Ameren Exhibit 2.0

# ILLINOIS COMMERCE COMMISSION

**DOCKET 16-______**

# DIRECT TESTIMONY

**OF**

**KAREN R. ALTHOFF**

**Submitted On Behalf**

**Of**

**AMEREN ILLINOIS COMPANY**
**d/b/a Ameren Illinois**

**JULY 8, 2016**

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## I. <u>INTRODUCTION</u>

**Q. Please state your name, address and current position.**

A. My name is Karen R. Althoff. My business address is 370 South Main Street, Decatur, Illinois 62523. I am a Supervisor, Rates & Analysis, providing regulatory services for Ameren Illinois Company d/b/a Ameren Illinois (AIC or the Company).

**Q. Please summarize your educational background and professional experience.**

A. A summary of my educational background and professional experience is attached as an Appendix to my testimony.

## II. <u>BACKGROUND</u>

**Q. What is the purpose of your testimony in this case?**

A. My testimony supports AIC's proposed cost allocation methodologies to be used to determine the performance-based formula rates under the Rate Modernization Action Plan – Pricing (Rate MAP-P) tariff. My testimony also presents the cost basis for a proposal to redesign Transformation Charges for DS-4 customers taking supply at 100 kV or above (DS-4 +100 kV) and the Reactive Demand Charge applicable to all DS-4 customers with a supply voltage below 100 kV. In addition, in the Order in Docket 13-0476, the Commission ordered the Company to review the allocation of Advanced Metering Infrastructure (AMI) costs to customer classes; as such, the Company also has complied with that directive in this proceeding. The cost allocation, revenue allocation and rate design methodologies approved at the conclusion of this proceeding will supersede the current methodologies, which are derived from the Commission's findings and conclusions in Docket 13-0476.

**Q. Please generally describe the analysis you performed for this filing.**

A. My testimony presents the results of AIC's Embedded Cost of Service Study (ECOSS), explains the cost allocation methods used therein, and presents data and calculations used to derive new service charges that will recover the Company's revenue requirement. The results of the ECOSS are based on the total revenue requirement presented by the Company in Docket 16-0262. I also present analysis in support of the Company's proposal to redesign Transformation Charges for DS-4 +100 kV customers. In addition, my testimony provides analysis in support of the Company's proposed update to the Reactive Demand Charge. Finally, I discuss the allocation for Non-Meter AMI General and Intangible (G&I) Plant as directed in the Order in Docket 13-0476. AIC witness Steve Wills performs AIC's revenue allocation calculations by applying rate mitigation constraints to the rate classes, and discusses the rate uniformity procedures to be utilized in future formula rate update proceedings. The revenue allocations and mitigation constraints are incorporated into the final rate design and pricing development.

**Q. In Docket 13-0476, the Company presented Rate Zone ECOSSs based on Rate Zone revenue requirements. Why hasn't the Company presented Rate Zone ECOSSs in this filing?**

A. As discussed in the testimony of Mr. Wills, the Company is proposing to rely upon a single ECOSS when designing rates. In future proceedings to update AIC's formula rate, the

Company would no longer utilize allocations of costs across Rate Zones in setting prices. Mr. Wills provides the rationale for this approach. For the same reasons, the Company also has not modified and relied on Rate Zone revenue requirements in this filing.

**Q. Is the Company proposing to eliminate all differences in prices across Rate Zones for each customer class?**

A. No, not immediately. As Mr. Wills explains, to maintain gradualism and avoid undue bill impacts, AIC has not yet eliminated all differences in prices across Rate Zones for each customer class. So for example, the DS-4 Primary Supply Demand Charge is not yet proposed to be uniform, since this charge as proposed in the 2016 MAP-P Update reflects, $6.140, $4.586 and $7.574 per kW for Rate Zones I, II and III, respectively. The uniformity methodology supported by Mr. Wills will eventually eliminate the far majority of any remaining price differences[1] across Rate Zones for AIC's customer classes.

**Q. If the Company is not utilizing Rate Zone ECOSSs and Rate Zone revenue requirements in this filing, how is the Company setting prices across Rate Zones for each customer class?**

A. Any differences in prices across Rate Zones for AIC's customer classes are derived from the revenue allocation and rate design methodologies supported by Mr. Wills.

