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November 2, 2011

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VIA OVERNIGHT MAIL

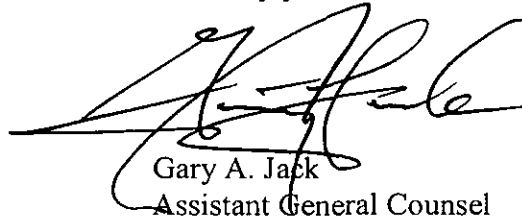
Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120

**Re: Duquesne Light Company Petition for Approval of
Smart Meter Procurement and Installation Plan**
Docket No: M-2009-2123948

Dear Secretary Chiavetta:

Enclosed for filing please find one (1) original and three (3) copies of a status update for the milestone "Establishment of Plans for Installation of Meters and Outside Communications and Training" in connection with Duquesne Light's Smart Meter Program.

Sincerely yours,



Gary A. Jack
Assistant General Counsel

Enclosures

cc: Service List (via United States First Class Mail)

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Dated: November 2, 2011

DUQUESNE LIGHT COMPANY
Smart Meter Procurement and Installation Plan
Docket No. M-2009-2123948

**Establishment of Plans for
Installation of Meters and
Outside Communications and Training
Status Update Filing to PUC**

November 2, 2011

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Duquesne’s Smart Meter Implementation Plan Update PUC Filing

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I. Introduction

Pursuant to Act 129 of 2008, signed into law by Governor Rendell on November 14, 2008, and the Smart Meter Procurement and Installation Implementation Order (Docket No. M-2009-2092655) issued on June 24, 2009 by the Commission, Duquesne Light submitted a Smart Meter Procurement and Installation Plan (“SMPI Plan” or “Plan”) on August 14, 2009. See *Duquesne Light Smart Meter Procurement and Installation Program, PUC Commission Docket No. M-2009-2123948, August 14, 2009*. This Plan was approved by the Commission on May 11, 2010, and Duquesne Light subsequently submitted an amended Smart Meter Plan on June 10, 2010, to comply with the issues addressed in the PUC’s approval order. See *Smart Meter Plan, Revision 1, Docket No. M-2009-2123948, June 10, 2010*.

Pursuant to the approved Plan, Duquesne committed to specific status update milestones to the Commission, such as the “Establishment of plans for installation of meters and outside communications and training” milestone due to the Commission on or about November 1, 2011.

The purpose of this filing update is to outline the current status of Duquesne’s Installation and Training Plan for smart meters and the associated communication network required to meet the requirements outlined in the Act and smart meter plan.

II. Smart Meters Deployment Plan Overview

Duquesne will deploy an Advanced Metering Infrastructure (“AMI”) system consisting of smart meters and the associated communication infrastructure to its 612,000 residential and commercial customers in four phases over a multi-year period. Duquesne will begin with a 52 Smart Meter Proof of Concept (“POC”) (Phase 1) to lab test the equipment and functionality. Upon completion of the POC, Duquesne will implement a 5,000 Smart Meter Technology Test (Phase 2) to further test the AMI system functionality and some of the advanced features outlined in the PUC Implementation Order. Upon successful completion of the Technology Test, Duquesne currently plans to implement an approximate 25,000 Smart Meter Customer Pilot (Phase 3) to gauge and evaluate consumer confidence, acceptance and level of interest in new programs and service offerings available with AMI. The results of Phase 3 will drive the features and functionality rolled out in Phase 4, which is the Full Scale Deployment and Rollout (Phase 4). The implementation details are defined below by phase. These four phases have not been fully analyzed and or received full internal Duquesne board approval and are subject to change prior to submitting the final full cost filing to the Commission for its approval in December 2011.

	Project Phase	# Meters¹	Period	Deployment Rate (meters/wk)	Completed Meter Install Date
1	Proof of Concept (lab only)	52	Q4 2011–Q4 2012	26	Q4 2011
2	Technology Test	5,000	Q1 2013–Q4 2013	1,000	Q1 2013
3	Customer Pilot	20,000-30,000	Q1 2014–Q4 2014	2,000	Q2 2014
4	Full Scale Deployment & Rollout	577,000	Q3 2014–TBD	2,000-2,700	TBD
1. Includes both residential and commercial meters, these are approximations and are subject to change.					

The Implementation Plan contains anticipated schedules and timelines to organize future activities; however, Duquesne recognizes that some actions will need to be planned and developed with further detail as more information becomes available. Duquesne would also like to note, this filing will address the field deployment phases only (Phases 2-4). Phase 1 will be conducted in a test environment only.

