

**STATE OF ILLINOIS
ILLINOIS COMMERCE COMMISSION**

AMEREN ILLINOIS COMPANY)	
d/b/a Ameren Illinois,)	
Petitioner)	
)	Docket No. 12-0244
Smart Grid Advanced Metering)	
Infrastructure Deployment Plan)	

**INITIAL BRIEF OF THE CITIZENS UTILITY BOARD AND
THE ENVIRONMENTAL LAW AND POLICY CENTER
UPON REHEARING**

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I. INTRODUCTION

Now come the Citizens Utility Board (“CUB”) and the Environmental Law and Policy Center (“ELPC”), pursuant to Rules of Practice of the Illinois Commerce Commission (“ICC” or “the Commission”), 83 Ill. Admin. Code Part 200, and pursuant to the briefing schedule established by the Administrative Law Judges (“ALJs”), to file this Initial Brief in the above captioned proceeding. This proceeding is a review of the revised Smart Grid Advanced Metering Infrastructure Deployment Plan (“AMI Plan”) filed by the Ameren Illinois Company (“Ameren,” the “Company,” or “AIC”) under Section 16-108.6 of the Public Utilities Act (“PUA”) on June 28, 2012. Under the new Energy Infrastructure Modernization Act (“EIMA”), Public Act 97-616, as modified by Public Act 97-646, Ameren is now obligated to invest \$360,000,000 in transmission modernization, distribution system improvements and “Smart Grid electric system upgrades,” as a result of the company’s election to recover its delivery services rates under a performance-based formula rate tariff. 220 ILCS 5/16-108.5. Ameren’s revised AMI Plan is the Company’s proposal to guide those multi-million dollar investments.

I. INTRODUCTION/STATEMENT OF THE CASE

A. Procedural History

On March 30, 2012, Ameren filed an initial AMI Plan under Section 16-108.6 of the PUA. As provided by statute, the Commission held a hearing over 60 days, and at the conclusion of that hearing, found that Ameren’s AMI Plan could not be approved. In *Re Ameren AMI Plan*, Final Order at 59, ICC Docket No. 12-0244 (May 29, 2012) (“Final Order”). On June 28, 2012, Ameren requested rehearing on the sole statutory requirement the Final Order found unsatisfied: that implementation of the AMI Plan will be cost-beneficial. AIC Petition for Reh’g at 2 (June 28, 2012) (“Petition”). In its Petition, Ameren requested the Commission approve the original Plan with modifications, specifically those modifications reflected in the Revised Plan. Petition at 1. On July 11, 2012, the Commission granted Ameren’s request for rehearing.

B. Legal Framework and Standards

The Energy Infrastructure Modernization Act (“EIMA”) offers electric utilities in Illinois the opportunity to recover their delivery services costs through a unique formula rate mechanism in exchange for making significant investments in Illinois’ electric grid over the next decade to modernize and upgrade transmission and distribution facilities in the State. Public Act 97-0616 at 220 ILCS 5/16-108.5(a); 220 16-108.5(b).

Ameren characterizes the EIMA as “landmark legislation” designed to encourage eligible electric utilities to participate in an investment infrastructure program that will fundamentally change and improve the delivery of electric energy to consumers. AIC Ex. 1.0RH at 2. By electing to participate in the EIMA program, AIC has pledged to make the significant incremental capital expenditures over the next ten years to strengthen and upgrade its electrical systems required as a condition of formula rate

recovery for its electric delivery services operations. *Id.*; 220 ILCS 5/16-108.5(b)(2)(B). These capital expenditures are described in Ameren’s Smart Grid Advanced Metering Infrastructure Deployment Plan (“AMI Plan”) required by the EIMA. 220 ILCS 5/16-108.6(c). As Ameren characterizes it, deployment of an advanced metering infrastructure and communications (“AMI”) communications network and meters to electric customers in the AIC service territory is intended to be a “key component of AIC’s investment program and a signature item to result from AIC’s participation in EIMA”. AIC Ex. 1.0RH at 2.

CUB and ELPC agree that investment in AMI is a key component of participating in the EIMA since it is the only way the legislation will “mutually benefit the State’s electric utilities and their customers, regulators and investors” and to “promote prudent, long-term infrastructure investment.” 220 ILCS 5/16-108.5(a). For example, the EIMA includes performance metrics to “further ensure that reliability and other indicators and not just maintained but improved over the next decade,” the time period over which Ameren is required to make the AMI investments which are the subject of this proceeding. 220 ILCS 5/16-108.5(a), 5/16-108.5(a)(1)(A), 5/16-108.5(a)(1)(B). Without cost-effective investment in AMI, Ameren’s ability to deliver improved performance to its customers must be questioned.

By encouraging these investments, the General Assembly hoped to ensure that the State’s electric utility infrastructure will promote future economic development in the State and that the State’s electric utilities will be able to continue to provide quality electric service to their customers, including innovative technological offerings that will enhance customer experience and choice. Public Act 97-0616 at 220 ILCS 5/16-108.5(a); 220 16-108.5(b).

As the ICC has already noted, 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. Final Order at 51. Therefore, the Commission understands that, to the extent possible, various Sections of the Act must be read together and interpreted to achieve a coherent intent. *Id.*

Taken as a whole, it becomes clear that the General Assembly clearly intended to condition the massive utility investment on providing equally significant benefits to ratepayers. The strong emphasis placed on utility performance, on creating new investment opportunities, and on integrating new grid resources, such as distributed generation and net metering, make clear that the ICC has a role to play in making sure that this new performance-based formula rate structure provides benefits to customers. See, *e.g.* 220 ILCS 5/8-103A; 220 ILCS 5/16-108.6; 20 ILCS 3855/1-56.

Under the EIMA, the ICC must reach two independent conclusions to approve Ameren's AMI Plan and find it sufficient to allow Ameren to continue participating in the EIMA's formula rate structure. First, the Commission must find that the AMI Plan contains the information required under the law, including a description of Ameren's Smart Grid AMI vision which shows consistency with the goal of developing a cost-beneficial Smart grid; a statement of Ameren's Smart Grid AMI strategy; a deployment schedule and plan; annual milestones and metrics to measure the Plan's success; and a consumer education plan. 220 ILCS 5/16-108.6(c). In the initial proceeding, the Commission concluded that while it found "Ameren has minimally met these

requirements, [the Commission was] very concerned that there is not more information in the initial plan.” Final Order at 21.

Second, the Commission must conclude that Ameren’s plan, if implemented, would be cost-beneficial for Ameren’s customers “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.” 220 ILCS 5/16-108.6(c). “Cost-beneficial” is defined in the law as where the benefits of Ameren’s AMI Plan exceed the costs of the AMI Plan as initially filed with the Commission or as subsequently modified by the Commission. 220 ILCS 5/16-108.6(a). Total costs for the purposes of this test include all utility costs “reasonably associated” with AMI Plan; 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, 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. 220 ILCS 5/16-108.6(a).