**Q. Are you sponsoring any exhibits with your direct testimony?**

A. Yes, I am sponsoring the following exhibits:

- Ameren Exhibit 2.1: Current Cost of Service Study Methodology

[1] The Meter Reassignment Charge will continue to be unique in Rate Zone I along with the DS-5 pole charges in Rate Zone III.

- Ameren Exhibit 2.2: Summary of Embedded Cost of Service Study – Proposed Rates of Return
- Ameren Exhibit 2.3: Summary of Unbundled Cost of Service Results Under Equalized Rates of Return (excluding reconciliation)
- Ameren Exhibit 2.4: Summary of Unbundled Cost of Service Results Under Equalized Rates of Return (excluding reconciliation), as presented in Docket 16-0262

**Q. Please summarize the Company's proposed cost of service methodologies.**

A. The cost of service methodologies supported by my testimony and exhibits provide a fair and reasonable basis for Rate MAP-P price development, and should be approved by the Commission. Specifically, I recommend that the existing ECOSS methodologies approved in Docket 13-0476 be retained, except for a modification to the classification of Other Revenues discussed below. Further, I recommend that the Commission approve the continued use of a labor allocator for Non-Meter G&I AMI Plant Investment.

**Q. Please summarize the impact on Net Revenue Requirement by Customer Class as a result of the proposed ECOSS**.

A. The table below provides the impact on Net Revenue Requirement by Customer Class as a result of the proposed ECOSS:

**Table 1**

| AIC Net Revenue Requirement | | | | |
|---|---|---|---|---|
| Class | 16-0262 | Modified | Difference | % |
| DS-1 | $ 580,447,548 | $ 579,169,446 | $ (1,278,101) | -0.22% |
| DS-2 | $ 204,269,106 | $ 203,817,490 | $ (451,616) | -0.22% |
| DS-3 | $ 96,511,357 | $ 96,566,758 | $ 55,401 | 0.06% |
| DS-4 | $ 98,627,762 | $ 99,583,702 | $ 955,940 | 0.97% |
| DS-5 | $ 30,812,777 | $ 31,328,979 | $ 516,202 | 1.68% |
| DS-6 | $ 5,236,591 | $ 5,438,767 | $ 202,176 | 3.86% |
| **Total** | **$ 1,015,905,141** | **$ 1,015,905,141** | **$ 0** | **0.00%** |

## III. COST OF SERVICE STUDIES

**Q. What are the Delivery Service Classes used in the ECOSS?**

A. The rate classifications are: DS-1 Residential Delivery Service; DS-2 Small General Delivery Service; DS-3 General Delivery Service; DS-4 Large General Delivery Service; DS-5 Lighting Service; and DS-6 Temperature Sensitive Delivery Service. The DS-3 and DS-4 classes have each been split into three sub-classes, differentiated by supply voltage: +100kV, High Voltage and Primary. The DS-6 class has been split into six sub-classes, differentiated by supply voltage and whether the customer was formerly or otherwise qualifies for DS-3 or DS-4.

**Q. What methodologies does AIC currently use in its cost of service studies?**

A. AIC’s current cost of service methodologies are derived from the Commission’s findings and conclusions in Docket 13-0476. For further discussion of these methodologies, please see Ameren Exhibit 2.1, which is an excerpt from my direct testimony in AIC's ongoing formula rate update proceeding, Docket 16-0262.

**Q. What principles underlie AIC's customer class allocations?**

A. AIC applies cost causation principles to fairly and reasonably allocate the costs of installing, operating and maintaining its electric delivery systems across the Company's customer classes. AIC has almost $6 billion of electric distribution assets and incurs hundreds of millions of dollars in expenses annually to deliver electricity across 43,700 square miles to 1,200 communities and 1.2 million customers served at different rate classifications. AIC's distribution system is comprised of, among other things, 45,400 miles of distribution lines, over 1,500 substations, and over 418,018 transformers of which the investment costs and expenses associated with these assets are charged across the various FERC accounts. Given the Company's vast and complicated electric grid, it is impractical to break up the facilities by piecemeal to trace commingled costs from a granular level to specific individual customers or groups of customers. The assignment of the costs of assets, bit by bit, even if possible, however is unnecessary when allocation methods can be developed that fairly and reasonably assign a portion of distribution costs to a particular customer class.

