directs each electric utility that is installing or proposing to install AMI equipment, to file a report in this docket by May 31, 2010, describing:

- (a) Meter testing and testing procedures for ensuring the accuracy of AMI meters.
- (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 its AMI meters.

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- (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.
- (d) Meter upgrade capabilities of the electric utility's AMI meters and compliance with National Electrical Manufacturers Association standard SG-AMI 1-2009.
- (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.¹

The Dayton Power and Light Company ("DP&L") filed its initial plan for AMI deployment and rate recovery within the context of its Electric Security Plan Case No. 08-1094-EL-SSO, *et al.* Pursuant to the Stipulation and Recommendation in that case, which was subsequently adopted without modification by the Commission on June 24, 2009, DP&L refiled its AMI and Smart Grid business cases in August 2009. The Commission has not yet issued an order approving or rejecting DP&L's AMI and Smart Grid plan. Consequently, DP&L has not deployed any AMI or AMI demonstration projects, and does not intend to move forward with such deployment unless and until it is granted Commission authority to do so, along with rate recovery. DP&L would stress that because it has not yet been authorized to move forward with deployment of AMI, the responses below reflect procedures that DP&L anticipates using based upon the information it has today. These procedures are necessarily subject to potential modifications because the ultimate scope of AMI deployment within DP&L's territory is unclear. Thus, DP&L's plans have not and cannot be finalized at this point. Nonetheless, the following report reflects DP&L's current expectations with regard to future AMI deployment within DP&L's service territory.

¹ March 24, 2010 Entry, ¶3.

(A) METER TESTING AND TESTING PROCEDURES FOR ENSURING THE ACCURACY OF AMI METERS.

To ensure the accuracy of its existing meters, DP&L currently requires meter vendors to provide certification of accuracy for each meter delivered along with a record of meter test information for each meter. As an additional safeguard, DP&L performs sample testing on all newly purchased meters. Further, DP&L requires all tested meters to meet the testing requirements outlined in ANSI C12.1 and ANSI C12.20. DP&L anticipates that these same procedures will be followed with the procurement of AMI meters in the future.

(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 ITS AMI METERS.

Once DP&L begins implementation of AMI, DP&L anticipates that it will continue to read meters manually for the first 2 months after deployment of an initial lot of smart meters (anticipated to be approximately 5,000 meters, approximately 1% of DP&L's total meters). The results of the manual meter reads will be validated against the readings collected through the AMI head-end and sent to the billing system. Traditional validation processes, such as high/ low checks, will continue in the billing system. Additional validation, editing and estimation (VEE) will be performed via the meter data management (MDM) application. Once the results of the deployment of the initial lot of meters are reviewed and any problems or concerns identified, DP&L will determine whether this process should continue for additional meters. DP&L will continue to monitor industry activity as well as the results of the deployments of the other Ohio

utilities to determine if this process and approach should be modified at the time it begins its AMI deployment.

(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.

DP&L plans to photograph existing meters in service before they are replaced with a smart meter. The photograph will record the dials and/or numerals indicating the ending usage prior to removal. At the beginning of the smart meter deployment, DP&L will retain all removed meters for two (2) billing cycles before disposal. Thus, should a customer question the final reading of the removed meter, DP&L will still have the removed meter in its possession as well as the photograph to confirm the final meter reading and resolve any customer concerns. DP&L anticipates that this practice would continue unless and until it becomes clear that customer confidence in the new meters is established and retention of the removed meter for potential testing is no longer beneficial or necessary. DP&L will also follow its standard practices for validating reads during the meter exchange process. The meter exchange order communicated to the hand-held device used by the field employees is the primary tool for collecting the meter readings as well as the exchange meter information. The hand-held devices contain functionality for the field representative to verify customer/premise information and have field audit functionality to report typographical errors during entry of reads. Additionally, more sophisticated bill audit processes will be performed by the MDM application and/or the billing system.

(D) METER UPGRADE CAPABILITIES OF THE ELECTRIC UTILITY'S AMI METERS AND COMPLIANCE WITH NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION STANDARD SG-AMI 1-2009.

DP&L's AMI plan as it currently exists contemplates holding meter vendors responsible for compliance with this standard. While no contracts with meter vendors have been executed, DP&L anticipates that compliance with this standard will be included as a material term of any contract with the AMI and meter vendor or vendors.

(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.

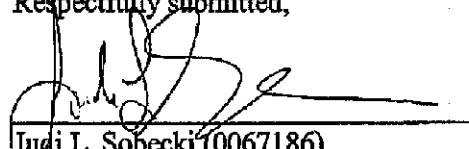
In addition to the safeguards described above, DP&L may also install dual meter socket adaptors at selected premises to allow side by side installations of both the existing standard meter and smart meters. Usage at these meters will be monitored and compared as an additional means to validate accuracy during the deployment phase. In addition, if a concern is expressed by a customer, DP&L will perform meter testing upon the customer's request on smart meters in accordance with the ESSS rules. Section 4901-15-19(B)(3) of the Ohio Administrative Code provides that a customer may request a meter test at no charge to the customer once every three years. Under DP&L's current plan, this three year test period will begin to run on the date a smart meter is installed at the customer's premises regardless of when the customer last requested a meter test. The meter will be tested in the field unless conditions prevent it and the customer will have the opportunity to observe the test upon request.

As part of its overall AMI implementation, DP&L envisions implementing a strong customer communication and education program. The benefits of AMI and Smart Grid technologies cannot be reached unless the end use customer takes advantage of the information and programs that are enabled by these technologies. The recent concerns

regarding smart meter accuracy raised in California and Texas ultimately point to the need to improve customer communication and education. Using lessons learned from AMI deployment experiences of other electric utilities both in Ohio and across the country, DP&L will ensure that customers have advance notice of meter installations, general information regarding the new meters, actual or anticipated features and functionality that can be utilized by the customer as well as the process for reporting and resolving metering and billing questions and disputes. DP&L will also leverage and make available applicable information and educational materials that are developed by entities such as the Department of Energy, the Smart Grid Consumer Collaborative, the NIST Smart Grid Interoperability Panel, Institute of Electrical and Electronic Engineers, Electric Power Research Institute and the Edison Electric Institute.

In conclusion, DP&L appreciates the opportunity to highlight for the Commission some of the practices and procedures DP&L intends to undertake once it receives Commission approval to deploy AMI within its service territory, and looks forward to a smooth, successful implementation of its AMI initiative in the near future.

Respectfully submitted,



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Message:

Case No. 10-325-EL-COI

The Dayton Power and Light Company's Report Regarding procedures to ensure AMI meter accuracy

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