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August 3, 2015

VIA ELECTRONIC FILING

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor
Harrisburg, PA 17120

Re: *Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company for Approval of their Smart Meter Deployment Plans;*
Docket Nos. M-2013-2341990, M-2013-2341991, M-2013-2341993 and M-2013-2341994

Dear Secretary Chiavetta:

Enclosed for filing on behalf of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company please find the 2015 Smart Meter Technology Procurement and Installation Plan Annual Progress Report for the twelve-month period ended June 30, 2015 in the above-referenced proceeding.

Please contact me with any questions you may have. Copies of this filing have been served as indicated in the attached certificate of service.

Very truly yours,



Lauren M. Lepkoski

dIm
Enclosures

c: The Honorable Elizabeth H. Barnes (via email and first class mail)
The Honorable Katrina L. Dunderdale (via email and first class mail)
The Honorable Dennis J. Buckley (via email and first class mail)
Bureau of Audits (via first class mail)
Bureau of Technical Utility Services, Reliability and Emergency Preparedness
Section (via first class mail)
Certificate of Service

**Before the
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

**Metropolitan Edison Company
Pennsylvania Electric Company
Pennsylvania Power Company
West Penn Power Company**

**Docket No. M-2013-2341990
Docket No. M-2013-2341994
Docket No. M-2013-2341993
Docket No. M-2013-2341991**

**2015
ANNUAL PROGRESS REPORT
SMART METER TECHNOLOGY PROCUREMENT
AND INSTALLATION PLAN**

(For the Twelve-Month Period Ended June 30, 2015)

August 3, 2015

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I. INTRODUCTION

Pursuant to the Implementation Order entered by the Pennsylvania Public Utility Commission (“Commission”) on June 24, 2009, at Docket No. M-2009-2092655,¹ Metropolitan Edison Company (“Met-Ed”), Pennsylvania Electric Company (“Penelec”), Pennsylvania Power Company (“Penn Power”) and West Penn Power Company (“West Penn”) (collectively, the “Companies”) submit this status report for the twelve-month period ended June 30, 2015 (“Reporting Period”). This report provides an update on events that have taken place since the Companies’ last report submitted on July 31, 2014, at Docket Nos. M-2013-2341990, M-2013-2341991, M-2013-2341993 and M-2013-2341994.

Deployment commenced in July 2014, following the Commission’s approval of the Companies’ Revised Deployment Plan. During the Reporting Period, the Companies deployed in Penn Power’s service territory approximately 110,000 meters and 118 field area network (“FAN”) pieces of equipment which are comprised of connected grid routers (“CGRs”) and range extenders (“REs”), along with the related infrastructure. In addition, the Companies deployed approximately 50,000 smart meters in service territories outside Penn Power’s service territory.

As of June 30, 2015, the Companies have spent a total of \$183.9 million, with \$101.7 million representing capital costs and \$82.2 million representing operations and maintenance (“O&M”) expenses as shown below.

| | Capital (\$ million) | O&M (\$ million) | Total (\$ million) |
|-------------------------------------|---------------------------------|---------------------------------|-------------------------------|
| IT Hardware/ Software | \$ 38.6 | \$ 8.8 | \$ 47.4 |
| IT Labor/ Contractor | \$ 19.0 | \$ 10.9 | \$ 29.9 |
| Bus. Unit Labor/ Contractor | \$ 0.1 | \$ 54.3 | \$ 54.4 |
| Bus. Unit Other | \$ 1.6 | \$ 6.9 | \$ 8.5 |
| Meter Installation/ Network Install | \$ 42.4 | \$ 1.3 | \$ 43.7 |
| Total | \$ 101.7 | \$ 82.2 | \$ 183.9 |

I.I DEPLOYMENT PLAN

In accordance with Pennsylvania Act 129, on December 31, 2012, the Companies filed a Smart Meter Deployment Plan (“Original Deployment Plan”) that the Commission approved with slight modifications through an Opinion and Order entered on March 6, 2014 (“Order”).² Prior to the issuance of the Order, the Companies noted in their exceptions to the Administrative Law Judge’s November 8, 2013 Recommended Decision that the smart meter deployment schedule as proposed in the Original Deployment Plan could be accelerated. The Commission’s March 6, 2014 Order indicated that if the Companies wished to pursue an accelerated deployment schedule, they “should promptly submit an amended [Deployment] Plan, with proper supporting documentation, with the Commission to properly

¹ *In re Smart Meter Procurement and Installation*, Docket No. M-2009-2092655 (Order entered June 24, 2009) (“Implementation Order”) p. 14.

² *Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company For Approval of Their Smart Meter Deployment Plan*, Docket Nos. M-2013-2341990, M-2013-2341991, M-2013-2341993, and M-2013-2341994 (Order entered March 6, 2014).

provide the opportunity for all affected Parties, as well as [the] Commission, to fully evaluate and comprehend this proposal.”³

On March 19, 2014, the Companies filed the Revised Deployment Plan which reflected the Commission’s modifications to the Original Deployment Plan consistent with the Order and which also proposed to accelerate the deployment of smart meters in each of the Companies’ service territories. Through its Opinion and Order entered on June 25, 2014, the Commission unanimously approved the Companies’ Revised Deployment Plan.⁴

The Revised Deployment Plan is being executed as part of the Smart Meter Implementation Program (“SMIP”). The Revised Deployment Plan begins with an eighteen month Solution Validation Stage which, among other things, tests an end-to-end smart meter “mini-system” and resolves as many system problems as possible in a controlled environment before beginning full scale deployment in the Met-Ed, Penelec, and West Penn service territories. The Solution Validation Stage includes the complete network build out of Penn Power’s service territory, which involves the installation of approximately 170,000 smart meters and related FAN equipment. The Companies have progressed as planned with the deployment of approximately 110,000 meters, 105 CGRs and 13 REs in Penn Power, and an additional 50,000 (approximately) meters in Met-Ed, Penelec and West Penn completed through the end of this Reporting Period. The remaining meters and related infrastructure are expected to be deployed in Penn Power’s service territory by the end of 2015.