Smart Meters

The meter installation includes the removal and disposal of the existing meters at each customer premise and replacement of these meters with new solid state smart meters. The selected AMI vendor *will provide installation of the smart meters for Phases 2-4. The installation of meters will adhere to a strict Communication Outreach Plan to ensure that customers, municipalities, law enforcement, stakeholders and the general public are aware of the infrastructure changes and how they may be impacted. Customer outreach through various media outlets will be used as a way to ease customer's concerns and keep them informed during the meter change out process.*

Smart meters will be installed on a route by route basis to optimize deployment efficiency and ensure billing cycles and actual meter reads are not adversely affected.

Home Area Network & Web Portal

The AMI infrastructure will include a ZigBee HAN interface solution enabling the deployment of Home Area Network ("HAN") devices to residential customers. These devices may include In-Home Displays ("IHDs"), Programmable Communicating Thermostats ("PCTs") and Load Control Devices ("LCD"). Duquesne may provide, pay for and install such devices to customers during Phase 2 – 5,000 Smart Meter Technology Test and Phase 3 – 20,000-30,000 Smart Meter Customer Pilot to ensure technology functionality and operations and to research customer response; however, it is likely the customer will be responsible for purchasing and installing HAN devices during Phase 4 - Full Scale Deployment & Rollout and thereafter. Duquesne will also provide a web portal to enable customers to have direct access to usage data.

Communication Network

Duquesne, and or its communication integrator, will be responsible to install the backhaul communication infrastructure required for cell relay communication. This will include the installation of the AMI cell relays and repeaters and the associated backhaul and intermediate communication infrastructure including radios, antennas, and pole/tower make ready work required to successfully install the communication infrastructure at the base stations. The communication network will be deployed in parallel with the installation of smart meters and cell relays.

IT Integration

Itron will be responsible for the installation and configuration of the OpenWay Collection Engine ("CE") software and assist with the integration of AMI to upstream systems including the Meter Data Management System ("MDMS") and Customer Care and Billing ("CC&B") systems, and the Workorder Management ("MWM") for deployment. The CE will include the OpenWay Reporting System ("ORS")

and the OpenWay Controls (“OWC”) software to allow Duquesne to monitor cell relay performance and communication statistics and manage configuration parameters and firmware download activities. The CE will be installed prior to any cell relays, repeater or meter installations. Duquesne will be responsible for the installation of related IT application and database servers and smart meter security keys. Server installation will be completed approximately three months prior to the installation of the AMI CE for the Phase 2 – 5,000 Smart Meter Technology Test which will include the installation of the enhanced security appliance.

IT integration will be ongoing occurring incrementally over time in conjunction with the deployment of the new service offerings and utility enhancements. Smart meter functionality and customer service enhancements will rely on Duquesne’s back-office system implementations and rollout of various CC&B and MDMS features/functionality.

Duquesne plans to set forth a more detailed installation and implementation plan that clearly indicates scope, roles, and responsibilities for the installation of the Smart Meters, Communications Infrastructure and IT and back office systems once final decisions and internal approvals have been solidified. A high level milestone schedule is provided in Section III.

III. Smart Meter Program Schedule & Milestones

	Milestone	Start Date	End Date	Responsibility of
Phase 1 -POC				
1	Order AMI Equipment (meters, cell relays, range extenders, backhaul radios)	9/2011	9/2011	DLC
2	Order HAN Equipment (IHD, PCT)	11/2011	11/2011	DLC
3	Procurement of IT Hardware (Servers)	10/2011	10/2011	DLC
4	Network Provisioning (firewalls, IP addressing, etc.)	10/2011	12/2011	DLC
5	Base Install Configuration (OS, System Management, Anti-virus, etc.)	11/2011	11/2011	DLC
6	Install CE, ORS, OWC, Direct Connect Application	11/2011	11/2011	Itron
7	CE Training	11/2011	11/2011	Itron
8	System Configuration (provision meters, set up configuration groups, etc.)	11/2011	12/2011	DLC/Itron
9	Lab Set-Up	12/2011	2/2012	DLC
10	Component Test (Network, Meter, communication, CE, HAN)	10/2011	10/2012	DLC
11	Installation of AMI Equipment (Meters, cell relays, repeater)	12/2011	1/2012	DLC
12	Installation of Backhaul Communication Network	12/2011	1/2012	DLC
13	System Test (CE, device registration)	1/2012	10/2012	DLC
14	Installation of HAN Equipment	2/2011	10/2012	DLC
15	Technology Feature and Functionality Test (meters, cell relay, repeater, HAN, communications, CE)	2/2011	10/2012	DLC
16	Back-office Integration Testing	6/2012	12/2012	DLC
17	POC Close-out	12/2012	12/2012	DLC
Phase 2 – Technology Test				
1	Procurement of IT Hardware (Servers)	8/2012	12/2012	DLC
2	Network Provisioning (firewalls, IP addressing, etc.)	8/2012	12/2012	DLC

