

## ATTACHMENT A

# Ameren Missouri 2017 Integrated Resource Plan Variance Requests

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#### **4 CSR 240-22.010 – Policy Objectives**

Ameren Missouri is not requesting any variances at this time from 4 CSR 240-22.010.

#### **4 CSR 240-22.020 – Definitions**

Ameren Missouri is requesting the below underlined clarification to the definition of “demand-side rate” in 4 CSR 240-22.020:

##### ***(1) 4 CSR 240-22.020 (12)***

Demand-side rate means a rate structure for retail electric service designed to reduce the net consumption or modify the time of consumption of a customer rate class. Demand-side rate includes price responsive demand response.

##### **Rationale:**

The definition of demand-side rate does not exclude price responsive demand side rate; nevertheless, Ameren Missouri would like to avoid any confusion by any party by explicitly stating that demand-side rate includes price responsive demand response since price responsive demand response has been part of demand-side analysis even before Chapter 22 was revised in 2011 and the demand-side rate analysis was added into the rules.

#### **4 CSR 240-22.030 – Load Analysis and Load Forecasting**

Ameren Missouri is not requesting any variances at this time from 4 CSR 240-22.030.

#### **4 CSR 240-22.040 – Supply-Side Resource Analysis**

Ameren Missouri is requesting the following variance from 4 CSR 240-22.040:

##### ***(1) 4 CSR 240-22.040 (3)(A)***

##### **Current Requirement:**

The analysis shall include the identification of transmission constraints, as estimated pursuant to 4 CSR 240-22.045(3), whether within the Regional Transmission Organization’s (RTO’s) footprint, on an interconnected RTO, or a transmission system that is not part of an RTO. The purpose of this analysis shall be to ensure that the transmission network is capable of reliably supporting the preliminary supply-side candidate resource options under consideration, that the costs of the transmission system investments associated with preliminary supply-side candidate resource options, as estimated pursuant to 4 CSR 240-22.045(3), are properly considered and to provide an adequate foundation of basic information for decisions to include, but not be limited to, the following:

1. Joint participation in generation construction projects;
2. Construction of wholly-owned generation or transmission facilities; and

3. Participation in major refurbishment, upgrading or retrofitting of existing generation or transmission resources;
4. Improvements on its transmission and distribution system to increase efficiency and reduce power losses;
5. Acquisition of existing generating facilities; and
6. Opportunities for new long-term power purchases and sales, and short-term power purchases that may be required for bridging the gap between other supply options, both firm and nonfirm, that are likely to be available over all or part of the planning horizon.

**Proposed Alternative:**

Ameren Missouri shall provide generic transmission interconnection costs or, for more site-specific resources, transmission interconnection cost estimates from its Transmission Planning group to provide an adequate foundation of basic information for decisions to include, but not be limited to, the following:

1. Joint participation in generation construction projects;
2. Construction of wholly-owned generation or transmission facilities; and
3. Participation in major refurbishment, upgrading or retrofitting of existing generation or transmission resources;
4. Improvements on its transmission and distribution system to increase efficiency and reduce power losses;
5. Acquisition of existing generating facilities; and
6. Opportunities for new long-term power purchases and sales, and short-term power purchases that may be required for bridging the gap between other supply options, both firm and nonfirm, that are likely to be available over all or part of the planning horizon

**Rationale:**

The Midcontinent Independent System Operator (“MISO”) process for providing transmission interconnection costs does not provide a final cost until a utility commits to a project. Furthermore, such detail is unwarranted considering data developed pursuant to 4 CSR 240-22.040(1) is generic. Ameren Missouri contracted with Black and Veatch to provide costs and operational characteristics for thermal and renewable resources in support of its 2011 IRP and has continued to update this information for its planning analysis. The owner’s cost estimates in these studies include generic transmission cost assumptions. Ameren Missouri will replace these generic transmission costs with estimates from its Transmission Planning group for supply-side options that are site-specific.

For clarity, this waiver request relates only to the development of transmission interconnection costs for supply-side resources as contemplated in the rule specified here. Ameren Missouri is not seeking waivers related to consideration of transmission costs or avoided transmission cost benefits associated with demand side resources. Ameren Missouri has included and will continue to include avoided transmission and distribution costs in its evaluation of demand side programs and in its integrated modeling and risk analysis. Ameren Missouri

also explicitly considers the potential for transmission system projects through the annual MISO Transmission Expansion Plan process and relies on this process as the basis for its analysis required by 4 CSR 240-22.045(3)(A) as provided for in 22.045(3)(B).