The ICC has broad authority under the PUA, including the EIMA, to oversee Ameren’s AMI investments and deployment. Within this grant of general authority comes an express duty to exercise general supervision over all Illinois public utilities in accordance with the provisions of the PUA. *Sheffler v. Commonwealth Edison Co.*, 399 Ill. App. 3d 51, 60 (1st Dist. 2010), *citing* 220 ILCS 5/4–101. In turn, within this supervisory framework, the ICC has discretion to “formulate reasonable methods of achieving stated legislative objectives.” *Abbott Laboratories, Inc. v. Ill. Commerce Comm’n*, 289 Ill. App. 3d 705, 712 (1st Dist. 1997). As the Commission itself noted in

the proceeding setting Ameren's initial delivery services rates under the EIMA framework, "ultimately [the Commission] has the obligation to investigate and regulate utilities and may not rely on intervening parties to contest or challenge the evidence offered by the utility." Final Order at 190.

The EIMA gives the Commission express authority to modify Ameren's Plan. In *Re Commonwealth Edison Co. AMI Plan*, Final Order at 44, 64 (June 22, 2012). When approving or modifying utility proposals, the ICC has authority under the PUA to impose additional obligations on the utility even where those obligations are not enumerated within the statute. *See, e.g.* 220 ILCS 5/16-105 ("approving, or approving as modified" a utility's delivery services implementation plan).

C. Ameren's AMI Plan Must Be Designed to Maximize the Benefits of AMI Investments for the Ameren Customers Financing AMI Investments

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. Final Order at 23. Ameren itself has made it clear the purpose of this proceeding is "to demonstrate to the Commission that AIC can deploy AMI technology to its electric customers in a cost beneficial manner, i.e. that AMI will result in operational, customer and societal benefits that exceed AIC's costs to implement the AMI investments." AIC Ex. 1.0RH at 3-4.

CUB/ELPC agree. The sole question before the Commission on rehearing is the most important one. As the ICC said in the initial case, while it is true that Ameren will be making periodic updates, thus being able to fill in details which might be lacking at this time, "it is also true that everything that follows in this AMI implementation follows from this initial plan." Final Order at 22. In this case, Ameren has indeed provided

additional detail since the initial plan, particularly with regards to the potential for achieving demand response benefits for customers. Yet Ameren continues to refuse to offer the dynamic pricing programs necessary to achieve those demand response benefits. As the ICC noted in its initial review of Ameren's AMI 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." Final Order at 21. General statements about what is possible about demand response benefits do not translate into implementation of the programs necessary to achieve those benefits.

The Commission should use its authority to modify Ameren's AMI Plan to ensure that implementation of the plan results in the maximum benefits to Ameren's customers rather than simply the achievement of basic functionalities. The cost saving operational improvements can only be realized as quickly as the meters are installed and, as discussed below, certain modifications are necessary to protect consumers. In *Re Commonwealth Edison Co. AMI Plan*, Final Order at 14, ICC Docket No. 12-0298 (June 22, 2012). CUB/ELPC believe that the modifications proposed herein are necessary for Ameren's AMI Plan just as they were to ComEd's AMI Plan to "sooner bring the environmental/societal benefits of reduced usage at peak times to all ratepayers." *Id.* at 14. As the Commission concluded in ComEd's AMI Plan proceeding, "dynamic rate structures will allow ratepayers to reduce their bills as soon as their AMI meter is installed." *Id.* The tracking metrics proposed follow naturally from the EIMA's requirement that "the success in enabling Smart Grid functions should be measured." *Id.* at 21.

The Commission has made it clear in the prior EIMA proceedings that it wants all parties –utilities, ICC Staff, and intervenors – to work together to find ways to ensure that customers receive the maximum benefits of the proposed investments.” In *Re Ameren Illinois Co. Performance Metrics*, Final Order at 21-22, ICC Docket No. 12-0089 (May 29, 2012); In *Re Commonwealth Edison Co. Performance Metrics*, Final Order at 29, ICC Docket No. 11-0772 (April 4, 2012). In two separate cases, the Commission went so far as to note that at the conclusion of proceedings reviewing utility AMI Plans, the Commission will request a Staff Report to review the metrics approved in both this docket and in the AMI deployment docket. *Id.* Based upon that Report the Commission may initiate an investigation to consider any appropriate actions to take in order to ensure the full realization of the consumer, environmental and societal benefits of the aforementioned grid modernization programs. *Id.*

II. WHETHER IMPLEMENTATION OF AMEREN ILLINOIS AMI PLAN PRESENTED ON REHEARING WILL BE COST BENEFICIAL

A. Comverge Recommendations

B. CUB and ELPC Recommendations

Ameren admits the task of the Commission in this case is to judge whether implementation of AMI is cost-beneficial. Tr. at 42:11-14. AIC witness Mr. Abba concedes that the question on rehearing is “whether implementation of the Plan will be cost beneficial.” AIC Ex. 8.0RH at 18. Despite this, Mr. Abba testified that he did not believe that the Commission should “consider what actions might ensure that a certain

category of benefits will materialize” from the implementation of AIC’s Revised AMI Plan. Tr. at 166:9-20.

AIC’s view of the EIMA is internally inconsistent, defies the plain language of the statute, and fails to follow recent Commission practice which aims to *maximize* customer benefits from *implementation* of AMI Plans . AIC’s Revised AMI Plan places the significant financial risk that actual benefits to customers may be substantially less than AIC’s projections contained in its cost-benefit analysis presented on rehearing. AG Ex. 1.0 on Reh’g at 4. For CUB/ELPC, Christopher Thomas concluded Ameren’s Revised AMI Plan failed to present an implementation strategy that will result in a cost-beneficial deployment of AMI technology for AIC’s customers. CUB/ELPC Ex. 2.0 RH at 4. This plan is in fact the only means the Commission to assess whether the costs and benefits described in AIC’s cost-benefit analysis will in fact be the costs and benefits realized by Ameren customers. *Id.* at 7. CUB/ELPC witness Colin Meehan noted that Ameren’s Plan lacked the substantive detail necessary to determine that potential benefits would be actually realized from its implementation. CUB/ELPC Ex. 3.0 RH at 9.

Ameren admits that its AMI investment is not only a principal benefit of the EIMA program for the communities that AIC serves but in fact “the most significant EIMA investment it will make.” AIC Ptn. For Reh’g at 4. The Commission must ensure that implementation pursuant to this Revised AMI Plan maximizes the benefits to those communities. In order to do so, the Commission should order Ameren to modify its Revised AMI Plan in the seven ways listed below.

1. The Commission Should Order AIC to Modify the AMI Plan Through a Collaborative Workshop Process

Ameren claims that the EIMA provides for an unprecedented level of transparency and engagement with stakeholders and no further structured means is warranted. AIC Ex. 8.0RH at 15. In Section 8.5 of Ameren's Revised AMI Plan, for example, the Company addresses its proposed outreach to categories of stakeholders such as customers, regulators, legislators, educational institutions, non-profits of various types including business and civic organizations. AIC Ex. 2.2RH at 30-32. These stakeholders are categorized into groups based on what level of information "they would find valuable as well as a level of engagement that we [Ameren] would expect this group to have with Ameren Illinois." *Id.* While Ameren rates the Company's level of engagement as ranging from "high" to "medium" to "low," the Company does not include in its Revised AMI Plan what is entailed in each level of engagement. CUB/ELPC Ex. 2.0RH at 38.

