STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

COMMONWEALTH EDISON COMPANY	:	
	:	
Petition to approve proposed Federal Stimulus	:	No. 09-
Project and associated tariffs	:	
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Direct Testimony of

MICHAEL J. MEEHAN

Vice President,
AMI Operational Implementation,
Commonwealth Edison Company

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I. Executive Summary and Introduction

A. Witness Identification

Q. Please state your name and business address.

A. My name is Michael J. Meehan. My business address is 1919 Swift Drive, Oak Brook, Illinois 60523.

Q. By whom and in what position are you employed?

A. I am Vice President, AMI Operational Implementation for Commonwealth Edison Company ("ComEd").

B. Purposes of Direct Testimony

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to address a number of issues relating to the deployment of AMI as proposed in ComEd's application requesting federal assistance pursuant to the American Reinvestment and Recovery Act of 2009 ("ARRA"). First, I explain the types of advanced meters and Information Technology ("IT") to be deployed in the expansion of the footprints within which ComEd has proposed to deploy the Advanced Metering Infrastructure ("AMI") Pilot in its service territory. (see ICC Docket No. 09-0263) Second, I address the expected benefits relating to the deployment of the AMI as proposed in the ARRA application. Third, I address the expansion of the contiguous footprint know as the I-290 Corridor[1] of the AMI Pilot to incorporate all of the Maywood Operating Center[2]. Finally, I present the forecasted incremental capital expenditures and

[1] The I-290 Corridor is located in ComEd's Maywood Operating Center and is composed of 9 towns, Bellwood, Berwyn, Broadview, Forest Park, Hillside, Maywood, Melrose Park, Oak Park and River Forest.

[2] The portions of O'Hare International Airport that fall within the Maywood Operating Center will not be included for purposes of expanding the AMI Pilot to the Maywood Operating Center.

Operating and Maintenance expenses that will be incurred as a result of the expansion of AMI footprints (Maywood Operating Center and the City of Chicago) that is the subject of the proceeding in ICC Docket No. 09-0263.

C. Background and Qualifications

Q. What are your current duties and responsibilities?

A. As Vice President, AMI Operational Implementation, I have responsibility for all of the required business process changes, meter and network installations, and the business case validation for the AMI pilot project. I am also responsible for the information technology modifications for both the AMI Pilot and the AMI Customer Application Plan. In addition to these duties, I also have responsibility for the Regulatory Programs area.

Q. What was your earlier professional experience?

A. I have been employed by ComEd since 1979. During my employment, I have held various positions in the Information Technology Department, and have twenty-five years' experience in developing and supporting a wide variety of computer applications. From January 1998 through August 2004, I served as ComEd's Director of Customer Systems and Open Access, and was part of the leadership team that implemented Open Access for ComEd. From 2005 until the current year, I was the Director of Regulatory Programs for ComEd.

Q. What is your educational background?

A. I hold a Bachelor of Science in Mathematics and Computer Science from Loyola University of Chicago.

Q. Have you previously testified before the Illinois Commerce Commission ("Commission" or "ICC")?

A. Yes. I previously filed testimony on behalf of ComEd in Docket Nos. 99-0013, 99-0117, 00-0494, 01-0423, 05-0597, 06-0411, 08-0532, and 09-0263.

D. Summary of Conclusions

Q. Please summarize the conclusions in your direct testimony.

A. In brief, I conclude that the advanced meters and IT as proposed in the stimulus proposal is appropriate and is identical to the technology proposed in ICC Docket No. 09-0263. The benefits, as described in the application requesting federal assistance pursuant to the American Reinvestment and Recovery Act of 2009, are potentially significant and merit further investment by ComEd. It is appropriate to expand the I-290 Corridor footprint as proposed in ICC Docket No. 09-0263 to include ComEd's entire Maywood Operating Center. Finally, ComEd estimated that the total incremental costs to expand the Maywood Operating Center and City of Chicago footprints proposed in the AMI Pilot includes one-time direct capital costs (excluding the Customer Applications Plan capital costs) of approximately $41,300,000 and Operating and Maintenance expenses of approximately $9,700,000.