#### **4 CSR 240-22.045 – Transmission and Distribution Analysis**

Ameren Missouri is requesting the following variances for 4 CSR 240-22.045:

##### **(1) 4 CSR 240-22.045 (1)(B)**

###### **Current Requirement:**

Interconnect new generation facilities. The utility shall assess the need to construct transmission facilities to interconnect any new generation pursuant to 4 CSR 240-22.040(3) and shall reflect those transmission facilities in the cost benefit analyses of the resource options;

###### **Proposed Alternative:**

Interconnect new generation facilities. Ameren Missouri shall provide generic transmission interconnection costs or, for more site-specific resources, transmission interconnection cost estimates from its Transmission Planning group and shall reflect those transmission facilities in the cost benefit analyses of the resource options;

###### **Rationale:**

MISO's process for providing transmission interconnection costs does not provide a final cost until a utility commits to a project. Furthermore, such detail is unwarranted considering data developed pursuant to 4 CSR 240-22.040(1) is generic. Ameren Missouri contracted with Black and Veatch to provide costs and operational characteristics for thermal and renewable resources in support of its 2011 IRP and has continued to update this information for its planning analysis. The owner's cost estimates in these studies include generic transmission cost assumptions. Ameren Missouri will replace these generic transmission costs with estimates from its Transmission Planning group for supply-side options that are site-specific.

For clarity, this waiver request relates only to the development of transmission interconnection costs for supply-side resources as contemplated in the rule specified here. Ameren Missouri is not seeking waivers related to consideration of transmission costs or avoided transmission cost benefits associated with demand side resources. Ameren Missouri has included and will continue to include avoided transmission and distribution costs in its evaluation of demand side programs and in its integrated modeling and risk analysis. Ameren Missouri also explicitly considers the potential for transmission system projects through the annual MISO Transmission Expansion Plan process and relies on this process as the basis for its analysis required by 4 CSR 240-22.045(3)(A) as provided for in 22.045(3)(B).

**(2) 4 CSR 240-22.045 (3)(C)**

**Current Requirement:**

The utility shall provide copies of the RTO expansion plans, its assessment of the plans, and any supplemental information developed by the utility to fulfill the requirements in subsection (3)(B) of this rule.

**Proposed Alternative:**

The utility shall provide a web link to the RTO expansion plans, its assessment of the plans, and any supplemental information developed by the utility to fulfill the requirements in subsection (3)(B) of this rule.

**Rationale:**

The expansion plans are publicly available on the MISO website, are very voluminous and can be accessed by anyone at any time (see link below).

<https://www.misoenergy.org/Planning/TransmissionExpansionPlanning/Pages/TransmissionExpansionPlanning.aspx>

**4 CSR 240-22.050 – Demand-Side Resource Analysis**

Ameren Missouri is requesting the following variances for 4 CSR 240-22.050:

**(1) 4 CSR 240-22.050 (4)(D)2**

**Current requirement:**

An assessment of how the interactions between multiple potential demand-side rates, if offered simultaneously, would affect the impact estimates;

**Proposed Alternative:**

A qualitative assessment of how the interactions between multiple potential demand-side rates, if offered simultaneously, would affect the impact estimates.

**Rationale:**

Ameren Missouri is assuming non-simultaneous offering of the rates in the assessment, as this is likely how they would be deployed in practice (and as was assumed in the 2014 IRP). Ameren Missouri is not aware of empirical data from secondary data sources that could be used to develop models that could address the requirement for the assessment of a myriad of possible interactions between simultaneous offerings of multiple demand-side rate options. There is no Ameren Missouri primary data from which to attempt to make an assessment. Even if data was available, potential interactions between multiple demand-side rates would still be a function of numerous variables including opt-in vs. opt-out tariff parameters, types of demand-side programs offered by Ameren Missouri during each 3-year DSM implementation planning cycle, specific rate provisions, etc. The value to Ameren Missouri customers of conducting studies with such a wide range of uncertainty based on judgment modeling input assumptions is not expected to justify the costs incurred to attempt to conduct such studies.

**(1) 4 CSR 240-22.050 (5)(B)3**

**Current requirement:**

For purposes of this test, the costs of potential demand-side programs and potential demand-side rates shall not include lost revenues or utility incentive payments to customers.

**Proposed Alternative:**

For purposes of this test, the costs of potential demand-side programs shall not include lost revenues or utility incentive payments to customers.

**Rationale:**

“Incentives” given to customers to get them enrolled in the price responsive demand response programs or in any other potential demand-side rate are, in fact, not incentives that the rule provision aims to exclude from the TRC test, but are rather costs incurred by the utility because they do not “buy down” any incremental measure costs. In the TRC equation, incentives only cancel each other out if they offset the incremental cost of a measure; hence, any incentive paid to the customer to encourage them to switch to a demand-side rate is a true cost to the program. Mathematical proof can be seen in Richard A. Voytas’ Surrebuttal Testimony in File No. EO-2012-0142 starting on page 59, line 13. It is really easy to confuse “incentive” and “utility cost” in this context and Ameren Missouri believes that the proposed alternative would help avoid any confusion by any party.

**(2) 4 CSR 240-22.050 (5)(E)**

**Current requirement:**

The utility shall provide results of the total resource cost test and the utility cost test for each potential demand-side program evaluated pursuant to subsection (5)(B) and for each potential demand-side rate evaluated pursuant to subsection (5)(C) of this rule, including a tabulation of the benefits (avoided costs), demand-side resource costs, and net benefits or costs.

**Proposed Alternative:**

The utility shall provide results of the total resource cost test and the utility cost test for each potential demand-side program evaluated pursuant to subsection (5)(B) and for each potential price responsive demand response program evaluated pursuant to subsection (5)(C) of this rule, including a tabulation of the benefits (avoided costs), demand-side resource costs, and net benefits or costs.