To Mr. Thomas, it is clear that Ameren has not found a good way of working with the SGAC, and by extension, working with a broader community of stakeholders. *Id.* at 37. For example, neither CUB nor ELPC had been asked to meet with Ameren on any issue related to its Revised AMI Plan. CUB/ELPC Ex. 2.0RH at 37. By law, Ameren must consult with the Smart Grid Advisory Council ("SGAC") before the filing of any AMI deployment plan. 220 ILCS 5/16-108.6(c). Although AIC attended two SGAC meetings before filing this Revised AMI Plan, the record does not contain a single edit or addition made to the plan in response to any consultation with the SGAC. *See* CUB/ELPC Cross Ex. 1. (AIC Response to CUB 4.11). Indeed, AIC admits that "[t]he only documents provided to the Smart Grid Advisory Council were copies of the documents filed in this docket on June 28, 2012." CUB/ELPC Cross Ex. 1 (AIC Response to CUB 4.12). Based on this record, any future plan of AIC to "discuss with

stakeholders and Staff ways to analyze AMI provided customer interval data” through the SGAC and other stakeholder forums should be viewed by the Commission with skepticism. CUB/ELPC Cross Ex. 2 (AIC Response to CUB 4.30).

The problem is that AIC believes that its current level of stakeholder engagement has been sufficient, and that it has sufficiently consulted with the SGAC as the EIMA envisions. Nevertheless, the Company admits that key stakeholders have not been met with, testifying that Ameren values further stakeholder involvement at least in part because alternative retail electric suppliers (“ARES”) which are not members of Illinois Competitive Energy Association (“ICEA”) and curtailment service providers need to be involved in any future workshop discussion. Tr. at 28:21-29:11.

In response to this lack of stakeholder engagement, Mr. Thomas recommended that the Commission order AIC to modify its plan through a collaborative process facilitated by the SGAC, after which the SGAC would review and approve a revised AMI Plan that AIC would file with the ICC next April. CUB/ELPC Ex. 2.0 RH at 6. On rebuttal, AIC proposed two different workshops to determine whether and how to deliver the benefits from Ameren’s Revised AMI Plan to its customers. AIC proposed a first six-month workshop in 2013 facilitated by the Commission’s Office of Retail Market Development (“ORMD”) with the goal to ensure that AMI systems talk with any load control device to enable direct load control programs or critical pricing programs. Tr. at 33:7-14; 29:17-30:10. AIC also proposed a second six-month workshop in 2016 facilitated by ORMD to assess two questions: first, whether or not dynamic pricing is being offered by the RES community or curtailment service providers, and second,

whether there are any market barriers that AIC, the General Assembly, or the Commission could address. Tr. at 33:7-14; 30:11-31:7.

Both proposals fail to address the need for structured stakeholder collaboration as Ameren moves through the initial stages of its AMI investment. A structured process facilitated by the statutory consultant before the Ami Plan is too heavily implemented is the most optimal decision for the Commission to order in this proceeding. AG witness Rick Hornby recommended that the Commission require AIC to work with stakeholders to identify initiatives to increase the value of the AMI Plan to the majority of AIC's customers. AG Ex. 1.0 on Reh'g at 5. CUB/ELPC witness Mr. Meehan testified a collaborative workshop process like the one adopted in California increases the collective knowledge base of the parties, creates new tools to calculate and monetize benefits, provides the utility and other actors with data to ensure the least-cost path to meet standards, and creates stakeholder buy-in that can provide the utility with regulatory certainty. CUB/ELPC Ex. 3.0 RH at 16. Mr. Meehan found that where stakeholders are engaged from planning through implementation, the likelihood of successfully attaining benefits can be increased. *Id.* at 16-17. Such a proper workshop process requires a broad spectrum of community stakeholders to be engaged and fully empowered participants. *Id.* at 17. In fact, Mr. Meehan noted that such a collaborative process can empower those stakeholders who may lack the expertise required to comment meaningfully on the utility's plan. *Id.* at 18. Mr. Meehan explained how that collaborative process should be structured in order to maximize the resources of stakeholders. *Id.*

Mr. Meehan thus recommended a stakeholder-drive plan process facilitated by an independent third party that builds on the legislative requirements in the EIMA to consult

with the SGAC. *Id.* at 19. This process would be focused on adding detail to ensure successful delivery of the benefits of AMI investment to AIC's customers, with a report drafted by SGAC as the final workproduct. *Id.* Mr. Thomas testified that such a stakeholder process would benefit AIC by giving it access to the technical expertise and input of a broad array of stakeholders. CUB/ELPC Ex. 2.0 RH at 9.

Mr. Thomas pointed out that the Commission has already used a collaborative process to work through issues around the deployment of AMI technology – the AMI workshop process which designed the AMI Pilot for ComEd and the Illinois Statewide Smart Grid Collaborative. CUB/ELPC Ex. 2.0RH at 39-40. Since the results of both of these collaborations must be considered by the Commission when it reviews Ameren's AMI Plan, Mr. Thomas noted that it was the General Assembly's intent to give weight to the results of those stakeholder processes. *Id.* Both workshops utilized a third-party facilitator and held workshops over a six-month period during which the technology and deployment area was selected. *Id.*

With this experience in mind, Mr. Thomas noted that a third-party facilitator is already made statutorily available in this instance: the SGAC. Mr. Thomas recommended that the SGAC organize meetings around the specific areas he identified as needing modification in Ameren's plan:

- Final selection of AMI technology;
- Volt/Var Optimization;
- Dynamic pricing rates;
- Final deployment strategy;
- Distributed generation interconnection process;

- Consumer education and stakeholder engagement; and
- Baselines for additional performance tracking measures. CUB/ELPC Ex. 2.0RH at 41-42.

All stakeholders who have expressed an interest in Ameren's AMI planning should be invited to attend, including those which are not members of the SGAC. *Id.* Mr. Thomas added that Ameren could present a final AMI Plan for review and comment by the SGAC, and include the comments of the SGAC in a final AMI Plan filed with the Commission as a compliance filing within 90 days of the date of the final order in this proceeding. *Id.* at 42-43.

Ameren's proposed dual workshop process does not act quickly enough, is not designed to maximize benefits from implementation of Ameren's Revised AMI Plan, and focuses on only two of several issues related to its proposed AMI deployment. In contrast, CUB/ELPC's proposal is based off of experiences in Illinois, designed to borrow the best practices from other jurisdictions, uses the statutory AMI consultant, and is focused on rectifying the deficiencies identified by stakeholders with Ameren's Revised AMI Plan thus far. Based on the recommendations of Mr. Thomas, Mr. Meehan, and Mr. Hornby, the Commission should require Ameren to engage in a stakeholder process facilitated by the SGAC before it files its next AMI Plan in April 2013.