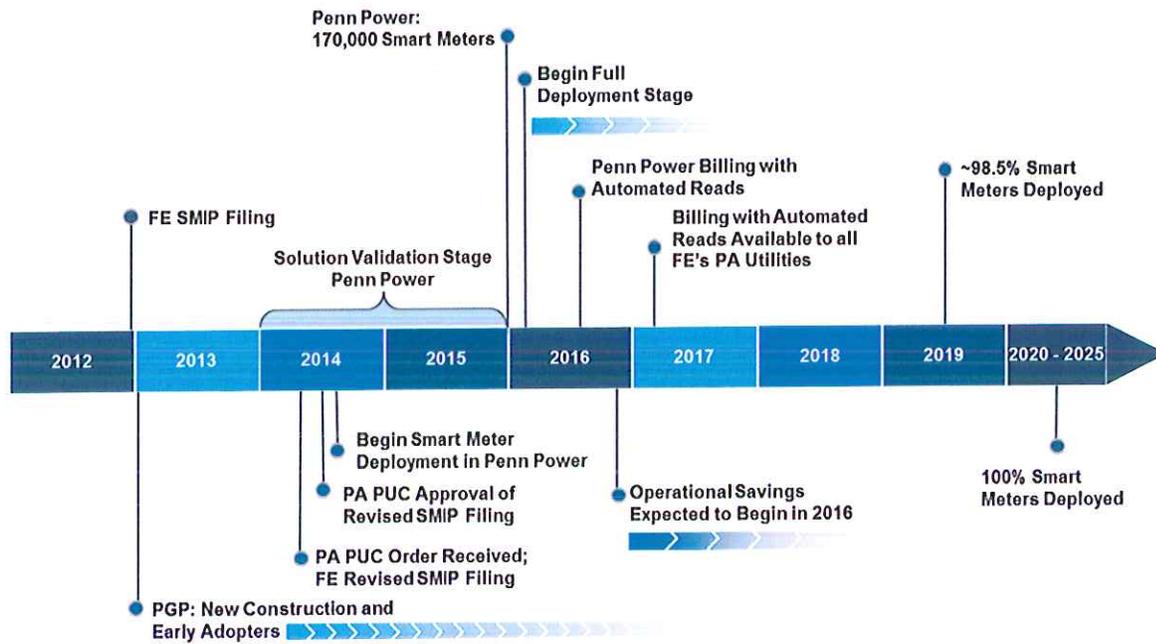
It is currently anticipated that Full-Scale Deployment will then commence in January of 2016 upon completion of the Solution Validation Stage. The Revised Deployment Plan also provides for installation of approximately 98.5% of all smart meters by mid-2019, with a plan to install the remainder no later than the end of 2022. The illustration on the following page (Figure 1) summarizes the Companies’ projected deployment schedule as well as the projected timeline for functionality, both of which are consistent with the timelines included in the Revised Deployment Plan.⁵ As of the date of this report, there is nothing to indicate that these projected timelines cannot be met.

³ *Id* pg. 43.

⁴ *Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company For Approval of Their Smart Meter Deployment Plan*, Docket Nos. M-2013-2341990, M-2013-2341991, M-2013-2341993, and M-2013-2341994 (Order entered June 25, 2014).

⁵ As explained in the Revised Deployment Plan, while the smart meters at installation will be capable of providing all smart meter functionality required by Act 129 and the Implementation Order, actual functionality will become available upon completion, optimization and acceptance of the communication network in the applicable deployment area.

Figure 1: Smart Meter Deployment Timeline



II. REGULATORY

The program team continued to meet regulatory obligations as part of the Smart Meter Program. With the approval of the Companies' Revised Deployment Plan, the Companies focused on completion of the communications plan and collaborating with interested parties on a number of other issues, including:

- Customer privacy policy;
- Involuntary remote termination;
- Voluntary remote disconnections;
- Cyber security; and
- Customer installation issues.

Consistent with the Commission's stated objective to work with stakeholder groups on a going-forward basis, the Companies held a number of collaboration meetings:

Stakeholder Meeting August 6, 2014: The Companies hosted a meeting in Harrisburg, Pennsylvania, to provide an update to all interested parties on various issues related to the SMIP, including:

- The 2014 Annual Progress Report;
- The stand-alone customer privacy policy draft;
- The future use of a remote service switch ("RSS"), including voluntary remote disconnect, involuntary remote termination and RSS; and
- Cyber security matters.

Among those stakeholders in attendance at the August 6, 2014, meeting were representatives from the Office of Consumer Advocate ("OCA"), the Office of Small Business Advocate, the Pennsylvania Coalition Against Domestic Violence, the Pennsylvania Utility Law Project, the Industrial Customer Groups (collectively on behalf of the Met-Ed Industrial Users Group, the Penelec Industrial Customer Alliance, the Penn Power Users Group, and the West Penn Power Industrial Intervenors), Direct Energy Services LLC, IGS Energy, and FirstEnergy Solutions.

Consistent with the Commission's March 6, 2014, Order, the Companies will continue to work with the stakeholder group to develop protocols for voluntary remote disconnection for move in/move out situations.⁶ The Companies will not implement the involuntary remote termination for non-payment functionality until after working with interested parties and obtaining any necessary Commission approvals to proceed. Currently, the Companies anticipate further discussions on this issue in 2016.

As directed, the Companies also used the August 6 meeting as an opportunity to continue to discuss and address cyber security issues with the stakeholder group. The Companies recognize the importance of cyber security and are committed to ensuring their smart meter solution meets industry recognized cyber security standards. To support this, the SMIP project is included within the scope of the Companies' comprehensive cyber security program, which is closely scrutinized by FirstEnergy senior management, is addressed at the board of directors' level and is audited annually.

⁶ *Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company For Approval of Their Smart Meter Deployment Plan*, Docket Nos. M-2013-2341990, M-2013-2341991, M-2013-2341993, and M-2013-2341994 (Order entered March 6, 2014) pg. 43.

After discussions during the stakeholder meeting and follow up discussions with interested parties, the Companies filed their Customer Privacy Policy with the Commission on March 18, 2015. The online presentation of the policy, as approved by the Commission on May 1, 2015, is set forth below and can be found at <https://www.firstenergycorp.com/help/pa-smartmeter/privacy-security.html>.

