



**Ameren Illinois Advanced Metering  
Infrastructure (AMI) Annual ICC  
Report – April 2013**



<b><u>EXECUTIVE SUMMARY</u></b>	<b><u>3</u></b>
<b><u>2012 AMI PROGRAM ACCOMPLISHMENTS</u></b>	<b><u>3</u></b>
<b><u>2012 AMI PROGRAM ELECTRIC CAPITAL EXPENDITURES</u></b>	<b><u>5</u></b>
<b><u>2013 PROGRAM GOALS</u></b>	<b><u>5</u></b>
<b><u>2013 FORECASTED ELECTRIC CAPITAL EXPENDITURES</u></b>	<b><u>11</u></b>
<b><u>GAS AMI PLAN</u></b>	<b><u>11</u></b>
<b><u>OTHER DYNAMIC / TIME VARIANT PRICING</u></b>	<b><u>11</u></b>
<b><u>EIMA METRICS</u></b>	<b><u>12</u></b>
<b><u>AMI TRACKING MECHANISMS</u></b>	<b><u>12</u></b>

## **Executive Summary**

In accordance with the requirements of Public Acts 97-616 and 97-646, Ameren Illinois Company (Ameren Illinois) has prepared this Advanced Metering Infrastructure (AMI) annual report to outline expenditures and accomplishments achieved through December 2012. Specifically, Section 16-108.6(e) of the Public Utilities Act (Act) requires:

(e) On April 1 of each year beginning in 2013 and after consultation with the Smart Grid Advisory Council, each participating utility shall submit a report regarding the progress it has made toward completing implementation of its AMI Plan. This report shall:

- (1) Describe the AMI investments made during the prior 12 months and the AMI investments planned to be made in the following 12 months;
- (2) Provide sufficient detail to determine the utility's progress in meeting the metrics and milestones identified by the utility in its AMI Plan; and
- (3) Identify any updates to the AMI Plan.

This report also provides a summary of the forecasted expenditures and goals for 2013 (January-December).

In addition, this report will provide an update on Consumer Education and Communications Planning, Ameren Illinois' plan to implement Gas AMI concurrently with Electric AMI, Ameren Illinois' plan concerning other dynamic / time variant pricing, Advanced Metering Infrastructure metric requirements, and AMI tracking mechanisms.

## **2012 AMI Program Accomplishments**

### **Established the AMI Program Management Office**

Ameren Illinois established the AMI Program Management Office with internal and external subject matter experts to effectively deliver the AMI program.

### **Completed Business Process Design Planning**

Ameren Illinois partnered with Accenture's consultants to identify and prioritize the business processes that will be redesigned to implement AMI. In addition, the team developed a high-level schedule for Business Process Design by phase based upon complexity, criticality, and dependencies.

### **Executed Procurement Strategy – Request for Proposals (RFPs)**

Ameren Illinois formed a team of internal subject matter experts and leading industry consultants to develop the RFPs to assist with the anticipated changes to Ameren Illinois' people, processes, and technologies as a result of the implementation of AMI. This effort included an in-depth analysis of Ameren Illinois' requirements for the RFPs, identification of potential vendors, analysis of vendor systems and processes, impacts to the cost-benefit analysis, reference calls, and oral presentations. The following RFPs were executed:

- Business Process Design RFP
- AMI technology and MDM (Meter Data Management) software application RFP
- Systems Integration RFP
- Customer Segmentation RFP

## Selected a Business Process Design (BPD) Vendor

The Business Process Design engagement with IBM commenced in mid-November and workshops started in January 2013. The scope of this engagement includes the documentation of business and technical requirements needed to revise Ameren Illinois current and future state systems and processes that will be utilized to enable the new functionality of the AMI system, organizational change impact assessments, and communications planning. Ameren Illinois anticipates significant impacts on business processes and information technology infrastructure, including data storage requirements due to the large quantities of AMI interval data. The Business Process Design engagement with IBM will conclude in October 2013.