**Q. When is it appropriate to directly assign or sub-functionalize costs at a more granular level than the FERC account level?**

A. Direct assignment or subfunctionalization of distribution costs may be appropriate, if the particular costs can be allocated to groups of customers with common rates based on accessible, relevant, and accurate data. For example, as discussed later in my testimony, AIC has substations that are utilized by specific customers; as such, the associated costs can be directly assigned. However, given that AIC's electrical system is complex, the direct assignment or even sub-functionalization of distribution costs is more often than not impractical. For example, AIC's plant records contain specific Retirement Unit Codes for types of conductor, which can be used on multiple voltage levels. The complexity of the distribution system, however, does not allow for the assignment of costs of conductor based on customer use. Sub-functionalization of the costs of conductors based on voltage levels would require actual asset data not readily available.

**Q. Do you propose any modifications to the current classification of costs within the cost of service model?**

A. I am presenting one modification to the current cost of service methodologies relating to the classification of Other Revenues, as explained below.

**Q. Does AIC believe that the Commission needs to revisit any of the cost allocations previously approved in Docket 13-0476?**

A. No. AIC does not believe that the Commission needs to revisit any of these previously approved cost allocations. Other than the modification discussed below, the current ECOSS methodologies appropriately apportion costs to customer classes in a manner that produces reasonable and fair class cost of service results. I therefore recommend that AIC maintain the current ECOSS methodologies except for the change in classification of Other Revenues.

## IV. ADVANCED METERING INFRASTRUCTURE

**Q. Did the Commission direct AIC to revisit the cost allocations related to General and Intangible AMI Plant?**

A. Yes, and I am presenting testimony below in order to comply with the Commission's directive.

**Q. Please explain why it was necessary to review the allocator for Non-Meter General and Intangible Plant related to AMI.**

A. In Docket 13-0476, AIC proposed to use a customer-related allocator instead of a labor-related allocator for General and Intangible (G&I) plant investments that AIC made as part of the Commission-approved AMI Plan. AIC stated that the communications network and IT investments effectively replaced manual meter readers and were necessary for AMI meters to be fully functional; therefore, AIC proposed the use of a customer-related allocator. The Commission ruled that the allocation of the Non-Meter G&I AMI plant investments should not be differentiated from other similar non-meter investments, and that the labor allocator should be used for these costs. In addition, the Commission ordered that this allocator should be re-evaluated in AIC's next rate design proceeding in light of actual cost data on AMI installations.

**Q. Does AIC believe that a labor-related allocator should continue to be used for Non-Meter AMI G&I Plant?**

A. Yes. AIC agrees with the continued use of a labor-related allocator for Non-Meter AMI G&I Plant. In addition, in light of AIC's planned future investment and the amortization period for this intangible plant, a change to a customer-related allocator would have only a negligible effect of the allocation of costs across customer classes.

**Q. Please explain why a change to a customer-related allocator would have only a negligible effect.**

A. As shown in the table below, approximately 80% of AMI Non-Meter investments have been made to Account 303-Misc Intangible Plant:

**Table 2**

| FERC Account | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|
| 303-Misc Intangible Plant | $ - | $ - | $ 40,723,800.37 | $ 17,572,576.58 |
| 391-Office Furniture and "Fixtures | $ 11,197.44 | $ 539,792.86 | $ 4,009,833.83 | $ 265,552.03 |
| 397-Communication Equipment | $ - | $ - | $ 7,387,657.65 | $ 5,208,573.93 |
| Total | $ 11,197.44 | $ 539,792.86 | $ 52,121,291.85 | $ 23,046,702.54 |

As the AMI Plan indicates, AIC's investment spending in AMI drops significantly after meter deployment is completed in 2019. In addition, the majority of the G&I investments associated with the AMI deployment already will be placed into service by the end of 2016. Furthermore, investments in Account 303-Misc Intangible Plant are amortized over a five-year period. As such, the majority of G&I AMI assets will be fully amortized by year-end 2021. Any changes in the allocation factors approved as a result of this proceeding will not be implemented until 2018. Therefore, a change in allocation factors will have only a negligible effect. AIC recommends that the labor allocator continue to be used for both Non-AMI and AMI Non-Meter G&I Plant investments.

## V. ECOSS MODIFICATIONS

**Q. Were any modifications made to the classification of costs in the ECOSS presented in this proceeding?**

A. Yes. AIC has made one modification regarding the classification of "Other Revenue". Other Revenue reflects revenue arising predominantly from rental agreements in place for excess facilities. Excess facilities include customer requests for duplicate on-site facilities, additional points of delivery, equipment for lighting service, equipment required for customer operations (motor driven equipment, apparatus and appliances), and equipment for customers' anticipated growth. As such, the equipment installed as excess facilities resides in FERC plant accounts related to distribution plant in service, which is classified as Demand. Other Revenue has been classified accordingly. In previous ECOSSs, Other Revenue had been presented as a separate line item.

