STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Ameren Illinois Company	**:**	
d/b/a Ameren Illinois	**:**	
	:	**12-0244**
Verified Petition for Approval of	**:**	
Smart Grid Advanced Metering	**:**	
Infrastructure Deployment Plan.	**:**	

ORDER

DATED: May 29, 2012

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By the Commission:

I. PROCEDURAL HISTORY AND BACKGROUND

On March 30, 2012, Ameren Illinois Company d/b/a Ameren Illinois ("Ameren") filed its Advanced Metering Infrastructure Plan ("AMI Plan") with the Illinois Commerce Commission ("Commission") pursuant to Section 16-108.6 of the Public Utilities Act ("Act"), 220 ILCS 5/1-101 et seq.

Petitions to intervene were filed by the Citizen's Utility Board ("CUB"), Comverge, Inc., and the Environmental Law and Policy Center ("ELPC"). A notice of appearance on behalf of the People of the State of Illinois, by and through Lisa Madigan, Attorney General of the State of Illinois ("the AG") was also filed. An Evidentiary Hearing was held on April 26, 2012 at the Commission offices at 527 E. Capital Ave., Springfield, Illinois. Briefs were filed by Ameren, Staff, the AG, and CUB/ELPC. A Proposed Order was served on the parties. Briefs on Exceptions were filed by Ameren, the AG, and CUB/ELPC. Those Briefs on Exceptions were fully considered in the preparation of this final Order.

II. RELEVANT STATUTORY PROVISIONS

Section 16-108.6(c) of the Act states in part:

> The AMI Plan shall contain:
>
> (1) the participating utility's Smart Grid AMI vision statement that is consistent with the goal of developing a cost-beneficial Smart Grid;
>
> (2) a statement of Smart Grid AMI strategy that includes a description of how the utility evaluates and prioritizes technology choices to create customer value, including a plan to enhance and enable customers' ability to take

advantage of Smart Grid functions beginning at the time an account has billed successfully on the AMI network;

(3) a deployment schedule and plan that includes deployment of AMI to all customers for a participating utility other than a combination utility, and to 62% of all customers for a participating utility that is a combination utility;

(4) annual milestones and metrics for the purposes of measuring the success of the AMI Plan in enabling Smart Grid functions; and enhancing consumer benefits from Smart Grid AMI; and

(5) a plan for the consumer education to be implemented by the participating utility.

It also states that:

> After notice and hearing, the Commission shall, within 60 days of the filing of an AMI Plan, issue its order approving, or approving with modification, the AMI Plan if the Commission finds that the AMI Plan contains the information required in paragraphs (1) through (5) of this subsection (c) and further finds that the implementation of the AMI Plan will be cost-beneficial consistent with the principles established through the Illinois Smart Grid Collaborative, giving weight to the results of any Commission-approved pilot designed to examine the benefits and costs of AMI deployment.

Section 16-108.6(a) of the Act defines "Cost-beneficial" as:

> "Cost-beneficial" means a determination that the benefits of a participating utility's Smart Grid AMI Deployment Plan exceed the costs of the Smart Grid AMI Deployment Plan as initially filed with the Commission or as subsequently modified by the Commission. This standard is met if the present value of the total benefits of the Smart Grid AMI Deployment Plan exceeds the present value of the total costs of the Smart Grid AMI Deployment Plan. The total cost shall include all utility costs reasonably associated with the Smart Grid AMI Deployment Plan. The total benefits shall include the sum of avoided electricity costs, including avoided utility operational costs, avoided consumer power, capacity, and energy costs, and avoided societal costs associated with the production and consumption of electricity, as well as other societal benefits, including the greater integration of renewable and distributed power resources, reductions in the emissions of harmful pollutants and associated avoided health-related costs, other benefits associated with energy efficiency

measures, demand-response activities, and the enabling of greater penetration of alternative fuel vehicles.

III. AMI PLAN INFORMATIONAL REQUIREMENTS

A. AMI Vision Statement

1. Ameren's Position

Ameren states that the AMI Plan presents its vision of having the capability of serving all customers with a cost-beneficial AMI, and serving 62% of electric customers by 2022. Ameren claims its vision statement sets forth in broad terms the enhanced customer benefits and functionalities that it intends to deliver with its deployment of AMI. Ameren asserts that Staff and CUB/ELPC concur that the AMI Plan fulfills this statutory requirement. Ameren claims that no other party, in testimony or at hearing, disputed the adequacy of its vision statement. Ameren recommends the Commission find the AMI Plan adequately contains a statement of its Smart Grid AMI vision.

2. Staff's Position

Staff notes the participating utility's Smart Grid AMI vision statement must be consistent with the goal of developing a cost-beneficial Smart Grid. Staff witness Schlaf stated that the AMI Plan satisfied this requirement by stating that Ameren intends to deploy electric meters to a minimum of 62% of its customers by 2021 and by deploying technology that will improve utility operations while benefitting customers. Dr. Schlaf also stated that the vision statement's list of the capabilities of AMI technology appears to be comprehensive.

3. The AG's Position

The AG notes that at page 4 of its AMI Plan, Ameren writes:

> Ameren Illinois' vision is to have the capability to serve all of its customers with a cost-beneficial Advanced Metering Infrastructure, serving 62% of electric customers by 2022. To achieve this vision the Company must have (i) a clear path to full and complete cost recovery (i.e. return of and on investments and operating costs) and (ii) a strong and healthy financial position to provide the financing needed to install and maintain the infrastructure.

The AG asserts that Ameren assumes a simultaneous rollout of gas AMI along with the electric AMI rollout, but states that it will only commit to rolling out the gas meters provided Ameren has a clear path to full and complete cost recovery, and a strong and healthy financial position to provide the financing needed to install and maintain the infrastructure. The AG opines that it is this type of vision that creates roadblocks to Commission approval of the Ameren AMI Plan.

B. AMI Strategy

1. Ameren's Position

Ameren states that the AMI Plan explains its strategy for AMI deployment, including the planned stages to roll out AMI functionality, its intended approach to data communication with customers, its proposal to automate gas meters wherever the AMI network is installed for electric metering, its expectation that it will own the AMI components, its plan to engage leading AMI consultants and the targeted number of meters to be deployed within 10 and 15 years. The AMI Plan "strategy" also includes Ameren's plan and progress in evaluating and selecting the AMI technology to create customer value, the data analytic solutions it intends to incorporate, the potential enhancements that will be considered, and its approach to program management. The Plan also points out Ameren's plan to leverage its considerable automated metering deployment and operating experience in deploying AMI.

Ameren notes that Staff agrees the AMI Plan adequately addresses Ameren's Smart Grid AMI strategy, although CUB/ELPC complains Ameren has not yet decided on its AMI technology or meter data management system technology ("MDMS"). Ameren asserts in rebuttal that the fact that it has yet to make those decisions is understandable, given where Ameren is in the process of evaluating AMI vendors. Ameren believes it is not essential for the Commission to have this information in its possession now. Ameren asserts it will update this missing information in its annual reports to the Commission and keep stakeholders abreast of developments through consultation with the Smart Grid Advisory Council (the "Council"). Ameren recommends the Commission find, as Staff recommends, that the AMI Plan adequately addresses Ameren's strategy in the deployment of AMI to its customers.

2. Staff's Position

Staff notes the AMI Plan must contain a statement of Smart Grid AMI strategy that includes a description of how the utility evaluates and prioritizes technology choices to create customer value, including a plan to enhance and enable customers' ability to take advantage of Smart Grid functions beginning at the time an account has billed successfully on the AMI network.

Dr. Schlaf stated the AMI Plan satisfied Information Requirement (2) by describing a staged approach to constructing an AMI system that builds on Ameren's experience with automated metering reading technology. Dr. Schlaf notes the AMI Plan describes the various stages, which start with installation of the meter data management and AMI systems and later adds more features, including the capability to bill residential customers, and, eventually, commercial and industrial customers. Dr. Schlaf also notes that the AMI Plan states that Ameren intends to deploy and evaluate a number of features that will enhance customer benefits.

3. CUB/ELPC's Position

CUB/ELPC states that Ameren's AMI Plan is required to contain a strategy statement that includes a description of how Ameren evaluates and prioritizes technology choices to create customer value, including a plan to enhance and enable customers' ability to take advantage of Smart Grid functions beginning at the time an account has billed successfully on the AMI. CUB/ELPC suggests that Ameren's AMI Plan falls short of the requirements which will enable the Commission to determine whether its Smart Grid strategy will deliver benefits to its customers. Smart grid functions should work together to create customer value, which in CUB/ELPC witness Horn's opinion, means lower bills for Ameren customers as well as reduced emissions that are associated with public health costs. CUB/ELPC argues that functions noted by the Black & Veatch Report (such as demand response initiatives, net-metering demands of plug in electric vehicles, distribution system asset monitoring and control, and load control opportunities) are critical to the long-term success of AMI investment. CUB/ELPC asserts that Ameren's meters should be enabled to maximize interoperability by being upgradable as improved protocols for interoperability, like Smart Energy Profile 2.0, are developed and adopted. CUB/ELPC opines that open network principles are important to create new ways for customers to manage energy usage and to create standard procedures for interconnecting devices, and that these principles are:

- Easy and convenient access by consumers to their energy information;
- Ability of consumers to easily protect and authorize third party access and use of energy information;
- Transparent pricing models for information access charges;
- Adoption of common format for transfer of energy data;
- Transparency and interoperability in data transfer; and
- Consistency in measurement and verification standards.

Though it appears that Ameren's ultimate data format is unknown, CUB/ELPC suggests it should be designed with these principles in mind, which would allow Ameren customers to take advantage of all the data available with the Smart Grid. CUB/ELPC argues that clear, enforceable standards are necessary to make sure individual customer usage data are protected, and that a standardized data format, such as the federally-endorsed Green Button format, will lead to consistency necessary to spur a wave of software application developers and energy services companies. CUB/ELPC asserts that Ameren's AMI Plan should require efficient management of data flow (such as the allowance of e-signatures); discrete and clear third party authorization protocols that are well-defined with respect to scope and duration; and transparent, competitive pricing for third party access.

CUB/ELPC also opines that Ameren's AMI Plan must provide a sufficiently detailed description of chosen technology, such that the Commission can find that Ameren's choices create customer value, including the ability of customers to take advantage of smart grid functions as defined by Section 16-108.6 of the Act. However, CUB/ELPC notes that Ameren has apparently not yet decided on the AMI or MDMS technology, including its AMI technology, vendor, or specific components. CUB/ELPC complains that the very features which would support enhanced customer benefits, such as voltage optimization, distributed generation, home area networking and smart appliance communication, and enhanced rate options and services, are not included in Ameren's basic functionalities.

CUB/ELPC asserts these very functionalities were included in Section 16-108.6 of the Act because they support other stated goals of the General Assembly. CUB/ELPC notes that included in the Energy Infrastructure Modernization Act ("EIMA") was a requirement to review whether or not additional energy efficiency and demand response products could be procured, and changes to Illinois' net metering policy. CUB/ELPC suggests that the Commission must make sure that Ameren's proposed AMI investments are enhancing the likelihood of success of these policies by enabling smart grid functions required by the Act.

CUB/ELPC suggests that in order to ensure that pursuit of Smart Grid functionalities does not compromise data security; clear, enforceable standards are required to protect customer usage data. CUB/ELPC avers that a standardized data format, like Green Button, will lead to the consistency required to allow software and energy service companies to provide applications to customers. While Ameren believes that it has sufficient time to investigate web portal and data access industry standards, CUB/ELPC opines that Ameren's AMI Plan should aid efficient management of data flow by allowing e-signatures; discrete and clear third party authorization protocols limited in scope and duration; and transparent pricing for any third party access charges in order to ensure sufficient data security while enabling real customer savings. Ameren claims that it clearly lays out the functionalities that will be required of its AMI meters, network, MDM, and other Information Technology ("IT") systems to create customer value on the face of the AMI Plan, and the fact that a final decision has not been made is irrelevant because the Plan outlines the plan, process, procedures, and timelines to make these decisions.

However, CUB/ELPC states that the very functionalities that Ameren considers "potential enhancements," such as distributed generation which includes the integration of electric vehicles storage; home area networks; and Smart Appliance communication, are the functionalities required by the EIMA and the functionalities crucial for customers to be able to respond to price signals. CUB/ELPC asserts that the Commission should be concerned that Ameren does not view these enhancements as required of Ameren's AMI investment, nor does Ameren anticipate that these enhancements will be enabled for full functionality by 2015. CUB/ELPC argues it is crucial that the Commission require Ameren to incorporate distributed generation as part of its AMI Plan, especially since existing distributed generation in Ameren's territory varies by operating center. CUB/ELPC asserts that the discussed benefits are valuable to customers and should be explored further by way of stakeholder workshops. CUB/ELPC suggests the

Commission direct Ameren to modify its AMI Plan to discuss how the various enhanced functionalities can be brought sooner, rather than later, to Ameren's customers.

4. The AG's Position

The AG notes that among the strategies Ameren describes in its AMI Plan is its intention to activate the remote connect/disconnect switch in the AMI meters installed over the relevant 10-year performance metric period. In addition, the AG states that Ameren's Cost/Benefit Analysis assigns specific dollar benefits to fewer truck rolls related to remote connections and disconnections, including those made for nonpayment. The AG notes that in Docket No. 12-0089, Ameren also made clear that its assumed performance metrics filed in that docket assumed no on-site notification requirement prior to disconnection. The AG asserts that the Commission's current Part 280.130(d) clearly states that the utility shall attempt to advise the customer that service is being discontinued by making contact "at the time service is being discontinued." The AG says this important requirement for an attempt at in-person notification is in addition to a requirement that if disconnection cannot be accomplished during a call made at the customer's premises, the utility shall attempt to leave a notice at the premise or billing address informing the customer that disconnection was attempted and their service continues to be subject to disconnection. Specifically, the AG avers the current Part 280.130(d) "Discontinuance of Service" rule reads:

> A utility shall attempt to advise the customer that service is being discontinued by directing its employee making the disconnection to contact the customer at the time service is being discontinued. When the utility is unable to discontinue service during a call made at the customer's premise, the utility shall attempt to leave a notice at the premise or billing address information the customer that an attempt to discontinue service has been made and that his/her service continues to be subject to discontinuance.

The AG states the Commission's most recent finding concerning this issue came in Docket No. 09-0263, Commonwealth Edison Company's ("ComEd") Petition to approve an AMI Pilot Program and associated tariffs. In its Order, the AG asserts the Commission specifically directed ComEd to continue the practice of premise visits and customer contact, despite the installation of AMI technology that enabled remote disconnection. In doing so, the AG claims the Commission denied ComEd's request to make a contrary interpretation on this point, by requesting that language be stricken that recognized that a site visit is required in part because of its value in detecting safety issues. The AG asserts that in its Order, the Commission rejected ComEd's request to strike that language, choosing instead to interpret the premise visit requirement as requiring an attempt at in-person contact, despite the technical capability for remote disconnection AMI created. The AG notes the Order stated:

> We agree with the AG/AARP, CUB and the IBEW insofar a (sic) remote disconnection should occur in a manner that is consistent with current

> Illinois law, the regulation cited above (sic). The regulation, cited above, clearly contemplates a site visit by a utility employee upon disconnection. While we acknowledge that the language in this regulation may have contemplated the world as it existed before AMI technology, a site visit upon disconnection affords a valuable service to consumers, and, in certain circumstances, (e.g., when a safety issue is detected upon the site visit) to ComEd. ComEd shall not remotely disconnect a program participant unless such disconnection is in accordance with 83 Ill. Adm. Code 280.130(d) and any other pertinent laws that are in effect at the time of disconnection.

Even though this rule was drafted at a time when a customer's electric service could not be discontinued without a premise visit, the AG asserts the purpose of the rule is greater than recognition of mere technical limitations. The AG opines that the Commission recognized the vital public health and safety goals that are furthered by maintaining the premise visit/in-person contact rule. The AG opines that the health and safety consequences of disconnection of energy service can trigger severe, adverse health consequences for older consumers in particular, including death due to hypothermia or exposure to extreme heat. The AG claims the "knock on the door" is important because phone calls and letters may not reach all customers who are vulnerable and who are facing potential disconnection.

The AG notes Ameren currently follows the on-site notification procedure outlined in Section 280.130(d) to the letter. When asked in an AG data request what procedures Ameren field personnel follow when disconnecting residential customers due to nonpayment, and what if any contact is provided to the residential customer subject to disconnection at the time of disconnection, Ameren stated:

> Customer contact is attempted before the actual physical disconnection. The customer receives a bill which provides all pertinent usage and balance information along with a due date. If unpaid, the customer receives a disconnect notice in accordance with Part 280 giving the past due balance and a date in which it needs paid (sic) to avoid disconnection. The notice contains literature describing payment arrangements, assistance options, payment options, and the Call Center phone number and hours of operation. Additionally, each residential customer receives an automated call again advising them of the balance and the date by which to pay. Balance and payment information is available 24/7 both through the phone system and on Ameren Illinois' website.
>
> After all attempts to solicit payment have failed, the disconnection order is sent to the field to be worked. The field technicians work from terminals in their vehicles which operate in real-time. Any arrangements or payments made by the customer update their systems immediately. Customers are given up to the point of physical disconnection to make payment and/or payment arrangements. Upon arriving at the customer's premises, the

> field technician attempts to make contact by knocking at the door. If the customer is home, the technician can speak with the customer and hand deliver a door tag. That door tag gives the Call Center phone number, website information, a phone number for Western Union/Speedpay to make payments as well as a safety message regarding the main breaker and pilot relight. If the customer is not home, the technician will hang the door tag at the customer's front entrance.