## Selected the AMI and MDM technology vendor

In January 2012, Ameren Illinois began a process to select its AMI and MDM vendor. The selection was based on the work of more than 50 Ameren internal subject matter experts that developed the RFPs and reviewed the responses of the vendors. The RFPs were issued to five AMI vendors and five MDM vendors. Ameren Illinois had four MDM vendors and three AMI vendors provide live demonstrations/presentations on their system capabilities. After vendor demonstrations, Ameren Illinois narrowed its selection to two vendors for AMI/MDM and negotiated contracts with each. Upon reaching terms with its best value vendor, Ameren Illinois selected Landis+Gyr and Ecologic Analytics as its AMI and MDM suppliers, respectively, in December 2012.

## Developed Systems Integration RFP

The AMI Project Management Office (PMO) and Strategic Sourcing team developed and issued the Systems Integration RFP in late October 2012. The scope of the Systems Integration effort is to tie Landis+Gyr's AMI and MDM software into Ameren Illinois' existing energy delivery suite of software applications.

## Consumer Education and Communications

Education related to AMI was incorporated into Ameren Illinois' overall Modernization Action Plan (MAP) communication efforts. To date, we have developed a Power Point presentation and a video that is used both internally and externally. The video is on the AmerenIllinois.com website and it is used during co-worker town hall meetings. It also serves as a communication tool for our Community Relations Coordinators as they share our plans for upgrading and modernizing the electric grid during their community outreach efforts which includes community-based events to one-on-one sessions with local mayors and community leaders.

In early 2012, Ameren Illinois commissioned Market Strategies International (MSI) to develop and conduct a quantitative study to measure the baseline awareness about AMI among Ameren Illinois customers. This study was intended to guide the development of our stakeholder and customer education plan. Ongoing research will be conducted to track progress and to strategically guide the sustained communications.

Key Findings from the MSI research:

63% of customers have heard the term "smart grid." Among the 63% hearing the term:

- 40% don't know much about what it means
- 34% have a favorable impression, 29% are neutral, 16% have an unfavorable impression, and 21% don't know.
- 45% of customers have heard the term "smart meter." Among the 45% hearing the term:
  - 25% of those who have heard the term don't know much about what it means
  - 35% have a favorable impression, 28% are neutral, 23% have an unfavorable impression and 14% don't know.
- 46% of all customers feel that smart meters would be "mostly an advantage", 40% seeing the meters as "having no impact", and 8% as "mostly a disadvantage".


Customers indicated that improving reliability, bill accuracy, customer service, and providing them more control of home energy usage as the top smart meter benefits.