## VI. ECOSS SUMMARY

**Q. Please summarize the results of the ECOSS.**

A. The results of the ECOSS are summarized in Ameren Exhibits 2.2 through 2.4. Ameren Exhibit 2.2 contains the rate base components, expenses, and proposed revenue excluding the prior year reconciliation (line 7) for each delivery service class. Exhibit 2.2 also shows the proposed rate revenues including reconciliation (line 19) after the rate design process; i.e., revenue allocation and pricing. Rates of return under these proposed rate revenues are shown on line 21 of Exhibit 2.2.

Ameren Exhibit 2.3 contains, for each delivery service class, the unbundled revenue requirement components necessary for AIC to earn the equalized rate of return. Unbundled revenue requirement components include, for example, Distribution, Services, Meters, and Customer Service. Ameren Exhibit 2.3 does not include the 2015 reconciliation amount.

Ameren Exhibit 2.4 shows the unbundled revenue requirement necessary for AIC to earn the equalized rate of return per the performance-based formula rate set forth in Docket 16-0262, for each delivery service class. The revenue requirement amount shown in Ameren Exhibit 2.4 does not include the 2015 reconciliation amount.

**Q. How does the revenue requirement by rate class from the modified ECOSS compare to the revenue requirement by rate class from the ECOSS presented in Docket 16-0262?**

A. The revenue requirement has only slightly shifted by rate class as shown in the table below. This shift is primarily related to the application of AIC class demands, which shifts around due to additional coincidization of demands at the AIC level, [2] as opposed to calculating individual Rate Zone class demands.

[2] The NCP allocator on a secondary and primary voltage level basis reflects the allocation of less cost to DS-1 on an AIC basis as well as the primary voltage level reflecting the allocation of less cost to DS-2. Additionally, the Sigma NCP allocator on a secondary and primary voltage level basis reflects the allocation of less cost to DS-1.

**Table 3**

| AIC Net Revenue Requirement | | | | |
|---|---|---|---|---|
| Class | 16-0262 | Modified | Difference | % |
| DS-1 | $ 580,447,548 | $ 579,169,446 | $ (1,278,101) | -0.22% |
| DS-2 | $ 204,269,106 | $ 203,817,490 | $ (451,616) | -0.22% |
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| DS-5 | $ 30,812,777 | $ 31,328,979 | $ 516,202 | 1.68% |
| DS-6 | $ 5,236,591 | $ 5,438,767 | $ 202,176 | 3.86% |
| **Total** | **$ 1,015,905,141** | **$ 1,015,905,141** | **$ 0** | **0.00%** |

## VII. RATE DESIGN

**Q. What elements of rate design are you supporting in your testimony?**

A. I have developed an updated cost basis for the Reactive Demand Charge assessed to DS-4 customers. I also propose a change to the structure of the Transformation Charge applicable to DS-4 customers. Except for customers served at +100 kV Supply Voltage in Rate Zone II, the Transformation Charge for DS-4 customers is uniform. I propose setting a uniform charge among all +100 kV Supply Voltage DS-4 customers (e.g., not differentiated among rate zones) and provide an updated cost basis for the charge.

### A. Reactive Demand Cost Development and Pricing

**Q. What is reactive demand or power?**

A. Reactive power, measured in kVAR, is sometimes referred to as “wasted power”. When combined with “real” power, or kW, one can determine how much total power is supplied. Total supplied power is measured in kVA. Distribution planners must design delivery systems to meet customers' expected peak kVA demand. The typical industry billing unit is the kW. Use of only the kW as the delivery service billing unit can cause a mismatch between costs to serve and delivery charges for individual customers within the class.

**Q. Why is the Reactive Demand Charge limited to only those DS-4 customers with a supply line voltage less than 100 kV?**

A. Low power factors (or a high reactive demand relative to kW demand) can cause voltage problems on the distribution system. For lower voltage systems (under 100 kV), capacitors are often installed to correct local power factor problems. For higher voltage systems, power factor can still be a concern but the installation of distribution equipment for correction of reactive demand (power factor) on facilities over 100 kV is rare. Instead, more specialized or individualized solutions are required to address power factor problems at the 100kV or greater level. Therefore, in lieu of charging a standard rate based on capacitor costs per peak kVAR for customers over 100 kV, the Company directly assigns the cost of power factor correction measures, if any, to the customer if it has a power factor less than 95% lagging or leading.

