

**BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO**

**In the Matter of the Application of
Ohio Edison Company, The Cleveland
Electric Illuminating Company, and
The Toledo Edison Company for
Approval of Ohio Site Deployment of
the Smart Grid Modernization
Initiative and Timely Recovery of
Associated Costs**

**Case No. 09-1820-EL-ATA
Case No. 09-1821-EL-GRD
Case No. 09-1822-EL-EEC
Case No. 09-1823-EL-AAM**

**APPLICATION OF OHIO EDISON COMPANY, THE CLEVELAND
ELECTRIC ILLUMINATING COMPANY, AND THE TOLEDO EDISON
COMPANY FOR COST RECOVERY TO COMPLETE STUDIES RELATED
TO THE OHIO SITE DEPLOYMENT OF THE SMART GRID
MODERNIZATION INITIATIVE**

I. INTRODUCTION

Ohio Edison Company, The Cleveland Electric Illuminating Company (“CEI”) and The Toledo Edison Company (collectively, the “Companies”) hereby seek authority for cost recovery to complete studies related to the Ohio Site Deployment of the Smart Grid Modernization Initiative (“Initiative”). FirstEnergy is conducting a Smart Grid Modernization Initiative (“Initiative”) in some of its utilities’ territories in Ohio, Pennsylvania and New Jersey. The Initiative has been partially funded by FirstEnergy customers with the remainder of the funds being provided through the U.S. Department of Energy (“DOE”) and the American Reinvestment and Recovery Act of 2009 (“ARRA”) funds. The Ohio Site Deployment was comprised of various studies, including a Volt Var Optimization study, a Distribution Automation study and a consumer behavior study (“CBS”) conducted in two phases.

In Ohio, the DOE grant covered a four year implementation period (June, 2010 through June, 2014) and a one year data collection period for the Volt Var Optimization and Distribution Automation study (June, 2014 through June, 2015). The Commission agreed

with the Companies, however, that the Volt Var Optimization and Distribution Automation studies, specifically SAIDI/SAIFI improvements, should be measured over a five year period.¹ That period began on June 1, 2014 and the Companies' propose that it continue to June 1, 2019. The Commission authorized related cost recovery for the afore-mentioned pilot program in CEI's service territory in the Companies' second ESP but only to the extent that costs were matched by DOE funds.²

DOE funding for the Ohio Site Deployment completes on June 1, 2015. The Companies, however, still have several years remaining of data collection to complete for the Volt Var Optimization and Distribution Automation studies. Therefore, the Companies request approval to collect 100% of the on-going data collection and maintenance costs for the completion of the Volt Var and Distribution Automation studies after June 1, 2015.

II. PROCEDURAL HISTORY

The Commission has addressed the Ohio Site Deployment in several separate cases. On January 21, 2009 in Case No. 07-551-EL-AIR *et al.*, the Commission approved the creation of an advanced metering infrastructure rider ("Rider AMI") as a mechanism for the recovery of costs related to the deployment of smart grid and advanced metering infrastructure.³

On March 25, 2009, the Commission approved the stipulation filed in the Companies' ESP Case, Case No. 08-935-EL-SSO *et al.* In this stipulation, the Companies agreed to pursue federal funds for the Ohio Project. The stipulation also provided recovery for smart grid investment through a nonbypassable rider.⁴

¹ Case 09-1820-EL-ATA *et al.*, p. 6 (15)(d), p. 9 (17) and p. 10.

² ESP Case 10-388, p. 14(h)

³ Case No. 07-551-EL-AIR *et al.*, Opinion and Order dated January 21, 2009, pp. 44-45.

⁴ Case No. 08-935-EL-SSO *et al.*, Second Opinion and Order dated March 25, 2009, p. 13.

On November 28, 2009, the Companies filed an application for approval of the Ohio Site Deployment in this docket.⁵ Among other things, the Commission made clear that the Companies were entitled to recovery for 50% of the costs incurred by the Companies which were matched by the DOE for implementing the Ohio Project through Rider AMI, subject to the cost recovery provisions in the Companies' ESP Case.⁶

On January 13, 2010, Staff issued Comments on the Companies' initial Application for the Ohio Site Deployment. In those Comments, Staff recommended that the Companies set target values for CAIDI and SAIFI in the project area and report to Staff at the completion of the pilot project.⁷ On January 20, 2010, the Companies responded to this recommendation by stating that while the Companies can provide the actual CAIDI and SAIFI results at the conclusion of the pilot program, that it cannot set target values.⁸

On April 30, 2010, the Companies issued a letter to Staff indicating that five years of data should be used to determine improvements in SAIDI and SAIFI.⁹ On June 15, 2010, the Companies filed a letter indicating the commitment expressed in April 30, 2010.¹⁰ On June 30, 2010, the Commission approved the Ohio Site Deployment including the Companies' commitment to Staff on determining improvements in SAIDI and SAIFI.¹¹

On August 25, 2010, the Commission approved a stipulation regarding the terms of the Companies' Second ESP Case.¹² Among other things, this stipulation provided additional detail regarding the administration and cost-recovery associated with the Ohio Site Deployment.¹³

⁵ Case No. 09-1820-EL-ATA *et al.*, Application, filed November 18, 2009.

⁶ Case No. 09-1820-EL-ATA *et al.*, Entry on Rehearing dated August 25, 2010, p. 4.

⁷ Case No. 09-1820, EL-ATA, *et al.*, Staff Comments dated January 13, 2010, p.16.