## 2012 AMI Program Electric Capital Expenditures

2012 Expenditures	Capital
Regulatory Support	\$1.2
Project Management Office	\$1.6
<b>TOTAL</b>	<b>\$2.8</b>

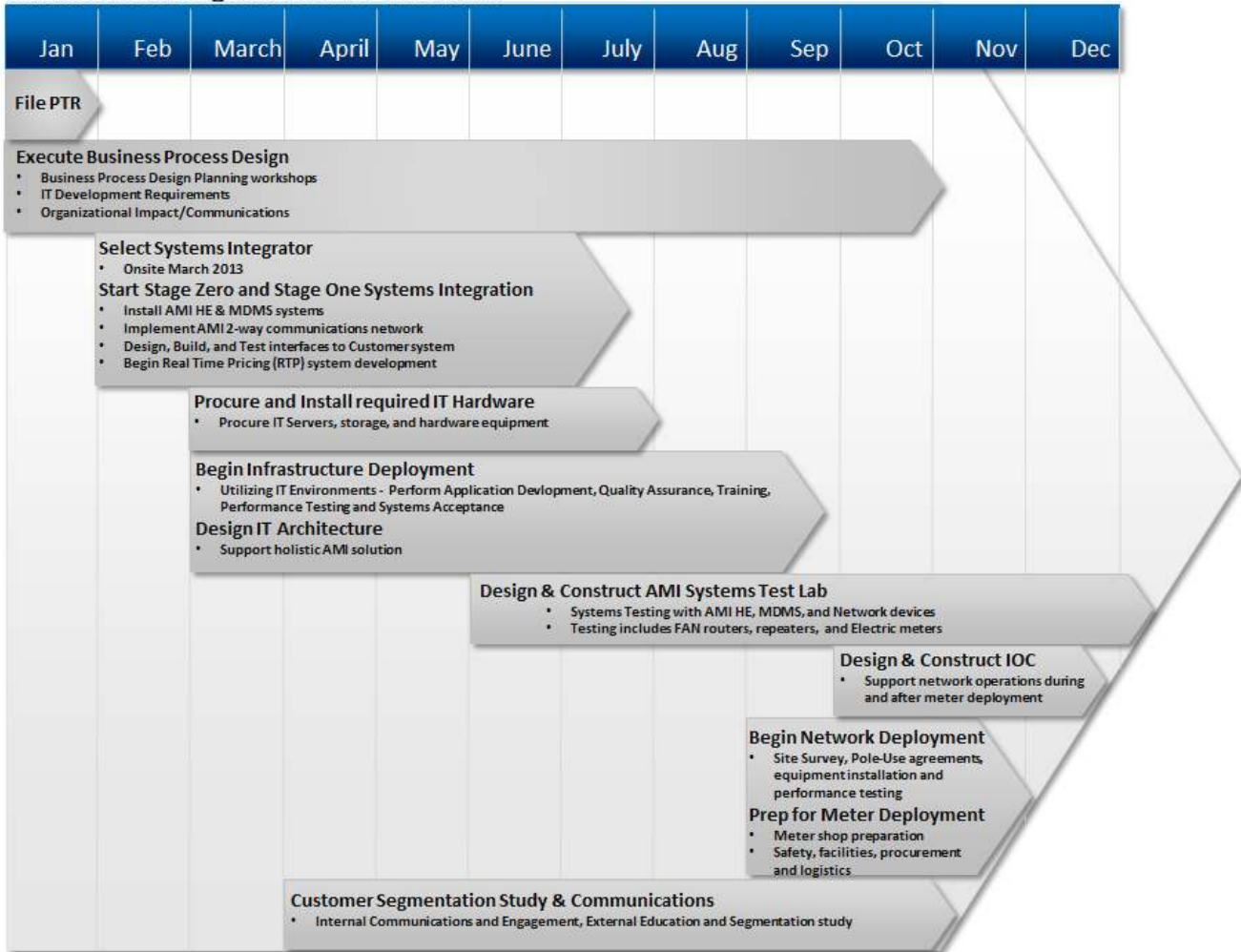
## 2013 Program Goals

The stages below summarize Ameren Illinois' high-level plan for implementing information technology software applications and equipment to provide for accurate and timely billing, remote connect/disconnect functionality and customer access to usage information. As outlined in subsequent sections of this document, Ameren Illinois' 2013 program goals will support the functionality planned for Stage 0 of the implementation plan.

Stage 0	Stage 1	Stage 2	Stage 3	Stage 4
Install foundational meter data management system and AMI system	Process and Bill Residential Simple Rates and customers from RTP program via legacy interface	Provide Web portal for presentation of customer usage	Upgrade processes and system to support remote connect/disconnect	Support Peak Time Rebate pricing and enable similar dynamic / time of use pricing
Prepare systems and processes for installation of 2-way communication network	Integrate AMI and MDM systems and prepare for billing	Provide Operational Analytics		Prepare systems & processing for Commercial and Industrial (C&I) billing
Manage Asset Information	Deployment analytics			Event processing such as outage notification and restoration
<b>2<sup>ND</sup> Quarter 2014</b>	<b>4<sup>th</sup> Quarter 2014</b>	<b>2<sup>nd</sup> Quarter 2015</b>	<b>3<sup>rd</sup> Quarter 2015</b>	<b>4<sup>th</sup> Quarter 2015</b>

The timeline below depicts a high level view of the project activities that will be executed in 2013. The subsequent sections provide an overview of each activity.

**Advanced Metering Infrastructure – 2013 Plan**



**File Peak Time Rebate tariff**

On February 1, 2013, Ameren Illinois filed a Peak Time Rebate tariff for the purpose of implementing a program to provide credits to residential customers that curtail their electric energy usage during specific periods of peak time in accordance with Section 16-108.6(g) of the Act.

**Execute Business Process Design**

The Business Process Design engagement with IBM is scheduled to conclude in October 2013. The successful outcome of this engagement will equip Ameren Illinois with the information needed to provide all requirements for Systems Integration, organizational impact, and internal and external Communications planning.