**Q. Why is the Company proposing an updated Reactive Demand Charge?**

A. The Reactive Demand Charge has not been revised since the Company's final rates were set in Docket 13-0301. At the conclusion of that case, the Reactive Demand Charge was lowered to the current charge of $0.27 per kVar. The charge has been left unchanged, in accordance with the methodology approved in the prior rate redesign proceeding, Docket 13-0476. The Company believes the appropriate venue for addressing the Reactive Demand Charge, after being unchanged for several years, is in this Rate Redesign proceeding.

**Q. Are customers responding to the Company's Reactive Demand Charge?**

A. Based on information received from AIC distribution engineers, customers do not appear to be incented to install corrective equipment to correct poor power factors, and instead appear content to pay the Reactive Demand Charge. When local delivery systems are heavily loaded, AIC may need to expend capital to reinforce these circuits. Improved power factors on these circuits may avoid the need to build the system reinforcement.

**Q. What level of Reactive Demand revenue does AIC receive from its DS-4 customers with Primary and High Voltages[3]?**

A. During 2015, the Company collected over $3 million in Reactive Demand Charges from over 500 DS-4 bill accounts. The three bill accounts with the highest Reactive Demand revenue had associated kVar totaling 483,974, 430,135, and 329,021 equating to about $131,000, $116,000 and $89,000, respectively. These three highest Reactive Demand customers have power factors ranging from 69% to 86%.

**Q. How did the Company establish the Reactive Demand Charge prior to the MAP Update proceedings referred to above?**

A. The last rate proceeding in which the Company provided an analysis regarding Reactive Demand was Docket 09-0306 et al. (cons.). In that case, the Company performed a replacement cost new analysis that determined the average current cost of $0.305 per kVar for the primary voltage capacitor banks and the average current cost of $0.631 per kVar for 34.5 and 69kV capacitor banks. A rate of $0.29 per kVar was proposed and adopted in that rate proceeding.

**Q. Has the Company developed an updated replacement cost new analysis?**

A. Yes. The update reflects that the primary voltage capacitor banks (ranging between 300 and 1200 kVAR) have an average current cost of $0.38 per kVar while 34.5 and 69kV capacitor

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[3] DS-4 Customers supplied at +100kV are not subject to Reactive Demand Charges.

banks (ranging between 3.6 MV and 10.2 MVAR) have an average current cost of $0.769 per kVar. The below table reflects this cost development.