The AG avers that Ameren has indicated in its AMI Plan that the realization of benefits associated with the remote disconnect capability is not assumed to begin until 2015, when the remote switch functionality is activated. The AG argues that regardless of when and what new Part 280 rules take effect, Ameren has an obligation to comply with the current regulation and to continue to make a premise visit a part of the disconnection for nonpayment process.

The AG states it is not attempting to re-litigate the safety and public policy issues associated with the premise visit requirement, however the AG believes it is important to highlight the current status of the Part 280.130(d) rule, so that the Commission can direct Ameren to adopt an AMI Plan that complies with the Part 280 rules. Given Ameren's stated strategy of utilizing the remote disconnect switch and its identification of specific monetary benefits associated with fewer truck rolls employed in the Ameren Cost/Benefit Analysis, the AG asserts that a specific finding on this point in any final order issued in this docket is essential.

In its Brief on Exceptions, the AG maintains that the order should recognize the existing Part 280 requirements relating to notifying customers of disconnection.

C. AMI Deployment Plan

1. Ameren's Position

Ameren notes that the AMI Plan lays out its approach to ensure that 62% of its electric customers are serviced via AMI within the next 10 years, by deploying an estimated 780,000 AMI-equipped electric meters starting in the fourth quarter of 2013. Ameren states the AMI Plan also illustrates how it would continue deployment of AMI meters to provide AMI capability to serve all electric customers within a 15-year period. Ameren suggests the AMI Plan further presents its planned phased approach to deployment of the AMI network and meters, the capabilities it expects its "smart" meters to have, a preliminary project schedule and key activities associated with the deployment, while also providing a status update on the progress made in considering potential AMI networks, evaluating initial vendor pricing received during the Request for Information ("RFI") process, and putting together and releasing to vendors comprehensive Request for Proposals ("RFPs") for the AMI and MDMS systems.

Ameren states that Staff agrees that the AMI Plan contains enough information on the planned deployment to satisfy the statutory requirement, although Staff indicates it would prefer the AMI Plan to contain detailed information on the identification of the AMI vendors and equipment, and the sequence of deployment by operating center. Ameren acknowledges that it has not yet finalized and incorporated these details into the AMI Plan, however Ameren asserts this is not grounds for the Commission's rejection of the AMI Plan, which it notes Staff does not recommend. While Ameren acknowledges these details are important, it suggests they are not required for the Commission to approve the AMI Plan, noting that Staff concedes that the law does not require a "comprehensive deployment schedule." Ameren asserts that Staff agrees that it is reasonable to assume that aspects of the AMI Plan, including the deployment schedule, could change over time, and that Staff acknowledges that the fact that the deployment schedule could change does not prevent the Commission from reviewing and approving the AMI Plan in this proceeding.

Ameren notes that it continues to make progress in finalizing the details surrounding the deployment of the AMI network and meters, and has a plan in place to contract with AMI vendors, select AMI equipment and determine the exact sequence of deployment by the end of 2012. Ameren states Staff concedes that these are important milestones that should not be taken lightly and that require time and resources to evaluate. Ameren avers it will continue to apprise both the Commission in its annual reports, and interested stakeholders through consultation with the Council on its progress in developing a more comprehensive and firm deployment schedule. While CUB/ELPC complains that the AMI Plan is not presented in enough detail, Ameren suggests that additional details are not needed now. Ameren notes the Commission will have the opportunity to address issues or concerns about the deployment schedule in a proceeding following the submission of Ameren's annual report. Ameren suggests the Commission should follow Staff's recommendation, and find that the AMI Plan adequately addresses Ameren's deployment plan and schedule.

2. Staff's Position

Staff notes the AMI Plan must contain a deployment schedule and plan that includes deployment of AMI to all customers for a participating utility other than a combination utility, and to 62% of all customers for a participating utility that is a combination utility.

Staff witness Schlaf stated that the AMI Plan would meet this requirement if the AMI Plan is only required to list the number of meters that would have to be deployed annually to meet the 62% target.

3. CUB/ELPC's Position

CUB/ELPC notes that Staff witness Schlaf testified regarding Ameren's AMI Plan that if deployment schedule, as used in the Act, means that Ameren is only required to list the number of meters it intends to deploy annually to meet the 62% requirement, then the Ameren AMI Plan adequately addresses this requirement.

CUB/ELPC states however, that various witnesses express concern that Ameren's proposed deployment schedule is not detailed enough for thorough Commission review. CUB/ELPC avers that Dr. Schlaf noted there is a lack of specificity in the Plan with respect to deployment, with the reason being that Ameren has not yet made basic decisions about deployment and technology selection. CUB/ELPC states that examples of decisions not yet made by Ameren, which were identified by Staff, include:

- The timetable and location of deployment; that is, the identification of the operating areas in which AMI will be deployed and whether deployment will occur first in the areas in which Automatic Meter Reading ("AMR") has not been deployed or the areas in which AMR has already been deployed;
- Identification of the vendors of the AMI equipment;
- Ownership of the communications system;
- Whether Ameren intends to continue to deploy AMI for electric customers beyond 168 the initial 10-year deployment period; and
- Whether Ameren will deploy AMI for natural gas customers.

CUB/ELPC notes that Ameren has conducted an RFI process with AMI vendors to determine possible costs, and expects to complete review of RFP responses for the AMI and MDMS by mid-2012, and that Ameren expects to develop a final deployment schedule by operating center by the fourth quarter of 2012. While Ameren states it has considered one hypothetical deployment schedule to ensure comparability of vendor submissions, CUB/ELPC notes that Ameren indicates without finalized information, it can not finalize a year-by-year operating center-by-operating center deployment schedule.

CUB/ELPC suggests however, that detailed and reliable schedules and plans are necessary for the Commission to find that customer benefits result from Ameren's AMI Plan. CUB/ELPC opines that the Commission must be able to see enough detail to conclude that the AMI Plan choices are the most beneficial to its customers, and that this detail is critical because the actual net present value customers receive from AMI investments depends in part on how those investments are deployed. CUB/ELPC asserts that as an example, an evaluation of ComEd's AMI pilot program showed that a five year deployment, rather than a ten year deployment, would increase the net present value of AMI deployment by $146 million. CUB/ELPC suggests that this same study showed how the timing and geography of AMI deployment can significantly affect the operational efficiencies gained and customer benefits accrued. CUB/ELPC avers that Ameren confirmed that operational and customer benefits from AMI differ by operating center, and that the unique mixture of residential, commercial, and industrial customers can differ by operating center. CUB/ELPC argues that if Ameren deploys to operating centers with relatively fewer proportions of residential customers first, then, logically, fewer benefits will be realized in the first ten years of Ameren's proposed fifteen year deployment plan.

CUB/ELPC acknowledges that Ameren's AMI Plan did provide for two different deployment scenarios: first, a ten-year deployment to 62% of Ameren's electric customers with full deployment to 100% of those customers over fifteen years; and second, simply deploying AMI to 62% of its electric customers with no further deployment. CUB/ELPC opines that Ameren did not model any deployment scenarios where AMI deployment occurred in less than ten years in its Cost/Benefit Analysis, and also did not consider whether changing the deployment schedule might reduce the overall cost of meeting Ameren's incremental goals regarding estimated bills, inactive meters, and uncollectible expense.

As a result of this lack of detail, CUB/ELPC suggests that the two scenarios Ameren included in its Cost/Benefit Analysis are insufficient for the Commission to determine whether Ameren's planned deployment schedule sufficiently delivers benefits to customers. Because the value of customer benefits decreases over time the longer they are deferred, CUB/ELPC asserts there is a material difference in customer value with different deployment schedules based on operating center.

CUB/ELPC notes that Ameren anticipates network deployment to commence near the end of the first quarter of 2013, with deployment of AMI meters to begin by the fourth quarter of 2013; and that the benefits included in the Cost/Benefit Analysis assume the most likely and intended deployment scenario. While Ameren claims that there is little, if any, difference in anticipated benefits based on specific operating centers, CUB/ELPC witness Horn argues it is a mistake not to take geography into account when calculating the Cost/Benefit Analysis. CUB/ELPC notes that Ms. Horn testified that other utilities that the Environmental Defense Fund ("EDF") has worked with on this issue discovered ways to extract much greater value from their AMI by considering geographic conditions. Although Ameren admits that it needs to understand its population to know how to market pricing programs effectively, CUB/ELPC assert the Commission should require information about specific locations and demographics to accurately forecast customer benefits before it approves Ameren's AMI Plan. Because Ameren's AMI Plan does not have timelines with specific quantitative goals, CUB/ELPC suggests the Commission can not assess whether the proposed deployment schedule is reasonable at this time, and the Commission should therefore direct Ameren to modify its AMI Plan and present alternative scenarios for comparison regarding why Ameren's chosen time period is sufficient. CUB/ELPC also recommends the Commission require Ameren to modify its AMI Plan to present a year by year, operating center by operating center deployment schedule.

4. The AG's Position

The AG notes that according to Ameren's AMI Plan, in order to ensure that 62% of Ameren electric customers are served via AMI by December 31, 2022, as required under Section 16-108.6(c)(3) of the Act, Ameren must install an estimated 780,000, AMI-equipped electric meters, however Ameren indicates it has not yet determined the specific service areas where AMI is to be deployed. The AG states Ameren expects the initial deployment of AMI meters to begin in the fourth quarter of 2013, and ramp up in

2014 and 2015. The AG opines that initially, Customer Service System, MMS, and AMI interfaces will be implemented that will allow meter records and customer account information to be updated daily, while such functions as IT, MDMS, and initial business processes would be completed by mid-2014. The AG asserts that automated reads will not be used for billing or billing inquiries during the initial stage of AMI deployment, according to Ameren.

The AG avers that what is absent from the Plan, however, is any detail regarding the location and strategy of deployment decisions. The AG opines that Dr. Schlaf agreed that Ameren has not yet provided very detailed information on deployment, although he was expecting to see some other indication of what Ameren's plans would be.

The AG notes that unlike ComEd, Ameren currently has in place AMR that provides one-way communications to Ameren meter readers, and that an expansion of AMR in Ameren's service territory began in the spring of 2006 and concluded in early 2010. The AG asserts that more than half of Ameren's gas and electric customers have automated, 1-way, transmit-only meters, including 678,000 electric meters and 476,000 gas meters.

Ameren notes in its AMI Plan that due to early automation, Ameren’s customers have been receiving the benefits of AMR, and with it, a large portion of Ameren’s service territory is ready to move to the next level of metering infrastructure with its additional benefits, which the AG suggests means that the operational benefits associated with reduced meter reading costs commonly attributed to AMI technology at least partially exist for more than half of Ameren’s service territory. In addition, Ameren currently offers a dynamic pricing option in its Power Smart Pricing ("PSP") Program to all of its electric distribution customers, which assesses real-time prices for participating customers’ electric supply service, therefore the AG asserts that AMI deployment criteria should include considerable deliberation as to how all of the benefits associated with AMI functionality can be maximized. With that goal in mind and cognizant of the unique AMR installations that exist in Ameren’s service territory, the AG suggests that the Commission should, prior to approving any AMI Plan, require Ameren to provide more detailed information about where the AMI meters will be installed.

In addition, the AG argues that Ameren should be required to provide and implement a Plan for installation of AMI meters that maximizes the usefulness of smart grid reliability investments required under Section 16-108.5 of the Act. For example, the AG notes that the AMI Plan states that one of the key functions of AMI technology is its ability process and communicate outage notification and restoration, and that it will include a functionality that enables remote detection of service and grid conditions. Given this capability, the AG argues that AMI deployment decisions should be made in conjunction with a review of the infrastructure reliability investments required under Section 16-108.5 of the Act, as well as Ameren's performance under the System Average Interruption Frequency Index and Customer Average Interruption Duration Index metrics. The AG state that Ameren's AMI Plan does not suggest that such factors will influence the geographic details of its deployment strategy, which the AG considers troubling, given the significant cost ratepayers will be asked to bear in the coming years associated with AMI and other smart grid technologies.

The AG asserts that at the behest of ComEd and Ameren, the General Assembly approved the EIMA last year that not only ensures cost recovery of smart grid investments, but guarantees annual recovery and reconciliation in customer rates of all reasonable utility expenses, including a set rate of return. The AG expresses concern however, that it does not appear that Ameren has developed a detailed deployment strategy which would consider what constitutes the most cost-beneficial, practical method of ensuring all customers, not just those who might engage in demand response and dynamic pricing, obtain some benefit from these meters.

In its Order in this proceeding, the AG recommends the Commission require Ameren to construct a deployment strategy that recognizes and incorporates reliability data as well as past AMR deployment to ensure that ratepayers recognize the appropriate benefit from this infrastructure investment.

In its Brief on Exceptions, the AG argues that any Commission-approved AMI Plan should include the requirement that a utility's AMI deployment is coordinated with its Section 16-108.5 reliability investments to ensure delivery service reliability and cost-effectiveness of the AMI investment.

D. AMI Plan Milestones and Metrics

1. Ameren's Position

Ameren notes that the AMI Plan sets forth the milestones and metrics that will be used to measure the success of the AMI deployment in enabling Smart Grid functions and enhancing consumer benefits from AMI, and includes the AMI-related metrics defined in Section 16-108.5(f) of the Act that will assist in evaluating the AMI Plan's success in realizing direct customer benefits in reduced consumption on inactive meters and reduced uncollectible/bad debt expense, as well as measure any reduction in estimated bills. Ameren states the AMI Plan also includes a number of milestones that it intends to report on in its annual reports to the Commission concerning its progress in implementing the Plan. Ameren asserts Staff agrees the AMI Plan adequately addresses the statutory requirement that the AMI Plan contain information on the proposed annual milestones and metrics.

Ameren states that CUB/ELPC and Staff both propose that Ameren consider additional metrics and milestones. Ameren indicates it intends to consider other meaningful methods for measuring and reporting of criteria related to the AMI deployment in its annual reports to the Commission, and states it will entertain such proposals in its ongoing interaction with stakeholders and the Council. Ameren complains however, that the proposals presented by Staff and CUB/ELPC are too vague and undeveloped to consider in this 60-day proceeding and include in the AMI Plan at this time.

Ameren finds it incongruous that CUB/ELPC defends its position by referring to a California procedure where Smart Grid implementation is still a work in progress, and although that process began in 2008, the issue of metrics and baselines has yet to be finalized. While CUB/ELPC witness Horn supports her claims by relying upon a draft filing made by the California utilities in 2010, Ameren suggests that in response to a proposed order in the California proceeding, two of the three utilities involved have raised issues regarding the decision and its application to the metrics, and have placed some of the metrics in question due to the passing of time and regulatory uncertainty.

Ameren asserts that it is unable to agree to include any of the proposed additional metrics and milestones in its AMI Plan at this time, and suggest that the appropriate forum to give proper consideration to these proposals would be in consultations with the Council, not in an expedited Commission proceeding. Ameren recommends that the Commission should find, as Staff recommends, that Ameren's AMI Plan contains the required information on annual metrics and milestones, and that the AMI plan need not be modified to include the additional metrics and milestones proposed by Staff and CUB/ELPC.

2. Staff's Position

Staff notes the AMI Plan must contain annual milestones and metrics for the purposes of measuring the success of the AMI Plan in enabling Smart Grid functions and enhancing consumer benefits from Smart Grid AMI, and that Ameren has addressed this requirement by proposing a number of metrics. Staff states that the additional metrics include the following: the percentages of the AMI support system and 2-way system that were installed; the number of customers able to access the Web Portal that Ameren will construct; the number of customers eligible for and taking service under Peak Time Rebate ("PTR") tariffs; and, the number of customers taking service under various types of dynamic pricing rates, such as real-time pricing. Staff notes it has no objection to Ameren's proposed metrics.

Dr. Schlaf noted that the AMI Plan also discusses potential features, products and uses of the AMI system that Ameren states it will evaluate, which may include some products that are evaluated in the Smart Grid Test Bed. Staff asserts other features may include Volt/Var Optimization, Distributed Generation, Home Area Network and Smart Appliance Communication, and Enhanced Rate Options and Services.

Staff recommends that Ameren include in its annual report information about the adoption of these and other potential features of AMI, although Ameren opposes this recommendation, contending that the information is not specific. In response, Staff notes that Staff is not recommending that the information about Ameren's adoption of the features and products enabled by AMI be used to evaluate the success of the AMI investment, but rather, since Ameren believes that products and features of AMI will benefit customers, Staff recommends that Ameren inform the Commission on an annual basis of its adoption of the features and products that are made possible by AMI.

3. CUB/ELPC's Position

CUB/ELPC argues that Ameren's AMI Plan does not contain adequate milestones and metrics to allow the Commission to determine that implementation of the AMI Plan as presented will be cost-beneficial for Ameren's customers. CUB/ELPC suggests that milestones and metrics should measure how the Smart Grid functionalities are delivered to Ameren consumers, as required by Section 16-108.5 of the Act, in addition to any Smart Grid metrics approved by the Commission in the Ameren performance metrics docket.