Figure 2: Customer Privacy Policy

The screenshot shows the PennPower website interface. At the top right, there are links for 'FirstEnergy Home', 'Careers', 'Contact Us', and 'Log In', along with social media icons. A search bar is also present. Below this is a horizontal navigation bar with links for 'Home', 'My Account', 'Service Requests', 'Customer Choice', 'Outages', 'Safety', 'Save Energy', 'Products', and 'Help'. On the left side, there is a vertical navigation menu with categories like 'Help', 'Managing My Account', 'Billing & Payments', 'Making Service Requests', 'Outages', 'Safety', 'Saving Energy', 'Communication Tools', 'Pennsylvania Smart Meters', 'Contact Center', and 'Useful Brochures & Forms'. The main content area is titled 'Security and Privacy' and contains the following text:

FirstEnergy takes the responsibility to protect the privacy and security of our customers very seriously. We do not sell any personal information about customers to third parties. In addition, we will not disclose a customer's information without prior consent, except as required by law, requested by regulatory agencies and governmental authorities, or to be used for legitimate business purposes (such as credit evaluations).

No personally-identifiable customer information – such as names and addresses – is stored in the meters or transmitted across the network. Just like traditional analog meters, digital smart meters collect how much electricity you use. The main difference is that smart meters collect that information more times throughout the day. For example, the smart meters we are using send the company a snapshot of customers' energy usage a few times a day.

For additional information about the security of our smart meter system, [read our smart meter manufacturer's white paper on security.](#)

[Click here for our Fact Sheet on Privacy.](#)

[Click here for our Customer Privacy Policy Regarding the Protection of Smart Meter Information.](#)

**When you click this link, you will open a third-party website. The site is not maintained by FirstEnergy and FirstEnergy is not responsible for the content.*

Last Modified: November 24, 2014

On the right side of the page, there is a 'Quick Links' section with a list of links: 'FAQs', 'Radio frequency/health', 'Security and privacy', 'Installation schedule', 'What you can expect', 'Online resources and fact sheets', and 'Contact us'. Below this is a blue box titled 'PA Smart Meter Deployment' with the text: 'Harrisburg Stakeholder Meeting April 30, 2015. Contact Julie Brown at juliebrown@firstenergycorp.com for more information.'

Stakeholder Meeting April 30, 2015: A second stakeholder meeting was held on April 30, 2015. The objectives of this meeting were to provide a forum in which interested parties could receive an update on the Companies' progress on the implementation of the Revised Deployment Plan. In addition, the meeting was intended for the Companies to gather stakeholder perspectives on various aspects of the Revised Deployment Plan, including the standing agenda items addressing (1) the customer privacy policy; (2) remote service switching; and (3) cyber security. Related to cyber security, the Companies shared as appropriate the results of a security assessment conducted by SecureState⁷ in which no critical vulnerabilities of the Companies' smart meter systems were identified. The Companies indicated that similar periodic assessments would occur as the smart meter system is being built, as depicted in Figure 3.

⁷ SecureState is a global management consulting firm focused on information security. For more information, see its website at www.securestate.com.

Figure 3: Cyber Security Process



Among those stakeholders in attendance at the April 30, 2015, meeting were representatives from the OCA, the Pennsylvania Utility Law Project, the Industrial Customer Groups (collectively on behalf of the Met-Ed Industrial Users Group, the Penelec Industrial Customer Alliance, the Penn Power Users Group, and the West Penn Power Industrial Intervenors), Direct Energy Services LLC, and Cirus Energy.

Rate Case Orders. On April 9, 2015, the Commission approved a Joint Petition for Partial Settlement in each of the Companies' respective base rate cases.⁸ The settlement addressed the following items with regard to Smart Meters:

- 1.) For purposes of measuring smart meter savings, baselines of pre-existing cost impacts and/or relevant existing employee complements were established for the following categories: (1) Meter Reading; (2) Meter Services; (3) Back Office; (4) Contact Center; (5) Theft of Service; (6) Revenue Enhancements; (7) Distribution Operations; (8) Load Research; and (9) Avoided Capital Costs.
- 2.) Smart meter revenue requirements would be rolled into rate base and that each of the Companies' Smart Meter Technologies Charge Riders ("SMT-C") would be set to zero. The Companies may periodically file for future adjustments to these SMT-C Riders in order to adjust both for costs in excess of those included in base rates and to flow back realized savings resulting from the installation of smart meters.
- 3.) The Companies agreed to host an informational meeting with representatives of the Environmental Defense Fund and any interested statutory parties in Akron, Ohio, with respect to the Companies' smart meter and smart grid deployment efforts, including discussion of customer data access, Volt/VAR best practices, and measuring GHG emission reductions. This meeting was held on July 20, 2015.

⁸ *Pennsylvania Public Utility Commission v. Metropolitan Edison Company*, Docket Nos. R-2014-2428745 and M-2013-2341990 (Order entered April 9, 2015); *Pennsylvania Public Utility Commission v. Pennsylvania Electric Company*, Docket Nos. R-2014-2428743 and M-2013-2341994 (Order entered April 9, 2015); *Pennsylvania Public Utility Commission v. Pennsylvania Power Company*, Docket Nos. R-2014-2428744 and M-2013-2341993 (Order entered April 9, 2015); and *Pennsylvania Public Utility Commission v. West Penn Power Company*, Docket Nos. R-2014-2428742 and M-2013-2341991 (Order entered April 9, 2015).

4.) The Companies also agreed to provide the following additional reporting metrics in this Report:

| Additional Reporting Metrics | As of Reporting Period |
|---|------------------------|
| Smart Meters: number of smart meters deployed ⁹ | ~160,000 |
| Smart Meters: number of smart meters deployed and communicating | N/A ¹⁰ |
| Smart Meters: number of smart meters deployed for new construction | 27,672 |
| Smart Meters: number of early adopters | 1 |
| Home Area Network (“HAN”) Devices: number of customers with HAN provisioned ¹¹ | 1 |
| Total spend | \$183.9 million |
| Customer Complaints: number of Formal PUC complaints related to the smart meter deployment | 1 |
| Customer Complaints: number of Informal PUC complaints related to the smart meter deployment | 12 |
| Reduction in greenhouse gas (“GHG”) emissions ¹² | N/A ¹³ |
| Voltage and Var Controls: number and percentage of distribution lines using sensing from the smart meters as part of the Companies’ voltage regulation scheme | 0 / 0% |

Electronic Data Exchange Working Group (“EDEWG”) Meetings: During the Reporting Period, the Companies continued to participate in a number of working groups, including the EDEWG. The Commission had required EDEWG to develop a standardized solution for the acquisition of historical interval usage and, going-forward, the acquisition of billing quality interval usage data via a secure web-portal, as specifically directed and detailed within the Commission’s Smart Meter Procurement and Installation Order entered December 6, 2012 at Docket M-2009-2092655. EDEWG created the Web Portal Working Group (“WPWG”) comprised of interested parties, whose charter was to develop standards for a secure web portal solution that would permit third parties such as electric generation suppliers (“EGSs”) and conservation service providers (“CSPs”) to acquire both historical interval usage and billing quality interval data within 48 hours of daily smart meter reads. The Companies are working toward incorporating the resulting standards into their Revised Deployment Plan. Going forward, the Companies expect to remain active in these groups.