## Select Systems Integrator

Ameren Illinois has identified the potential vendors for the AMI Systems Integration effort and made the final selection in February 2013. The AMI PMO intends for the system integrator to start in Q1 of 2013.

## Start Stage Zero and Stage One Systems Integration

Stage Zero includes the installation of the AMI Head End system as well as the foundational Meter Data Management system. The development team will be involved in the activities to design, build and test code, perform integration testing, and perform user acceptance testing prior to implementation. This stage also includes the implementation of the AMI 2-way communications network and interfaces to the customer system for basic information as well as the Meter Asset System. It involves the end-to-end testing of the system from the meter to the Head End system to the Meter Data management system and then to the Meter Asset System (MMS) and CSS.

Stage One involves interfacing data from the Meter Data Management system to the current customer system (CSS) to facilitate the billing of customers based on the meter data reads provided by the advanced meters. The development team will be involved in the activities to design, build and test code, perform integration testing, and perform user acceptance testing prior to implementation. This includes the processing and billing all residential simple rates and customers enrolled in the Real Time Pricing (RTP) program. The last item involved in Stage 1 is deployment analytics on meters installed. Stage 1 will conclude in 2014.

## Procure and install required IT Hardware

IT servers and storage disk will be purchased in 2013 and used for the development, testing, quality assurance, and training environments. This effort will include the procurement and configuration of hardware for the production and disaster recovery environments.

## Begin Infrastructure Deployment

The IT environments will be used for the AMI HE (Head End) and MDMS (Meter Data Management) systems initial installation and deployment. The environments include: application development, quality assurance, training, application testing, performance testing, and system acceptance testing.

## Design IT Architecture

The IT Technical team is developing IT architecture to support the AMI Solution holistically. The design is being developed to reach out beyond just this AMI Solution implementation. The design is being developed to give direction and facilitate how IT will develop and implement applications in the future.

## Design and construct AMI Systems Test Lab

Ameren Illinois will construct a testing lab in the Collinsville, Illinois location that will be utilized for systems testing with the AMI HE and MDMS applications. The hardware includes all the network devices required to facilitate end-to-end communications from the meters to the MDM system. This hardware includes FAN Routers, Repeaters, and AMI Electric Meters.

## Design and construct Integrated Operations Center (IOC)

Ameren Illinois will construct an Integrated Operations Center to support meter deployment and oversee network operations post AMI implementation. The development of the IOC architecture and organization design will be completed in 2013. Facility design and construction will be started in 4Q 2013 and will be continued in 2014. The initial phase of the IOC will be in operation prior to the initial meter rollout scheduled for 2Q 2014.

## Begin Network Deployment

Network deployment will be performed Q4 2013 in Hillsboro, Illinois where the first batch of meters will be deployed in Q2 2014. The scope of this initial deployment in Hillsboro will include site surveys, pole-use agreements (as needed), equipment installation, and performance testing in preparation for meter deployment.

## Prepare for Meter Deployment

Preparation for electric meter deployment will begin in Q3 2013. This process will ensure that Ameren Illinois meter shops are prepared for AMI processing. This process will also include medical tag surveys to improve mass deployment efficiencies and safety, facilities management, procurement, and the deployment information needed to deploy in Hillsboro.

## Customer Segmentation Study and Communications

In 2013, the major areas of communication will be divided into two main categories: Internal and External Communication. Each will have key tactics that educate co-workers, customers, and stakeholders on the benefits of AMI.

### Internal Communications:

- Co-worker FAQs- General population- A document that outlines questions and associated answers stakeholders might ask once they become aware of the AMI program. This will be a living document that will change over time as more is learned.
- Scripts for Customer Service and FAQs to support the Energy Advisor service model- CSR and Field teams will be equipped with scripts and message points to inform customers and to provide details of the deployment and programs.. This vehicle could also be used as a prompting to ask customers if they are aware of the project should they call around the time of their installation (if information is available).
- Utilize a “Leadership Letter” to share AMI updates, key topics, opportunities, and challenges.
- Support the Business Process Design/Organizational Impact strategy with communication tools and collateral. This will include a Change Champion program as well as communications and training support.
- Engage co-workers in AMI Communication Stakeholder sessions to establish a baseline for lessons learned and best practices.
- Small work group engagement sessions, town hall meetings
- Video, intranet, other online communication tools for co-workers
- Create a project identity to assist with telling the AMI story internally. This will potentially have the ability to gain traction in external communication venues as well.