CUB/ELPC notes that Ameren believes that metrics should provide a meaningful way for the Commission to measure either the success of the implementation of the AMI Plan or consumer benefits, and Ameren criticizes Ms. Horn's proposed metrics because they lack a baseline value for how to measure the metrics. CUB/ELPC states that Ameren witness Abba does offer a few suggestions on how, for example, Ms. Horn's power flow metric could be implemented, such as evaluating how much money is spent or how much usage was saved in comparison to a baseline period. Similarly, for Ms. Horn's proposed distributed generation metric, Ameren suggests that the number of connections, timeframe for getting connected, amount of paperwork needed to connect distributed generation, or type of equipment needed could all measure Ameren's progress under that metric. CUB/ELPC asserts that Ameren also criticizes Ms. Horn's metrics because they fail to provide an impact for failure to meet the metric. CUB/ELPC agrees with Ameren that performance metrics must be relevant to measuring the success of Smart Grid deployment, should include baseline values for comparison, and should provide an impact for failure to meet the metric. CUB/ELPC suggest that Ms. Horn's testimony addresses how Ameren's AMI Plan can use additional milestones and metrics to enable Smart Grid functions which deliver consumer benefits, and why Ameren's proposed list of metrics falls short of Ameren's own standard.

CUB/ELPC suggests that a lack of clearly defined metrics risks overemphasizing expenditure amounts and underemphasizing performance outcomes, and notes that Ms. Horn testified that the EDF has developed a scorecard for evaluation of AMI deployment plans, which concludes that metrics must provide reasonable measurement and reporting methods in addition to enabling stakeholders to evaluate future effectiveness of smart grid deployment.

CUB/ELPC witness Horn testified that EDF engaged in a process in cooperation with utilities, and at the request of the California Public Utilities Commission, to develop a set of metrics to track utility progress in smart grid deployment in the California Smart Grid rulemaking, Docket No. 08-12-0009. After the first phase of that process, EDF consulted with the utilities to create a set of metrics around the goals where consensus was reached, and although the list of consensus metrics has not been finalized yet, CUB/ELPC argues the objection of utilities are relatively technical and minor, yet illustrate the need for such a collaborative stakeholder process here in Illinois.

In contrast, CUB/ELPC asserts that Ms. Horn notes that Ameren provides a "few bare phrases" which Ms. Horn agrees should be measured, however Ameren fails its own standard for metrics by failing to include baseline values and failing to include consequences for failure to achieve any specific metric. In addition, CUB/ELPC notes that Ameren misses some key metrics, like data access metrics to ensure that customers can properly utilize the tools that would allow them to directly benefit from Ameren's AMI investments. CUB/ELPC recommends the Commission order Ameren to modify its AMI Plan to include the following metrics:

- Measures of third party access to the Smart Grid applications and technologies in Illinois;
- Measures of the ease of connection of distributed generation and net metering;
- Milestones for how wholesale market access for distributed generation, energy efficiency, and demand response can be maximized;
- Measures of the load impact from smart grid-enabled, Ameren administered demand response;
- How many customers understand ways to lower their bills, how to consume electricity more efficiently, how their bills are computed;
- Demand response program size, in total megawatts and customer class enrollment;
- System load factor and load factor by customer class;
- Measures of the use of capital assets such that power flows are optimized and energy waste in minimized; and
- Measures of the emissions impact of demand side management and integration of clean renewable resources, storage and electric vehicles enabled by Ameren smart grid investments.

CUB/ELPC asserts the Commission has already made clear that utilities opting to recover their costs through a performance-based formula rate must include milestones and performance metrics beyond those expressly named in the EIMA, citing the ComEd docket evaluating potential performance metrics for AMI deployment, where the Commission suggested that to the extent CUB's proposed metrics related to the deployment of AMI meters, the parties should consider those metrics in the forthcoming proceeding on ComEd's AMI deployment plan. (Docket No. 11-0772, Final Order at 29 (Apr. 4, 2012))

CUB/ELPC notes that Docket No. 11-0772 addressed ComEd's Multi-Year Performance Metrics Plan ("Metrics Plan") filed pursuant to Section 16-108.5(f) of the EIMA, in which CUB offered testimony addressing the need for metrics similar to those proposed in this proceeding, in order to ensure that ComEd's customers would benefit from the investments prescribed under the EIMA. CUB/ELPC asserts the Commission's considerations in that docket were substantially similar to those of the instant case, and that the Commission concluded that CUB presented good ideas concerning important additional metrics. Though the Commission concluded that the EIMA's scope and the limited time period available in the case made inclusion of additional requirements not feasible, CUB/ELPC opine the Commission expressed particular concern about how the EIMA framework would impact its ability to adequately review a utility's performance. Taking note of the disjointed nature of the many separate filings a utility must make under Public Acts 97-0616 and 97-0646, CUB/ELPC suggests the Commission expressed concern that there is no apparent docket for the overlapping issues that CUB had raised. Even though the Commission concluded that Docket No. 11-0772 was not the appropriate docket for addressing those issues, CUB/ELPC notes the Commission encouraged all parties to work together to ensure maximum customer benefits, including consideration of applicable metrics in the upcoming AMI docket for ComEd.

CUB/ELPC recommends the Commission continue to guide utility Smart Grid investments by requiring Ameren to modify its AMI Plan to include additional performance metrics in consultation with the Council, Staff and other stakeholders. In addition to requiring an evaluation plan, CUB/ELPC suggests the Commission should adopt standards for customer data access, should modify Ameren's AMI Plan to include the list of metrics it proposes, and should require that Ameren's AMI Plan interface with current and future customer technology such as customers' mobile telecommunication devices.

4. The AG's Position

The AG notes that Ameren provides a list of milestones and metrics in its AMI Plan, and the AG does not take issue with these criteria per se, except to note that the annual $3.5 million reduction in uncollectibles expense presumes the elimination of a site visit at the time of disconnections related to nonpayment.

5. Comverge's Position

Comverge notes that Ameren proposes in its AMI Plan that the milestones used to track the success of the AMI implementation will include, but not be limited to, the following:

- Percent of support system installed
- Percent of two-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

It is Comverge's position that the milestones enumerated by Ameren, which will be reported annually to the Commission, are appropriate. However, since 30% of the customer benefits identified in the AMI Plan come from peak demand reductions from dynamic pricing, Comverge requests that the Commission require that Ameren also include an additional milestone in its annual report to the Commission, which would be the amount of peak demand reduction achieved by implementation of the PTR program and other dynamic pricing programs.

E. Consumer Education Plan

1. Ameren's Position

Ameren notes the AMI Plan sets forth its goals, objectives and key message components that represent the framework of its plan to educate its customers and other stakeholders about the functionality and benefits of AMI. Ameren states the AMI Plan also identifies the categories of stakeholders and segments of customers that will be the audience for Ameren's messaging. Ameren asserts that the AMI Plan contains the phases of implementation and vehicles of communications that Ameren intends to use in promoting awareness of AMI to consumers and addressing the questions that are raised. In response to Staff's direct testimony, Ameren opines it also explained how it derived its initial budget for consumer education and communications. Ameren notes Staff agrees Ameren adequately addresses the statutory requirement that the AMI Plan contains the utility's plan for consumer education.

While CUB/ELPC complains that Ameren has not yet developed a comprehensive final communication plan, Ameren argues that Section 16-108.6(c) of the Act does not require a comprehensive final plan for consumer education to gain Commission approval. Ameren believes criticisms that the PTR and other dynamic pricing rate structures are not fully developed are similarly premature and will be the subject of a subsequent filing with the Commission. Ameren notes Comverge recommends that the Commission find, as Staff also recommends, that the AMI Plan adequately addresses Ameren's plan for consumer education, and is sufficient to warrant Commission approval.

2. Staff's Position

Staff states that to satisfy this requirement, Ameren must provide a plan for the consumer education to be implemented by the participating utility.

Staff notes that according to the AMI Plan, Ameren plans to spend about $1-2 million annually on consumer education and communications. Ameren state that its communication message will focus on informing customers of the capabilities of AMI. Dr. Schlaf notes that he requested further information from Ameren to describe how it developed its consumer education budget, especially in comparison with the consumer education budgets of other utilities that have developed AMI. After evaluating Ameren's response, Staff believes that Ameren has adequately addressed the consumer education technical requirement of the AMI Plan.

3. CUB/ELPC's Position

CUB/ELPC notes that Ameren's AMI Plan recognizes that consumer education efforts will be integral to customer acceptance of AMI, and the realization of the potential benefits of AMI. CUB/ELPC suggests that educating customers and notifying them of events can lead to usage reductions during event hours, independent of rate structures and enabling technologies. CUB/ELPC asserts that a properly designed consumer education plan is essential, given that many customers are not even aware under which delivery service rate they receive services. CUB/ELPC avers the Illinois Statewide Smart Grid Collaborative ("ISSGC") recommended that consumer education plans achieve the following:

- Consumers should understand the nature of the program, including technologies used, options available, rate structure changes, and the role of the utility and third parties.
- Consumers should understand the goals of the program.
- Consumers should understand the implications of their participation as it relates to benefits, costs, and risks to the consumer.

CUB/ELPC states that part of Ameren's stated goal for its consumer education plan is to achieve 30% dynamic program participation by 2031. CUB/ELPC opines that dynamic pricing is an essential tool for Ameren's customers to lower their electric bills, improve system congestion, and improve asset life. CUB/ELPC suggests that having a full menu of pricing options is important to different customer segments, and will aid them in being able to maximize the benefits of Smart Grid investment. CUB/ELPC argues the problem is that Ameren has not yet begun to determine the anticipated number of customers who will sign up for any of the identified rate structures. CUB/ELPC notes that Ameren does not commit to providing support functionality for other rate structures, such as critical peak pricing; although Ameren claims that its AMI systems will be fully capable to capture, store, and use billing hourly usage data for endless flexibility to accommodate other dynamic pricing programs. CUB/ELPC suggests that Ameren has not even considered implementation of other potential new dynamic rate options besides the peak-time rebate expressly named in the EIMA.

While Ameren believes it is premature and irrelevant to determine the number of customers who may sign up for a specific rate option; because Ameren's deployment plan lacks a detailed geographic and demographic description, CUB/ELPC argues the Commission cannot determine which audience segments receive AMI first and in what amounts, or find that Ameren's forecasted benefits from dynamic pricing will result from the AMI Plan.

CUB/ELPC states that Ameren acknowledges the need to understand particular audience segments within the deployment population to tailor its messaging to maximize consumer benefits, however Ameren points out that since no AMI meters will be installed until the fourth quarter of 2013, there is time for Ameren to further refine the plan and add more details, coordinate communication efforts with the Illinois Science and Energy Innovation Trust ("ISEIT"), and to leverage ISEIT money. CUB/ELPC notes that Ameren acknowledges that the unique demographics of its service territory make comparison with other utilities' consumer education budgets a difficult exercise, and as a result, admits that it has not developed a comprehensive final communications evaluation plan.

Although Ameren believes it has time in the future to supplement its education plan, CUB/ELPC asserts the Commission must review the AMI Plan as proposed. CUB/ELPC asserts that Ameren has failed to sufficiently detail investments that will be made and messages that will be developed so that the Commission can find that Ameren's Plan enables Smart Grid functions and enhances consumer benefits. Given Ameren's own admission that its service territory contains unique and differing demographic proportions, which may or may not differ by operating center, CUB/ELPC suggests the Commission should require Ameren to modify its AMI Plan to include a more specific customer education plan which takes into account the type of audiences and provides baseline values for evaluation of progress in consultation with the Council, Staff and other stakeholders.

4. The AG's Position

Like other portions of the AMI Plan, the AG asserts that Ameren's consumer education plan is vague, although Ameren appropriately recognizes that consumer education efforts will be integral to customer acceptance and the realization of the potential benefits of AMI. The AG notes that Ameren appears to be committed to consider the advice of the ISEIT and other stakeholders to leverage trust dollars and maximize plan effectiveness, however based on the lack of detail in the AMI Plan, the AG complains it is difficult to meaningfully comment on the Consumer Education Plan at this time. The AG does note that Ameren ascribes significant monetary benefits to customer participation in dynamic pricing programs, therefore the AG suggests the Commission regularly monitor the development of Ameren's Consumer Education program to ensure customers are educated about any new pricing programs available from Ameren, as well as information that ensures consumers retain control over personal usage and other data.

In its Brief on Exceptions, the AG avers that the Commission should closely monitor Ameren's customer education plan when and if an AMI Plan is approved.

F. Commission Analysis and Conclusions

The interpretation of the sufficiency of the contents of the AMI Plan submitted by Ameren in order to meet the requirements of Section 16-108.6(c) of the Act is obviously a case of first impression. While the Commission believes that Ameren has minimally met these requirements, it is very concerned that there is not more information in this initial plan. In some instances, Ameren has come very close to not having a "plan," in the normal sense of the word, but merely making general statements. And while it is true that Ameren will be making periodic updates, thus being able to fill in details that are currently lacking, it is also true that everything that follows in this AMI implementation follows from this initial plan. It is also offered that the short timeline for review (60 days) in this matter is an indication that the plan should not have to be detailed. While that review time may be a hardship for Staff in its review of the submission, it certainly does not speak to the ability of Ameren to offer a more substantial product. Thus, while the Section 16-108.6(c) requirements may be minimally fulfilled, it is disappointing that more was not set forth.

The Commission notes there is no apparent dispute among the parties regarding the "Statement of Smart Grid AMI Vision" component of Ameren's AMI Plan, although the AG expresses concern regarding Ameren's suggestion of a simultaneous roll-out of gas AMI, and the possible confusion the gas AMI brings when considering Ameren's electric AMI Plan. The Commission is concerned with Ameren's conjoining of gas and electric AMI, and Ameren's expressed intent to only pursue the gas AMI plan if there is a clear path to full and complete cost recovery, and a strong and healthy financial position to provide the financing needed to install and maintain the infrastructure. Section 16-108.6(c)(1) merely asks for a "vision statement that is consistent with the goal of developing a cost-beneficial smart grid." Ameren does this in one sentence of its submission, but in the very next sentence, appears to condition its "vision" upon receiving full and complete cost recovery and being in a strong financial condition—thereby negating its original "vision." Upon review of the information contained in Ameren's AMI Plan and the other record evidence, the Commission finds the AMI Plan contains a sufficient statement of Ameren's Smart Grid AMI vision, and therefore minimally complies with Section 16-108.6(c)(1) of the Act.

The second information requirement contained in Section 16-108.6(c)(2) of the Act requires an AMI Plan to contain "a statement of Smart Grid AMI strategy that includes a description of how the utility evaluates and prioritizes technology choices to create customer value, including a plan to enhance and enable customers' ability to take advantage of Smart Grid functions beginning at the time an account has billed successfully on the AMI network." This statutory language indicates to the Commission that the proper focus of this expedited docket is whether Ameren filed an AMI Plan that contains information consistent with Section 16-108.6(c)(2) of the Act. It appears to the Commission (and Staff) that Ameren has sufficiently complied with the requirement to provide a statement of Smart Grid AMI strategy. The Commission notes that CUB/ELPC complains that there is insufficient detail presented by Ameren to determine if the Smart Grid strategy requirement has been met, and also suggests that what Ameren identifies as potential enhancements are the very functionalities required by the EIMA. It appears to the Commission that the AG expresses concern about Ameren's plan to institute remote disconnections as part of its strategy, while acknowledging that Ameren is currently following the current Commission rules on this issue.

The Commission is satisfied that Ameren has filed an AMI plan that sufficiently details its Smart Grid strategy, in minimal compliance with Section 16-108.6(c)(2) of the Act. While the Commission agrees with the parties that more information would be desirable, the Commission notes that the statute requires only a statement of evaluation and prioritization, not an actual showing of what the results will be. The Commission also agrees with Ameren that if the legislature had wanted a utility to file an AMI Plan that meticulously detailed every facet of its strategy, it would have said so and it would have allowed the Commission more than 60 days to review and approve the Plan. The Commission believes CUB/ELPC's recommendation requiring more detail is inappropriate for this proceeding and it will not be adopted for this proceeding.

The Commission also rejects the AG's recommendation that the Commission order Ameren to adopt an AMI Plan that complies with the current Part 280 rules. The Commission notes that the purpose of this proceeding is to determine whether Ameren's AMI Plan presents a plan to deploy AMI to its customers that will ultimately result in more benefits than costs to Ameren's electric customers. The Commission does not believe that the purpose of this proceeding is to ensure that the deployment plan complies with the Commission's existing regulations to date. The Commission recognizes that Ameren has an obligation to comply with Commission rules, and believes that this issue will be resolved in the pending proceeding considering revisions to the Part 280.

The Commission recognizes that Section 16-108.6(c)(3) requires a combination utility, such as Ameren, to have a deployment schedule and plan that includes deployment of AMI to 62% of all customers over a 10-year period. Ameren has presented to the Commission a deployment schedule and plan to deploy AMI to 62% of its electric customers within 10 years, and 100% within 15 years to reach the entirety of its service territory, which Ameren suggests satisfies the informational requirement in Section 16-108.6(c)(3). While Ameren suggests the Commission has the authority to approve an AMI Plan that contemplates full deployment to all of Ameren's electric customers over a period longer than 10 years, the Commission believes this issue is best addressed in the Cost Benefit Analysis portion of this Order. The Commission does find that the suggested deployment schedule and plan minimally satisfies the requirements of Section 16-108.6(c)(3) of the Act, in that Ameren's deployment schedule and plan includes deployment of AMI to 62% of its customers over a 10-year period.

The Commission acknowledges that various parties have pointed to the lack of detail in Ameren's plan, and suggest that the Commission require Ameren to provide more details in this proceeding before approval. The Commission agrees with the parties that more detail would have been preferable to less detail; however, the Commission also recognizes that the Act sets a 60-day time limit for Commission consideration of the AMI Plan, and to determine whether the AMI Plan contains the statutorily required information and that implementation will be cost-beneficial. The difficulty here is that what is contemplated by Section 16-108.6(c)(3) is <u>both</u> a deployment schedule and a plan. There is no disagreement that Ameren has provided a schedule. However, it strains credulity to say a plan is in place. It is difficult to have a deployment plan when the Commission does not know who will execute it, which technology will be used, the geographic roll-out, or other details. There is a plan to bring on the people to further develop the plan, which while minimally acceptable under the statute, is obviously not ideal.