Cost Allocation of SMIP Costs Among Sister Utilities In Other States: In the November 8, 2013, Recommended Decision, the Administrative Law Judge, recommended that “should any of the sister utilities deploy smart meters, the Commission should direct that the Companies provide a report with their next SMT-C filing that identifies expenditures on all components of their Plan that have the potential to benefit their sister utilities when they begin deploying smart meters and that describes the method

⁹ This metric reflects the number of smart meters installed.

¹⁰ Metrics for smart meter communication (or registration) will be provided after the Solution Validation Stage during Full Scale Meter Deployment.

¹¹ This metric reflects the number of utility AMI meters with customer devices registered to operate with the HAN chip.

¹² This metric reflects the reduction associated with reduced truck rolls associated with meter readings and increased efficiencies.

¹³ This reporting will commence once the realization of this benefit has been determined as reflected in the smart meter operations baseline savings as of April 30, 2016.

through which the Companies will receive credit from FirstEnergy Service Company for those expenditures. To the extent any system upgrades are currently being utilized by the Companies' sister utilities, the Commission should direct that those costs be properly allocated now."¹⁴ In its March 6, 2014 Order, the Commission affirmed the ALJ's recommendation and ordered that, "the Companies are directed to provide a report with their next SMT-C filing that identifies expenditures on all components of their Plan that have the potential to benefit their sister utilities in other states **when they begin deploying smart meters** and that describes the method through which the Companies will receive credit from FirstEnergy Service Company for those expenditures."¹⁵ The Commission also ordered, "that to the extent any system upgrades are currently being utilized by the Companies' sister utilities, the Companies are directed to properly allocate those costs to the sister utilities." Currently, no sister utility of the Companies in other states is deploying smart meters.¹⁶ If and when that occurs, the Companies will provide a report within its SMT-C filing that identifies expenditures on all components of their Revised Deployment Plan that have the potential to benefit their sister utilities when they begin deploying smart meters and will describe the method through which the Companies will receive credit from FirstEnergy Service Company for those expenditures.

¹⁴ *Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company For Approval of Their Smart Meter Deployment Plan*, Docket Nos. M-2013-2341990, M-2013-2341991, M-2013-2341993, and M-2013-2341994 (Recommended Decision November 8, 2013) pgs. 28, 59.

¹⁵ *Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company For Approval of Their Smart Meter Deployment Plan*, Docket Nos. M-2013-2341990, M-2013-2341991, M-2013-2341993, and M-2013-2341994 (Order entered March 6, 2014) pg. 45 (emphasis added).

¹⁶ *Id.*

III. PROGRAM MANAGEMENT

III.I PROGRAM GOVERNANCE

The Companies understand that program governance is essential to efficient and effective smart meter planning and implementation. The Companies continue to execute and refine their Program Management Office (“PMO”) activities and processes. The PMO is responsible for proper governance around work planning, risk/cost/resource/facility management, and contract/deliverable management. The PMO was created leveraging both the leading practices from other utilities involved in smart meter projects and the experiences and support of the Companies’ various service providers including Accenture, Inc., Harbourfront Group, Inc., and Itron, Inc. (“Itron”).

Key activities during the Reporting Period

- Addressed policies, procedures and protocols involving customer privacy and customer smart meter disputes.
- Completed the build out of the Smart Meter Test Lab and Operations Center in Connellsville, Pennsylvania. The Dunbar Facility houses the smart meter lab to test smart meters and associated network equipment.
- This facility includes a dedicated smart meter inventory, a staging area for all smart meter network equipment prior to deployment and a Smart Meter Operations Center (“SMOC”), which will be the command post for monitoring the entire smart meter system as it goes online across the four Companies’ service territories.
- Developed and refined a smart meter benefits tracking tool and supporting data collection processes.
- Conducted the RFP process and evaluation and selected Tesco’s Meter Manager Software Suite to support full meter deployment.
- Began an RFP evaluation process for the selection of a smart meter incident identification and problem management tool and processes. A solution is expected to be finalized by the end of the year.

III.II FINANCIAL ANALYSIS/COST RECOVERY

In response to Act 129 and subsequent Commission Orders, the Companies developed a detailed smart meter financial analysis model (“Financial Model”) to estimate and analyze the future costs and potential operational cost savings associated with the smart meter project.

III.II.a Cost Recovery Overview

As discussed in the Regulatory section, the Companies’ base rate cases were approved April 9, 2015. With this approval, smart meter revenue requirements were rolled into base rates and the Companies’ SMT-C Riders were set to zero. Consistent with the Commission’s Order, the Companies may periodically file for future adjustments to the SMT-C Riders in order to adjust both for costs in excess of those included in rates and to flow back realized savings resulting from the installation of smart meters.

III.II.b Benefits Realization

The Companies have developed a benefit tracking tool and reporting process. This tool and supporting procedures and protocols will support the Companies in tracking, measuring and flowing back operational cost savings realized through the installation of smart meters. As mentioned in the Regulatory Section, the settlements in the rate case proceedings identified the categories in which smart meters savings will be measured. Specifically, for purposes of measuring smart meter savings, baselines of pre-existing cost impacts and/or relevant existing employee complements were established for the following categories:

(1) Meter Reading; (2) Meter Services; (3) Back Office; (4) Contact Center; (5) Theft of Service; (6) Revenue Enhancements; (7) Distribution Operations; (8) Load Research; and (9) Avoided Capital Costs. Though the Companies do not expect to realize actual smart meter related operational cost savings until sometime in late 2016, they continue to monitor smart meter deployment activities should such cost savings occur prior to this time frame.