II. Expansion of the Footprints in the AMI Pilot

A. Number of Incremental Meters Included in the ARRA Proposal

Q. What is ComEd's ARRA proposal regarding AMI meters?

A. Pursuant to the Commission's Order in ICC Docket No. 07-0566, ComEd is currently seeking approval of deploying approximately 141,000 AMI meters in its service territory; 100,500 meters in the I-290 Corridor in its Maywood Operating Center, 30,000 meters in

the City of Chicago, 10,000 meters in the City of Elgin, and 500 meters in the Village of Tinley Park. (See ICC Docket No. 09-0263) In its ARRA application, ComEd is seeking to expand this deployment from 141,000 meters to 320,000 meters, with approximately 120,000 of the additional meters used to build out the rest of the Maywood Operating Center and approximately 59,000 of the additional meters to be deployed in the City of Chicago. The meters to be deployed in the City of Chicago are addressed in the Direct Testimony of Val Jensen (ComEd Ex. 1.0).

B. AMI Meters and Technology

Q. Will the AMI meters be identical to the ones proposed in ICC Docket No. 09-0263?

A. Yes, it will be identical in all respects except for an increase in the number of meters from 141,000 to approximately 320,000. The meters are microprocessor-based and support two-way communications, time-of-use measurement, outage management, tamper detection, net metering, home area networking, voltage monitoring, remote configuration of components and gas & water meter reading. Additionally, the meters are equipped with service switches to support the remote turn-ons and turn-offs of electric service. The meters will collect cumulative kWh usage as well as usage in 30-minute time-of-use intervals.

The AMI network will leverage the Silver Spring Networks Mesh Radio System. The system provides interoperability through IP end-to-end, using TCP routing and SNMP network management for alarms and diagnostics, leveraging a proven communications network built on open standards allowing for the transport of varied data requirements. The network supports peer-to-peer communications and DNP3 transport

over IP to enable distribution automation. Finally, the HAN communications will leverage Zigbee standard protocols to support In Home Displays ("IHDs").

Q. Will the various AMI Information Technology tools that will be integrated into ComEd systems or legacy applications be identical to the technologies proposed in ICC Docket No. 09-0263?