2. The Commission Should Order AIC to Commit to Voltage Optimization as a Core AMI Function

The EIMA specifically lists amongst its desired AMI functions the ability to "assist in voltage control." 220 ILCS 5/16-108.6(a). In contrast, Ameren's Revised AMI Plan includes voltage optimization as a "potential enhancement." AIC Ex. 2.1 RH at 9. AIC witness Mr. Abba testified that AMI will ultimately reduce the cost and enhance the

benefits of voltage optimization by providing a robust remotely accessible voltage monitor at every customer premise. AIC Ex. 8.0RH at 20. Yet, AIC only committed to studying how best to leverage AMI functionality once AMI is “in place and fully functional.” *Id.*

CUB/ELPC witness Mr. Thomas testified that dynamically managed reactive power, or volt/var optimization, can result in more efficient management of the distribution grid and reduce overall system usage. CUB/ELPC Ex. 2.0 RH at 13. Mr. Thomas noted that the Commission ordered AIC to institute a pilot program for voltage optimization to determine what the possible benefits of such a program would be. *Id.* at 14 (citing Final Order at 28, ICC Docket No. 10-0568 (Dec. 21, 2010)).

Ameren has in fact implemented a pilot program in this regard, admitting in rebuttal testimony that it in fact had already reached out to Staff regarding the scope of the pilot. Tr. at 155:22-156:3. Only at the hearing did Ameren agree to share the final report on that program with stakeholders. *Id.* Based on those results, and based on the recommendation of Mr. Thomas, the ICC should require that Volt/Var optimization become a part of the core functionality of AIC’s AMI rollout as opposed to a potential enhancement that may come too late to maximize benefits from implementation of Ameren’s Revised AMI Plan.

3. The Commission Should Require AIC to Offer a Time Of Use (“TOU”) Rate and Consider Other Dynamic Pricing

The General Assembly has defined “Smart Grid” investments as promoting the following goals related to dynamic pricing: development and incorporation of demand-response, demand-side resources, and energy efficiency resources; deployment of “smart” technologies; deployment and integration of peak shaving technologies;

provision to consumers of timely information and control options. 220 ILCS 5/108.6(a). The “Smart Grid functions” that the General Assembly wants enabled by Ameren’s investments include the specific functions related to dynamic pricing: the ability to develop, store, send, and receive digital information concerning electricity use, costs, prices, time of use; and the ability to measure or monitor electricity use as a function of time of day. 220 ILCS 5/108.6(a).

Ameren’s cost-benefit analysis of its Revised AMI Plan relies heavily on demand response benefits, such as those benefits resulting from dynamic pricing, for its conclusion that the Revised AMI Plan is cost-beneficial. Ameren lists amongst the capabilities of its AMI investments the capability to allow for remote programming of TOU features, which would enable consumers to opt into dynamic pricing programs. AIC Ex. 2.2RH at 4. Ameren states that their further evaluation of technology vendors will consider the ability of the vendor to “[p]rovide pricing options” as one criterion in a list of what will be focused on “at a high level.” *Id.* at 11-12. Yet the Revised AMI Plan adopts a somewhat schizophrenic attitude to dynamic pricing options themselves. While on the one hand it includes a description of how Ameren will develop and implement the statutorily required Peak Time Rebate (“PTR”) Program, *Id.* at 63-64, on the other hand it describes “Enhanced Rate Options and Services” including a “potential enhancement” that will be evaluated. AIC Ex. 2.1RH at 9.

Indeed, Ameren witness Mr. Abba testified that quantifying benefits resulting from dynamic pricing, among other benefits, “is necessary in order to sufficiently prove a 62% electric only AMI deployment within 10 years is cost-beneficial.” AIC Ex. 3.0RH at 5. Section 3.6.1 of Ameren’s AMI Cost Benefit Analysis, entitled “Demand

Response,” states that “[c]ustomers will have the choice to opt in to a Peak Time Rebate (PTR) program, Critical Peak Pricing rate, Direct Load Control Program, or Time of Use program with the AMI program.” In Section 3 5.1.3 of its Cost-Benefit Analysis (also entitled “Demand Response”), Ameren represents as follows:

“Ameren Illinois expects that all Residential customers will be eligible to participate in a Peak Time Rebate program for electricity curtailed during critical peak hours. Residential customers will also have opportunities to opt-in to a Critical Peak Pricing rate with and without enabling technologies, and Direct Load Control or Time-of-Use with smart charging for electric vehicles. Commercial and Industrial customers may be on a Critical Peak Pricing Program, with or without Automated Demand Response. Additionally, certain C&I customers may qualify to participate in a Direct Load Control program.”

Despite this reliance on dynamic pricing to achieve demand response benefits and, in turn, to render Ameren’s Revised AMI Plan cost-beneficial, Ameren is not intending to offer any dynamic pricing program aside from the Peak Time Rebate program required by the EIMA and the Power Smart Pricing Program already offered by the Company. Tr. at 145. Ameren in fact does not anticipate offering any new dynamic pricing program at all within the at least the first three years of AMI implementation. *Id.*

Although Ameren has performed well in implementing the statutory mandate to offer a real time pricing structure, participation in that program has grown under the Commission’s oversight and Ameren’s direction. *Id.* at 20. However, besides its real-time rate, Mr. Thomas noted that Ameren does not currently offer any other pricing structure, such as a PTR, Time of Use (“TOU”), or Critical Peak Pricing (“CPP”) rate. *Id.* Mr. Thomas also testified that he was not aware of any third-party ARES who offers such rates for customers in Ameren territory. *Id.* Moreover, Mr. Thomas explained that he was not aware of any plans for anyone to deploy home energy management technology at this time. *Id.* Ameren witness Mr. Nelson correctly observed that

“information alone is not always adequate by itself. The tools necessary to better manage the consumer’s decision making must be at hand.” AIC Ex. 1.0RH at 6. Therefore, Mr. Thomas recommended that the Commission modify Ameren’s Revised AMI Plan to require Ameren to offer, at least, a TOU rate but also to consider other pricing structures such as CPP. CUB/ELPC Ex. 2.0RH at 21.

Ameren witness Dr. Faruqi used several dynamic pricing programs, including at least two additional dynamic pricing rates, when he calculated the net benefits of demand response, which total over \$400 million in his medium scenario, for Ameren. Ameren Exhibit 5.0RH, at 8-9, lines 179-197, and Ameren Exhibits 5.3RH, 5.4RH and 5.6RH.

While AIC may be willing to consider offering a CPP rate after 2016, that is simply too late. Tr. at 25:6-17. Ameren claims that offering a dynamic rate would be premature since the costs of generation capacity are forecasted to rise. *Id.* at 27:3-6. Setting aside the reality that those costs are forecasted to rise whether or not dynamic pricing is offered to AIC customers in the meantime, the reality is that no ARES offers a direct load control or dynamic pricing program to Ameren’s residential customers. *Id.* at 27:12-14. In fact, the record shows that it is unlikely to occur.