### External Communications:

1. Leverage News Media: Utilize traditional and established communications mix, news releases, and news media advisories that will allow Ameren Illinois to communicate benefits, associated milestones, and status/progress of deployment. This may include social media tools such as Twitter communities.
2. Customer Communication:
  - a. Bill Inserts-Scripts for Customer Service and FAQs to support the Energy Advisor service model- Information placed on bills to raise awareness on benefits and impacts and pointing customers to more information (website, newsletter, phone number, etc.)
  - b. Facts on Energy Newsletter- The newsletter will be used to provide regular updates on the project, its benefits, and impacts, and to share customer testimonials, etc. The newsletter offers an opportunity to share what customers can expect during deployment as well specific scenarios of how they will benefit from AMI.
3. Advertising
  - a. Electronic-radio, television, digital including social media paid channels



- b. Non-Electronic- print, billboards
- 4. Support the Business Process Design strategy with communication tools/collateral
- 5. Corporate Website Enhancements- Web pages will be created and managed to supply specific information for customers around the benefits of AMI as well as the details of the project. These pages could also provide links to other information such as FAQ's, demonstration videos, external research, customer testimonials, and possibly an interactive map showing deployment timeframes. Once PTR rates and the customer portal are available, information regarding those will also be available.
- 6. Community Outreach- Support Ameren Illinois established outreach groups to engage customers in conversations about AMI and its benefits.
- 7. Demonstrations- Use both physical demonstration tools as well as videos to show customers what they can expect during installation as well as understand how the system works for greater awareness and education. A physical demo is in the works to support initial outreach.
- 8. Customer Segmentation Study (to be conducted in 2013): The study will help Ameren Illinois to quantify participation propensity for AMI programs and behaviors. It will help Ameren Illinois with the following:
  - a. Determine relevant decision drivers, potential barriers that customers encounter when considering AMI related programs.
  - b. Determine key messaging data that will be most effective to increase customer participation
  - c. Serve to help identify media consumption habits and preferences for communicating about advanced meters and the associated programs.

In addition, Ameren Illinois will continue discussions with the Energy Foundry and other stakeholders on ways to integrate and leverage Energy Foundry funding and education initiatives with Ameren Illinois' efforts.

The Consumer Education and Communication Plan has been developed to take customers through four distinct phases, beginning with education about AMI and its current and future benefits and culminating in the acceptance and engagement in smart energy pricing programs.

Ameren Illinois will build off these core communication elements in the deployment of AMI. These elements include, but may not be limited to:

1. Contact with local mayors, emergency responders, community leaders, stakeholders and organizations.
2. Advanced notice to customers announcing the timeline of the installation and highlighting current and future benefits.
3. Localized news release and media briefing.
4. Courtesy contact prior to installation and door hangers left after installation.

Since January 2013, we have developed a Frequently Asked Questions document in support of Ameren Illinois' adoption of a new Energy Advisor Program. The Energy Advisor Program is intended to provide a consistent format and focus as we continue to provide timely, accurate, and beneficial energy advice to our customers. The FAQ document will support the customer service representatives in conversations with customers about AMI. We also have identified a subject matter expert to support the Energy Advisor program should the customer service representative need to elevate the concerns of the customer to some with greater knowledge on the advanced metering initiative. As part of the IBM Business Process Design strategy, the Ameren Illinois communication lead and the change management lead has hosted Communication Stakeholder Assessment sessions with co-worker teams/departments. The purpose of these sessions are to reveal some internal best

practices, gain insight to potential communication challenges, concerns and issues that will help develop a communications strategy for a successful deployment.