The Commission recognizes that there will be review of Ameren's AMI implementation on an ongoing basis, with a progress report being filed by Ameren in April of each year, assuming the AMI Plan is approved. Once the progress report is submitted, the Commission notes it has 90 days to conduct the proceeding to investigate the utility's progress. The Commission recognizes that it will have more time to review AMI plan progress reports each year, than the time allotted to review the initial plan, and expects the detail provided by Ameren to be considerably more than was provided for the initial review of the AMI Plan. The Commission believes this ongoing review process already built into the law will help to allay any concerns that approval of the AMI plan will impair the Commission's ability to review details and decisions that have not yet been made. As stated above, it would be far more beneficial for Ameren to have provided more detail up front, so that future Commission reviews would have been working from an implementation plan rather than a plan to get an implementation plan. The Commission agrees with Ameren that the statute does contemplate a continued evolution of the AMI Plan throughout the deployment process.

The Commission notes that Staff is in apparent agreement that Ameren's AMI Plan contains the information required under Section 16-108.6(c)(3), but also discussed perceived weaknesses in the AMI Plan. The Commission appreciates Staff's attention to detail in its review of the AMI Plan, especially given that the review was conducted during an expedited timeframe; however, the Commission does not consider these details and decisions that have yet to be finalized in the AMI Plan as sufficient reason to delay approval of the AMI Plan. The Commission recognizes that Ameren is in the process of obtaining bids through its RFP process, however the Commission does expect the parties to be kept informed on the details and decisions being made, and acknowledges that there will be an opportunity to review these details and decisions at a later date. To the extent that Staff and CUB/ELPC propose that more details be included in the AMI plan now to gain Commission approval, those proposals are therefore rejected.

The Commission also rejects the AG's proposal that the Commission direct Ameren to re-file its AMI Plan to incorporate reliability data as well as past AMR deployment. The Commission does not see a need to delay approval of Ameren's AMI Plan until that detail is resolved; nor does the Commission believe that the statutory scheme governing the AMI Plan contemplates a refiling of the Plan to accommodate the resolution of that level of detail. The Commission also notes that Ameren's performance under its reliability metrics is not the subject of this proceeding, and is not dependent exclusively on its deployment of AMI.

The Commission notes that the fourth informational requirement, described in Section 16-108.6(c)(4) of the Act, is the establishment of annual milestones and metrics for the purposes of measuring the success of the AMI Plan in enabling Smart Grid functions, and enhancing consumer benefits from Smart Grid AMI. The Commission agrees with Ameren that the appropriate forum for consideration of Staff and CUB/ELPC's proposed additional metrics and milestones would be in consultations with the Council, not in this expedited proceeding. The Commission further notes that it will have the opportunity to review Ameren's progress in implementing the AMI Plan on an annual basis, and that this review will help to ensure that Ameren's deployment of AMI is successful in realizing full AMI functionality, operational and customer benefits and other potential enhancements, although the Commission does agree that it is troubling that baselines have not yet been established for the metrics. Accordingly, the Commission rejects Staff and CUB/ELPC's proposals to the extent that they propose a modification to the AMI Plan to incorporate additional metrics and milestones. Section 16-108.6(c) simply requires that the AMI Plan contain information on Ameren's proposed annual milestones and metrics. Based on a review of the Plan at issue here and the other record evidence, the Commission finds Ameren's AMI Plan adequately addresses that statutory requirement. The Commission encourages Ameren and all interested stakeholder to continue the dialogue, outside of this proceeding, on appropriate measurements of the AMI Plan's success.

In regard to the last information requirement, the Commission notes the statute states that an AMI Plan must contain a plan for the consumer education to be implemented by the utility. The Commission agrees that Ameren has provided sufficient detail in its AMI Plan to indicate that its consumer education will be consistent with Section 16-108.6(c)(5); however, the Commission feels that Ameren, as with the other criteria, should be able to provide more information about its educational plan at this time than it has. It was not simply to have set out an amount to be spent, but how that money is to be spent, and maximized to achieve desired outcomes. The Commission notes that, as with any other facet of the AMI Plan, the Commission will have the opportunity to review updates to the Plan in Ameren's annual reports regarding progress in implementation of the AMI Plan, and will have the opportunity to assess Ameren's spending on consumer education in annual updates to its formula rates. The Commission believes that had the legislature wanted Ameren to file an AMI Plan meticulously detailing every facet of their strategy, it would have indicated that in the Act, and the Commission trusts it would have allowed more than 60 days for review and approval of the AMI Plan.

Notwithstanding the concerns enumerated above, based on the totality of the evidence presented in this proceeding, the Commission finds that Ameren's AMI plan has minimally satisfied the five informational requirements identified in Section 16-108.6(c) of the Act.

IV. TECHNICAL CRITERIA

The Commission must enter an order in this proceeding approving, or approving with modification, the AMI Plan, if the requisite information is contained within the Plan and implementation of the Plan is found to be cost beneficial for electric customers. In addition to these Plan requirements necessary for Commission approval, Section 16-

108.6(c) provides that the AMI Plan "shall" satisfy certain technical criteria. Those technical criteria are:

> The AMI Plan shall be fully consistent with the standards of the National Institute of Standard and Technology ("NIST") for Smart Grid interoperability that are in effect at the time the participating utility files its AMI Plan, shall include open standards and internet protocol to the maximum extent possible consistent with cyber security, and shall maximize, to the extent possible, a flexible smart meter platform that can accept remote device upgrades and contain sufficient internal memory capacity for additional storage capabilities, functions and services without the need for physical access to the meter.
>
> The AMI Plan shall secure the privacy of personal information and establish the right of consumers to consent to the disclosure of personal energy information to third parties through electronic, web-based, and other means in accordance with State and federal law and regulations regarding consumer privacy and protection of consumer data.

Ameren claims that its AMI Plan satisfies each of these technical criteria. Although Ameren suggests it is not required for approval of the AMI Plan, Ameren is also requesting that the Commission find that the AMI Plan satisfies each of the technical criteria set forth in Section 16-108.6.

A. NIST Standards for Smart Grid Interoperability

1. Ameren's Position

Ameren claims its AMI Plan sufficiently outlines its commitment to designing an AMI system that follows the standards for interoperability established by NIST, and notes that Staff agrees. Ameren states that it does not intend to choose a vendor that does not adhere to NIST standards, and its RFPs require its vendors to meet those standards, and notes that no party to this proceeding offered evidence that Ameren does not intend to follow NIST standards or that the AMI Plan is somehow inconsistent with those standards. Ameren recommends the Commission find that Ameren's AMI Plan is fully consistent with the NIST standards in effect at the time the AMI Plan was filed.

2. Staff's Position

As required by Section 16-108.6 of the Act, Staff finds that the AMI Plan addresses smart grid interoperability. Staff notes that Dr. Schlaf testified that the AMI Plan adequately addresses this technical requirement, and that Staff presumes that Ameren will adhere to the policies listed in the AMI Plan when Ameren develops and deploys AMI.

3. CUB/ELPC's Position

CUB/ELPC states that pursuant to Section 16-108.6 of the Act, Ameren's AMI Plan shall be fully consistent with the standards of NIST for Smart Grid interoperability that are in effect at the time Ameren filed its AMI Plan; and shall include open standards and internet protocol to the maximum extent possible consistent with cyber security, and shall maximize, to the extent possible, a flexible smart meter platform that can accept remote device upgrades and contain sufficient internal memory capacity for additional storage capabilities, functions and services without the need for physical access to the meter.

CUB/ELPC opines that it believes adherence to NIST standards should be required, but notes that Ameren believes that some vendors' solutions may have functions that are so compelling that losing interoperability in one area could be outweighed by a benefit in another. CUB/ELPC complains that Ameren does not provide any further detail on which functionalities might be weighed against each other, and express concern that there is no transparent process for ensuring that the required functionalities end up in the meters Ameren chooses, or how it will judge core functionalities versus other unexplained compelling benefits.

CUB/ELPC argues that the Commission cannot even evaluate what NIST standards Ameren's deployment will be consistent with, and suggest the Commission require Ameren to modify its AMI Plan to address the final functionalities and NIST standards selected by Ameren, after discussion with the Council, Staff, and other stakeholders.

4. The AG's Position

Although the Plan indicates that Ameren will select a vendor that complies with NIST Standards for Smart Grid Interoperability, the AG notes that on July 19, 2011, the Federal Energy Regulatory Commission ("FERC") issued an Order dismissing a potential rulemaking on smart grid interoperability standards. In its "Order on Smart Grid Interoperability Standards," the FERC stated:

> In this order, we find insufficient consensus to institute a rulemaking proceeding at this time to adopt the five families of standards. Going forward, we encourage utilities, smart grid product manufacturers, regulators, and other smart grid stakeholders to actively participate in the NIST interoperability framework process[1] to work on the development of interoperability standards and to refer to that process for guidance on smart grid standards.

In footnote 1, the FERC explained:

> The NIST interoperability framework process includes the work and outputs of a number of groups and events organized by NIST to achieve

> the goal of an interoperable smart grid. These groups include the Smart Grid Interoperability Panel (SGIP) along with its committees and working groups. Outputs include the NIST Framework and Roadmap for Smart Grid Interoperability Standards, Release 1.0, NIST Special Publication 1108 (Jan. 2010), available at http://www.nist.gov/public_affairs/releases/upload/smartgrid_interoperability_final.pdf; Guidelines for Smart Grid Cyber Security, NIST Interagency Report 7628 (Aug. 2010), available at http://csrc.nist.gov/publications/PubsNISTIRs.html; and various documents related to new or modified standards produced by Priority Action Plan working groups. These materials along with descriptions of the various groups, their memberships, tasks, and timelines can all be accessed at http://collaborate.nist.gov/twiki-sggrid/bin/view/SmartGrid/WebHome.

RM11-2-000, 136 FERC ¶ 61,039.

The AG suggests that presently there does not appear to be a nationally recognized standard for NIST smart grid interoperability, therefore the AG recommends that Ameren's AMI Plan should reflect that there is no single NIST interoperability standard, and that compliance with NIST standards may require modification of its AMI Plan upon adoption of a uniform standard.

B. Cyber Security

1. Ameren's Position

Ameren states the AMI Plan sufficiently outlines its approach to developing policies and procedures for cyber security to identify and mitigate cyber security risks, implement cyber security standards based on industry best practices and regulatory guidelines, and evaluate AMI vendors and equipment that provide AMI solutions that meet the minimum security requirements outlined in the Plan, and notes that Staff agrees. Ameren suggests that no party has presented any evidence in this proceeding that the AMI Plan does not adequately address its approach to cyber security. Ameren recommends the Commission find the AMI Plan contains open standards and internet protocol to the maximum extent possible consistent with cyber security.

2. Staff's Position

As required by Section 16-108.6 of the Act, Staff suggests that the AMI Plan addresses the issue of cyber security. Staff notes Dr. Schlaf testified that the AMI Plan adequately addresses this technical requirement, and that Staff presumes that Ameren will adhere to the policies listed in the AMI Plan when Ameren develops and deploys AMI.

3. The AG's Position

The AG believes that Section 16-108.6 of the Act requires that the AMI Plan be fully consistent with the standards of NIST for Smart Grid interoperability that are in effect at the time the participating utility files its AMI Plan, and shall include open standards and internet protocol to the maximum extent possible consistent with cyber security, and shall maximize, to the extent possible, a flexible smart meter platform that can accept remote device upgrades and contain sufficient internal memory capacity for additional storage capabilities, functions and services without the need for physical access to the meter. The AG states that according to the ISSGC report:

> One key feature of a smart grid is its ability to capture and transmit information about system conditions and customer usage in near-real-time. The vast quantity of data made available by smart grid technology contains significantly more and new private information about individual consumption and consumer behavior. That information must be protected from unauthorized collection, release, sharing, use or retention.

(ISSGC Report at 146)

The AG states that Section 16-108.6 of the Act, as well as the ISSGC, identify several considerations that an AMI plan should set forth in order for the Commission to approve the plan. The AG suggests that Ameren's plan appears to acknowledge the existence of those considerations and Ameren appears to be prepared to address cyber security and privacy concerns.

Despite the outlined procedures to address these concerns, the AG complains that Ameren's failure to identify which vendors will be responsible for implementing and maintaining these security measures and the practices the vendors would follow, makes it difficult for the Commission to confidently assess Ameren's readiness to ensure cyber security.

C. Privacy of Personal Information Protections

1. Ameren's Position

Ameren states the AMI Plan recognizes that implementation of AMI will allow Ameren to more effectively collect and utilize customer data. Ameren opines that the AMI Plan further recognizes that advancements in the collection and utilization of customer data do not change existing consumer privacy regulations, and suggests that its AMI Plan sufficiently outlines what data will be collected, how that data will be used, and the limitations on disclosure of that data without customer consent. Ameren notes that Staff agrees that the AMI plan satisfies this technical requirement. Ameren states that no party has presented any evidence in this proceeding that the AMI Plan does not adequately address Ameren's approach to protecting the privacy of customers' personal information. Ameren requests that the Commission find the Plan adequately secures the privacy of customers' personal information and provides them the opportunity to consent to disclosure of that information in accordance with State and federal law and regulations regarding consumer privacy and protection of consumer data.

2. Staff's Position

Staff notes that as required by Section 16-108.6 of the Act, the AMI Plan addresses the privacy technical requirement. Staff states that Dr. Schlaf testified that the AMI Plan adequately addresses this technical requirement, and that Staff assumes that Ameren will adhere to the policies listed in the AMI Plan when Ameren develops and deploys AMI.

3. CUB/ELPC's Position

CUB/ELPC asserts that Ameren's AMI Plan must secure the privacy of personal information and establish the right of consumers to consent to the disclosure of personal energy information to third parties through electronic, web based, and other means in accordance with State and federal law and regulations regarding consumer privacy and protection of consumer data. CUB/ELPC states that pursuant to Section 16-108.6(d) of the Act, personal information consists of the customer's name, address, telephone number, and other personally identifying information, as well as information about the customer's electric usage, and that electric utilities, their contractors or agents, and any third party who comes into possession of such personal information by virtue of working on Smart Grid technology shall not disclose such personal information to be used in mailing lists or to be used for other commercial purposes not reasonably related to the conduct of the utility's business.

CUB/ELPC suggests that Fair Information Practice Principles should be followed in allowing access to any customer specific data by any vendors contracted by Ameren or any other third parties, and that the Commission should make clear that each electric delivery service customer owns data that is not used by the utility for operational functions. CUB/ELPC requests that the Commission modify Ameren's AMI Plan to include such statements.

4. The AG's Position

The AG notes that Ameren claims that it is aware that the increase in the flow of information which will be enabled by AMI technology raises concerns about what data will be used, how the data will be used and how it will be protected. Importantly, the AG states that Ameren indicates that it will not sell or otherwise provide customer data to third parties without customer consent, consistent with existing practices and the exceptions permitted under law.

The AG states that Ameren's AMI Plan provides that instructions will be readily available to customers, which are intended to explain how a customer can provide authorization for a third party to receive web-based data for them. In any order issued in this docket or in a future order approving a modified Ameren AMI Plan, the AG requests the Commission require that Ameren provide a report detailing these customer instructions so that ratepayers do not unwittingly authorize the access to personal information, including demand data, real time usage data and other personal information.

D. Commission Analysis and Conclusion

In regard to what are characterized as the technical requirements for approval of the AMI Plan, it appears to the Commission that Ameren suggests that satisfaction of these requirements is not necessary for approval of the AMI Plan, although Ameren is requesting that the Commission find that the AMI Plan satisfies each of these technical criteria. The Commission, however, believes that Ameren's AMI Plan must satisfy each of these technical requirements for the Commission to contemplate approval of the AMI Plan. The Commission notes that in each instance under this portion of Section 16-108.6(c) of the Act, it mentions that the AMI Plan shall be fully consistent with NIST, or shall secure the privacy of personal information. The Commission believes that this language describes a set of conditions that must be satisfied for approval to be considered.

The Commission believes Ameren's AMI Plan sufficiently outlines Ameren's commitment to designing an AMI system that follows the standards for interoperability established by NIST. The Commission finds there is no record evidence that Ameren does not intend to follow NIST standards and no party disputes the Plan is consistent with those standards. The Commission therefore finds Ameren's AMI Plan is fully consistent with the NIST standards in effect at the time the AMI Plan was filed.

It also does not appear to the Commission that any party submitted testimony disputing that Ameren's AMI Plan sufficiently outlines Ameren's approach to developing policies and procedures for cyber security to identify and mitigate cyber security risks, implement cyber security standards based on industry best practices and regulatory guidelines, and evaluate AMI vendors and equipment that provide AMI solutions that meet the minimum security requirements outlined in the Plan. Based on its review of the AMI Plan, the Commission finds that Ameren's AMI Plan contains open standards and internet protocol to the maximum extent possible, consistent with cyber security.

Neither does it appear that any party submitted evidence disputing that Ameren's AMI Plan sufficiently outlines what data will be collected, how that data will be used, nor the limitations on disclosure of that data without customer consent. Based on its review of the AMI Plan, the Commission finds the AMI Plan secures the privacy of customers' personal information and provides them the opportunity to consent to disclosure of that information in accordance with State and federal law and regulations regarding consumer privacy and protection of consumer data.