Comverge witness Mr. Lacey testified that he did not think that third-party suppliers would provide dynamic pricing services since the benefits of demand response accrue to all customers in AIC’s service territory. *Id.* at 210:17-211:5. Because a third-party supplier would need to fund a demand response program from its customer base, the benefits accrue to AIC’s entire customer base presents an economic problem¹. *Id.* at

¹ Dr. Faruqi admits that the benefits he projected from dynamic rate programs accrue to all of AIC’s customers. *Id.* at 105:22-106:18. CUB/ELPC agree, and as such, take no issue with this statement.

211:5-14. Indeed, Mr. Lacey testified that he observed this economic problem in the current marketplace, where there is no demand response program that he was aware of being offered by third-party suppliers to residential customers anywhere in the country. *Id.* at 211:14-18. The consumer demand that AIC believes will allow ARES to offer dynamic programs in the future, in particular the “consumer demand to save money on power and energy over the BGS standard supply service is present” today and has existed since January 2007, as testified to by two different AIC witnesses. *Id.* at 28:8-20; 54:22-55:3; 154:12-18. Yet the record contains no evidence that hat alternative suppliers offer dynamic rates to AIC’s residential and small commercial customers at this time.

In addition to a third party being unlikely to offer such a dynamic pricing structure, Ameren’s calculations of projected benefits from dynamic pricing do not accurately reflect the provision of dynamic rates by third party suppliers. By and large, the “Arc of Price Responsiveness” – the foundation of Dr. Faruqui’s projections of load impact – was based on a database of incumbent utilities. *Id.* at 90:3-8. The Institute for Electric Efficiency study, which Dr. Faruqui relied upon for the amount of daily energy reduction expected of customers with and without enabling technologies, estimated benefits based on a range of utility companies – not ARES. *Id.* at 90:17-91:22; AG Ex. 1.0 on Reh’g at 25. Indeed, Dr. Faruqui testified that the only data in the database that was from alternative suppliers was a rate offered in Illinois, although no witness including Dr. Faruqui identified this a rate offered to Ameren’s residential customers. *Id.* at 96:5-20.

AIC witness Mr. Abba concedes that neither AIC nor the ICC have control over whether alternative suppliers offer dynamic rate structures. *Id.* at 170:7-22. AIC’s vague

offer to “discuss with stakeholders and Staff” ways to provide customer interval data to provide targeted information regarding appropriate rate options is similarly hollow.

CUB/ELPC Cross Ex. 2. (AIC Response to CUB 4.30). Mr. Meehan testified that there is vast untapped demand response potential in Southern Illinois, although he noted that Ameren’s Revised AMI Plan does not detail the utility actions that will be taken to realize the \$406 million in expected demand response benefits. CUB/ELPC Ex. 3.0 RH at 8.

AIC witness Mr. Abba testified that he was not aware of any AIC employee consulting with third-party providers before assuming the levels of commercial and industrial participation in demand response programs which would result from AIC’s implementation of AMI. *Id.* at 137:8-21. Finally, even if Ameren holds a workshop in YEAR to determine whether and to what extent any barriers exist to retail electric suppliers offering dynamic pricing rates, AIC does not commit to offering time variant rates to its customers at this time. *See* Tr. at 151:11-19. The Commission must question whether Ameren is in fact committed to achieving the benefits of demand response through dynamic pricing if Ameren is not committed to offering the dynamic pricing programs themselves.

As AG witness Mr. Hornby testified, the actual customer benefits are likely to be lower than projected by AIC due to lower rates of customer participation than projected by AIC in the time-varying pricing options enabled by AMI. AG Ex. 1.0 on Reh’g at 4. Finally, AIC witness Dr. Faruqui admitted that characteristics specific to the particular utility performing the rollout are important to consider when projecting benefits and costs of an AMI rollout,. Tr. at 82:5-9. CUB/ELPC witness Mr. Thomas examined the

projected participation rates included in Dr. Faruqui's analysis which lay the foundation for the projected benefits and concluded that Dr. Faruqui's assumed participation rates were not reasonable given that Ameren did not commit to offering dynamic pricing structures to its customers, except for the statutorily required power smart pricing ("PSP") and Peak Time Rebate ("PTR") rates. Mr. Hornby agreed, testifying that Dr. Faruqui's projections of residential customer participation in dynamic pricing options were unreasonably high because of empirical offerings by other utilities, the difficulty of motivating customers to "opt-in", and a lack of sufficient evidence behind Dr. Faruqui's projections. *Id.* at 20.

Based on the record evidence, it is unlikely that third party suppliers will offer dynamic rates in Ameren's service territory. AIC has not fulfilled its burden to prove to the Commission that implementation pursuant to its Revised AMI Plan will deliver more benefits to Ameren's consumers than it will cost them.

Without those commitments, Mr. Thomas concluded that it is not reasonable for the Commission to conclude that implementation pursuant to Ameren's Revised AMI Plan will result in the \$403 million in net incremental benefits due to dynamic pricing. CUB/ELPC Ex. 2.0RH at 19. Because AIC does not describe any formal mechanism to provide advanced notification to parties responsible for forecasting peak demand, setting reserve margins, qualifying resources, or providing retail supply that PSP, CPP or PTR customers that would lead the Commission to believe that customer benefits projected from these programs would actually materialize as a result of implementing AIC's Plan. *Id.* at 14-15. Yet these programs are the programs which will provide the direct customer benefits Ameren relies on to demonstrate its Revised AMI Plan is cost-beneficial. Mr.

Hornby testified that time-of-use pricing could achieve significant savings for customers by offering money-saving opportunities during the entire year. *Id.* at 21. Additionally, Comverge witness Mr. Lacey urges the Commission to direct AIC to file tariffs for the CPP and DLC programs described in the cost-benefit analysis of AIC's Plan. Comverge Ex. 1.0RH at 2.

The Commission should require Ameren to offer, at least, a TOU rate to its customers in order to maximize the benefits from implementation of Ameren's Revised AMI Plan.

4. The Commission Should Require AIC to Change its Distribution Generation Interconnection Procedures

One of the key objectives of the EIMA is to promote the deployment and integration of distributed generation. 220 ILCS 5/16-108.6(a). By law, the Commission's inquiry into the cost-beneficial implementation of Ameren's Revised AMI Plan "shall include" the greater integration of distributed power resources. *Id.* Although Ameren has not projected benefits for its cost-benefit analysis, it has committed to making net metering functionality an essential component of AMI technology. AIC Ex. 8.0RH at 23. The concern for the Commission should be that net metering presumes customers can utilize distributed generation, and Ameren's Revised AMI Plan does not remove the technical barriers which complicate this process for customers.