3	Base Install Configuration (OS, System Management, Anti-virus, etc.)	11/2012	11/2012	DLC
4	Install CE, ORS, OWC, Direct Connect Application	12/2012	12/2012	Itron
5	System Configuration (provision meters, set up configuration groups, etc.)	2/2013	2/2013	DLC/Itron
6	Component Test (Network, Meter, communication, CE, HAN)	1/2013	1/2013	DLC
7	Order AMI Equipment (meters, cell relays, range extenders, backhaul radios)	10/2012	12/2012	DLC
8	Installation of AMI Equipment (Meters, cell relays, repeaters)	1/2013	3/2013	Itron
9	Installation of Backhaul Communication Network	1/2013	1/2013	DLC
10	System Test (CE, device registration)	12/2012	12/2013	DLC
11	Technology Feature and Functionality Test (meters, cell relay, repeater, HAN, communications, CE)	3/2012	12/2013	DLC
12	Back-office Integration Testing	9/2012	12/2012	DLC
13	CE Acceptance Test	4/2013	6/2013	Itron/DLC
14	Technology Test Close-out	12/2013	12/2013	DLC
Phase 3 – Customer Pilot				
1	Network Provisioning (firewalls, IP addressing, etc.)	12/2013	12/2013	DLC
2	System Configuration (provision meters, set up configuration groups, etc.)	1/2014	1/2014	DLC/Itron
3	Component Test (Network, Meter, communication, HAN)	8/2013	9/2013	DLC
4	Order AMI Equipment (meters, cell relays, range extenders, backhaul radios)	6/2013	12/2013	DLC
5	Installation of AMI Equipment (Meters, cell relays, repeaters)	1/2014	6/2014	Itron
6	Installation of Backhaul Communication Network	12/2013	1/2014	DLC
7	System Test (CE, device registration)	1/2014	12/2014	DLC
8	Customer Pilot Testing (features/functionality tests)	1/2014	12/2014	DLC
9	Integration with Back-office Systems	12/2013	12/2013	DLC
10	Annual Scalability Acceptance Test	6/2014	6/2014	Itron/DLC
11	Customer Pilot Close-out	12/2014	12/2014	DLC
Phase 4 – Full Scale Rollout				
1	Network Provisioning (firewalls, IP addressing, etc.)	12/2013	12/2013	DLC
2	System Configuration (provision meters, set up configuration groups, etc.)	1/2014	TBD	DLC/Itron
3	Component Test (Network, Meter, communication, HAN)	3/2014	TBD	DLC
4	Order AMI Equipment (meters, cell relays, range extenders, backhaul radios)	1/2014	TBD	DLC
5	Installation of AMI Equipment (Meters, cell relays, repeaters)	9/2014	TBD	Itron
6	Installation of Backhaul Communication Network	3/2014	TBD	DLC
7	System Test (CE, device registration)	1/2014	TBD	DLC
9	Integration with Back Office System (HAN, DR, etc.)	TBD	TBD	DLC
10	Annual Scalability Acceptance Test (annually)	6/2014	TBD	Itron/DLC
11	Full scale rollout Close-out	TBD	TBD	DLC
Note: These dates are estimates and are subject to change prior to submittal of the Final Full Cost Filing in December 2011.				

IV. Staff Training Plan

Duquesne along with its selected AMI and Communication technology vendors will provide training to personnel on the ongoing operation of the systems. In addition, Duquesne will provide internal staff training on the technology and business process changes associated with the implementation of the Smart Meters project.

General Smart Meters/AMI System Training:

- **Background Review** – search for any criminal history and perform drug testing
- **Security Badge** – collect personal information, take picture and issue employee identification badge.
- **Electrical Workers Safety / Substation Entry Requirements** – conduct safety training discussing specific job hazards, use and requirements of personal protection equipment and fire rated clothing and training required for working in or around substation equipment.
- **OSHA, NERC and CIP Requirements** – conduct training / review of OSHA safety practices and requirements and NERC/CIP training compliance for security of critical infrastructure.
- **Internal Business Process Changes for Duquesne Personnel** – provide training to customer service representatives, internal IT support staff, etc. based on the business process changes implemented to support the project.

Customer Engagement Overview:

- **Customer Concerns / Issues** – Provide overview of Duquesne’s Customer Engagement process interaction with customer during the smart meter installation process. Address all customer complaints and claims pertaining to work performed during installation of the smart meter. Document each complaint and return information to project management office.
- **Access / Site Issues** – Provide overview for gaining access to industrial, commercial and residential properties, coordination of customer keys, and awareness for unsafe or special situations. Document tamper or theft of service conditions during the installation process.
- **Customer Follow Up** – A follow up survey will be conducted to ensure customer satisfaction.

AMI System Training:

- **Monitor System Performance** –utilize the CE software system to monitor system performance.