While CUB/ELPC and the AG express concern about certain aspects of Ameren's AMI Plan and its compliance with the technical requirements of Section 16-

108.6(c) of the Act, the Commission finds that the requested changes are not required to be implemented at this time. The Commission does recognize the importance of some of the issues raised, and expects Ameren to consider the various suggestions as it prepares its annual reports.

Based on the evidence presented in this proceeding, the Commission finds that the technical requirements of Section 16-108.6(c) of the Act are satisfied by Ameren's AMI Plan as presently drafted.

E. Ameren's PTR Program

Ameren indicates that it is required to file a proposed tariff with the Commission that offers an opt-in, market-based, PTR program to all residential customers with smart meters. Ameren says its tariff filing will be within 60 days after the Commission approves its AMI Plan, and submitted after consultation with the Council. According to Ameren, the PTR program is to be competitively neutral, and provide rebates to residential retail customers that curtail their use of electricity during specific periods that are identified as peak usage periods. Ameren says rebates shall be the amount of compensation obtained through markets or programs at MISO. Ameren also says the rules and procedures for consumers to opt-in to the PTR program shall include electronic sign-up, be designed to maximize participation, and be included on Ameren's website. (Ameren Ex. 1.1 at 38-39)

To meet the basic requirements for a residential PTR program, Ameren says its AMI process will capture hourly usage information for customers participating in a PTR program. Ameren claims this will enable it to establish a usage baseline for non-PTR event periods, and also determine the customer's response to a PTR event. To maintain competitive neutrality, Ameren says PTR participants will be allowed to switch from utility provided service to a retail electric supplier ("RES") subject to existing switching rules. That is, participation in a PTR program will not be used to delay a direct access switch request. Ameren also says the same type of usage information gathered for PTR participants will be available to RES served customers and available for RES's, subject to proper authorizations for release of customer data. (Ameren Ex. 1.1 at 39)

F. Ameren's Planned Reporting

On April 1 of each year beginning in 2013, Ameren indicates that it will submit a report regarding the progress it has made in implementing this Plan. Ameren says the report will:

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 a description of progress made in achieving the specific metrics and milestones in the Plan; and

3. Provide any material updates to the Plan.

(Ameren Ex. 1.1 at 39)

In addition to the three AMI related metrics defined in the legislation that will be included in the annual June 1 metric plan filing, beginning in 2013 Ameren plans to also report on the following milestones each year as part of the annual April 1 AMI progress report:

- 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 PTR tariff
- Number of customers signed up for PTR tariff
- Number of customers on PSP, RTP, or other real time rates

(Id.)

V. AMEREN'S COST/BENEFIT ANALYSIS

The Act provides that, after notice and hearing, within 60 days of the filing of the AMI Plan, the Commission "shall . . . issue its order approving, or approving with modification" the Plan, if the Commission finds (i) the Plan contains the informational requirements and (ii) "implementation of the AMI Plan will be cost-beneficial consistent with the principles established through the Illinois Smart Grid Collaborative, giving weight to the results of any Commission-approved pilot designed to examine the benefits and costs of AMI deployment." Section 16-108.6(c). A plan is "cost beneficial" "if the present value of the total benefits" of the plan "exceeds the present value of the total costs" of the plan. Section 16-108.6(a). The "total costs" of the plan include "all utility costs reasonably associated" with the plan. Id. The "total benefits" include "avoided utility operational costs, avoided consumer power, capacity, and energy costs, and avoided societal costs associated with the production and consumption of electricity," as well as other societal benefits. Id. The parties and Staff are in agreement that whether an AMI plan is "cost beneficial," as established by both the Act and the ISSGC, is a threshold requirement for the Commission's approval of Ameren's AMI plan. However, the parties are not in accord as to whether Ameren's Cost/Benefit Analysis establishes that the AMI Plan is cost beneficial.

A. Ameren's Position

Ameren asserts the Cost/Benefit Analysis (Ameren Ex. 2.1) provided with the AMI Plan demonstrates that Ameren expects to be able to implement and deploy AMI to 62% of its electric customers over a 10-year period, and 100% of electric customers over a 15-year period, in a manner that will be cost beneficial to Ameren's electric customers. Ameren explains the Cost/Benefit Analysis outlines in detail the expected costs and benefits of AMI. It further explains capital costs for installation of AMI meters and communication network were developed using vendor pricing. (Ameren Brief at 17) Costs for IT systems and integration hardware were projected. Ongoing operational and maintenance expense to support these systems were calculated. Direct operational and customer benefits were identified and quantified. (Id., pp. 16-27) According to Ameren, the net present value – or total annual discounted net customer benefit – for Ameren's "Base Case" proposal (100% electric over 15 years with gas meter automation) is $153 million over the 20-year measurement period. Ameren asserts, even if it stopped at year 10 and discontinued deployment of AMI to its remaining electric customers and further automation of gas meters, the net present value of the "Base Case" at year 10 would still remain positive based on its analysis. Ameren further contends, if it were assumed that it did not go forward with automating gas meters whatsoever, the deployment of AMI to 100% of electric customers over a 15-year period still results in a net present value. (Id.)

According to Ameren, no party takes issue with the categories and calculations of costs and benefits in the Cost/Benefit Analysis. (Id. at 18) It also notes no party takes issue with the positive net present values calculated for the "Base Case" at years 15 and 10, or the positive net present value for 100% electric only AMI over 15 years. Ameren further points out that Staff recognizes the "Base Case" presented in Ameren's AMI Plan – deploying AMI to 100% of electric customers (62% receiving meters within 10 years, the remaining receiving meters with 15 years) and automating gas meters in areas where the AMI network is deployed – is cost beneficial for electric customers. (Id.)

Ameren recognizes that Staff takes issue with the fact that deployment of AMI to 62% of Ameren's electric customers over 10 years (without automation of gas meters and without continued deployment to the remaining 38% of Ameren's electric customers in the subsequent five years) is not cost beneficial to electric customers. Ameren does not dispute this is true. Ameren responds, however, that that is not the plan it has presented to the Commission for approval. Rather, it asserts, Ameren has presented a plan for Commission approval that deploys electric AMI across its entire service territory over a 15-year period – a scenario that Staff recognizes is cost beneficial to electric customers, even if Ameren did not move forward with automating gas meters. (Ameren Brief p. 18)

Ameren believes Staff offers a strained interpretation of Section 16-108.6: that the Commission is barred from approving an AMI Plan with a deployment schedule exceeding 10 years. Ameren argues the plain language of the Act supports a different, more reasonable and flexible interpretation: Section 16-108.6(c) requires a combination utility to submit a plan that contains a deployment schedule and plan that includes deployment to 62% of all electric customers, but it does not restrict a utility from proposing (or the Commission from approving) additional deployment beyond the 10-year period. In Ameren's view, the statute specifies what Ameren must do within 10 years, but does not limit the Commission's authority to approve a plan with a longer deployment period to achieve full deployment across the "entire service territory." Ameren argues it does not make sense that the General Assembly intended to require

Ameren to deploy AMI to 62% of its electric customers over 10 years – and then just stop. It contends a more reasonable reading of the law is that Ameren must plan for deployment to 62% of its electric customers by year 10, and then it can continue to deploy AMI to the remainder of its customers in subsequent years Ameren points out, the law recognizes the Commission can continue to monitor any AMI Plan after year 10, and provides that the utility has a continuing obligation, beyond year 10, to report, upon request, to the Commission and the Council on the AMI Plan. (Id. at 18-19)

Ameren further notes Staff's hesitation to embrace a plan that includes automation of gas meters (i) without an unconditional commitment from Ameren and (ii) without a demonstration that automation of gas meters is cost beneficial to gas customers. In response, Ameren asserts neither is a requirement under EIMA, and neither should be a concern for the Commission in this proceeding. It explains, as a participating utility in EIMA, Ameren must make substantial capital investments over the 10 years in the distribution grid. A substantial part of Ameren's planned investment is to be spent on Smart Grid electric upgrades, including AMI. In turn, Ameren says the General Assembly has authorized the recovery of these significant, incremental capital costs through a performance-based rate for electric delivery costs that must be updated annually to reflect Ameren's actual electric costs for the prior year and its projected electric plant investment for the current year. Ameren contends the purpose of this docket and the point of the AMI Plan is to demonstrate that Ameren's electric operations can deploy AMI and make these significant, incremental AMI investments in a manner cost beneficial to Ameren's electric customers. Ameren argues the purpose of this docket is not to calculate what the net benefit to gas customers might be from the automation of gas meters. (Ameren Brief at 19-20)

Ameren notes that no gas costs or benefits related to the automation of gas meters have been included in the analysis of whether implementation of the AMI Plan is cost beneficial to electric customers – the Cost/Benefit Analysis only measures the costs and benefits that would be attributed to Ameren's electric operations and customers. Ameren explains it will weigh cost recovery options and available capital to fund these incremental gas investments, and notes the Commission will review the prudence and reasonableness of these incremental gas costs, outside of EIMA and the performance-based formula rate process. Ameren contends the Act does not require – and the Commission should not require - an unconditional commitment to automate gas meters and a showing that automation of gas meters is cost beneficial to gas customers to approve the AMI Plan.

Staff's analyses, Ameren argues, showing that various scenarios are more or less cost effective than others under various assumptions, may be of theoretical interest, but are of no practical significance. Ameren says Staff does not dispute that Ameren's discount rate is appropriate for the type of customer-perspective cost benefit analysis called for under the law. Ameren notes its discount rate is within Staff's proposed range, although it argues the upper end of Staff's range is artificially inflated because neither Ameren's weighted average cost of capital nor Staff's proxies for the customer rates (e.g., credit care interest and stock market returns) are appropriate for evaluating the customer's, rather than the utility's, cost of money. Ameren asserts the bottom of Staff's range is artificially inflated as well and does not account for other examples of a customer perspective cost of money such as the Commission-approved interest rate paid on customer deposits, which is currently zero. Ameren points out that, Staff witness Dr. Brightwell, in defending his discount rate, refers to a federal regulation that he says calls for a range of 3-10%, "since the government represents society." Ameren argues, upon closer examination, however, these facts became clear: the regulation is used to calculate a life cycle cost analysis for federal buildings, which in Ameren's view does not constitute the totality of "society." Ameren says Staff uses a 3% to 10% range offers no reasoning and concludes the discount rate is under 3%. Ameren notes that Staff does not make any recommendations for a particular discount rate, or basis for the rate, for the electric Cost/Benefit Analysis. Ameren points out Staff's own analysis shows that both the Plan's "Base Case" (100% electric over 15 years with gas meter automation) and electric-only deployment scenarios produce a positive net value with discount rates that exceed what Ameren used. (Ameren Brief at 20-21)

Ameren argues Staff's other analyses – examining downward adjustments to Ameren's dynamic pricing growth rates and the additional costs of a future site visit before disconnecting service for non-payment – are similarly flawed and non-dispositive on the issue of whether the Plan presents a cost beneficial solution for Ameren's electric customers. Ameren explains the growth rate for dynamic pricing participation is achievable based on Ameren's customer demographics and general interest in dynamic pricing. It contends the non-inclusion in the Cost/Benefit Analysis of potential costs associated with a future site visit is reasonable to ensure full functionality provided by AMI as contemplated by the law and the pending changes to Part 280. Finally, Ameren contends neither sensitivity analysis results in a negative net present value for the "Base Case" in the AMI Plan. (Ameren Brief, p. 21)

In response to CUB/ELPC, Ameren states those parties do not provide any calculations or quantified analysis to support their opinion that the Plan does not have enough details yet for the Commission to accurately forecast the Plan's benefits. Ameren argues, to come to that conclusion, one would need to throw out the Cost/Benefit Analysis in its entirely (or, as it believes CUB/ELPC has done, ignore it). Ameren concludes CUB/ELPC's suggestion that the AMI Plan (supported by the Cost/Benefit Analysis) fails to deliver any operational and customer benefits should not be given any weight in the Commission's consideration of whether the Plan presents a cost beneficial solution for Ameren's electric customers. (Ameren Brief at 21-22)

Ameren states that Section 16-108.5(f) requires it, as a participating combination utility, to develop and file with the Commission certain multi-year metrics designed to achieve, ratably (i.e., in equal segments) over a 10-year period, improvement over baseline performance values. Ameren indicates that two such multi-year metrics are the metrics for uncollectible expense and consumption on inactive meters. Ameren says it included these metrics in its Metrics Plan, which is the subject of a different Commission proceeding, Docket No. 12-0089. (Ameren Brief at 23) According to

Ameren, Staff recommends the Commission order Ameren to modify the AMI Plan to either (i) account for costs that Ameren will incur to implement any "manual methods" outside of the AMI deployment to achieve annual performance goals; or (ii) amend the AMI deployment to meet those requirements. (Id.)

Ameren argues that the law does not require the AMI Plan to be designed to achieve, or demonstrate how Ameren intends to achieve, the annual, incremental performance goals proposed in Ameren's Metrics Plan. Ameren claims it is not surprising that the yearly reductions for uncollectible expense and consumption on inactive meters that it expects to achieve through implementation of AMI are different from yearly reductions as determined under the Metrics Plan. Ameren contends the calculations are markedly different and serve different purposes. Ameren says the annual goals in the Metrics Plan are derived from the baseline as proscribed by Section 16-108.5(f). Ameren states that the aggregate percentage improvement from the baseline required by the Act has been spread over the 10-year measurement period in equal segments. Ameren also states that the reductions reflected in the AMI Cost/Benefit Analysis for these expenses are based on the projected timing of expected benefits from the planned AMI deployment. According to Ameren, the yearly amounts are higher in the AMI Plan than the levels calculated under the Metrics Plan, largely because benefits from reduced uncollectible expense and consumption on inactive meters attributable to AMI deployment will not be realized until full AMI functionality is obtained. Ameren asserts that it would not be appropriate when calculating the expected net benefit from AMI deployment to include reductions that Ameren does not expect to realize from the AMI deployment. (Ameren Brief at 23-24)

Ameren also contends that whether the planned AMI deployment allows it to meet its performance goals under the Metrics Plan is not relevant to the issue that the Commission must address in this proceeding, whether the implementation of the Plan is cost beneficial to Ameren's electric customers. Ameren insists the purpose of the AMI Cost/Benefit Analysis is to demonstrate that Ameren can deploy AMI to electric customers in a cost beneficial manner, not to account for the total costs that it may incur in meeting performance goals under the Metrics Plan through any means. Ameren believes that to make the cost beneficial determination, the Commission must weigh the expected costs and benefits to electric customers attributable to the AMI deployment. Ameren says while it may incur "manual methods" costs, outside of the AMI deployment, those costs are irrelevant to the cost beneficial determination. In Ameren's view, any potential, incremental "manual methods" costs that Ameren may incur, beyond the costs it expects to incur in deploying AMI, should not be reflected in the AMI Cost/Benefit Analysis. (Ameren Brief at 24-25)

Ameren urges the Commission to reject Staff's recommendation to require Ameren to align, or account for the difference between, the calculated reductions reflected in the Metrics Plan and the AMI Plan for uncollectible expense and consumption of inactive meters. Ameren insists the AMI Plan and Cost Benefit Analysis account for the expected benefits attributable to the AMI deployment. In Ameren's view, it is reasonable to expect the timing of benefits from the deployment to result in reductions that do not match what is required under the Metrics Plan. Ameren maintains that it is not relevant to approval of the AMI Plan whether it may incur other costs outside of the Plan to achieve its annual performance goals. (Ameren Brief at 25)

In its Brief on Exceptions, Ameren insists that its AMI Plan reasonably assumes it will automate gas meters and allocate a portion of AMI infrastructure costs to gas customers. Ameren also contends that its AMI Plan reasonably excludes any "manual methods" costs incurred to meet the performance metrics costs, which Ameren claims would not be AMI implementation costs. Ameren also argues that its AMI Plan reasonably considers the benefits of investing in AMI beyond year 10 when judging whether the Plan is cost-beneficial. Finally, Ameren complains that the proposed order leaves it without an opportunity to gain Commission approval or refine the AMI Plan.