Additionally, the request for proposals to conduct primary research for our Customer Segmentation study was released early January and the review process is just beginning. Our goal is to choose a vendor in February/early March and execute a contract to begin the study in late March of 2013. Other future communication plans are as follows:

<b>Customer Communications Vehicles/Collateral</b>	<b>Description</b>
<b>Frequently Asked Questions (FAQ)</b>	A document that outlines questions and associated answers stakeholders might ask once they become aware of the AMI program. Will be a living document that will improve over time as more is learned.
<b>Scripting for Customer Service Representatives (CSRs)</b>	CSR and Field teams will be equipped with scripts and message points to make customers aware and to provide details of the deployment and programs for inquiring customers. This vehicle could also be used as a prompting to ask customers if they are aware of the project should they call around the time of their installation (if information is available).
<b>Leveraging earned media news releases and news media advisories</b>	Through the traditional and established communications mix, news releases and news media advisories will allow Ameren Illinois to communicate benefits, associated milestones and status/progress of deployment.
<b>Bill Messaging/Inserts</b>	Information placed on bills to raise awareness on benefits and impacts and pointing customers to more information (website, newsletter, phone number, etc.)
<b>Customer Newsletter (Facts On Energy)</b>	The newsletter will be used to provide regular updates on the project, its benefits, impacts and to share customer testimonials, etc. The newsletter offers an opportunity to share what customers can expect during deployment as well specific scenarios of how they will benefit from AMI.
<b>Advertising (print, radio, TV, digital, billboards, etc.)</b>	Targeted advertising in areas may be considered to raise awareness of the deployment and to reach large customer segments.
<b>Dedicated web pages that include fact sheets, contact information, programs, FAQs</b>	Web pages will be created and managed to supply specific information for customers around the benefits of AMI as well as the details of the project. These pages could also provide links to other information such as FAQ's, demonstration videos, external research, customer testimonials, and possibly an interactive map showing deployment timeframes. Once PTR rates and the customer portal are available, information regarding

	those will also be available.
<b>Videos demonstrating: installation process</b>	Videos may be created to show customers what they can expect during installation as well as understand how the system works for greater awareness and education. Once it becomes available, more information

## **2013 Forecasted Electric Capital Expenditures**

<b>2013 Forecasted Expenditures</b>	<b>Capital</b>
AMI Hardware	\$2.9
Systems Integration (Development, etc.)	\$14.3
Program Management	\$1.8
Meter Deployment Preparation	\$1.9
Integrated Operations Center	\$0.4
<b>TOTAL</b>	<b>\$21.3</b>

## **Gas AMI Plan**

On January 23, 2013, Ameren Illinois filed in its future test year rate case a Gas AMI plan to deploy advanced gas metering technology to 56% of gas customers by 2019. Upon regulatory approval, it is Ameren Illinois' intention to deploy Gas AMI concurrently with Electric AMI beginning in Q2 2014. The capital expenditures for 2012 and 2013 listed above assume that gas AMI is approved as part of the 2013 gas rate case filed by Ameren Illinois in January 2013. If gas AMI is not approved, the network and IT costs that would have been allocated to gas customers will be solely allocated to electric customers. The total allocation for gas is approximately \$7 million.

## **Other Dynamic / Time Variant Pricing**

Ameren Illinois plans to design its AMI infrastructure and systems to enable existing and potential future dynamic and time variant pricing. As part of its 2013 Business Process Design, Ameren Illinois will solicit the input, through appropriate forums, of alternative retail electric suppliers with regard to the needed AMI functionality required to support potential dynamic pricing offered by these entities.

With the de-regulated structure of the electric energy supply markets in Illinois, Ameren Illinois believes the market, not the utility, is the appropriate mechanism for further development of alternative dynamic / time variant pricing, including time of use pricing. It is premature for Ameren Illinois to introduce additional dynamic / time variant tariffs. AIC's AMI infrastructure and system functionality to support dynamic / time variant pricing is expected to be in place in late 2015. The majority of AIC's customers are now served from alternate power suppliers. Ameren Illinois believes the markets should be given a chance to develop dynamic pricing products. At this point Ameren Illinois does not intend to develop nor pursue any additional time of use or other dynamic / time variant pricing tariffs.