## Table 4

| Capacitor | kVAR | Total Cost | Annual Return & Income Taxes | Annual Return & Tax Cost | Monthly Return& Tax Cost | Cost per kVAR | O&M & A&G expense % | O&M & A&G per kVAR | Total |
|---|---|---|---|---|---|---|---|---|---|
| (1) | (2) | (3) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| *Primary Voltage Facilities* | | | | | | | | | |
| 300kVAR | 300 | $ 6,175 | 12.14% | $ 750 | $ 62 | $ 0.239 | 6.8% | $ 0.12 | $ 0.356 |
| 600kVAR | 600 | $ 9,161 | 12.14% | $ 1,112 | $ 93 | $ 0.178 | 6.8% | $ 0.09 | $ 0.264 |
| 300kVAR | 300 | $ 6,550 | 12.14% | $ 795 | $ 66 | $ 0.254 | 6.8% | $ 0.12 | $ 0.378 |
| 600kVAR | 600 | $ 7,444 | 12.14% | $ 904 | $ 75 | $ 0.144 | 6.8% | $ 0.07 | $ 0.215 |
| 300kVAR | 300 | $ 6,616 | 12.14% | $ 803 | $ 67 | $ 0.257 | 6.8% | $ 0.13 | $ 0.382 |
| 600kVAR | 600 | $ 4,258 | 12.14% | $ 517 | $ 43 | $ 0.083 | 6.8% | $ 0.04 | $ 0.123 |
| 300kVAR | 300 | $ 3,734 | 12.14% | $ 453 | $ 38 | $ 0.145 | 6.8% | $ 0.07 | $ 0.215 |
| 600kVAR | 600 | $ 4,941 | 12.14% | $ 600 | $ 50 | $ 0.096 | 6.8% | $ 0.05 | $ 0.142 |
| 300kVAR | 300 | $ 13,917 | 12.14% | $ 1,689 | $ 141 | $ 0.540 | 6.8% | $ 0.26 | $ 0.803 |
| 600kVAR | 600 | $ 14,948 | 12.14% | $ 1,815 | $ 151 | $ 0.290 | 6.8% | $ 0.14 | $ 0.431 |
| 300kVAR | 300 | $ 14,245 | 12.14% | $ 1,729 | $ 144 | $ 0.552 | 6.8% | $ 0.27 | $ 0.822 |
| 600kVAR | 600 | $ 15,034 | 12.14% | $ 1,825 | $ 152 | $ 0.292 | 6.8% | $ 0.14 | $ 0.434 |
| 1200kVAR | 1200 | $ 18,677 | 12.14% | $ 2,267 | $ 189 | $ 0.181 | 6.8% | $ 0.09 | $ 0.269 |
| 300kVAR | 300 | $ 14,129 | 12.14% | $ 1,715 | $ 143 | $ 0.548 | 6.8% | $ 0.27 | $ 0.815 |
| 600kVAR | 600 | $ 7,905 | 12.14% | $ 960 | $ 80 | $ 0.153 | 6.8% | $ 0.07 | $ 0.228 |
| 1200kVAR | 1200 | $ 15,308 | 12.14% | $ 1,858 | $ 155 | $ 0.148 | 6.8% | $ 0.07 | $ 0.221 |
| 300kVAR | 300 | $ 6,954 | 12.14% | $ 844 | $ 70 | $ 0.270 | 6.8% | $ 0.13 | $ 0.401 |
| 600kVAR | 600 | $ 12,168 | 12.14% | $ 1,477 | $ 123 | $ 0.236 | 6.8% | $ 0.11 | $ 0.351 |
| | | | | | | **AVERAGE COST PER kVAR** | | | **$ 0.380** |
| | | | | | | | | | |
| *Subtransmission Voltage Facilities* | | | | | | | | | |
| 34.5kV, 3.6MVAR | 3,600 | $ 223,438 | 12.14% | 27,125 | $ 2,260 | $ 0.722 | 6.8% | $ 0.35 | $ 1.074 |
| 34.5kV, 9MVAR | 9,000 | $ 273,090 | 12.14% | 33,153 | $ 2,763 | $ 0.353 | 6.8% | $ 0.17 | $ 0.593 |
| 34.5kV, 10.2MVAR | 10,200 | $ 322,743 | 12.14% | 39,181 | $ 3,265 | $ 0.368 | 6.8% | $ 0.18 | $ 0.615 |
| 69kV, 5.4MVAR | 5,400 | $ 248,264 | 12.14% | 30,139 | $ 2,512 | $ 0.535 | 6.8% | $ 0.26 | $ 0.863 |
| 69kV, 10.2MVAR | 10,200 | $ 372,396 | 12.14% | 45,209 | $ 3,767 | $ 0.425 | 6.8% | $ 0.21 | $ 0.700 |
| | | | | | | **AVERAGE COST PER kVAR** | | | **$ 0.769** |

**Q. What is the Company proposal for the Reactive Demand Charge in this proceeding?**

A. Based on the cost analysis performed, the Company is proposing to increase the Reactive Demand Charge to $0.40 per kVar, with a systematic three-year movement from the current rate to the full $0.40/kVar as follows:

**Table 5**

| | | |
|---|---|---|
| **Proposed Cost per kVar** | **$** | **0.40** |
| **Current Reactive Demand Charge** | **$** | **0.27** |
| **Increase** | **$** | **0.13** |
| **Annual increase over three years** | **$** | **0.04** |
| **January-18** | **$** | **0.31** |
| **January-19** | **$** | **0.36** |
| **January-20** | **$** | **0.40** |

**Q. How will an increase in the Reactive Demand Charge impact other DS-4 Delivery Service charges?**

A. Reactive Demand Charge revenue is treated as an offset to the Distribution Delivery Charge. That is, a larger Reactive Demand Charge will result in lower Distribution Delivery Charges, all else equal. The amount of total revenue requirement needed for the DS-4 class is not affected, so DS-4 customers in total will not pay any more or less with a change in the Reactive Demand Charge. However, if customers react to the charge and improve their power factors (i.e., reduce reactive demand or kVAR), delivery service costs could potentially decrease over time if fewer system reinforcements are required.