B. Staff's Position

Staff identifies multiple concerns in relation to the assumptions within Ameren's Cost/Benefit Analysis: the discount rate used is at the lower end of the spectrum of what is appropriate; the automation of gas meters, in the absence of both a solid commitment to deploy them (Staff Brief at 14) and statutory authority for the Commission to approve them (Staff Brief at 14 and 7); and the 15-year implementation period, which Staff does not believe is authorized by Section 16-108.6. (Id., at 14) Staff also notes that it is not clear whether all relevant costs, including the cost of deploying AMI while Ameren is still using and paying for the costs associated with AMR technology, were factored into the Cost/Benefit Analysis. (Id. at 6) Staff recommends that the Commission approve a modified Plan in which Ameren is authorized to deploy electric AMI meters to 62% of electric customers over 10 years conditioned upon Ameren also deploying automated gas meters and accepting the associated risk. Staff recommends that the Commission accept Ameren's proposal to deploy both electric and gas automated meters, but make clear that approval of the modified AMI Plan is not approval of the gas meter automation and that Ameren will have to justify the automation of its gas meters in its next gas rate case. (Id. at 14) According to Staff witness, Dr. Brightwell, the choice of a discount rate is important because benefits tend to accrue later than costs. He stated that as a result, lower discount rates will increase cost-effectiveness while higher discount rates will decrease cost effectiveness. He explained that discount rates express consumer's and business' willingness to make tradeoffs between purchasing items or earning profits now and purchasing items or earning profits in the future. Dr. Brightwell did not contest Ameren's use of a 3.62% discount rate. However, Dr. Brightwell asserted that an argument can be made for any discount rate between 3% and 12.58% and that 3.62% is at the lower end of a spectrum of discount rates that may be appropriate. (Staff Brief at 15)

In response to Ameren's argument that Dr. Brightwell's discount rate analysis is speculative because it is unknown how customers may spend money from a no-AMI alternative, Staff asserts that what is relevant in determining a discount rate from the customer perspective is the perceived trade-off between consuming goods now and consuming goods in the future. (Id. at 16) In response to Ameren's assertion that AMI investment is a relatively low-risk for the customer and that an appropriate discount rate would consider that higher return uses of money come with relatively higher risk, Staff asserts that there are considerable risks to the customer associated with Ameren's AMI Plan. According to Staff, Ameren's calculation of the net present value of benefits assumes everything goes as projected in Ameren's Cost/Benefit Analysis, yet there is uncertainty about assumptions within the Cost/Benefit Analysis e.g., whether Ameren will be in a financial position to continue AMI deployment beyond year 10; costs of deployment may be higher than anticipated in the Cost/Benefit analysis, customer participation in dynamic pricing rates may be lower than Ameren's projected 1.8-1.9 annual percentage point increase in customer participation; whether the benefits attributed to dynamic pricing were calculated correctly; and whether site visits will continue to be required before service disconnections. (Id. at 17-18)

Staff states that essentially, the question before the Commission is whether customers would agree to a 3.62% return on investment for a project that requires Ameren to automate its gas meters and extend deployment to 100% of customers in a time frame beyond the 10 years allowed by Section 10-108.6 of the Act when: 1) Ameren's analysis shows that such deployments are necessary to ensure the deployment is cost-beneficial; 2) Ameren stated that it needs conditions to be met to automate gas meters and extend AMI deployment beyond 10 years; 3) Ameren distinguished between a Plan and a commitment and stated that there is too much uncertainty for Ameren to commit to automating gas meters at this time; and 4) Ameren would not agree to provide customer rate impact reports as part of its annual filings because Ameren did not know how they would be used.

Dr. Brightwell recommended that the Commission approve a modified deployment plan in which Ameren deploys AMI meters to 62% of its electric customers and automates the meters of gas customers in overlapping areas, provided that there are positive net benefits to gas customers (using Ameren's weighted average cost of capitol as the discount rate) from the automation of gas meters. Staff references Ameren witness, Craig Nelson's testimony that Ameren cannot make an absolute commitment to automate gas meters in overlapping areas unless there is a clear path to cost recovery and that "too much uncertainty exists for Ameren Illinois to agree with Dr. Brightwell's recommendation at this time." (Ameren Ex. 3.0R at 7) However, Staff recommends that the Commission approve a modified plan incorporating the automation of gas meters and state that it is not pre-approving cost recovery for automating the gas meters. According to Staff, Ameren must decide whether it can justify automating the gas meters and has the means to fund such installation if it is going to deploy AMI meters to its electric customers. Dr. Brightwell further recommended that if Ameren is unwilling to commit to automating those gas meters, the Commission should reject Ameren's Plan because it is not cost-beneficial. (Staff Brief at 19-20)

Dr. Brightwell's recommendation is based on Staff's interpretation of Sections 16-108.5 and 16-108.6 of the Act. Staff points out that Section 16-108.6(c) and Section-108.5(b) each reference a "10-year period." Moreover, according to Staff, Section

16-108.6(e) provides that, with one specific exception, a participating utility must complete the implementation of its AMI plan in 10 years. Staff asserts that the only exception to the requirement that a utility complete its AMI Plan by year ten is if the utility is subject to a corrective action plan, which only applies in very specific circumstances. Staff states that starting on April 1, 2013, and each year thereafter, the utility must submit an AMI implementation progress report to the Commission. Within 21 days after the filing of an annual report, if, after investigation, notice and a hearing, the Commission finds that the utility's progress in implementing the AMI Plan is materially deficient for a given plan year, then the Commission shall issue an order requiring the utility to devise a corrective action plan, subject to Commission approval and oversight, to bring the implementation back on schedule, such order to be entered within 90 days of the filing of the annual report. Staff states that the exception for a corrective action plan is inapplicable to the instant proceeding.

According to Staff, the language of Sections 16-108.6 and 16-108.5 of the Act is unambiguous. Staff concludes that a participating utility's investments under, and implementation of, an AMI plan must take place over a 10-year period and, with one specific exception that is inapplicable here, be completed by year 10 of the AMI plan.

Staff concludes that the deployment of AMI meters and automating gas meters is the only option that is cost-beneficial to electric customers within the 10-year period. However, Staff states that no analysis was provided about whether automating gas meters is cost-beneficial to gas customers. As a result, Staff proposes to have gas meter automation as a requirement for deploying AMI meters to electric customers but that Ameren must justify the deployment of gas meters in subsequent gas rate cases. According to Staff, this proposal provides for the opportunity to deploy meters to 100% of electric customers and gas customers in the overlapping areas over 15 years as well. Staff asserts this a scenario that provides the greatest net present value of benefits to electric customers. (Staff Brief at 23) Staff further asserts that its recommendation also mitigates some of the risk to customers and provides some justification for using a lower discount rate for determining whether the plan is cost-beneficial.

Staff states that pursuant to Section 16-108.5(f) of the Act, Ameren must have multi-year metrics designed to achieve improvement over baseline performance values in several defined areas. According to Staff, three of these metrics, consumption on inactive meters, unaccounted for energy, and uncollectible expense, are directly tied to deployment of AMI technology. Staff states that these metrics, according to the Act, together measure non-operational customer savings and benefits relating to the implementation of the Advanced Metering Infrastructure Deployment Plan. Staff says Ameren specifically indicates that it will measure the success of its AMI Plan based upon the three legislatively defined metrics. (Staff Brief at 26-27)

Staff asserts that Ameren did not design its AMI Plan to meet the statutory measures or consider the costs and benefits of doing so. According to Staff, Ameren states that whether the planned deployment would allow it to meet the annual performance goals for these items under the Metrics Plan was never considered as part of the Cost/Benefit Analysis. Staff disagrees with Ameren that the Act neither requires Ameren to design an AMI Plan to meet these annual performance goals nor explain how Ameren intends to achieve these annual performance goals outside of the AMI Plan. In Staff's view, because the General Assembly included within the Act metrics designed to measure the non-operational customer savings and benefits related to implementation of Ameren's AMI Plan, and further because Ameren includes these measures as specific gauges of the success of its AMI Plan, it is self-evident that Ameren should have designed its AMI Plan with the goal of meeting these metrics. (Staff Brief at 27)

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The table below was produced using data from Staff Ex. 3.0 at 3-5 and shows Staff's comparison of yearly consumption on inactive meters from Ameren's Multi-Year Metrics Plan and its Cost/Benefit Analysis in this proceeding.

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Multi-Year Metrics Plan	Cost/Benefit Analysis
2013 - 11,423,161 kWh	2013 - 12,100,806 kWh
2014 - 10,745,516 kWh	2014 - 12,100,806 kWh
2015 - 10,067,871 kWh	2015 - 12,058,453 kWh
2016 - 9,390,225 kWh	2016 - 12,001,982 kWh
2017 - 8,712,580 kWh	2017 - 11,945,512 kWh
2018 - 8,034,935 kWh	2018 - 11,889,041 kWh
2019 - 7,357,290 kWh	2019 - 11,832,571 kWh
2020 - 6,679,645 kWh	2020 - 11,739,135 kWh
2021 - 6,002,000 kWh	2021 - 10,805,389 kWh
2022 - 5,324,355 kWh	2022 - 9,867,256 kWh

Staff complains that Ameren assumes in its Cost/Benefit Analysis that it will fail to meet its Section 16-108.5(f)(6) consumption on inactive meters requirements for each year over the 10-year period of its Plan. (Staff Brief at 27-29)

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The table below was produced using data from Staff Ex. 3.0 at 5-6 and shows Staff's comparison of yearly performance goal of uncollectible expense from Ameren's Metrics Plan and its Cost/Benefit Analysis in this proceeding.

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Multi-Year Metrics Plan	Cost/Benefit Analysis
2013 - $17,423,333	2013 – $17,773,333
2014 - $17,073,333	2014 – $17,773,333
2015 - $16,723,333	2015 – $17,479,220
2016 - $16,373,333	2016 – $16,935,555
2017 - $16,023,333	2017 – $16,481,015
2018 - $15,673,333	2018 – $16,026,476
2019 - $15,323,333	2019 – $15,571,936
2020 - $14,973,333	2020 – $15,117,397
2021 - $14,623,333	2021 – $14,662,857
2022 - $14,273,333	2022 – $14,208,318

According to Staff, Ameren assumes in its Cost/Benefit Analysis that it will fail to meet its Section 16-108.5(f)(8) uncollectable expense requirements for each year, except year 2022, over the 10-year period of its Plan. (Staff Brief at 28-29)

Staff states that while Ameren's AMI Plan yields an outcome where its fails to meet its Section 16-108.5(f)(6) and Section 16-108.5(f)(8) obligations, its Plan does reference other manual methods that it may need to rely on to meet its performance requirements. Staff asserts that these manual methods were neither considered within the determination of Ameren's deployment nor were they included as part of Ameren's cost benefit analysis. Staff believes Ameren's AMI Plan, as proposed and presented within its Cost/Benefit Analysis, will result in Ameren missing its AMI related performance metrics. (Staff Brief at 29-30)

Staff suggests that while the AMI Plan proposed and presented by Ameren within its Cost/Benefit Analysis will result in Ameren missing many of its AMI related performance metrics, Ameren may actually intend to meet the AMI related performance metrics. In that case, Staff believes Ameren's Cost/Benefit Analysis does not accurately measure the costs and benefits of its AMI deployment schedule and Plan. According to Staff, Ameren indicates that the manual methods it may rely on to meet its AMI related performance metrics are not the most efficient or cost effective in the long term. In Staff's view, to the extent that Ameren's deployment schedule and Plan call for a relatively slow roll out of AMI technology in the early years of the AMI Plan, Ameren may need to incur the costs of manual compliance with its AMI related performance metrics that are inefficient and not cost effective. According to Staff, Ameren assumes that since the AMI capability is there sooner, the benefits would come sooner. Staff claims; however, that Ameren also concedes that the potential reduction in the cost of meeting the AMI related performance measures related to its deployment schedule and Plan were not considered. Staff argues that even if Ameren proposes to meet its AMI related performance metrics, in contrast to what is assumed in its actual AMI Plan, then it has failed to design its AMI Plan to ensure it deploys its AMI technology so that the costs of meeting its AMI related performance metrics are reasonable. Staff believes Ameren should design its AMI Plan so that Ameren will meet its annual AMI-related performance metrics in a reasonably cost-efficient manner. (Staff Brief at 30-31)

C. CUB/ELPC's Position

CUB/ELPC argues that if any one of the assumptions in Ameren's Cost/Benefit Analysis fails to materialize, Ameren's own analysis demonstrates that its AMI Plan will no longer be cost-beneficial. CUB/ELPC notes that although Ameren admits that the timing of benefits does affect the present value of Ameren's Cost/Benefit Analysis and that local distribution system capabilities differ by operating center; Ameren does not address how these operating-center-specific differences impact the overall costs and benefits delivered by the AMI Plan. CUB/ELPC believes that the cost benefit analysis should consider the impact of the deployment schedule, and that the Commission should regard Ameren's proposed ten-year deployment to 62% of its electric customers as a minimum deployment scenario, not a maximum investment commitment. (CUB/ELPC Brief at 26)

In CUB/ELPC's view, it is preferable to deliver AMI to all customers in Ameren's service territory as soon as practicable, since increasing meters installed maximizes consumer benefits such as demand response, distributed generation, consumption on inactive meters, and estimated bills. CUB/ELPC notes that customers who are in the 38% of the service territory not receiving AMI in 10 years will be delayed benefits, if they receive them at all, even though they will not be excused from paying for these investments through formula rates. Thus, CUB/ELPC argues that Ameren should examine how a delay in full functionality (expected in mid-2015) impacts its customers' options with respect to dynamic pricing programs. Because Ameren admits that its costs might change with different deployment schedules other than the one it proposed in its plan, CUB/ELPC believes that the Commission should direct Ameren to update its AMI Plan to model different scenarios. (CUB/ELPC Brief at 27)

CUB/ELPC also believes that Ameren's Plan does not address all the benefits required to be included in a Cost/Benefit Analysis by Section 16-108.6(a) of the Act. CUB/ELPC offers examples of these benefits, such as those that flow from Smart Grid functionalities like meter integration with a Home Area Network, Programmable Communicating Thermostats, and personal computer USB devices. CUB/ELPC notes that Ameren does not commit to including these functions as a requirement for AMI meters nor does Ameren analyze benefits flowing from these functions. CUB/ELPC argues that this omission delays and reduces direct customer benefits as no customers are eligible for PTR tariffs until 2015. CUB/ELPC asserts that the implementation of demand response might change load shape, but it notes that Ameren's Cost/Benefit Analysis does not account for this change in its benefit projection. (CUB/ELPC Brief at 27-28)

CUB/ELPC notes that the value of AMI investments can vary based upon geographic, demographic, and climactic differences by operating center. (CUB/ELPC Brief at 28) Thus, CUB/ELPC points out that claimed customer benefits may differ depending on the specific deployment schedule, which Ameren has not presented in its AMI Plan. (CUB/ELPC Ex 1.0 2ndC at 17-18) In order for the Commission to ensure that Ameren's AMI Plan results in benefits from demand response, CUB/ELPC believes that Ameren should require that AMI vendors provide peak - off/peak price differential data analytics. (CUB/ELPC Brief at 29) CUB/ELPC notes that Ameren acknowledges that the sooner AMI capability is deployed to its customers, the sooner benefits can be realized, yet Ameren has not provided a year-by-year deployment schedule. CUB/ELPC points out that Ameren acknowledges that its current residential real-time pricing rate, PSP, is a single dynamic pricing option that may or may not appeal to a specific set of customers and that different dynamic pricing structures may appeal to different sets of customers. Yet, CUB/ELPC notes that Ameren has not analyzed what difference in benefits under the Cost/Benefits Analysis might result from adoption of one rate option over another. (CUB/ELPC Brief at 30)

CUB/ELPC notes that Ameren has not analyzed any benefits associated with energy efficiency, renewable and distributed power sources, or alternative fuel vehicles. CUB/ELPC believes that this proceeding is the appropriate time for the Commission to ask Ameren about how its proposed AMI Plan makes the realization of these benefits more likely than not. CUB/ELPC believes that energy efficiency programs deliver customer benefits by maintaining or increasing productivity while reducing electricity usage, thus lowering health costs of consumers by lowering overall emission related to electricity generation. CUB/ELPC believes that Ameren's Plan should integrate energy efficiency benefits from AMI deployment with existing energy efficiency portfolio standards ("EEPS"). (Id.)

Moreover, CUB/ELPC notes that Ameren's Cost/Benefit Analysis does not analyze an increase due to AMI investment in residential delivery rates by year or rate zone, as recommended by the ISGC, despite Ameren's admission that the timing of benefits does affect the present value of Ameren's Cost/Benefit Analysis. CUB/ELPC believes that the Commission should direct Ameren to examine how usage and consumption data can simplify the evaluation, measurement and verification protocols of Ameren's EEPS and facilitate the entry of energy efficient appliances like those used in utility energy efficiency programs. CUB/ELPC concludes that the Commission should require Ameren to examine how different deployment scenarios affect the Cost/Benefit Analysis with specific accounting of the different dynamic pricing rate structures and geographically and demographically specific deployment schedules. (CUB/ELPC Brief at 30-31)

D. The AG's Position

The AG argues that the AMI Plan, as filed, fails to meet the threshold cost/benefit requirements because it relies on cost assumptions that are not fully developed, and, in some cases, omitted, including cost allocations related to the "simultaneous rollout" of gas and electric AMI. According to the AG, pursuant to Section 16-108.6(a) an AMI plan is cost beneficial, in part, if the "present value of the total benefits of the Smart Grid AMI Deployment Plan exceeds the present value of the total costs of the Smart Grid AMI Deployment Plan." The AG asserts that definition of total costs includes "all utility costs reasonably associated with the Smart Grid AMI Deployment Plan." The AG further states that the ISSGC determined that the Cost/Benefit Analysis should separately identify "those costs and benefits that will be directly incurred or realized by ratepayers through the traditional ratemaking structure." (AG Brief at 22)

The AG references the cost implications for the utility and its ratepayers, once the AMI Plan is approved and according to the AG, on the electric side, costs associated with the AMI Plan will be recovered through the Section 16-108.5 formula rate process. The AG asserts that absent any showing of unreasonableness, the utility that has an AMI Plan approved by the Commission is assured cost recovery in rates. (AG Brief at 23) However, the AG cautions that the utility is not authorized to set its revenue requirement pursuant to a formula and the costs, potential benefits and rate impacts on gas customers are undefined in the record. Thus, the AG argues, the impact on Ameren's gas customer rates is unknown and cannot be included in the Cost/Benefit Analysis.