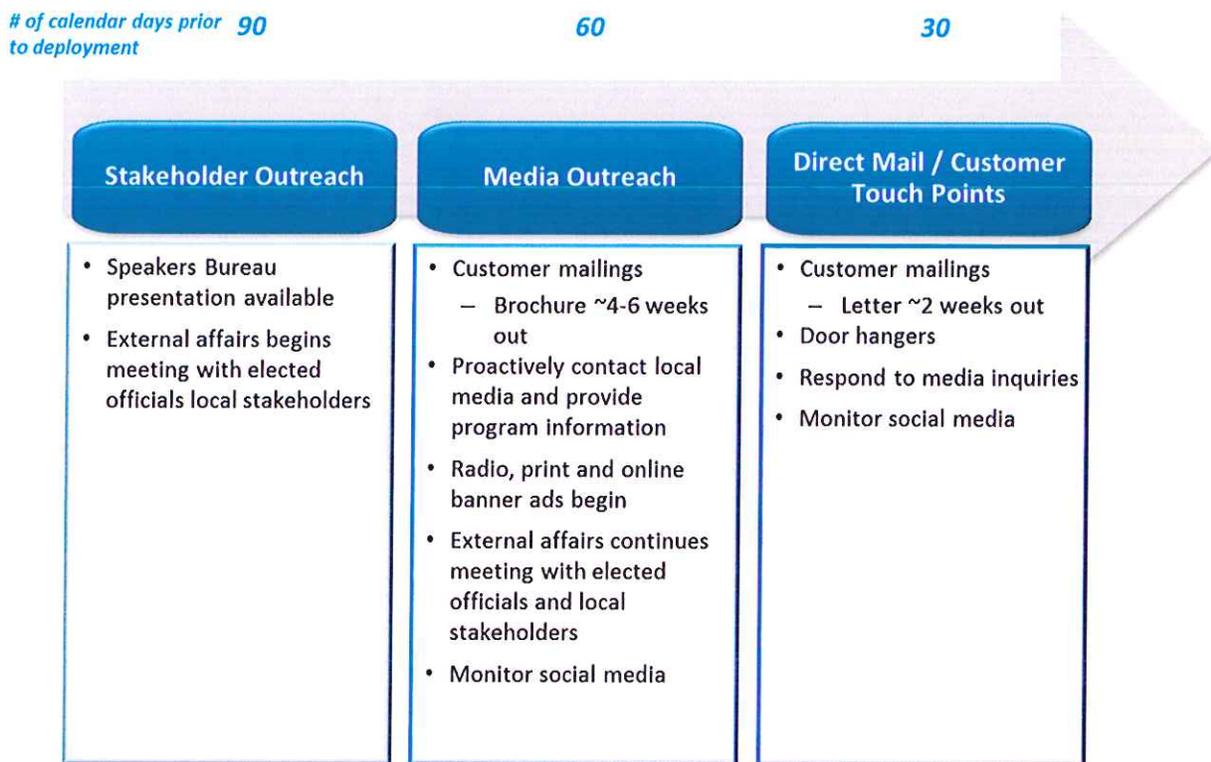
IV. BUSINESS READINESS

IV.I COMMUNICATIONS AND CUSTOMER ENGAGEMENT

The program team developed a Communications Plan for external parties such as the Commission, public officials, interested stakeholders and consumers, with goals of educating customers, managing expectations, providing pertinent status updates, and when appropriate, vetting issues that are identified during the Solution Validation Stage.

Customer communications have followed the “90-60-30” day strategy (see Figure 4 below), in which materials are distributed to customers based on the deployment schedule and consistent with the Companies’ Communications Plan that was approved by the Commission on June 5, 2014 at Docket Nos. M-2013-2341990, M-2013-2341991, M-2013-2341993 and M-2013-2341994.

Figure 4: Communications Plan



Additional educational information continues to be reviewed and posted on the Companies’ website (which is also available upon request in written form). This link (<https://www.firstenergycorp.com/PAsmartmeter>) provides easy access to:

- General program information and overview
- Talking points/frequently asked questions (FAQs), which cover topics such as:
 - How smart meters work
 - Benefits of smart meters
 - Installation and deployment overviews

- Where to go for additional information
- Fact sheets on issues such as radio frequency/health, security and privacy and other online resources
- Customer materials (brochures, letters, door hangers)
- Description of installers
- Contact information
- Deployment schedule

The Companies monitor customer interactions. Through the end of the Reporting Period, there have been:

- Over 32,000 page views to the smart meter website
- Just over 1,300 smart meter-related calls made to the Companies' contact centers
- Approximately 400 – or 0.36% – customers refusing a smart meter

Thus far during the Solution Validation Stage, the Companies have encountered approximately 400 customers who, for various reasons refused to allow installation of a smart meter at their premises. After discussing the issue with other Pennsylvania utilities and meeting with the OCA and Commission staff, the Companies have developed a pilot process for resolving disputed installations. The primary goals of the pilot are (i) to develop a process that will allow 100% installation of smart meters in Penn Power's service territory by the end of the Solution Validation Stage to facilitate cost effective mesh network optimization; and (ii) to take what is learned through the pilot process and apply it in the Met-Ed, Penelec and West Penn service territories once full scale deployment begins.

The pilot targets approximately 100 of the approximate 400 customers who refused to accept a smart meter and lays out a multi-step education process for success. The first step focuses on customer education through a warm outreach to customers who currently have a disputed installation indicator. The Companies will make several attempts through various communications that are focused on trying to resolve individual customer concerns. Should the customer continue to refuse a smart meter, the final step may include disconnection of service. The Companies will track customer conversion at each step to understand how many customers agree to allow installation of the smart meters. Based on pilot results, the remaining Penn Power disputed accounts will be assessed for processing prior to the December moratorium on winter disconnects (requiring an early October start) and the lessons learned will be applied during full scale deployment.

Key activities during the Reporting Period

- Executed and refined approved Communications Plan
- Updated smart meter FAQs via the FirstEnergy website
- Developed talking points to answer customer questions and provided the talking points to all employees who interact with customers
- Distributed customer notification materials to advise customers of upcoming smart meter installations. The following are the results through the end of the Reporting Period:
 - Brochures distributed since May 2014: 111,756 residential and 6,766 commercial brochures
 - Installation letters distributed since June 2014: 108,426 letters
 - Print ads and online banners ads (began in June 2014)
 - Door hangers distributed since July 2014: approximately 110,000

- Field installer cards given to installers and customer-facing employees to hand to customers who have questions

IV.II EDUCATION – EMPLOYEE TRAINING AND AWARENESS

In addition to customer education, the Companies have dedicated resources that focus on employee training and awareness.