### B. Transformation Cost Development, Rate Design, and Pricing

**Q. Are you proposing any changes to the Transformation Charge applicable to DS-3 and DS-4 customers?**

A. I propose a change to the Transformation Charge only for +100 kV Supply Voltage DS-4 customers. I proposed that the Transformation Charge remain at the current level of $0.59/kW for all other rate classes and subclasses.

**Q. Please summarize the testimony and conclusion reached in Docket 13-0476 relating to the DS-4 +100kV Transformation Charge for Rate Zone II.**

A. The Rate Zone II DS-4 +100kV customers were unlike their counterpart customers in Rate Zones I and III. Specifically, Rate Zone II +100kV customers make extensive use of Transformation service paid for based upon the Company's Transformation Charge. In Docket 13-0476, Rate Zone II reflected 1.9 million kW of Transformation demand, while AIC's DS-4 +100kV customers in aggregate used 2.036 million kW of Transformation demand. Due to the significant demand for Transformation service in Rate Zone II, the small number of investments driving the underlying cost of providing that service, and the limited number of customers receiving the service, a disproportionately large share of rate class revenues were being collected from the Transformation Charge. As such, AIC proposed a Transformation Charge of $0.15/kW for the Rate Zone II +100kV DS-4 customers taking Transformation service from AIC as of December 31, 2012. The Commission adopted AIC's proposal to lower the Transformation Charge for DS-4 Rate Zone II customers who have taken service as of December 31, 2012.

**Q. Was there any other factor in Docket 13-0476 which created the need for a lower Transformation Charge for Rate Zone II DS-4 +100kV Customers?**

A. Yes. Assessing a uniform Transformation Charge and a uniform Electric Distribution Tax (EDT) Cost Recovery charge would have produced revenues in excess of the total cost of service allocated to this rate subclass, preventing movement toward uniform EDT Cost Recovery charges across Rate Zone II.

**Q. What has been proposed in the current Formula Rate Update case, Docket 16-0262, regarding the DS-4 +100kV class?**

A. In Docket 16-0262, AIC proposed a uniform Distribution Delivery Charge for DS-4 +100kV across the rate zones. Previously, Rate Zones I and III had been uniform at $0.042 per kW with Rate Zone II set at $0.079. However, the proposed charges developed using the approved rate design methodology crossed over in Docket 16-0262; as such, the Distribution Delivery Charge for this rate class was proposed at a uniform rate of $0.042.

**Q. How does AIC propose to develop Transformation Charges?**

A. Since AIC has achieved uniformity for DS-4 +100kV customers across the rate zones for the Distribution Delivery Charge, AIC is now proposing a uniform Transformation Charge for this customer class based on the cost of service of the assets providing Transformation service to all rate zone DS-4 +100kV customers.

**Q. Please provide a summary of your methodology for this uniform charge.**

A. AIC identified the transformation assets providing service to all DS-4 +100kV customers and approximated the revenue requirement associated with these assets. This revenue requirement was then divided by the current kW Transformation demand associated with these customers to derive a Transformation Charge cost basis of approximately $0.23 per max kW. AIC proposes that the Rate Zone I and III DS-4 +100kV customers have distinct Transformation Charges from the rest of the DS-4 class going forward, following the path that the same customer group in Rate Zone II took in Docket 13-0476. The Company further proposes to transition to a uniform cost based $0.23/kW charge for all rate zones over a three-year phase-in from the currently applicable Transformation Charge in each rate zone. The starting point for the transition for Rate Zones I and III is the $0.59/kW that they currently are assessed. Finally, as discussed by Mr. Wills, the Company proposes to limit application of this rate to customers already taking this service as of April 1, 2017 and direct future +100 kV DS-4 customers to acquire this service as a rental agreement under the Company's Rider EFC - Excess Facilities Charge.

**Q. Please provide a summary for the basis of the Transformation Charge for the DS-4 +100kV customer class.**

A. The total net plant for substations providing Transformation service through the Transformation Charge is $3.46 million. Applying a return of 7.282%, grossed up for income taxes by a factor of 1.667709 produces a cost of $420,533. Adding a component for expenses including Operation and Maintenance, Administrative and General, and other taxes (a combined factor of 10.88%) adds $376,928. Adding the two cost elements together gives a total revenue requirement of $797,460. Dividing the revenue requirement by the total annual kW Transformation demand of 3.477 million gives an average cost per kW of $0.23.