CUB/ELPC witness Mr. Thomas testified that while distributed generation may be technically feasible for customers in some places on Ameren's grid and in other places it may not be. CUB/ELPC Ex. 2.0 RH at 21. Mr. Thomas observed that currently there is no way for a customer to know whether they are in a good location for a distributed generation project without first evaluating a project, contacting a vendor, preparing an

interconnection application, filing that application with Ameren and waiting for a response. *Id.* at 22. Mr. Thomas noted that these steps can involve substantial time and resources, which can ultimately have the effect of discouraging customer adoption of distributed generation. *Id.* Mr. Thomas testified that Ameren could publish maps or other information about its distribution grid on its website, which would allow customers to discover where interconnection may be technically feasible. *Id.* As an example, Mr. Thomas noted that Ameren could publish information on customer areas served by feeders that have already reached the threshold of distributed generation that would require a higher level of study under the Illinois interconnection rules. *Id.* Despite the fact that Ameren does offer paper-based interconnection application materials on its website, Mr. Thomas testified that Ameren could also transition from a paper-based interconnection application process to a web-enabled interconnection portal. AIC Ex. 8.0RH at 22; CUB/ELPC Ex. 2.0 RH at 22. Mr. Thomas concluded that these steps would save resources for both Ameren and its customers, reduce risk for distributed generation developers in site selection, substantially reduce the barriers to interconnection, and help further enable the type of customer and grid benefits of distributed generation that Ameren describes in its Revised AMI Plan. CUB/ELPC Ex. 2.0 RH at 22.

Ameren's only concern appears to the potential for a security risk for the Company if such information is published, a concern that CUB/ELPC appreciate. However, Mr. Thomas testified that despite security concerns, several utilities have published interactive distribution grid maps that provide customers with information that they can use to perform and initial screening of the best places to interconnect distributed

generation. CUB/ELPC Ex. 2.0RH at 23. For example, Mr. Thomas testified that San Diego Gas and Electric, Southern California Edison, and Hawaiian Electric Company have all established websites with maps of their distribution systems with useful information to facilitate the interconnection of distributed generation. *Id.* Mr. Thomas provided the example of National Grid in New England, which has published maps of secondary networks on its *grid*. *Id.* at 22-23.

CUB/ELPC recommend that the Commission order Ameren to work with CUB, ELPC, ComEd, ICC Staff and others as directed in the ComEd AMI Plan proceeding to discuss ways to modify distributed generation interconnection procedures. Final Order at 50, ICC Docket No. 12-0298. Because the Smart Grid, as envisioned by the General Assembly, includes the promotion of distributed generation, the Commission should require Ameren to publish the desired information on its website and automate the interconnection application process. These modifications will remove many of the technical barriers to greater adoption of distributed power resources, and result in the implementation of AMI consistent with the objectives of the General Assembly.

5. The Commission Should Require AIC to Expand Its Customer Education Plan

In its Revised AMI Plan, Ameren claims that it will develop different messaging strategies on the benefits of AMI to its customers and stakeholders based on the category type a customer may be. The messaging plan will be tailored to target the different customer segments to ensure the message is received by customers who will take appropriate actions. AIC Ex. 7.0RH at 6. AIC will annually report to the Commission and periodically to SGAC on consumer education plan updates. *Id.* at 7.

Although Ameren illustrates a commitment to ensuring that consumers understand the mechanics of AMI deployment, CUB/ELPC witness Mr. Thomas testified that Ameren should make more of a commitment to educate consumers about the opportunities to benefit from AMI technologies, namely through participation in energy efficiency and demand response programs. CUB/ELPC Ex. 2.0RH at 35. Ameren's ambitious projections for the number of customers that will participate in demand response programs lack detail about how Ameren or other entities will educate consumers about the availability of these programs or administer them. *Id.* Indeed, Mr. Thomas testified that Ameren's cost-benefit analysis is predicated on consumer participation in demand response and energy efficiency programs. CUB/ELPC witness Mr. Meehan noted that although Ameren's Plan includes an additional \$23 million in costs for customer engagement without detailing how Ameren will decide to spend these dollars, what types of organization they will contract with, or how they will actually deploy funds. CUB/ELPC Ex. 3.0 RH at 8. Because Ameren has not shared specific outreach or education strategies, Mr. Thomas recommended that the Commission order Ameren to collaborate with stakeholders on best practices for educating consumers. CUB/ELPC Ex. 2.0RH at 35-36.

6. The Commission Should Order AIC to Analyze Other AMI Deployment Scenarios

The Commission has made clear that its policy in Smart Grid related cases is to maximize the benefits that customers can receive from the utility's investments. In *Re Commonwealth Edison Co. Performance Metrics*, Final Order at 29, ICC Docket No. 11-0772 (April 4, 2012). Since Ameren's Revised AMI Plan only deploys advanced metering infrastructure to 62% of its customers, and therefore includes a choice to

exclude a particular 38% of Ameren's service territory, the choice of which 38% to withhold deployment from may have a material impact on the Commission's cost-benefit determination.

Mr. Thomas testified that the choice of where to deploy AMI to and where not to deploy AMI to will affect the costs and benefits resulting from implementation of Ameren's Revised AMI Plan. CUB/ELPC Ex. 2.0RH at 33. Ameren initially plans to install AMI in areas of its service territory that are not currently covered by automated meter reading ("AMR"). AIC Ex. 7.0RH at 2. AIC will deploy in a sequence in which operating centers receive AMI contiguous to other operating centers that already have AMI, with the exception of the first operating center. *Id.* at 2. Ameren believes that this sequence provides more benefits earlier than if AMI was deployed to areas that currently have AMR and that contiguous deployment will benefit from network coverage efficiencies. *Id.* at 3. In fact, the areas already served by AMR have the densest population in the service territory. *Id.*

In Mr. Thomas' expert opinion, it does not appear that Ameren chose the meter deployment schedule based on the population density of operating centers. Although, on rehearing, Ameren chose to accelerate its deployment schedule from 10 to 8 years, Mr. Thomas observed that Ameren continues to deploy to the accelerated population without proper consideration of other factors which may maximize consumer benefits. CUB/ELPC Ex. 2.0RH at 34. The Company itself has identified the fact that different segments of customers, based on their behavioral characteristics, respond differently to messaging and education regarding technology adoption. AIC Ex. 2.2RH at 24. Moreover, the Revised AMI Plan recognizes that "efficient implementation of consumer

awareness programs” requires tailored messaging to these customer segments. *Id.* at 34. Ameren explicitly acknowledges that segmentation will “identify customers with a higher propensity to engage in energy use changes or technology that achieves energy saving goals.” *Id.* Therefore, Ameren should consider the relative presence or absence of particular consumer segments in the operating centers they choose for deployment to maximize opportunities for customer benefit and the overall cost effectiveness of the deployment. CUB/ELPC Ex. 2.0RH at 34.

AIC witness Mr. Ellen testified that, despite Commission policy, he did not believe that the Commission is required to modify a proposed AMI Plan to derive a projected maximum customer benefits. *Id.* at 5. Ameren admits that accelerating the installation of meters increased the Net Present Value of the Revised AMI Plan since “benefits are realized sooner and for a longer period of time.” AIC Ex. 3.0RH at 5. Presumably, accelerating the deployment of meters to customers with higher propensities to engage in energy use changes would also increase the Net Present Value of Ameren’s proposed investments. CUB/ELPC Ex. 2.0RH at 35. The Commission should thus require Ameren to fully evaluate the costs and benefits of a deployment schedule that deploys AMI meters to customers based on maximizing benefits from implementation.