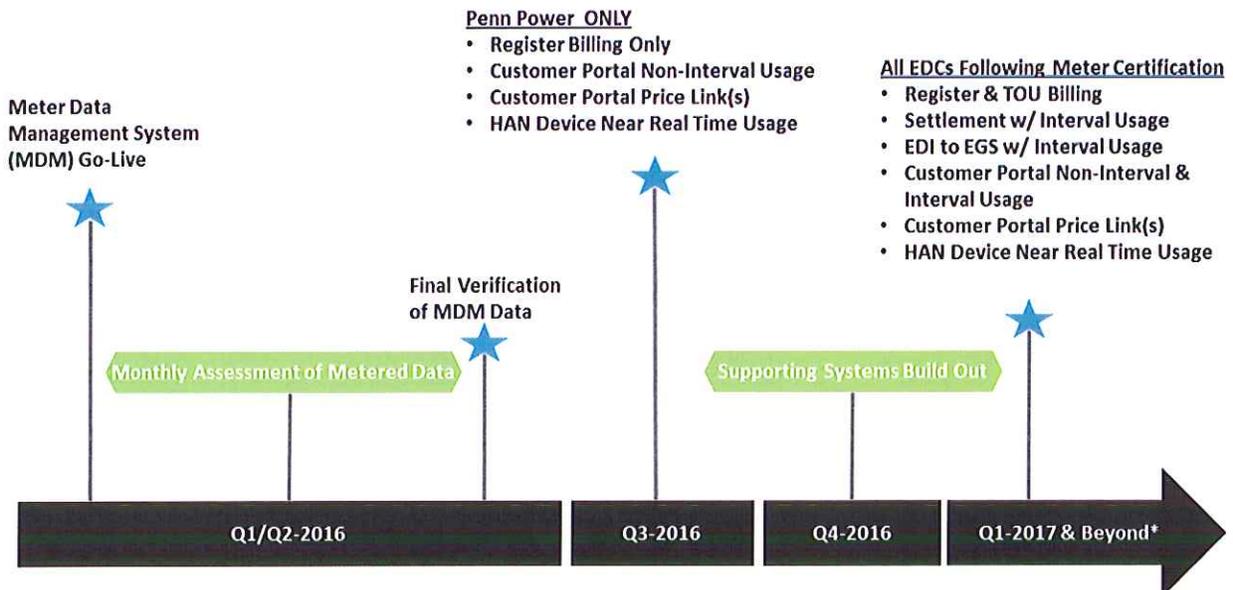
Key activities during the Reporting Period

- Trained over 3,800 employees in 260 sessions
- Continued to refine communications to field employees, contact center and other key audiences
- Engaged key leadership throughout the Companies in program activities and status
- Published smart meter FAQs, talking points, customer materials and program status on the internal FirstEnergy portal and in employee communication channels

IV.III BUSINESS PROCESS REDESIGN TO ACCOMMODATE SMART METER OPERATIONS

During the Reporting Period, the Companies held business process redesign workshops to identify, develop and finalize processes and technology capabilities that will support smart meter operations throughout the program and into steady-state activities. Processes were identified and grouped based on smart meter functionality requirements as identified by Act 129 and the Implementation Order. As the program team continues working through these processes, the team is continually evaluating the process and technical impacts for potential future smart meter uses (such as RSS, theft of service detection and outage integration). Below is a summary of the anticipated functionality and systems schedule:

Figure 5: Smart Meter Functionality and Back-Office Systems



* From Q1 of 2017 forward, there is an anticipated three-month lag between when a meter is deployed and when it is certified as ready for automated billing

Key activities during the Reporting Period

- Business Processes continued to be refined to support deployment and prepare for automated billing (estimated to be available in third quarter of 2016 for Penn Power)
- Completed construction of the Dunbar Facility and moved SMOC operations to its new location
- Completed workshops on the following topics and issues:

Customer interactions and communications

- Disputed installation pilot
- Customer requested smart meter testing

Deployment support

- Meter and FAN device lifecycle management
- Excluded and complex meter types support
- Network optimization and route acceptance

SMOC

- Incident identification and problem management
- SMOC monitoring
- SMOC operations management
- Remote meter and FAN programming firmware and configuration management

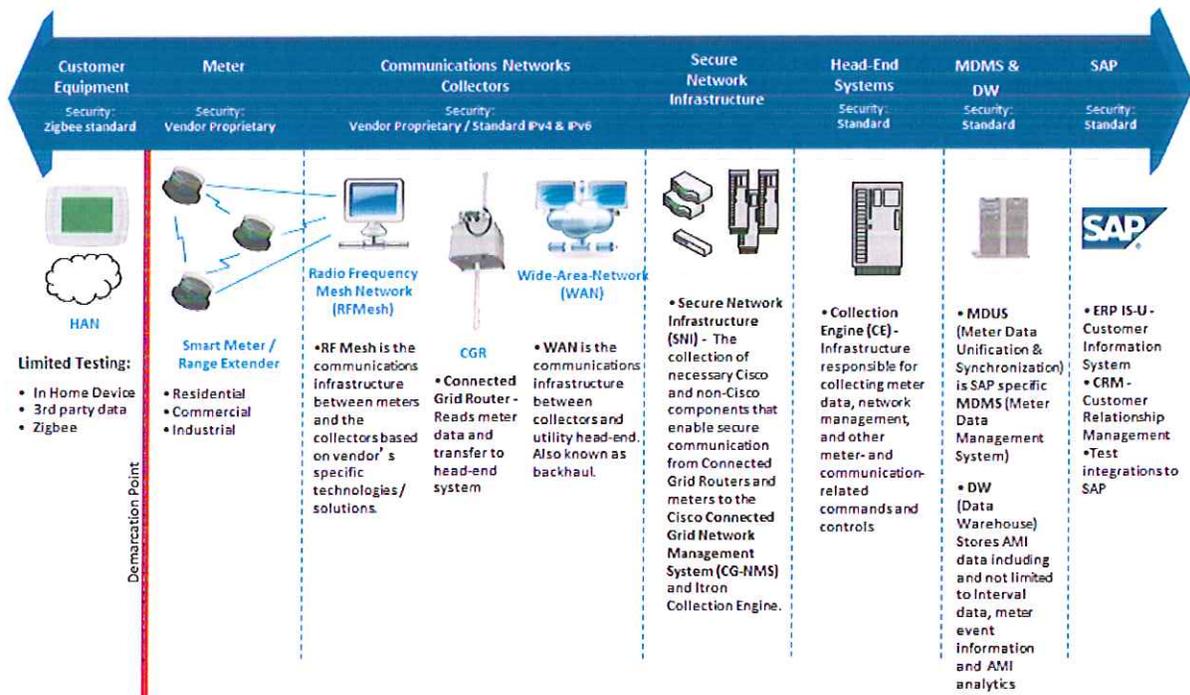
Meter data management and billing

- Register reads validation, editing and estimation (VEE)
- Reading and billing exceptions
- Customer register read submission
- Manual billing
- Billing certification

V. END-TO-END SOLUTION

The following diagram shows the major components within the Companies' smart meter solution, which was approved as part of the Revised Deployment Plan.