A. Yes. The following tools will be used:

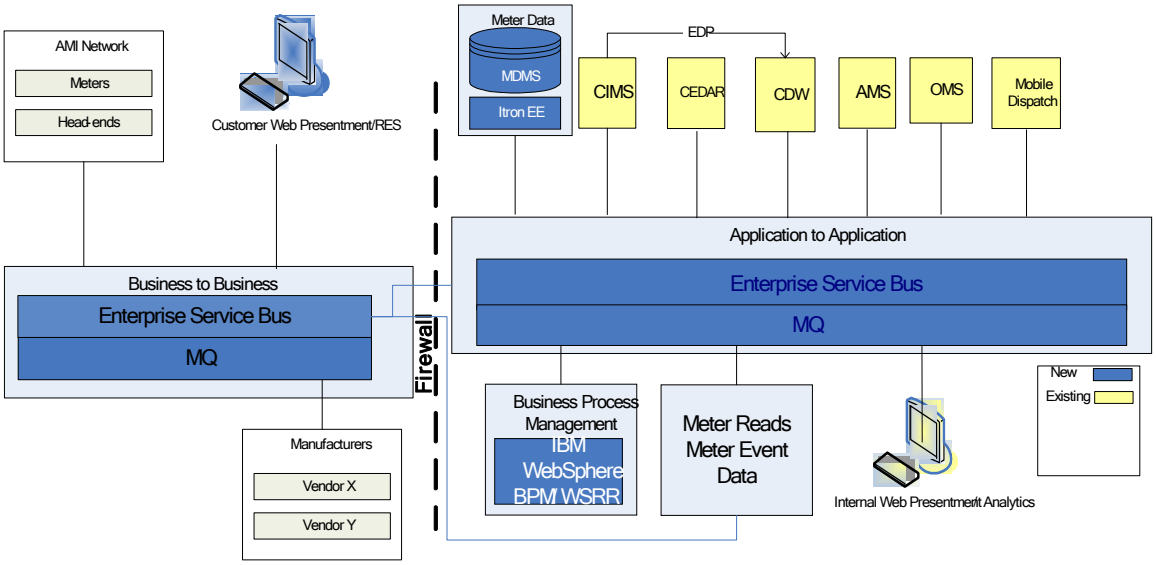
- The Head-end system is the gateway to the AMI network. Its core functionality is to manage the AMI network and capture meter data and deliver it to the backend system and send out data to the meter. Meter data can be delivered real-time or in batch, and includes meter reads, meter events, power quality, and health. Backend systems and end users are not required to know the details of the network to utilize the head-end system.
- Customer Web Presentment is a web portal designed to show customers their usage. While the requirements are not approved, the general consensus is the user would be able to view their usage in terms of usage vs. time of day. The purpose is to provide timely and detailed feedback to the customer on their usage patterns. Data to the web portal will be supplied by web services.
- The Meter Data Management System is the system that captures meter data. Its main functionality is to act as a meter data repository, Validation/Estimation/Editing ("VEE"), and archive. Data will be passed to the MDM from the Head-end system. Once the reads are validated, the MDM will publish meter events and reads to the Enterprise Service Bus ("ESB") for use by all the other systems.
- Web Presentment is a web portal designed for use internally to present dashboard data and workflows to employees. Dashboard data will be used to analyze activity within the business, such as deployment progress.
- The Asset Management System is used to track and manage assets. In the case of AMI, it will be used to track meters. It will be the master record of inventory, monitoring the status, location, and health of meters.
- The Customer Information Management System ("CIMS") is the centralized customer system and repository of customer data. This system is also used to create the customer's bill and manage work orders. The AMI implementation will not change CIMS functionality – rather it will expose services to the middle tier for external systems to leverage. Services will include creating work orders, creating customer contacts, and updating/inserting/deleting assets.
- CEDAR is the custom usage calculation system used by CIMS. Meter reads are passed into CEDAR, where billable usage is calculated. If the meter read fails

validation, CEDAR will generate an estimated read or billing exception. Then the billable usage is passed to CIMS for billing. For the AMI Pilot, CEDAR will receive VEE'ed meter reads from the MDMS, and then pass the reads to CIMS for billing.

- The Outage Management System is an existing piece of ComEd's architecture. It is used to declare and manage outages. Utilizing AMI technology, the back office system will confirm outage restorations and notify OMS.
- The Customer Data Warehouse ("CDW") is a repository of customer information used by the business to gain insight to customer operations. The CDW is updated daily to maintain synchronization with third party systems.
- Business Process Management Suite is a tool used to orchestrate business processes transactions between backend systems and manual touch points (i.e. interactions from an installer). Transactions usually involve many steps and are considered long running, and must retain the state of the transaction throughout its life. Such functionality would include: remote connect/disconnect, and meter deployment.

Q. How will the AMI technology be integrated into ComEd's legacy applications?

A. The Service Oriented Architecture/Enterprise Service Bus is the primary architecture that will allow our legacy applications to interface with the new AMI technology. It provides the necessary communication, intelligent routing, and the translation and transformation needed for integration. Furthermore, the bus allows incremental integration driven by business requirements, not technology limitations, as in our current point to point system architecture. The bus design provides for the flexibility needed to process the extremely large volume of data produced by the AMI metering system, thereby allowing requesters of the data, both legacy applications and new applications, access to the systems that are the source of the data. The goal of ComEd's AMI IT architecture approach is to ensure that, as both publishers and requesters of data, system users, business processes, applications and installation vendors are able to interact seamlessly and efficiently. The following diagram illustrates the architecture:



Q. What are the benefits of an Enterprise Service Bus ("ESB")?

A. From a high level perspective, the ESB provides several key architectural benefits. First, it provides enhanced architecture functionality and scalability (such as transaction management and load balancing). Second, it enables portability and interoperability. Third, it provides platform and service location transparency. Fourth, it simplifies programming interfaces. Fifth, it provides adaptability and flexibility. Sixth, it enforces architecture and application uniformity. Seventh, it enables de-coupling of application logic. Finally, it isolates developers from technical complexity.