7. The Commission Should Order AIC to Include Additional Tracking Measures

On Rehearing, Ameren’s Revised AMI Plan states that it will use the following “milestones” to measure the success of AMI implementation:

- Percent of support system installed;
- Percent of 2-way network installed;
- Number and percent of AMI meters installed;

- Number of customers able to access the Web Portal and Web Portal usage statistics;
- Number of customers eligible for peak time rebate tariff;
- Number of customers signed up for peak time rebate tariff; and
- Number of customers on PSP, RTP [Real-Time Pricing], or other real time rates. AIC Ex. 2.2RH at 23.

However, Ameren's current metrics and milestones fail to give the Commission the necessary data points to ensure that implementation pursuant to Ameren's Revised AMI Plan will be cost beneficial for the Company's customers. The Commission should thus require Ameren to adopt the additional tracking measures proposed by Mr. Thomas in this proceeding and agreed to by ComEd in its AMI Deployment Plan proceeding. *See* CUB/ELPC Ex. 2.0RH at 31. These tracking measures should also be adopted for Ameren because, as Mr. Thomas testified, they provide a transparent yardstick against which stakeholders, regulators and legislators can see how the deployment of AMI is affecting Ameren's customers. *Id.*

The Revised AMI Plan provides the best opportunity for the Commission to put in place ways to measure AIC's progress in achieving customer benefits and managing costs. *Id.* at 7. Mr. Meehan concluded that Ameren's milestones and metrics were not sufficiently tied to a goal, date, or timeline. CUB/ELPC Ex. 3.0 RH at 9 (citing AIC Ex. 2.2RH at Section 7.3). For example, the Revised AMI Plan does not have any ultimate goal or timeline for implementation for the implementation of the statutorily required Peak Time Rebate program. *Id.* Mr. Meehan noted that this omission made it difficult to track and quantify progress in future proceedings. *Id.*

Mr. Thomas testified that a utility's performance is driven by goals that are publicly committed to, and that these goals were more likely to be achieved if

stakeholders could measure Ameren's progress in reaching them. *Id.* at 29. In order to properly design a milestone, metric, or tracking measure, Mr. Thomas testified that the Commission can first establish a goal, then measure progress towards the achievement of that goal with specific data regarding third parties, technologies, and services available to Ameren's customers. CUB/ELPC Ex. 2.0RH at 28. Directing Ameren to report on ways it is creating customer value will give the Commission assurance that the benefits Ameren relies upon in its cost-benefit analysis actually realize for Ameren's customers. *Id.* Thus, Mr. Thomas recommended that the Commission establish metrics for determining whether consumers have increased their understanding of (a) ways to lower their bills; (b) ways to consume more efficiently; (c) how bills are computed (so that they understand their responsibility to pay off sunk costs even as they reduce future costs); and (d) ways in which third parties, who are not the utility, can enter the marketplace to provide enhanced services to customers. CUB/ELPC Ex. 2.0RH at 29. In particular, Mr. Thomas proposed the following tracking measures to observe the realization of those benefits:

Number	Issue	Operational Tracking Measure
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Number	Issue	Operational Tracking Measure
1	<p>Customers enrolled in Peak Time Rebate, Real Time Pricing, and other dynamic/time variant prices</p> <p>NOTE: Ameren has committed to measuring the number of customers eligible for the peak time rebate tariff, signed up for a peak time rebate tariff, and participating in Power Smart Pricing, Real-Time Pricing, or other real-time rates. Ameren Ex. 2.2RH at 23.</p>	<p><u>Residential Customers</u></p> <ol style="list-style-type: none"> 1. Number of customers on a time-variant or dynamic pricing tariff offered by Ameren. Expressed also as a percentage of customers in each delivery class. 2. Number of customers served by retail electric suppliers for which the supplier has requested monthly Electronic Data Interchange delivery of interval data. Expressed also as a percentage of customers taking supply from a retail electric supplier in each delivery class. <p><u>Small Commercial Customers</u></p> <ol style="list-style-type: none"> 1. Number of customers on a time-variant or dynamic pricing tariff offered by Ameren. Expressed also as a percentage of customers in the delivery class. 2. Number of customers served by retail electric suppliers for which the supplier has requested monthly Electronic Data Interchange delivery of interval data. Expressed also as a percentage of customers taking supply from a retail electric supplier in the delivery class.
2	<p>Customer-side-of-the-meter devices sending or receiving grid related signals</p>	<p>Number of Ameren AMI meters with consumer devices registered to operate with the Home Area Network (HAN) chip by tariffs under which customer receives delivery.</p>
3	<p>AMI Meter failures</p>	<p>Number of advanced meter malfunctions where customer electric service is disrupted.</p> <p>A “malfunction” is a malfunction that causes the meter to become inoperable but does not include cases of tampering, service panel and service entry equipment, house fires, etc.</p>

Number	Issue	Operational Tracking Measure
4	AMI Meters replaced before the end of their expected useful life	<p>Number of Ameren advanced meters replaced annually before the end of their expected useful life, including reasons for replacement that include Ameren errors.</p> <p>“Replaced” means a replacement due to a malfunction that causes the meter to become inoperable, including tampering.</p>
5	Customers with net metering	<p>Number of customers enrolled on Net Metering tariff and net load of each customer.</p>
6	<p>Customer premises capable of receiving information from the grid</p> <p>Note: Ameren has committed to measuring the number of customers able to access the web Portal and providing Web Portal statistics.</p> <p>Ameren Ex. 2.2RH at 23.</p>	<p>Number of installed AMI Meters as of the last day of the calendar year that communicate back to the head end system.</p> <p>Number of installed AMI Meters as of the last day of the calendar year that communicate back to the head end system, divided by the total number of AMI meters installed.</p> <p>Number of customers who have accessed the web-based portal as of the last day of the calendar year as a percentage of customers with AMI Meters and as a percentage of Ameren customers in that delivery class.</p> <p>Number of customers who can directly access their usage data as of the last of the calendar year as a percentage of customers with AMI Meters and as a percentage of Ameren customers in that delivery class</p>
7	Peak load reductions enabled by demand response programs	<p>Load impact in MW of peak load reduction from the summer peak due to AMI enabled, Ameren administered demand response programs such as the Peak Time Rebate program as a percentage of all demand response in Ameren’s portfolio.</p>

Number	Issue	Operational Tracking Measure
8	Customer Complaints	Number of formal ICC complaints, informal ICC complaints, and complaints escalated to Ameren’s customer relations department related to AMI Meter deployment, broken down by type of complaint and resolution. AMI Meter deployment includes AMI Meter installation, functioning or accuracy of the AMI meter, and HAN device registration.
9	Reduction in Greenhouse Gas Emissions enabled by smart grid	Ameren will work collaboratively with CUB and EDF to operationalize this measure.
10	Distributed generation projects	Number of locations and total MWs of customer owned distributed generation connected to the transmission or distribution system, broken down by connection to transmission and distribution system. “Distributed generation” locations are those where customers take service under net metering or successor tariffs.
11	Load served by distributed resources	Total sales of electricity to the grid from distributed generation divided by zone energy plus distributed generation sales, with all data provided in sortable format.
12	System load factor and load factor by customer class	Total annual consumption for AMI meters (including, separately, small commercial customers) divided by the average demand across all AMI meters over the 4 peak hours multiplied by 8760 hours by customer class. Ameren will work collaboratively with CUB and EDF to establish a similar measure for all system load.
13	Products with end-to-end interoperability certification	Ameren will conduct an annual survey through a third-party provider to evaluate how products are being introduced in the smart grid enabled marketplace.