Ameren Illinois does understand the concerns of some stakeholders that for various reasons the market may not sufficiently develop an appropriate selection of customer beneficial dynamic / time variant pricing options. With this in mind, Ameren Illinois fully supports ongoing discussions on this topic as the marketplace develops. After AMI functionality to support dynamic pricing is in place and Ameren Illinois AMI deployment is progressing, Ameren Illinois also foresees some sort of forum to assess the retail market dynamic pricing offerings, assess any barriers limiting the development of dynamic pricing options, and discuss potential ways to mitigate the barriers.

## **EIMA Metrics**

The Illinois Commerce Commission approved Ameren Illinois' revised MAP-M metric plan filing on January 9, 2013. The approved MAP-M metric plan includes a January 1, 2014 start date for the three AMI related metrics below:

1. Ameren Illinois will achieve a 56% reduction in the number of estimated bills as compared to Baseline (the average of the actual number of estimated bills in years 2008, 2009, and 2010) by the end of year 2023.
2. Ameren Illinois will achieve a 56% reduction in the KWh consumption on inactive meters compared to Baseline (the average of the actual kWh of consumption on inactive meters in years 2009 and 2010) by the end of year 2023.
3. Ameren Illinois will achieve a \$3.5 million reduction in uncollectible expense as compared to Baseline (the average of the actual uncollectible expense in years 2008, 2009, and 2010) by the end of year 2023.

Baseline calculations, yearly incremental metric goals, and reporting schedule were explained in detail in Ameren Illinois MAP-M metric plan. Further information pertaining to these metrics will be reported in accordance with the approved MAP-M plan.

## **AMI Tracking Mechanisms**

In its approved AMI Plan, Ameren Illinois proposed to track the following information:

- Percent of support system installed
- Percent of 2-way network installed
- Number and percent of AMI meters installed
- Number of customers able to access the Web Portal and Web Portal usage statistics
- Number of customers eligible for peak time rebate tariff
- Number of customers signed up for peak time rebate tariff
- Number of customers on PSP, RTP, or other real time rates

Since we are still in the early stages of AMI system development, and network deployment will not begin until Q4 of 2013, no data exists for these items, except for the existing number of customers on the following Ameren Illinois offered rates:

1. Number of customers on Ameren Illinois' Power Smart Pricing (PSP) Program as of December 31, 2012 = 12,244.
2. Number of customers on an Ameren Illinois' Real Time Pricing (RTP) Program (excluding PSP) as of December 31, 2012 = 1,625

Ameren Illinois will provide data on these items in subsequent annual reports as appropriate and as available.

In addition to the above tracking mechanisms, Ameren Illinois is considering the adoption of additional tracking mechanisms proposed by the Citizens Utility Board (CUB) in conjunction with the Environmental Law & Policy Center (ELPC) and the Environmental Defense Fund (EDF). Ameren Illinois has participated in several discussions with these stakeholders and has voluntarily agreed to track the following additional items.

As stated, the work and activities described below are a voluntary undertaking on the part of Ameren Illinois. Recognizing changing circumstances that may affect the propriety of tracking the subject information, or where provisions of the enabling statutes are no longer operative, Ameren Illinois reserves the right to modify, delete, or add to any of the provisions described below, and the right to terminate any or all of the undertakings.

Ameren Illinois will voluntarily track and report the prior year's calendar year end information in its annual AMI Plan Update for the following items:

1. The number of residential and small commercial customers taking service from Ameren Illinois sponsored time variant or dynamic pricing tariffs, segmented by residential and small commercial customers, and by the specific dynamic or time variant rate. A residential customer is defined as a customer taking service under DS1. A small commercial customer is defined as a DS2 customer with usage of 15,000 kWh or less annually for the prior calendar year.
2. The estimated peak demand reduction in MW resulting from customer participation in Ameren Illinois' Peak Time Rebate Program. Estimated peak demand reduction is defined as the average estimated load reduction during the previous calendar year's Peak Time Rebate curtailment events.
3. The following by customer class (DS1, DS2-Small Commercial, DS2-All Other, DS3, DS4):
  - a. Number of AMI meters installed
  - b. Number of AMI meters communicating through the AMI network and network accessed data used for billing.
  - c. Number of customers with AMI meters whose data is available on the applicable web-based portal.
  - d. Number of customers with AMI meters who have viewed their data on the applicable web-based portal a minimum of one time during the calendar year.
4. The number of AMI metered customers with a consumer device registered to receive information from the AMI meter. Ameren Illinois will also provide a list, by device type, of the consumer devices that have been certified as capable of receiving information from its AMI meters.
5. As applicable, the number of AMI metered customers who download data through the Green Button Initiative format a minimum of one time during the calendar year.
6. The number of AMI meters that are replaced prior to the end of their manufacturer expected 20-year useful life. The high level cause of the meter replacement will also be tracked in one of four categories – 1. communication related, 2. metrology related, 3. remote switch related, 4. external physical damage not caused by the meter. Ameren Illinois will also note those internal meter malfunctions (categories 1 – 3 above) that cause a non-momentary disruption of service to the customer.
7. Ameren Illinois will add the most current Part 466.140 Distributed Generation Annual Report as an attachment to its annual AMI Plan Update.
8. Ameren Illinois will segment from the most current Part 466.140 Distributed Generation Annual Report those customers taking service on the Net Metering Tariff and add this document as an attachment to its annual AMI Plan Update.
9. The total known distributed generation capacity in KW connected to the Ameren Illinois distribution system based on the Part 466.140 Distributed Generation Report and divide that capacity value by the total Ameren Illinois system peak demand.
10. The time required to connect distributed resources to the grid. The clock will start upon receipt of a complete application from the customer. An application is considered complete when all required documentation, information, application fees, etc. have been received and application can be forwarded to engineering. The clock will end when an appropriate Ameren Illinois electric meter is installed and / or appropriately programmed to accommodate the distributed resource.

11. The number of formal ICC complaints, informal ICC complaints and other complaints related to AMI deployment, broken down by type of complaint and resolution.
12. The reduction in gasoline consumption from the reduction in manual meter reading miles, and converted to a reduction in greenhouse gas emissions based on formulas provided by CUB / ELPC / EDF.
13. The annual combined load factor for all its AMI metered customers, and its entire system annual load factor. Annual load factor is defined as total consumption in MWH divided by the hourly peak demand at the time of system peak in MW multiplied by 8760 hours per year.
14. The number and percentage of 12 kV distribution circuits using data from AMI meters as part of a voltage / var control scheme.

Ameren Illinois will voluntarily track and report the prior year's calendar year end information in its annual Infrastructure Investment Plan Update for the following items:

1. The number, type, and total MW of utility owned energy storage devices connected to the Ameren Illinois electric grid.
2. The number and percentage of Transmission, High Voltage Distribution (BULK), and Distribution substations controlled and/or monitored via Supervisory Control and Data Acquisition (SCADA) systems.
3. The number and percentage of distribution circuits (69 kV, 34 kV, 12 kV, and 4 kV) equipped with remotely controlled and/or monitored devices.
4. The number of meters per automated three phase 12 kV line segment. An automated line segment is defined as a 12 kV three phase mainline circuit between two automated devices.
5. Provide a list by major device category of the types of remotely accessible devices that Ameren Illinois has deployed or has approved for deployment on its electric distribution system, and the predominate manufacturers of these devices.

Ameren Illinois will provide data on these additional items in subsequent annual reports as appropriate and as available.

Ameren Illinois will voluntarily continue discussions with CUB, ELPC, and EDF, and will voluntarily participate in associated workshops as practical, on the following items:

1. On-peak load reductions resulting from Ameren Illinois administered programs in addition to PTR.
2. Potential additional methods by which to estimate greenhouse gas emissions reduced by smart grid technology.
3. Potential methods by which to estimate the energy provided by distributed generation connected to the Ameren Illinois system.
4. Methods by which to further calculate annual load factor of AMI metered customers by customer class.
5. Potential methods by which to define and track network nodes monitored in "real time".
6. Potential methods by which to determine the number of third party owned energy storage devices connected to the Ameren Illinois electric grid.
7. Potential methods by which to define and track improvement in line loss reductions enabled by smart grid technology.
8. As part of its AMI Business Process Design in 2013, Ameren Illinois will discuss with alternative retail electric suppliers options for identifying and tracking those retail electric supplier served customers taking service under a time variant or dynamic pricing rate.