C. Retirement of Existing Meters to be Replaced With AMI Meters

Q. As the AMI meters are installed, what will happen to the existing meters that are removed?

A. The existing meters, which are mostly single phase, cumulative watt-hour meters, would be retired. It costs $19.50 to purchase a new single phase, cumulative watt-hour meter.

However, it costs $21.00 to test a meter that has been removed pursuant to Commission rules (83 Illinois Administrative Code §460 ("Part 460")) and restock it. Therefore, it is less costly to retire a single phase watt-hour meter than to re-use it.

Q. Will the existing polyphase meters be handled the same way?

A. No. Approximately 5% of the meters are polyphase. Due to the higher per-unit cost of these meters, ComEd will attempt to re-deploy these meters outside of the AMI footprint. However, there are too many unknowns (e.g. age, condition, capability, etc.) to specify how many of these meters can be used again. As explained in ICC Docket 09-0263, this is included in the operational learnings of the AMI Pilot business case. Additionally, the assumptions relating to the cost of the retired meters include the retirement of all meters in the footprint, which is addressed by Martin G. Fruehe (ComEd Ex. 7.0) in his direct testimony. As part of the pilot evaluation, ComEd will revise those assumptions accordingly based on the number of meters retired.

Q. How will ComEd record the undepreciated costs of the retired meters?

A. The undepreciated costs will be recorded as a regulatory asset. For further discussion of the regulatory asset, see the direct testimony of Mr. Fruehe (ComEd Ex. 7.0).

D. Schedule of Deployment

Q. When will the approximately 179,000 additional meters be installed?

A. If approved, ComEd intends to complete the expansion of the I-290 Corridor to include all if the Maywood Operating Center by the end of May 2010 to bolster the AMI pilot evaluation of the operational business case. Pursuant to the proposal in ICC Docket No. 09-0263 and if approved by the Commission, the 30,000 AMI pilot meters in the City of

Chicago will be installed as planned, prior to the summer of 2010. The additional City of Chicago meters would follow and be installed by the end of 2010. Finally, pursuant to the proposal in ICC Docket No. 09-0263 and if approved by the Commission, the 10,000 meters to be deployed in the City of Elgin and 500 meter to be deployed in the Village of Tinley Park would also follow the completion of the expansion of Maywood.

III. Benefits of Deploying AMI as Proposed in the ARRA Application

Q. What are the benefits of deploying AMI as proposed in the ARRA application?

A. As I discussed earlier, in its ARRA application, ComEd is proposing to deploy 320,000 AMI meters in its service territory. As a result, ComEd and its customers may experience economic, reliability/power quality, and environmental benefits.

Q. Please explain the economic benefit.

A. Through the deployment of AMI as proposed in the ARRA proposal, there may be a reduction in electricity costs through a reduction in labor, improved collections, avoided energy consumption, and improved outage management. The information collected, as part of the AMI Pilot, to validate these benefits includes: (1) meter reading, billing, field, and call center costs; (2) uncollectibles; and (3) continuous service, tamper, theft, and meter accuracy. The estimated benefits as depicted in the ARRA application are $10,602,000 in annual operational savings. The savings estimate was a requirement of the ARRA proposal per the Funding Opportunity Announcement and are based on ComEd's AMI business case for full deployment throughout ComEd's service territory at steady state. Additionally, the estimate is tied to the 320,000 total meters described in the application.

Q. Please explain the benefits resulting from reliability/power quality.

A. As a result of deploying AMI as proposed in the ARRA proposal, ComEd may be able to improve outage management, which, in turn, will improve customer satisfaction. Customer satisfaction with their electric utility is primarily based on 3 things: Cost of electricity, the utility's reputation, and reliability. The benefit of improved reliability may be validated through an improvement in the American Customer Satisfaction Index ("ACSI") proxy score. The projected benefit is an approximate 0.16 ACSI index improvement, as described in the ARRA application.