The AG asserts that record evidence reveals several problems with the Ameren's proposed rollout which assumes the start of AMI installation but no customer benefits until 2015. First, the AG states that Ameren's plan fails to consider the cost or benefit impact on its gas customers and customers who fall early on the deployment schedule. The AG finds this significant not only because of the cost implications for Ameren's gas customers, but also because the plan fails to identify any discernible benefits for gas customers. In addition, according to the AG, there is an identifiable number of Ameren customers who will have advanced meters installed, but will derive no benefit from these meters for a number of years. The AG states that Ameren proposes to begin installation of electric meters in 2013, in a yet-to-be determined service area and estimates that approximately 82,000 electric meters will be installed in 2013 and 2014. However, according to the AG, Ameren will not have implemented its MDMS or associated back-office infrastructure until sometime in 2015. The AG points out that although customers will pay for this investment through annually adjusted formula rates, the AMI Plan does not address, nor has Ameren provided any insight into, what benefits those customers will receive in the interim years until the required back-office infrastructure is in place. In fact, according to the AG, the AMI Plan presumes that the realization of benefits, including those derived from reduced uncollectible expenses and reduced consumption on inactive meters will not begin until 2015. (AG Brief at 24)

The AG argues that while Ameren's business case Cost/Benefit Analysis assumes an electric-only view of costs and benefits, it is important to note that the analysis includes electric allocations for infrastructure shared across both electric and gas. (AG Brief at 25) The AG states that Ameren assumes reduced costs on the electric side of the ledger because of the assumed installation of gas digital meters. The AG asserts that Ameren's Cost/Benefit Analysis allocated 40% of AMI network costs to gas meter deployment and 20% of IT related costs to gas deployment. (AG Brief at 25)

The AG relies upon the testimony of Staff witness, David Brightwell, who, it asserts, testified that by its own analysis, Ameren's proposal for a 10-year AMI deployment plan to 62% of its electric customers (with no digital gas meter installations) is not cost-effective. The AG states that while Ameren provided alternative deployment scenarios any of which may be cost-effective to its electric customers, according to Dr. Brightwell, it is still unclear if any of these potential scenarios is cost beneficial to both gas and electric customers because the Ameren analysis did not examine the costs and benefits to gas customers associated with any kind of digital gas meter installation or whether the present value of combined gas and electric benefits were greater than the present value of combined gas and electric costs. (AG Brief at 25) According to the AG, Dr. Brightwell noted that if the AMI Plan is cost-beneficial only to electric customers because it shifts costs to gas customers without corresponding benefits to gas customers, "the Commission is essentially burdening Ameren gas customers with additional costs for which those customers are not receiving commensurate benefits." (Id. at 26)

The AG asserts that adding to the Commission's problem of examining an AMI Plan with an evidentiary omission regarding the benefits to gas customers, is Ameren's stated insistence that it will not commit to deploying gas meters unless there is (i) a clear path to full and complete cost recovery (i.e. return of and on investments and operating costs) and (ii) a strong and healthy financial position to provide the financing needed to install and maintain the infrastructure. According to the AG, these conditions are not authorized by Section 16-108.5 or 16-108.6 of the Act and must be rejected.

The AG then states that Ameren witness Craig Nelson made clear that Ameren has no intention of assuming the risk associated with investment in digital gas meters at this time "without adequate assurances that such a commitment would not be subject to future prudence reviews" in order to avoid the risk of Commission disallowances of costs in rates. The AG finds this refusal significant in light of Mr. Brightwell's admonition that if Ameren is unwilling to commit to automating those gas meters, the Commission should reject Ameren's Plan because it is not cost-beneficial. (AG Brief at 26-27)

The AG takes the position that either Ameren believes in the cost-effectiveness of gas meter installations for both electric and gas customers and moves ahead with its preferred AMI Plan of installing electric AMI for 62% of its electric customers and automating gas meters in overlapping areas, thereby assuming the risk that the Commission might find the digital gas installations imprudent, or the Commission should reject the AMI Plan. The AG asserts that because Ameren has made clear it will not commit to installing the digital gas meters if has to assume that investment risk, and due to the need to include gas meters to pass the cost/benefit test, the Commission has no choice but to conclude that Ameren failed in its burden to prove the cost-effectiveness of its AMI Plan and reject the AMI Plan as proposed. (AG Brief at 27)

The AG also states that Ameren's Cost/Benefit Analysis assigns specific dollar benefits to fewer truck rolls related to remote connections and disconnections, including those made for nonpayment. But, the AG asserts that it is unclear whether the AMI remote disconnect switch will be activated, according to the Ameren AMI Plan. It references that a premise visit requirement exists in 83 Ill. Adm. Code 280.130(d) and the lengthy notification and comment requirements inherent in the Joint Committee on Administrative Rules process that is a part of the Part 280 Rulemaking. According to the AG, given Ameren's stated strategy of utilizing the remote disconnect switch and its identification of specific monetary benefits associated with fewer truck rolls employed in the Ameren Cost/Benefit Analysis, the Commission should reject Ameren's Plan and order Ameren to adopt an AMI Plan that complies with the existing Part 280.130(d) premise visit requirement. (AG Brief at 3-4)

The AG also finds that there is a problem in the Cost/Benefit Analysis due to Ameren's assumptions regarding customer participation levels in existing and future dynamic pricing programs. The AG states the assumed 30% participation rate for dynamic pricing programs by residential customers by the year 2031 to be a key assumption driving Ameren's asserted dynamic pricing benefits, but states that Ameren has failed to provide a reasonable basis to support this participation figure or any specifics as to how these plans will be marketed. The AG states that Staff analyzed this assumption and found it dubious. According to the AG, Dr. Brightwell reviewed the participation rate of PSP and noted that enrollment in that program stands at roughly 1.2% of Ameren's customers after being implemented four years ago, equaling a growth rate of approximately 0.3% per year. The AG asserts that it would require a six-fold increase over the growth rate of what is already one of the more successful dynamic pricing programs in the nation, quoting Dr. Brightwell, to reach a 30% participation rate. (AG Brief at 28) According to the AG, Ameren is asking the Commission to take a leap of faith to presume that within 20 years, third party developers will have provided Ameren's customers with reliable dynamic pricing programs, and effectively marketed them to reach 30% participation. (Id. at 29)

Another factor the AG points to as impacting the Commission's decision is the absence of bill impacts data associated with a combination gas and electric digital meter deployment. The AG references Ameren's response to a data request which stated that it has not performed an analysis of the potential annual increase in residential rates required to recover the costs related to the Grand Total O&M/Capital investment and that Ameren does not believe it was necessary to perform a rate impact analysis for purposes of the filing. (Id.) The AG points to Ameren's failure to calculate any bill impacts (let alone costs and savings) associated with the installation of gas meters and states that Ameren is requesting the Commission to take a leap of faith about the unspecified costs and benefits of digital gas meters. (AG Brief at 29)

The AG references the Section 16-108.5 requirement that participating formula rate utilities file a report with the Commission on or before July 31, 2014. The AG states that the Act renders the formula rate and infrastructure investment provisions inoperative if the average annual increase exceeds 2.5% as calculated pursuant to subsection (g), as of the date of the report, and that the utility shall no longer be eligible to annually update the performance-based formula rate tariff pursuant to subsection (d) of Section 16-108.5. The AG suggests that if the filed AMI Plan indicates that rates will increase to the extent that the Section 16-108.5(g) formula rate and infrastructure investment expiration provisions is triggered, the Commission would be justified in requiring changes to the AMI Plan to avoid the risks of partial deployment. (AG Brief at 29-30)

The AG asserts that Ameren's plan, as filed, requires the Commission to assume that a simultaneous rollout of gas and electric meters will not only be cost-beneficial, but will in fact occur, without evidence that is the case. Although this proceeding deals with electric AMI, Ameren's AMI Plan assumes that certain costs will be allocated to its gas business and that, correspondingly, the costs assigned to the electric side of the business will be less as a result. The AG concludes that the Commission does not have adequate information upon which to conclude that the electric AMI Plan is cost beneficial, as required under Section 16-108.6(c) of the Act. (AG Brief at 30-31)

E. Comverge's Position

Comverge takes the position that the Commission should approve Ameren's AMI Plan at this time, but in doing so, the Commission should encourage Ameren to assure that cost-effective demand response benefits are maximized during the implementation of Ameren's statutorily required peak-time rebate program and any other dynamic pricing programs implemented by Ameren. Comverge also asserts that Commission should encourage Ameren to provide enabling technology to customers who opt in to the peak-time rebate program, which Comverge states Ameren is statutorily required to offer in a proposed tariff filed within sixty days after Commission approval of Ameren's AMI Plan.

According to Comverge, the present value of demand response benefits of $171 million exceed the $153 million amount by which the benefits exceed the costs, proper implementation of demand response is absolutely critical to successful implementation of Ameren's AMI Plan. Comverge states that it is important that the Commission recognize that Ameren must do whatever is necessary to cost-effectively maximize demand response benefits because these benefits are such a critical part of the cost/benefit justification of Ameren's AMI Plan. Comverge argues that to assure that at least this amount of benefits and likely much larger benefits are actually achieved, the implementation of Ameren's statutorily required peak-time rebate program and other dynamic pricing programs should provide enabling technology to consumers that automatically reduces electricity loads during peak demand events.

Comverge concludes that the Commission should find that Ameren's AMI Plan meets the cost/benefit requirement of the statute and the Commission should strongly encourage Ameren to provide enabling technology to consumers who opt in to the peak-time rebate program, and other dynamic pricing programs as long as the benefits of doing so exceed the costs.

F. Commission Conclusion

As an initial matter, the Commission observes that the parties primarily use the term "cost/benefit" in their testimony and briefs in this proceeding. While the Commission also uses that term as a matter of convenience in this Order, technically, the question before the Commission is whether Ameren's AMI Plan meets the "cost-beneficial" standard as defined in Section 16-108.6. Ameren presents cost/benefit analyses for the deployment of AMI to 62% of its electric customers over a 10-year period, and 100% of electric customers over a 15-year period; with and without deployment of automated gas meters. Ameren concludes that three of its deployment alternatives would result in a positive net present value, where the benefits exceed the associated costs. Ameren's proposal for 100% deployment of electric AMI over 15 years with gas meter automation has a positive net present value. The alternative to deploy electric AMI to 62% of its customers and install AMI gas meters during a 10-year time period in the overlapping gas service territory also has a positive net present value. In addition, the alternative to deploy electric AMI to 100% of its electric customers over a 15-year period with no deployment of automated meters to its gas customers has a positive net present value. The alternative under which only electric AMI is deployed to 62% of Ameren's customers over a 10-year period does not have a positive net present value.

The AMI Plan for which Ameren seeks approval provides for 100% deployment of electric AMI over 15 years with gas meter automation. Ameren refers to this as its "Base Case" proposal. Staff objects to the Base Case, 15-year proposal because it believes that a participating utility's investments under, and implementation of, an AMI plan must take place over a 10-year period and, with one specific exception that is inapplicable here, be completed by year 10 of the AMI plan. Staff recommends that the Commission approve a 10-year AMI Plan with a modification; approval being contingent on Ameren deploying gas meter automation concurrently with electric AMI deployment to 62% of its customers. Under Staff's proposal, cost recovery for gas meter deployment would be determined in subsequent gas rate cases at which time Ameren would be required to justify the deployment of gas meters. CUB/ELPC does not take a position on the deployment alternatives analyzed except to state that if any of the assumptions in the Cost/Benefit Analysis fail to materialize, Ameren's own analysis demonstrates that its AMI Plan will no longer be cost-beneficial. The AG criticizes the reliance on cost assumptions which it says are not fully developed, and, in some cases, omitted, including cost allocations related to the "simultaneous rollout" of gas and electric AMI. The AG concludes that the AMI Plan, as filed, fails to meet the threshold cost/benefit requirements. Comverge recommends that the Commission find that Ameren's AMI Plan meets the cost/benefit requirement of the statute.

The Commission has closely reviewed the parties' positions and the statutory provisions. Ameren's AMI Plan was filed under Section 16-108.6, and must strictly comply with the Section 16-108.6 requirements. The Commission concludes that Section 16-108.6(c) of the Act requires that an approved AMI plan and associated investments must take place over a 10-year period. Section 16-108.5 and Section 16-108.6 of the Act each reference a 10-year period. The statutory language only concedes one narrow exception to the 10-year time frame in the case of a utility's progress in implementing being materially deficient and a corrective action plan being ordered. There is no statutory language to support the theory that the Commission may extend the 10-year period for the AMI Plan to 15 years. The statute also specifies that the Commission must find that implementation of the AMI Plan will be cost-beneficial. If the General Assembly had intended for the Commission to have authority to extend the 10-year investment period for a combination utility to a 15-year period, it could have easily included such a provision; however, it did not. The Commission concludes that an approved AMI Plan and associated investments must take place over a period no greater than 10 years, and that the cost-beneficial finding must be based on the AMI Plan.

The only alternative provided by Ameren which takes place over no greater than a 10-year period and which potentially produces a positive net present value and meets the cost-beneficial standard is the plan to deploy electric AMI to 62% of its customers and install AMI gas meters at the same time in the overlapping gas service territory. Although Ameren stated it would not commit to AMI gas meters, it appears that installation of AMI gas meters would be necessary in order for the electric AMI deployment to take place within the statutory time limit and potentially satisfy the cost-beneficial requirement in the statute. It does not appear that the Commission possesses authority to order Ameren to install AMI gas meters. Indeed, provisions to include gas companies and meters were in original legislative proposals that eventually became the EIMA. The fact that they did not appear in the version passed by the General Assembly is further indication that the authority sought by Ameren does not exist.

The Commission also notes the AG's concern that some cost assumptions in Ameren's Cost/Benefit Analysis are not fully developed, and in some cases costs are omitted. The AG points out that in Ameren's analyses that include the simultaneous rollout of gas and electric AMI, a portion of the costs are allocated to gas operations; however, Ameren refuses to commit to a gas AMI program. The AG also cautions that potential benefits and rate impacts on gas customers are undefined in the record and cannot be included in the Cost/Benefit Analysis. Staff also expressed concern that no evidence of the cost-effectiveness of an AMI gas meter program was provided. Ameren acknowledges that no costs or benefits related to the automation of gas meters have been included in the Cost/Benefit Analysis. The Commission is troubled that while Ameren refuses to commit to a gas AMI program, it has allocated a portion of the combined electric and gas AMI costs to gas operations and assumes a simultaneous rollout of gas and electric AMI.

There are additional concerns regarding the failure of Ameren's Cost/Benefit Analysis to measure the costs associated with the manual methods it may rely on to meet its AMI related performance metrics. The relatively slow roll out of AMI technology anticipated in the early years of the AMI Plan may cause Ameren to incur costs of manual compliance which are inefficient and not cost effective. The costs for manual compliance are not considered within the Cost/Benefit Analysis. Ameren states that Section 16-108.6 does not require the AMI Plan to account for any potential, incremental costs that it may incur to implement manual methods outside of the AMI Plan to meet its performance metrics.

Part of Ameren's rationale is that it may incur "manual" costs to meet metrics established in Docket No. 12-0089 pursuant to Section 16-108.5 of the Act, but these costs need not be considered in the Cost/Benefit Analysis it presented in this proceeding. In Docket No. 12-0089, Ameren claims it will meet the statutory targets for consumption on inactive meters. In this proceeding, Ameren presents a different set of numbers for consumption on inactive meters which would not meet the Section 16-108.5 requirements but do meet the cost/benefit standard of Section 16-108.6 of the Act. Ameren essentially admits that it will incur "manual" costs to meet the metrics standards established in Docket No. 12-0089 and that it excluded these "manual" costs from its Cost/Benefit Analysis in this proceeding. The record in this proceeding contains no information regarding the level of costs that will be incurred, nor any information about when such costs would no longer be incurred, if ever. Therefore, the Commission cannot determine if these costs would be significant or trivial.

Also troubling with regard to Ameren's Cost/Benefit Analysis is the inconsistency with regard to the facts Ameren presented in this proceeding and those presented in Docket No. 12-0089. With regard to kWh consumption on inactive meters for example, Ameren's Cost/Benefit Analysis in this proceeding used a different set of assumptions than it presented in Docket No. 12-0089. Similarly, Ameren presented different dollar values with regard to expected uncollectable expenses in Docket No. 12-0089 than it presented in this proceeding. Ameren's proposal to use different data for the same variable in two pending proceedings brought under two sections of the Act enacted at the same time, in Public Act 97-646, is inconsistent with the principle that a law or statute must be read as a whole such that the legislation is congruent and makes sense.

It should be presumed that the legislature had a definite purpose in enacting a statute and drafted it so that each part would be in harmony with that purpose and, thus, the general purpose of the whole act controls and all parts are interpreted consistently with that purpose. The Commission understands that, to the extent possible, various Sections of the Act must be read together and interpreted to achieve a coherent intent. Acceptance in this proceeding of Ameren's assumptions, in regards to meeting its AMI related performance metrics, which are inconsistent with the evidence produced by Ameren in Docket No. 12-0089 would result in incompatible orders in the two proceedings.

The Commission concludes that it is unreasonable to use two different sets of values for the exact same measure in these two pending proceedings. The Commission cannot accept the suggestion that an AMI Plan considered under Section 16-108.6 of the Act need not be in harmony and consistent with the Smart Grid Advanced Metering Infrastructure Deployment Plan under Section 16-108.5.

The Commission rejects the argument that the manual costs, apparently necessary to meet the metrics established in Docket No. 12-0089, can be ignored in the Cost/Benefit Analysis in this proceeding. Because important cost information is clearly missing, the Commission cannot determine that Ameren's AMI Plan meets the cost-beneficial standard articulated in Section 16-108.6 of the Act.