Number	Issue	Operational Tracking Measure
14	Network nodes and customer interfaces monitored in “real time”	Ameren will work collaboratively with CUB and EDF to operationalize this measure.
15	Grid connected energy storage interconnected to utility facilities at the transmission or distribution system level	<p>Number of locations and total MWs of utility-owned or operated energy storage interconnected to the transmission or distribution system as measured at storage device electricity output terminals.</p> <p>Ameren will conduct an annual survey through a third-party provider to estimate similar measures of non-utility storage units.</p>
16	Time required to connect distributed resources to grid	Ameren’s response time to a distributed resource project application, and time from receipt of application until energy flows from project to <i>grid</i> .
17	Voltage and VAR controls	Number and percentage of distribution lines using sensing from an AMI meter as part of Ameren’s voltage regulation scheme.
18	Grid assets that are monitored, controlled, or automated	<p>Number and percentage of Ameren substations (Distribution Center Substations (DCs), Substations (SSs) Transmission Substations (TSSs) and Transmission Distribution Centers (TDCs)) monitored or controlled via Supervisory Control and Data Acquisition (SCADA) systems.</p> <p>Number and percentage of Ameren distribution circuits (4kV, 12kV and 34kV) equipped with automation or remote control equipment including monitor or control via Supervisory Control and Data Acquisition (SCADA) systems.</p>

Number	Issue	Operational Tracking Measure
19	Customers connected per automated circuit segment	<p>Average number of customers per automated three phase 12kV line segment.</p> <p>An “automated line segment” is a segment of 12 kV three phase mainline circuit between automated devices which include circuit breakers, reclosers, automated switches, etc.</p> <p>A “customer” is a Ameren account connected on the automated 12kV three phase line segment.</p>
20	Improvement in line loss reductions enabled by smart grid technology	Ameren will research the uncertainty in line loss measurement collaboratively with CUB and EDF.

CUB/ELPC Ex. 2.2RH.

In CUB/ELPC witness Mr. Meehan’s opinion, the metrics that Ameren proposed which merely count the number of devices installed only measure the performance of the installation team without capturing the promise of other customer and environmental benefits that could be achieved from that action. CUB/ELPC Ex. 3.0 RH at 17. Mr. Meehan noted that the inclusion of metrics additional to those required by the EIMA was demonstrated in the recent ComEd filing and he observed that inclusion increased the transparency of implementation and provided the required insights for the Commission to make future adjustments. *Id.* at 10. Mr. Meehan testified that the tracking measures adopted by ComEd provide a strong foundation to evaluate the efficacy of AIC’s deployment. *Id.* Mr. Thomas noted Mr. Meehan and the Environmental Defense Fund’s (“EDF”) experience in creating transparent yardsticks to measure utility progress in achieving smart grid benefits. CUB/ELPC Ex. 2.0RH at 31.

These additional tracking measures offer the Commission an opportunity to establish statewide metrics for utility performance under the EIMA, since this list was

approved by the Commission in the Final Order in ICC Docket 12-0298. As much as possible, Mr. Thomas testified that standardized performance metrics maximize transparency in measuring results. *Id.* at 31. Mr. Thomas acknowledged that there are significant differences between the operations of Ameren and ComEd. *Id.* As accommodation of this fact, Mr. Thomas explained, the utilities do not necessarily have to share the same baselines for metrics, although the Commission can and should still establish statewide goals. *Id.* at 32. As an example of the importance of statewide consistency, Mr. Thomas pointed to the statewide technical resource manual (“TRM”) as a goal for the future. In *Re Ameren Energy Efficiency Plans*, Final Order at 70, ICC Docket No. 10-0568 (Dec. 21, 2010). There, the Commission ordered Ameren and ComEd and independent evaluators to “strive to understand differences in evaluation results and to reconcile differences not driven by differences in weather, market and customers.” *Id.*

Mr. Abba testified that some tracking measures proposed by CUB/ELPC were already included in Ameren’s Revised AMI Plan. CUB/ELPC agree that that combination of the last two proposed Ameren milestones is identical to CUB/ELPC tracking measure 1. *See* AIC Ex. 8.0RH at 27. However, Mr. Abba also believes that tracking measures 18 and 19 are beyond the scope of AMI deployment. Yet, even Mr. Abba admits that these tracking measures are related to smart grid technology. *Id.* at 28 (grid assets and customer per automated segment). CUB/ELPC is willing to engage Ameren in the proposed stakeholder process to further determine how to refine these measures to make them applicable to the proposed AMI deployment.

Mr. Abba also believes that tracking measures 9, 11, 13, 14, 15, and 20 are too vague as proposed to be feasible or beneficial to track without further information and discussion. AIC Ex. 8.0RH at 28-29. That is precisely why CUB/ELPC has proposed an immediate stakeholder forum to resolve any ambiguities that may prevent Ameren from implementing tracking measure consistent, to the extent possible, with those agreed to by ComEd. Customers need to see value from what is a major investment program over many years. CUB/ELPC Ex. 2.0RH at 27. Although Ameren has partially recognized that value exists – Mr. Thomas’ recommendations focus on how the Commission can be sure that Ameren’s Revised AMI Plan will lead to the goals the General Assembly identified – improved customer service and new customer energy management opportunities. *Id.* at 25. AG witness Hornby supports Mr. Thomas’ recommendation as he believes that the Commission require AIC to adopt the same metrics the Commission ordered in the ComEd AMI proceeding. AG Ex. 1.0 on Reh’g at 5.

The Commission should require Ameren to amend its Revised AMI Plan to include the complete list of tracking measures identified in CUB/ELPC Exhibit 2.2RH. In order to ensure that Ameren’s customers realize benefits from the deployment of AMI and to ensure statewide consistency in smart grid proceedings, the Commission should adopt the recommendation of CUB/ELPC and the AG.

C. AG Recommendations

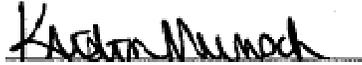
CONCLUSION

The Commission should reject Ameren’s AMI Plan as presented because it does not include the commitments from Ameren necessary to ensure that Ameren customers who are paying for these AMI investments will receive the benefits of those investments.

Instead, the Commission should approve Ameren's AMI Plan conditionally upon the modifications proposed herein.

Dated: October 3, 2012

Respectfully submitted,



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