Field Technicians:

- **Field Tools/Application Software** – instruct field works how to utilize the manufacturer’s application software to trouble shoot meter and communication problems during or after meter installation.
- **System Security** – provide overview of system security function and specific security requirements for daily field work to perform ongoing maintenance activities on meters.

- **Meter Requirements/Functionality** – review specific meter requirements for residential, commercial and industrial customers and provide an overview of meter functionality and features required for ACT-129.
- **Communication System/Mesh** - provide overview of communication two-way network including LAN (meter mesh) and WAN (backhaul) required to obtain meter data, enable meter functionality and remote configuration changes as well as future upgrades.
- **Meter Installation/Troubleshooting** – provide training for the various meter configurations to ensure a safe and reliable operation of meter equipment. In addition, provide best practices for troubleshooting various field problems.
- **Collection of Site Data** – train field personnel to utilize the handhelds (or other means) to collect site data upon meter installation.
- **Service Order Completion** – train field workers how to utilize the work order system to manage daily work tasks and utilize data collected during equipment installation to complete service orders for meter and communication installation work.

Home Area Network Equipment:

- **Field Tools** - instruct field works how to utilize the manufacturer’s application software to troubleshoot home area network equipment and ZigBee communication problems during or after equipment installation.
- **System Security** - provide overview of system security function and specific security requirements for daily field work to perform ongoing maintenance activities on home area equipment.
- **ZigBee Wireless Network** - provide overview of ZigBee, LAN (meter mesh) and WAN (backhaul) communication systems for home area equipment.
- **Equipment Installation** – provide training to field workers for best installation practices of home area network equipment such as displays, thermostats and load curtailment devices.
- **Service Order Completion** - train field workers how to utilize the work order system to manage daily work tasks and utilize data collected during equipment installation to complete service orders for home area equipment.

OpenWay System: OpenWay training will be provided by Itron and conducted at Duquesne’s facility. This training will focus specifically on Itron’s OpenWay product and cover the following subjects:

- OpenWay AMI software components, functions and terminology
- OpenWay network (Cell Relay and network concepts)
- Meter Reading – both manually and over the network
- Cell Relay, meter and device management via the CE
- Meter configuration groups
- Firmware management
- Security

Meter Data Operations: Duquesne, with assistance by software vendors, will train operations staff on the following subjects focusing specifically on meter data.

- Validation Estimation Editing (VEE)
- Meter data troubleshooting
- Read contingency processes
- Meter data integration between CE systems and CIS/MDM

System Operations: System operations and support staff will be responsible for operating and monitoring the AMI system and will be trained by Duquesne on the following subjects.

- Meter read statistic reporting
- Network monitoring
- System component monitoring
- System maintenance and backups
- Automation and scheduling

IT Infrastructure Administration: System Administrators will be responsible for maintaining the AMI system and will be trained in the following areas.

- Server function and configuration
- Maintenance windows
- Backups/Recovery
- Disaster Recovery
- Security

Backhaul Communications: Training will be necessary on various communication systems that will be installed/upgraded during the Smart Meter deployment. The selected backhaul communication equipment vendors will be required to be onsite and provide training to Duquesne's telecommunication technicians on basic configuration and operation of equipment. Advanced training may be provided for Duquesne's communication engineers. Training will be provided on:

- Data Networking, new equipment
- RF tools
- Introduction to AMI and OpenWay
- OpenWay Network Theory of Operations

V. Customer Outreach and Communication Plan

Duquesne plans to conduct a Customer Outreach and Communications program to educate customers on the implementation of the Smart Meters Project. The plan will also include any necessary education for Electric Generation Suppliers. Details will be included in the Full Cost Filing submitted to the PUC in December of 2011.

VI. Conclusion

Presented herein, Duquesne has identified its proposed multi-year phased deployment approach and implementation plan for its Smart Meters Project. Duquesne will continue to work with the selected AMI provider and communications equipment suppliers to solidify schedules and critical path items. *The installation plans and dates presented herein have undergone evaluation and study, but are subject to possible change prior to the full cost filing submitted to the PUC at the end of the year and based on further review and Duquesne internal board approval.* Duquesne understands the importance of training personnel on the equipment and business process changes that will occur before, during and after the implementation of AMI and will begin its customer education and internal training programs upon approval of its full filing submitted in December 2011.

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BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION PA PUBLIC UTILITY COMMISSION
SECRETARY'S BUREAU

DUQUESNE LIGHT COMPANY :
Smart Meter Procurement and : Docket No. M-2009-2123948
Installation Program :

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the Milestone Status Update for Duquesne's Smart Meter Program in the above-referenced proceeding has been served upon the following persons, in the manner indicated, in accordance with the requirements of § 1.54 (relating to service by a participant):

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