Given the problems associated with the AMI Plan filed by Ameren discussed herein, the Commission is unable to conclude that it meets the "cost-beneficial" standard articulated in Section 16-108.6 of the Act. Because Ameren failed to adequately quantify the "manual" costs discussed herein, as well as because the Commission does not have the authority to order Ameren to implement a gas AMI program, the Commission is unable to approve Ameren's AMI Plan with modifications that will produce a plan that meets the "cost-beneficial" standard in Section 16-108.6 of the Act.

Stated differently, even if the cost/benefit analysis did not rely on incomplete or speculative calculations, the AMI Plan as articulated by Ameren could still not be approved because it would have to rely on either an inclusion of gas meters, or a compliance period longer than 10 years – neither of which is allowed by the clear language of the statute.

And while the statute does provide for a plan to be approved with modifications, it would be both impractical and illogical to ask the Commission to substitute its judgment for that of a company on business issues vital to a cost/benefit determination – such as choices of vendor(s), technologies, geographic roll-out, and many other details which are not part of Ameren's submission. While it would be appropriate for the Commission to reject the results of an RFP conducted by a utility because the Commission had material concerns about the results, it would not be appropriate for the Commission to select the winner of an RFP conducted by a utility. Selecting the winner of a utility-conducted RFP is clearly in the purview of a utility's business operations and management decisions. The Commission should not impose its choice of winners on such processes. It cannot be argued that the legislature intended for Ameren to comply with this dramatic initiative by submitting a plan that is vague and incomplete, and for the Commission to fill in the details as it saw fit. If the General Assembly had intended such a result, it could easily have articulated such an approach during its consideration of both the original bill and its accompanying trailer legislation, a process which took approximately nine months.

The Commission notes that in its Brief on Exceptions, Ameren complains that the proposed order leaves it without an opportunity to gain Commission approval or refine the AMI Plan. As an initial matter, the Commission notes that the Act sometimes specifically lays out what procedures are to be followed in the event a utility petition for relief is denied (See, e.g., Section 16-113(c) of the Act relating to the declaration of a service as a competitive service), while in other instances, such as here, the Act is not specific. It appears to the Commission that Ameren takes issue with the language in the Act, something over which the Commission has no direct control. In any event, the issue to be addressed here is whether Ameren has met the cost-beneficial standard as defined in Section 16-108.6 of the Act. The statute does not provide that the Commission can or should ignore that standard because Ameren is unsure what it will do next in light of its failure to meet that statutory standard.

VI. USE OF EXISTING RADIO FREQUENCY NETWORK

Staff expresses concern that Ameren has not yet decided the extent to which it will use its existing RF network or the cost implications of that decision. Ameren claims it is premature to make the type of decisions Staff suggests because Ameren is still in the RFP stage of its AMI Plan.

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A. Staff's Position

Staff asserts that Ameren has not designed its AMI Plan in a manner that accounts for the communications network that it is currently using to provide AMR. Staff says the “AMI Communication Network” portion of Ameren’s AMI Plan is comprised of two sentences that indicate that Ameren is primarily considering Radio Frequency ("RF") technology, but may consider other technologies. (Staff Brief at 31)

It does not appear to Staff that Ameren has any concrete plans to use its existing RF network. Staff says that Ameren will consider use of the existing RF network only if Landis & Gyr, by its own choice, responds to the Ameren AMI RFP. Staff says Ameren is unaware of the cost implications of an Ameren decision to not use the existing communications network that it relies upon. (Staff Brief at 31-32)

In Staff's view, this demonstrates that Ameren’s AMI Plan and cost-benefit model may fail to accurately portray Ameren’s expectation of its future operations expenses. Staff suggests Ameren’s Cost/Benefit Analysis does not accurately measure the costs and benefits of its AMI deployment schedule and Plan. Since Ameren’s deployment schedule and Plan call for a communications network without consideration of costs associated with discontinuing use of its current communications network, Staff believes its deployment schedule and Plan are not based upon an accurate assessment of costs and benefits and is not likely to lead Ameren to incur only reasonable costs in its AMI deployment. Staff thinks that Ameren should design its AMI Plan so that Ameren specifically accounts for all costs and benefits associated with using or, alternatively, not using the communications network it currently relies upon to provide AMR. (Staff Brief at 32-33)

B. Ameren's Position

Ameren states that the existing RF network, installed and owned by Landis & Gyr and used for the deployment of AMR, is currently operated as a one-way communications network. Ameren notes that Staff considers the AMI Plan to be deficient because it does not specify how Ameren will utilize (or not utilize) this existing one-way communications network as part of its future AMI communications network. According to Ameren, Staff recommends the Commission require it to amend its AMI Plan to explain how it will incorporate (or not incorporate) the existing RF network into its AMI network and how that decision will affect the expected costs to deploy AMI. (Ameren Brief at 25)

Ameren believes Staff’s recommendation to amend the AMI Plan to explicitly address the use of existing RF network should be rejected as premature. Ameren states that Landis & Gyr purports that its existing RF network has the potential to be used as a two-way communications network in the AMI deployment. Ameren argues that the selection of the AMI network is subject to the selection of the AMI vendors and equipment following evaluation of the RFP responses. If Landis & Gyr responds to the RFP, Ameren says it will have to identify and explain the changes that must be made to the existing RF network to ensure that it will satisfy interoperability and cyber security standards and other requirements of the AMI network. Ameren contends that until the RFP process has run its course, it cannot make a final determination on how, if at all, it may use the existing RF network in its AMI network, and it cannot make that decision, independent of the owner of the network, Landis & Gyr, as Staff suggests. (Ameren Brief at 25-26)

According to Ameren, Staff implies that its decision to utilize (or not utilize) the existing RF network would change the resulting expected costs and benefits mix of AMI deployment. Ameren believes that may be true but, that it does not mean the Commission must hold approval of the AMI Plan in abeyance until that decision has been made. Ameren indicates that utilizing average vendor pricing, it calculated the costs associated with the installation of the AMI network and reflected these costs in the AMI Cost/Benefit Analysis. Ameren contends that it is not appropriate to include additional, hypothetical costs (or savings) that it may incur by utilizing (or not utilizing) the existing RF network. Ameren also claims that it is not appropriate to assume whether the existing RF network will be used (or not) until final decisions on the choice of AMI vendor or equipment have been made. Ameren believes any attempt to quantify the impact on the final selection of the AMI network on the expected installation costs would be a speculative exercise. Ameren also believes the Commission should reject Staff's recommendation to require Ameren to modify its Plan to account for these possible additional, hypothetical costs. (Ameren Brief at 26)

C. Commission Analysis and Conclusion

Staff expresses concern that Ameren has not yet decided the extent to which it will use its existing RF network or the cost implications of that decision. Ameren claims it is premature to make the type of decisions Staff suggests because Ameren is still in the RFP stage of its AMI Plan.

Given the current factual situation, the Commission finds that it not possible to reach final conclusions on the extent to which Ameren should utilize its existing RF network or the related impact on costs. Such decisions cannot be made at least until Ameren has selected its vendors and other related decisions.

VII. PROPOSED WORKSHOPS

CUB/ELPC believes Ameren's AMI Plan should be rejected because it is inadequately developed and recommends the Commission direct the parties to participate in workshops to resolve the shortcomings in Ameren's current AMI Plan. While Staff agrees that there are shortcomings in Ameren's AMI Plan, it does not believe the Commission has authority to adopt CUB/ELPC's proposal. Ameren believes its plan is adequately developed and suggests that any shortcoming CUB/ELPC has identified will be adequately addressed as the Plan is implemented.

A. CUB/ELPC's Position

CUB/ELPC believes that the Commission cannot approve the Plan as presented by Ameren. CUB/ELPC contends the Plan does not contain enough evidence that Ameren's proposed investments will deliver the claimed consumer and environmental benefits. According to CUB/ELPC, Ameren does not yet have enough information on what technology will be deployed, how that technology will be deployed, and how customers will be able to take advantage of the technology to realize customer benefits. CUB/ELPC recommends that the Commission conditionally reject the Plan as premature and lacking enough detail to ensure that deployment pursuant to the Plan will meet the EIMA goals and objectives. (CUB/ELPC Brief at 31)

According to CUB/ELPC, Ameren has provided no evidence of any changes made to its AMI Plan as a result of consultation with the Council and CUB/ELPC express concern that the Commission's ability to investigate Ameren's progress will be compromised if the initial plan presented in this docket lacks the detail necessary against which to evaluate Ameren's future performance. (CUB/ELPC Brief at 32)

CUB/ELPC urges the Commission to order Ameren to discuss with stakeholders over six months to solidify the selection of technologies, integration of automated gas meters, actual deployment plans and schedules, and consumer education. CUB/ELPC says the goal of the stakeholder process should be to ensure that Ameren's actual deployment does not slow the accrual of benefits to consumers. CUB/ELPC suggests that since Ameren does not propose deploying any meters until late 2013, and full functionality will not occur until 2015, the Commission has some time on this front end to ensure the greatest consumer and environmental benefits from Ameren's Plan. (Id.)

With references to best-in-class practices from other jurisdictions, CUB/ELPC further suggests such a process should include discussions on:

- How to ensure realization of energy efficiency/demand response, specifically plans to lower overall energy consumption and peak load;
- How to standardize access to customer usage data for both individual Ameren customers and third-parties;
- How to standardize procedures for the interconnection of distributed generation, and how to ensure that investors in distributed generation are properly compensated;
- How to ensure that the final technology selected by Ameren is consistent with NIST guidelines for interoperability among smart grid devices; and
- A final review and discussion of the final deployment plan, including replacement of existing AMR operations and availability of AMI functions as well as customer education and outreach.

After this six-month process, CUB/ELPC says the Commission should require Ameren to revisit its metrics and milestones every April. (CUB/ELPC Brief at 33)

In its Brief on Exceptions, CUB/ELPC maintains that the Commission should adopt its proposal and order a series of workshops.

B. Staff's Position

Staff notes that CUB/ELPC recommends that the Commission reject Ameren's AMI Plan as filed because it does not contain enough details to show that benefits, direct or indirect, of AMI deployment will actually be realized. Staff also notes that CUB/ELPC recommends that Commission direct Ameren to engage in discussions with interested parties for six months and modify the Plan. The Plan would be reviewed in a docketed proceeding. (Staff Brief at 33)

Staff agrees with CUB/ELPC that Ameren's Plan contains many inadequacies. Staff's opinion, however, is that the statute does not permit the Commission to reject the Plan in the manner envisioned by CUB/ELPC. Staff states that Section 16-108.6(c) directs the Commission to approve, or approve with modification, Ameren's AMI Plan in this proceeding, provided that the Commission finds that the AMI Plan satisfies the five informational requirements in subsection (c), and is cost-beneficial. Staff believes it is clear from this language that the Commission must make its decision in this proceeding. (Id.)

Assuming that the Commission approves an AMI Plan for Ameren, Staff suggests the Commission could direct Ameren to participate in workshops with parties before Ameren files its first annual report by April 1, 2013. Staff says the purpose of the workshops would be to discuss some of the topics listed on page 31 of CUB/ELPC witness Horn's testimony and/or potential metrics and milestones. (Id.)

C. Ameren's Position

Ameren believes CUB/ELPC's recommendation that the Commission convene a six-month workshop process to update the AMI Plan is not warranted and should be rejected. Ameren maintains it has presented to the Commission an AMI Plan that meets the requirements of Section 16-108.6(c). Ameren says there is a statement of its Smart Grid AMI vision on how it plans to develop a cost beneficial Smart Grid. Ameren also says there is a statement of its Smart Grid strategy that includes its approach on how it intends to select the appropriate technology to create customer benefits and ensure full AMI functionality. Ameren claims there is a framework in place to deploy the AMI network and meters to its electric customers. Ameren maintains there are annual milestones and metrics to measure its success in enabling AMI functionality and enhancing customer benefits and that there is a plan to educate consumers to encourage them to understand, accept and realize the potential benefits of AMI. Finally, Ameren says there is a demonstration that implementation of the AMI Plan will result in a quantifiable net benefit to its electric customers. Ameren insists the necessary information and data has been presented in this proceeding requiring the Commission to approve the AMI Plan now. Ameren suggests that simply because every detail is not known does not give the Commission the discretion to "conditionally reject" the AMI

Plan and adopt CUB's workshop proposal. Ameren contends that doing so would effectively delay approval of a modified AMI Plan for more than a year until the resolution of the Commission's 90- day review of Ameren's April 1, 2013 update filing at the end of June 2013. (Ameren Brief at 27)

Ameren asserts that CUB/ELPC's workshop proposal would unnecessary duplicate procedures and processes already in place to work with stakeholders and inform the Commission on updates to the AMI Plan. Ameren says it intends to continue to consult with the Council, the legally sanctioned advisor to participating utilities, on future developments to the AMI Plan and attend future Council meetings. Ameren insists this process is the appropriate forum for informing and seeking input from interested stakeholders on the decisions and details of the AMI deployment that have not been finalized. Ameren adds that after consultation with the Council, it must submit annual reports by each April 1st to the Commission regarding the progress made towards completing implementation of its AMI Plan pursuant to Section 16-108.6(e) of the Act. Ameren says these annual reports must identify any updates to the AMI Plan. Ameren contends that by April 1, 2013, the time when its initial annual report is due, the final decisions as to the identity of the AMI vendor and equipment and sequence of deployment by operating center will have been made. Ameren argues that overlaying yet another layer of regulatory review, beyond what the General Assembly contemplated, would add to the costs borne by ratepayers. (Ameren Brief at 27-28)

In Ameren's view, CUB/ELPC's proposal undermines its own goal for the six-month workshop process, which Ameren says is to ensure that consumers timely receive the benefits of AMI. According to Ameren, CUB/ELPC claim the goal should be to ensure that Ameren's actual deployment does not slow the accrual of benefits to consumers. Ameren insists that the recommendation that the Commission revisit a modified AMI Plan ensures that approval of the Plan would not occur sooner than the end of June 2013. Ameren maintains there is a process already underway to select the AMI vendor, equipment and deployment sequence by the end of 2012 and begin the deployment of the AMI network by early 2013. Ameren does not believe the Commission can expect it to finalize decisions and details while approval of its Plan remains in limbo and subject to any number of undetermined modifications. In Ameren's view, delaying approval of the AMI Plan and requiring it to come back to the Commission next year to litigate approval of a modified Plan is unnecessary and counterproductive. (Ameren Brief at 28-29)

D. Commission Analysis and Conclusions

Given the other conclusions in this Order, the Commission finds that it is not necessary to make a decision regarding CUB/ELPC's proposal for workshops at this time.

VIII. FINDINGS AND ORDER PARAGRAPHS

The Commission, having reviewed the entire record, is of the opinion and finds that:

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(1) Ameren is an Illinois corporation engaged in the transmission, sale, and distribution of electricity to the public in Illinois, and is a public utility as defined in Section 3-105 of the Act;

(2) Ameren is an electric utility as defined in Section 16-102 of the Act, and a combination utility and participating utility as defined in Section 16-108.5(b) of the Act;

(3) the Commission has jurisdiction over Ameren and the subject matter herein, the facts recited and conclusions reached in the prefatory portion of this Order are supported by the record and are hereby adopted as findings of fact;

(4) on March 30, 2012, Ameren filed with the Commission its Smart Grid Advanced Metering Infrastructure Deployment Plan after consultation with the Council and after the evaluation report in the Commission-approved AMI Pilot Program had been issued, consistent with Section 16-108.6(c) of the Act;

(5) Ameren's AMI Plan contains the five required elements set forth in Section 16-108.6(c)(1)-(5) of the Act and is compliant with that Section;

(6) in accordance with Section 16-108.6(c) of the Act, Ameren's AMI Plan is consistent with the standards of the NIST for Smart Grid interoperability that are currently in effect;

(7) in accordance with Section 16-108.6(c) of the Act, Ameren's AMI Plan includes open standards and internet protocol to the maximum extent possible consistent with cyber security;

(8) in accordance with Section 16-108.6(c) of the Act, Ameren's AMI Plan maximizes, to the extent possible, a flexible smart meter platform that can accept remote device upgrades and contain sufficient internal memory capacity for additional storage capabilities, functions and services without the need for physical access to the meter;

(9) in accordance with Section 16-108.6(c) of the Act, Ameren's AMI Plan secures the privacy of personal information and establishes the right of consumers to consent to the disclosure of personal energy information to third parties through electronic, web-based and other means in accordance with State and federal law and regulations regarding consumer privacy and protection of consumer data;

(10) for the reasons discussed in the prefatory portion of this Order, the Commission cannot conclude that Ameren's AMI Plan complies with the requirement that such plan must be cost-beneficial as defined in Section 16-108.6(a) of the Act;

(11) Ameren's AMI Plan does not comply with Section 16-108.6 of the Act and the Commission is unable to approve as filed or approve modifications thereto that will result in an AMI plan that complies with Section 16-108.6 of the Act.

IS THEREFORE ORDERED by the Illinois Commerce Commission that Ameren Illinois Company's Smart Grid Advanced Metering Infrastructure Deployment Plan does not comply with the requirements of Section 16-108.6 of the Act and it is not approved.

IT IS FURTHER ORDERED that all motions, petitions, objections, and other matters in this proceeding which remain unresolved are to matters in this proceeding which remain unresolved are to be disposed of in a manner consistent with the conclusions herein.

IT IS FURTHER ORDERED that, subject to the provisions of Section 10-113 of the Public Utilities Act and 83 Ill. Adm. Code 200.880, this Order is final; it is not subject to the Administrative Review Law.

By order of the Commission this 29th day of May, 2012.

(SIGNED) DOUGLAS P. SCOTT

Chairman