⁸ Case No. 09-1820-EL-ATA, *et al.*, Reply Comments dated January 20, 2010, p. 11.

⁹ Filed on June 15, 2010 in Case No. 09-1820-EL-ATA.

¹⁰ Case No. 09-1820-EL-ATA, Letter, p. 2.

¹¹ Case No. 09-1820-EL-ATA, Finding and Order, dated June 30, 2010, p. 10-11.

¹² Case No. 10-388-EL-SSO, *et al.*, Opinion and Order dated August 25, 2010, p. 36.

¹³ Case No. 10-388-EL-SSO, *et al.*, Proposed Stipulation filed March 23, 2010, p. 23.

The Commission approved the Companies' recovery of a matching 50% of estimated \$72.2 million in program costs through Rider AMI (which would be equal to DOE provided funding).

On February 8, 2013, Staff filed a report on the Initiative. In that report, Staff recommended that the Companies "shall provide all relevant improvement in distribution reliability of CAIDI, SAIFI, and customer minutes of outage as they relate to the geographical pilot area."¹⁴

On February 21, 2013, the Companies filed a letter responding to the Staff report filed on February 8, 2013. The Companies agreed with Staff's recommendation to provide all relevant improvement in distribution reliability of CAIDI, SAIFI and customer minutes of outage as it relates to the geographic pilot area but pointed out, as they did in their April 30, 2010 letter to Staff, that improvements to SAIFI need to be measured over a five year period.¹⁵ On May 15, 2013, the Commission issued an Order stating that the Companies implement the recommendations agreed by Staff and the Companies.¹⁶

As shown by the Companies' previous filings, pursuant to the Companies' stipulation in their first ESP, the Companies ultimately applied for and received a grant from the DOE for the Ohio Site Deployment. As directed by the Commission, since approval of this pilot program, the Companies have worked collaboratively with the Commission Staff on all aspects of the project.

III. OHIO SITE DEPLOYMENT STATUS

On June 1, 2014, the Companies began data collection for the Volt Var Optimization and Distribution Automation studies which will determine the CAIDI and SAIFI values. Distribution Automation utilizes a centralized software fault isolation and service restoration system to reduce the duration of outages on distribution circuits. The automation uses continuous polling of the distribution devices to determine the health of the circuit and collect data to ensure reliability. When

¹⁴ Case No. 09-1820-EL-ATA, *et al.*, Staff Report dated February 8, 2013, p. 4

¹⁵ Case No. 09-1820-EL-ATA *et al.*, Letter to Staff dated February 21, 2013, p. 6.

¹⁶ Case No. 09-1820-EL-ATA, *et al.*, Finding and Order dated May 15, 2013.

a fault occurs on a circuit, the distribution management system is able to isolate the fault, determine the best method to reroute power, and restore service for customers.

With Volt Var Optimization controls, the Companies are able to improve the voltage profile and the reactive power supplied between the substation and field devices to improve service quality and potentially achieve energy efficiency savings.

For the deployment of the Volt Var Optimization and Distribution Automation studies, the Companies have made upgrades at 14 substations and installed 100 reclosers, 138 capacitors, three regulators, and the related communication equipment and software equipment to support them on 36 circuits in smart grid pilot footprint.

As indicated in the Companies' various comments above, five years of data needs to be collected to provide the CAIDI and SAIFI values. DOE funding completes on June 1, 2015 with the end of the "period of performance" of the DOE grant. The Commission previously approved \$72.2 million in costs for the Ohio Site Deployment of which \$38.1 million was approved to support the Volt Var Optimization and Distribution Automation studies.¹⁷ The Companies estimate that the ongoing costs to complete the data collection through June 1, 2019 will be approximately \$8.5 million. Going forward cost include support and operation of the centralized software system (\$1.6 million), network communications to field devices and support the backhaul information including radio spectrum agreements (\$4.4 million) and other incremental labor for engineering, analysis and field support (\$2.5 million). As agreed to and approved in the Companies' Second ESP Case, "all costs associated with the project will be considered incremental for recovery under Rider AMI."¹⁸ The Companies have made a significant investment to study this technology. To not complete the full monitoring of the system and truly understand the benefits would not fully leverage the investment that

¹⁷ Case No. 09-1820-EL-ATA *et al.*, Finding and Order dated June 30, 2010, p. 11.

¹⁸ Case No. 10-388-EL-SSO, *et al.*, Opinion and Order dated August 25, 2010, p. 13.

has been made. The system must be monitored and evaluated over time, under various load and weather conditions, to understand its capabilities for reliability improvements and demand response. Therefore, the Companies are seeking authority for further cost recovery to complete the aforementioned studies.

IV. CONCLUSION

For all of the foregoing reasons, the Companies request that the Commission approve this application and authorize further cost recovery to complete the Volt Var Optimization and Distribution Automation studies. In order to continue the studies in a timely manner, the Companies are seeking approval no later than February 28, 2015.

Respectfully submitted,

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CERTIFICATE OF SERVICE

On December 22, 2014, the foregoing document was filed on the Public Utilities Commission of Ohio's Docketing Information System. The PUCO's e-filing system will electronically serve notice of the filing of this document and the undersigned has served electronic copies to the following parties:

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Summary: Application for Cost Recovery to Complete Studies Related to the Ohio Site Deployment of the Smart Grid Modernization Initiative electronically filed by Ms. Carrie M Dunn on behalf of The Toledo Edison Company and The Cleveland Electric Illuminating Company and Ohio Edison Company