Figure 6: The Companies' Smart Meter Solution



The solution is comprised of the following key components, starting from the meter:

Smart meters – The meters collect, store and transmit total consumption data, interval data and meter events to core applications after configuration, and communicate with HANs.

Key activities during the Reporting Period

- Smart meter installation are on schedule, expecting to complete Penn Power's service territory in December 2015
- More complex meter configurations are being created and tested
- Ordered and received transformer-rated meters for deployment
- Deployment of 2,711 transformer-rated meters
- Meter inventory for Pennsylvania has been swapped for smart meters

Communication Network Collectors – The CGRs and REs that read and transmit meter data and events to the collection engine. The Companies' solution leverages Itron's radio frequency ("RF") mesh technology. No significant issues related to this equipment were noted during the Reporting Period.

Key activities during the Reporting Period

- Communications network build-out completed for Cranberry Township and in progress for the communities of New Castle, Hermitage, Greenville and Mercer
- 105 CGRs installed in the Penn Power service territory
- 13 REs installed as part of FAN optimization in Penn Power service territory
- Site surveys are in progress for 2016 deployment activities

Wide Area Network (WAN) – This network (also known as the backhaul communications network) is the communication system between the collectors and the collection engine and includes data center equipment and control software. Smart meter information is transmitted through a Secure Network Infrastructure. No significant issues related to this equipment were noted during the Reporting Period.

Key activities during the Reporting Period

- Started to operate the SMOC from the Dunbar facility
- Business processes for monitoring the communications network have been executed and refined

Collection Engine – The collection engine software collects and delivers information from the meters via the collectors to the Meter Data Unification and Synchronization (“MDUS”). No significant issues related to this equipment were noted during the Reporting Period.

Key activities during the Reporting Period

- Monitoring of the collection engine continues with positive results – Preliminary test data indicates that greater than 95% of the deployed meters have consistently communicated with the collection engine

MDUS – The MDUS stores meter data from smart meters – including interval meter reads – and processes raw meter data with validate, edit and estimate algorithms for use in corporate systems, such as billing and customer service. The MDUS will be integrated with utility billing and customer care software (such as SAP’s solution for utilities which is used by the Companies) following the Solution Validation Stage. No significant issues related to this equipment were noted during the Reporting Period.

Key activities during the Reporting Period

- Continued the design, build and test activities for meter data management system in preparation for cutover to automated meter reading in Penn Power’s service territory

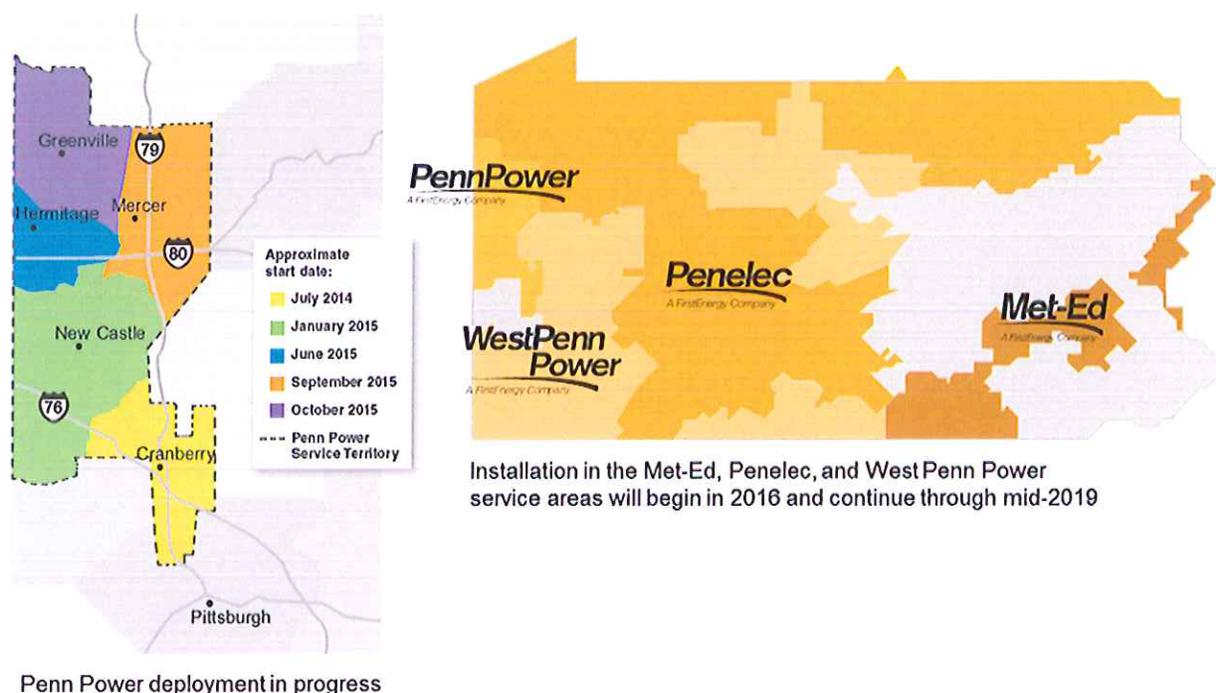
HAN – The HAN is a network contained within a user’s home that communicates information to customer-owned in-home devices such as in-home displays. The red line in Figure 6 depicts the demarcation point between the Companies’ infrastructure and the customer-owned equipment. Other than supporting early adopter’s HAN capabilities, the Companies do not assess the functionality of HAN equipment.