**Q. Is AIC proposing any changes to the eligibility requirement for Transformation service for DS-4 +100kV Supply Voltage customers?**

A. Yes. AIC is proposing that Transformation service provided through the uniform Transformation Charge be limited to existing customers due to the unique facility needs of these types of customers, which would likely cost substantially more than $0.23/kW. It is more appropriate for any new customers, or new load from an existing customer requiring an upgrade of current transformation facilities, to pay directly for the costs of the assets providing Transformation service. This is further discussed by Mr. Wills.

**Q. If the Commission approves uniform Transformation Charges for the DS-4 +100kV customer class in this proceeding and uniform Distribution Delivery Charge in Docket 16-0262, would any other charges remain specific by Rate Zone?**

A. Yes, the EDT Cost Recovery would remain separate by Rate Zone, because it is subject to a separate method to transition to uniformity.

## VIII. CONCLUSION

**Q. Does this conclude your direct testimony?**

A. Yes, it does.

# APPENDIX

## STATEMENT OF QUALIFICATIONS
## KAREN R. ALTHOFF

My educational background consists of a Bachelor of Science Degree in Accounting from Millikin University along with a Master of Business Administration degree. I am a Certified Public Accountant and a member of the American Institute of Certified Public Accountants (CPA) and the Illinois CPA Society. I began employment with Illinois Power Company (IP) upon graduation from Millikin University. I then became an employee of Ameren Corporation upon the acquisition of IP by Ameren in September 2004. Beginning in 2009, I became an employee of AmerenCILCO. I then became an employee of Ameren Illinois Company (AIC) on October 1, 2010 upon the merger of the three AIC legacy companies.

While employed by IP, my initial position was in the Internal Auditing Department where I performed customer service, power plants and corporate function audits. I then held several positions in the Accounting Department including Accountant, Staff Accountant, Business Leader and Supervisor – Financial Reporting. My duties in the Accounting Department encompassed general accounting activities, reporting to various regulatory bodies and internal management reporting, and accounting for both electric fuel and gas purchases. I also worked in the company's Finance Department where I was responsible for capital expenditure forecasting. While in Finance, my work experience also included responsibilities for Investor Relations where I would respond to various inquiries of shareholders and financial analysts along with developing financial community presentations.

I then transferred to IP's Rate Department where I have held the positions of Senior Regulatory Specialist, Pricing and Costing Manager and Lead Rate Specialist. My duties and responsibilities relating to the gas and electric rates of IP have included developing rate analyses, rate design and embedded cost of service studies (ECOSS), development and interpretation of gas and electric tariffs including standard terms and conditions; rules, regulations and conditions, testifying in regulatory proceedings; monitoring rate of return performance; and other rate or regulatory projects as assigned. Upon the acquisition of IP by Ameren, I continued these responsibilities and acquired responsibilities relating to regulatory filings and support of Ameren's Missouri operating company. In January 2008, I assumed duties solely related to AIC regulatory responsibilities.

I have submitted testimony concerning class cost of service before the Illinois Commerce Commission in Docket 98-0680 regarding an investigation concerning certain tariff provisions under Section 16-108 of the Public Utilities Act and related issues, Dockets 99-0129 and 99-0134 (Consolidated) regarding Delivery Services Implementation Plan and Tariffs approval, Docket 01-0432 regarding electric Delivery Service Tariffs, Docket 09-0306 – 09-0308 (Consolidated) regarding ECOSS for the electric business, Docket 16-0262 regarding ECOSS and updated rates, Dockets 04-0476, 11-0282, 13-0192 and 15-0142 regarding ECOSS and rate design for the gas business, Dockets 13-0266, 14-0262 and 15-0258 regarding reconciliation of Utility Consolidated Billing and Purchase of Receivables, Docket 14-0443 regarding Rider CCA relating to recovery of clean coal costs, Docket No. 14-0573 in which I sponsored AIC's Rider QIP and discussed its cap limits and communication plan and Docket No. 16-0192 regarding the 2015 calendar year reconciliation of Rider QIP. I have also submitted testimony to the Federal Energy Regulatory Commission regarding AIC's wholesale distribution service. I have also presented testimonies on various electric and gas miscellaneous type charges; i.e., off-cycle switching, single bill option credit and gas electronic metering equipment fees.