Q. Please explain the projected environmental benefits

A. Through the AMI deployment as proposed in the ARRA proposal, there are environmental benefits that will likely result in the form of reduced CO2 emissions. This will result from a reduction of fuel usage from meter reading vehicles and avoided energy consumptions. As a result of the AMI deployment as included in the ARRA proposal, there may be an approximate 30,000 MT CO2 equivalent annual reduction.

Q. Can you identify the benefit attributable to incremental increase in the number of AMI meters from 141,000 as proposed in ICC Docket No. 09-0263 to 320,000 as proposed in this proceeding?

A. ComEd is seeking to deploy an additional 179,000 AMI meters in this proceeding. The benefits that I have described can be prorated over the total number of meters, 320,000, in order to determine the incremental benefit of increasing the number of meters in the AMI Pilot.

IV. Expansion of the I-290 Corridor Footprint to Include the Maywood Operating Center

Q. How many AMI meters will be deployed in the Maywood Operating Center?

A. In ICC Docket No. 09-0263, ComEd is currently seeking approval of 100,500 meters in the I-290 Corridor, which is within the Maywood Operating Center. If the AMI I-290 Corridor footprint is expanded to include the entire Maywood Operating Center, 220,000 meters will be deployed in this footprint, or an increase of approximately 120,000 meters.

Q. If the footprint is expanded to include the Maywood Operating Center, will it still maintain the demographics and customer operation characteristics close to the ComEd system average while providing for some diversity from the average?

A. Yes. Using the same methodology that was used to evaluate the AMI Pilot in ICC Docket No. 09-0263, ComEd evaluated three categories of criteria: demographics, customer operations, and Transmission and Distribution ("T&D").

Q. What demographic criteria were considered for determining whether the Maywood Operating Center is close to the ComEd system average?

A. The criteria established for the demographics category include: the percentage of customers that are residential, the percentage of customers that are minorities, the percentage of multi-family buildings, the average household income, and the total number of customers.

Q. What customer operations criteria were considered for determining whether the Maywood Operating Center is close to the ComEd system average?

A. The criteria included in the customer operations category are: the number of households per square mile, the percentage of indoor meters, the number of errors in meter reads, the

number of meters per meter reader, the number of safety related human performance incidents, the percentage of meters read, the chronic number of no reads, the percentage of customer accounts that are past due, the average amount for accounts that are past due, and the average amount of consumption on inactive accounts.

Q. What criteria were considered with respect to T&D?

A. The criteria included in the T&D category are: the midcircuit reclosure population, the Automatic Line Reconfiguration Switches population, the modular substation population, the System Average Interruption Frequency Index, the Customer Average Interruption Duration Index, geography, ComEd's communication infrastructure, and the radio frequency ("RF") noise.

Q. What demographic criteria were considered for determining whether the Maywood Operating Center supports diversity from the ComEd system average?

A. The ten demographic criteria used to assess the diversity include: the percentage of the population that are minorities, the percentage of the population over 60 years old, the percentage of the population that speak languages other than English at home, the percentage of the population that attained education of high school or less, the percentage of multi-family buildings, the percentage of multi-family dwellings with 50 or more units, the percentage of households with household income less than $50,000, the percentage of owner-occupied housing valued less than $200,000, and the percentage of housing structures built before 1970. These ten criteria were selected based in part from input from the AMI workshop participants and ComEd's ready access to the applicable data. For 6 of the 10 criteria, Maywood Operating Center provides greater representation; for 3 of the 10 criteria, it provides less representation; and for 1 of the criteria, it has

similar representation. The following table provides a comparison of the I-290 Corridor and the Maywood Operating Center:

Demographic Criteria	"I-290 Corridor"	Maywood Operating Center
Non-white race population	Both over represent minority households	
Age 60 and over	Close to overall system average	Close to overall system average
Speak other than English	Close to overall system average	Over represent of non-English
Education level obtained	Close to overall system average	Over represent high school or less education
Household income <$50,000	Both over represent lower income households	
Households below poverty level	Both slight under represent households below poverty level	
Home value <$200,000	Both have smaller deviation than overall system average	
% Multi-unit	Both over represent multi-family structures	
% of Multi-unit w/50 or more units	Both under represent large multi-unit structures	
Houses built before 1970	Both over represent older homes	

Q. Why is ComEd seeking to expand the footprint of the I-290 Corridor to encompass the Maywood Operating Center?

A. As I stated in my direct testimony (ComEd Ex. 2.0) in ICC Docket No. 09-0263, deploying 100,500 advanced meters will allow a reasonable AMI business case evaluation. However, by expanding the footprint of the I-290 Corridor to include the Maywood Operating Center, the project benefits in three ways. First, a more robust business case evaluation of AMI can be conducted. Second, it eliminates the operational complexity associated with a partial operating center sooner. Finally, a larger footprint provides a better test of the network infrastructure synergy between AMI and Distribution Automation (which is discussed in the direct testimony of Ronald Donovan).

Q. How will the expansion of the I-290 Corridor footprint to include the entire Maywood operating center allow for a more robust business case evaluation?

A. As represented in the ComEd Exhibit 3.01, there are several cost and benefit items in the business case that will have enhanced results with the extra meters. There are five cost items and two benefit items whose cost (or benefit) calculations are greater impacted by one or more of the following drivers: job site variability, uncertainty in number and/or variety of observations or events that will occur during the pilot test period, and scale efficiency gains; and therefore, suggest a need of up to 200,000 meters (i.e., on the high end of the range) to better assess the items. Those items include AMR network installation; network maintenance; WAN equipment; project management; AMI operations; theft detection/power diversion; and other avoided field trips. With the expansion of I-290 Corridor to include the entire Maywood Operating Center, ComEd will be able to provide an improved evaluation report of these items in its pilot evaluation report to the Commission in the first quarter of 2011.

Q. How will expansion of the I-290 Corridor footprint to include the Maywood Operating Center eliminate the operational complexity sooner?

A. Operational effectiveness in Maywood, as whole, is more complex due to the hybrid approach to metering. ComEd currently reads approximately 7,000 AMR meters installed throughout its system. Drawing from this hybrid operational experience of a much smaller scale, human errors will likely occur resulting in lost communications and delayed or estimated bills, among other customer impacts. Additionally, ComEd's operations are managed at an operating center level. Introducing two different meter types within an operating center will present several challenges to the workforce that

must be managed. For example, both management and union employees will wrestle with two sets of processes and procedures. Energy Technicians will need to be able to discern, by address, whether a particular customer is in the AMI footprint or not and be sure to install the appropriate device. There will also be inventory impacts in the Maywood Operating Center that will require redundant stock in ComEd's warehouse and on each vehicle. ComEd crews are also occasionally shared across operating centers. If a crew from another operating center is dispatched to Maywood, the crew may not be familiar with the AMI meter and would not have an available meter to perform necessary work. Not knowing when ComEd would have approval to build out the rest of the Maywood Operating Center leaves the hybrid model in place, indefinitely, with the ongoing risks and costs to manage the added complexities. By expanding the Maywood implementation, these complexities will be eliminated, improving the quality of service and reaping incremental benefits.

Q. How will expansion of the I-290 Corridor footprint to include the Maywood Operating Center improve test of the network infrastructure synergy between AMI functions and DA functions?

A. By deploying AMI to the entire Maywood Operating Center, ComEd will be able to demonstrate the use of a shared communication network for reading the 220,000 AMI meters, supporting customer applications (which are discussed in the direct testimony of James C. Eber) and distribution automation. Additionally, the distribution automation demonstration would benefit from an area large enough to include entire electric distribution feeders, support the installation of up to 60 distribution automation switches,

and the conversion of two Maywood area substations into Intelligent Substations (which are discussed in the direct testimony of Ronald Donovan).