VI. DEPLOYMENT

The Companies are following the Revised Deployment Plan. The Companies approved deployment strategy involves three distinct stages: (i) the Post Grace Period (“PGP”) Stage; (ii) the Solution Validation Stage; and (iii) the Full Scale Deployment Stage. The PGP Stage, which began in January 2013 and will conclude with the completion of deployment, addresses the need to provide smart meters for all new service requests received on or after January 1, 2013, and for all customers requesting a smart meter prior to their scheduled installation date. It also addresses contract negotiations, final RFPs and other pre-deployment activities. The Solution Validation Stage incorporates two activities: the build-out of the infrastructure needed to install smart meters and a testing period in which a “mini version” of the end-to-end smart meter solution is constructed and tested prior to Full Scale Deployment. The stage began with the installation of smart meters in the Penn Power service territory, consists of related non-production testing, and is anticipated to be complete by the end of 2015. The Full Scale Deployment Stage is expected to begin in January of 2016 upon completion of the Solution Validation Stage and will continue until all meters are installed through 2022.

The deployment schedule is included on FirstEnergy’s website at:
<https://www.firstenergycorp.com/help/pa-smartmeter/schedule.html>

Figure 7: Smart Meter Deployment Schedule



VI.1a PGP and Solution Validation Stage

Per the Revised Deployment Plan, Penn Power deployment is in progress and is continuing as designed. With approximately 110,000 meters and supporting FAN installed in the Penn Power service territory, the Companies have tested the scalability and are in the process of resolving minor communication,

functionality and installation problems. Processes have been executed and refined. During the Reporting Period, the Companies encountered one concern. During deployment in Cranberry, the Companies determined a meter infrastructure failure was caused by the aged (circa 1950) 60 Amp meter socket with a loose jaw, which is customer-owned equipment. Because of safety concerns, the Companies are replacing all 60 Amp meter sockets with 100 Amp meter sockets throughout the Companies' respective service territories (currently estimated at approximately 45,000 - 60,000 meter sockets) during scheduled deployment. This estimate is subject to change as additional information becomes available. As an additional safety precaution, the Companies will also test the jaw tension as part of the normal installation process if it is suspected that a meter socket's jaws are of insufficient tension that could possibly cause a meter infrastructure failure. Currently, the cost of replacing all 60 Amp meter sockets is within the budget included in the Revised Deployment Plan for anticipated installation maintenance/repair work. These costs will be recovered consistent with the rate making treatment as described in Section III.II Financial Analysis/Cost Recovery.

Key activities during the Reporting Period

- One Early Adopter as of June 30, 2015
- Pre-sweep¹⁷ work completed in Met-Ed, Penelec, and West Penn
- 110,000 smart meters deployed in Penn Power, and approximately 50,000 additional meters in Met-Ed, Penelec and West Penn, as of the end of the Reporting Period
- Route acceptance and billing certification processes have been created. The operation and accuracy of the smart meters are being assessed with no major issues to-date
- Created an approach to satisfactorily resolve 60 Amp meter socket concern
- Consistent with best practices, continued to perform on-cycle manual meter reading pre- and post-smart meter exchange

VI.Ib Full Scale Deployment Stage

The Full Deployment Stage will begin upon resolution of any major problems encountered during the Solution Validation Stage and will continue until all meters are installed on or before December 31, 2022. During this stage, the remainder of the smart meter infrastructure will be concurrently built in each of the other three Companies' service territories, starting with the most populated areas first. The Companies expect to install approximately 98.5% of all meters between January 1, 2016 and mid-2019, with the remaining 1.5% of the meters being installed thereafter through December 31, 2022.¹⁸ Although the meters upon installation will be capable of providing all meter functionality required by Act 129 and the Commission's Implementation Order, actual functionality will become available upon completion and testing of the mesh communication network in the area, currently expected to lag installation by approximately three months.

¹⁷ Pre-sweep is a leading practice where, prior to smart meter deployment, non-emergency/safe conditions such as meter socket detachment or meter discoloration are noted for repair during deployment

¹⁸ The remaining 1.5 % to be installed are those installations that may require alternative communication solutions or involve difficult to reach locations such as remote cabins

VII. CONCLUSION AND LOOK AHEAD

Absent unforeseen events, the Companies anticipate on-time completion of the Solution Validation Stage by the end of 2015 and commencement of full scale deployment in early 2016. Below are some of the key activities expected to take place through the end of 2016:

VII.I HIGH LEVEL VIEW OF ACTIVITIES FOR REMAINDER OF 2015 AND 2016

- Complete meter deployment in Penn Power's service territory by December 2015
- Complete FAN equipment installation in Penn Power's service territory by December 2015
- Continue to build out SMOC to monitor status and health of network and meters consistent with deployment schedule
- Complete Solution Validation Stage by end of 2015
- Continue information-sharing sessions with peer utility companies and interested stakeholders

Below are the major milestones the Companies will strive to meet following the completion of the Solution Validation Stage:

- Deployment in the other Companies' service territories to commence in early 2016 consistent with the Revised Deployment Plan
- Automated billing in Penn Power's service territory using smart meter usage targeted for third quarter of 2016
- Direct Access for Penn Power customers (via customer portal and HAN) and Remote Programming capabilities (for non-early adopters) targeted for third quarter of 2016 (in conjunction with automated billing in Penn Power)
- RSS functionality will be further defined with an RSS assessment and roadmap¹⁹
- Outage Communications Support ("OCS") functionality further defined with an OCS assessment and roadmap²⁰

VII.II CONCLUSION

In sum, the Companies are following the Revised Deployment Plan without any material modifications being deemed necessary at this time. Both the number of meters installed, as well as the amounts spent thus far, are consistent with the projections included in the Revised Deployment Plan. The Companies have not encountered any significant problems with any of the components selected as part of their smart meter solution.

Met-Ed, Penelec, Penn Power and West Penn thank the Commission for the opportunity to provide a status update on their Smart Meter Implementation Plan and would be pleased to answer any questions the Commission or its Staff may have.

¹⁹ For RSS an assessment is proposed to be completed in 2015. Once this is completed, an iterative RSS roadmap will be created to plan out the RSS functionality

²⁰ For OCS an assessment is proposed to be completed in 2015. Once this is completed, an iterative OCS roadmap will be created to plan out the OCS functionality

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

| | | |
|--|----------|----------------------------------|
| Joint Petition of Metropolitan Edison | : | Docket No. M-2013-2341990 |
| Company, Pennsylvania Electric Company, | : | M-2013-2341991 |
| Pennsylvania Power Company and West | : | M-2013-2341993 |
| Penn Power Company for Approval of | : | M-2013-2341994 |
| their Smart Meter Deployment Plans | : | |

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true and correct copy of the foregoing document upon the individuals listed below, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a participant).

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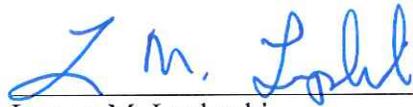
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