Q. Are there any other aspects of the business case that will be improved if ComEd expands the deployment of AMI to the Maywood Operating Center?

A. Yes. There are two benefit items in the business case that are difficult to quantify without a large number of AMI meters in the pilot: reduced outage overtime expenditures and reduced "single lights out trips". First, the AMI evaluation will be more robust in terms of understanding and possibly measuring outage restoration benefits by better understanding which customers are still out of power after restoration jobs are closed out and reducing the number of return trips by field crews later during a storm restoration period. Second, since ComEd has relatively few "single lights out" tickets over the course of a year, a bigger footprint will provide more confidence in the pilot results associated with the elimination of necessary field crew dispatches to customers' locations that have had their power already restored..

V. Identification and Explanation of Costs and Investments that are Incremental to the AMI Pilot Proposed in ICC Docket 09-0263

Q. What are the total forecasted expenditures related to costs and investments that are incremental to the meters that are being deployed as part of the AMI pilot in ICC Docket No. 09-0263?

A. ComEd estimates that the incremental direct capital costs to expand the pilot to all of the Maywood Operating Center and in the City of Chicago are approximately $41,300,000 and Operating and Maintenance ("O&M") expenses are approximately $9,700,000. These amounts consist of the following capital costs and O&M expenses:

Expenditure	O&M	Capital	Total
Project Management	$ 3.2	$ 5.7	$ 8.9
One-time AMI equipment		$ 24.4	$ 24.4
AMI meter installations		$ 6.7	$ 6.7
AMI network installation		$ 0.3	$ 0.3
IT software/hardware/system integration	$ 4.7	$ 4.2	$ 8.9
Operational expenses	$ 1.8		$ 1.8
Total forecasted expenditures	**$ 9.7**	**$ 41.3**	**$ 51.0**

Q. What are the incremental forecasted costs related to Project Management?

A. The forecasted costs for Project Management are $8,900,000, which consists of $3,200,000 of O&M expenses and $5,700,000 of capital costs associate with project team labor costs for the duration of the pilot. Besides performing the overall project management for the pilot, the project team also defines the scope of the business changes, creates and executes the internal change management plan, and is responsible for creating the business case and pilot evaluation that will be presented after the pilot.

Q. What are the incremental forecasted one-time AMI equipment costs?

A. The incremental forecasted one-time AMI equipment costs, inclusive of all meters and network hardware, are $24,400,000. This does not include labor to install back-office equipment, software, nor professional services. This amount includes the cost of poly-phase meters, single-phase meters with internal service switch and single-phase meters without internal service switch.

Q. What are the incremental forecasted AMI meter installation costs?

A. The incremental forecasted AMI meter installation costs are $6,700,000 for the approximately 179,000 incremental meters.

Q. What are the incremental forecasted AMI network installation costs?

A. The forecasted AMI network installation costs are $300,000. These costs include the labor to design and install the network equipment made up of Access Points and Relays. Access Points are devices that route network data to and from smart meters across the RF (radio frequency) network and act as an egress from the network to ComEd's data center. This is accomplished through a digital cellular device inside the Access Point or other backhaul medium. Relays are very similar to Access Points acting as routers but without the egress. The installation itself requires skilled crews to mount these devices on utility poles, streetlights, or similarly elevated and powered locations.

Q. What are the incremental one-time IT software, hardware and systems integration costs related to the deployment of the meters expanded to the Maywood Operating Center and City of Chicago?

A. The estimated one-time IT software, hardware and systems integration costs are $8,900,000, which consists of $4,700,000 of O&M expenses and $4,200,000 of capital costs. This includes the MDMS software licensing and supporting hardware scaled for the additional 179,000 meters.

Q. What are the forecasted ongoing operations incremental costs related to the operations of the expanded AMI Pilot after the meter deployment is completed?

A. The estimated incremental operational costs of the expanded pilot are estimated at $1,800,000. These costs are related to the AMI Operations department, hardware and software maintenance, network maintenance, and third party fees.

Q. Does this complete your direct testimony?

A. Yes.