**Rationale:**

Total resource cost test and utility cost test are not meaningful for demand-side rates other than price responsive demand response. For example, changing from a tariff rate structure based on a declining block rate structure to an inclining block structure will not require any meaningful costs but is expected to result in both energy and peak demand savings. If so, the benefit cost ratio would be infinite.

#### **4 CSR 240-22.060 – Integrated Resource Plan and Risk Analysis**

Ameren Missouri is requesting the following variances for 4 CSR 240-22.060:

**(1) 4 CSR 240-22.060 (5)(E)**

**Current Requirement:**

Siting and permitting costs and schedules for new generation and generation-related transmission facilities for the utility, for a regional transmission organization, and/or other transmission systems;

**Proposed Alternative:**

Total project cost (including siting, permitting and construction costs) for new generation and generation-related transmission facilities;

**Rationale:**

A total project includes siting, permitting, and construction activities. Thus, it is more practical to evaluate an uncertain factor like schedule across the entire span of a project, or to evaluate the separate uncertain factor of cost across the entire span of a project. This variance captures the uncertain factor of cost for the entire span of a project while variance (2) captures the uncertain factor of scheduling referenced in the original rule. Additionally, any uncertainty of project costs or schedules for a regional transmission organization would be common across all alternative resource plans, therefore, would not change the outcome of the analysis.

**(2) 4 CSR 240-22.060 (5)(F)**

**Current Requirement:**

Construction costs and schedules for new generation and generation-related transmission facilities for the utility, for a regional transmission organization, and/or other transmission systems;

**Proposed Alternative:**

Total project schedules (including siting, permitting and construction schedules) for new generation and generation-related transmission facilities;

**Rationale:**

A total project includes siting, permitting, and construction activities. Thus, it is more practical to evaluate an uncertain factor like schedule across the entire span of a project, or to evaluate the separate uncertain factor of cost across the entire span of a project. This variance captures the uncertain factor of scheduling for the entire span of a project while variance (1) captures the uncertain factor of cost referenced in the original rule. Additionally, any uncertainty of project costs or schedules for a

regional transmission organization would be common across all alternative resource plans, therefore, would not change the outcome of the analysis.

**(3) 4 CSR 240-22.060 (5)(K)**

**Current Requirement:**

Future load impacts of demand-side programs and demand-side rates;

**Proposed Alternative:**

Future load impacts and marketing and delivery costs of demand-side programs and demand-side rates if the costs and impacts are determined to be highly correlated. Future load impacts of demand-side programs and demand-side rates if the costs and impacts are determined to not be highly correlated;

**Rationale:**

4 CSR 240-22.060(5)(L) requires consideration of utility marketing and delivery costs for demand side programs. Including the possible interactions of high/base/low for DSM load impacts and costs could geometrically increase the analysis while some combinations would be less meaningful and less probable. The expectation is that these factors are highly correlated, and therefore, the simplifying assumption would be to combine the individual probability nodes into a combined probability node containing the high value for both, base value for both, and low value for both without explicitly considering the joint probabilities. However, if they are determined to not be correlated, Ameren Missouri would do the analysis as the rule requires.

**(4) 4 CSR 240-22.060 (5)(L)**

**Current Requirement:**

Utility marketing and delivery costs for demand-side programs and demand-side rates; and

**Proposed Alternative:**

Future load impacts and marketing and delivery costs of demand-side programs and demand-side rates if the costs and impacts are determined to be highly correlated. Utility marketing and delivery costs for demand-side programs and demand-side rates if the costs and impacts are determined to not be highly correlated;

**Rationale:**

Please see the rationale for variance request for 4 CSR 240-22.060(5)(K).

**(5) 4 CSR 240-22.060 (7)**

**Current Requirement:**

The utility decision-makers shall assign a probability pursuant to section (5) of this rule to each uncertain factor deemed critical by the utility. The utility shall compute the cumulative probability distribution of the values of each performance measure specified pursuant to 4 CSR 240-22.060(2).



Both the expected performance and the risks of each alternative resource plan shall be quantified. The utility shall describe and document its risk assessment of each alternative resource plan.

**Proposed Alternative:**

The utility decision-makers shall assign a probability pursuant to section (5) of this rule to each uncertain factor deemed critical by the utility. The utility shall compute the cumulative probability distribution of the values of “present value revenue requirements” performance measure for each alternative resource plan. For each of the other performance measures specified in 4 CSR 240-22.060(2)(A)1-6 and for any additional measures chosen by the utility pursuant to 4 CSR 240-22.060(2)(A)7, Ameren Missouri will compute a cumulative probability distribution of its values if inspection of the summary tabulation required by 4 CSR 240-22.060(4)A indicates that the rankings of alternative plans by this performance measure substantially differs from the ranking based on present value revenue requirements.

Both the expected performance and the risks of each alternative resource plan shall be quantified. The utility shall describe and document its risk assessment of each alternative resource plan.

**Rationale:**

The IRP rules in 4 CSR 240-22.060(7) require Ameren Missouri to compute the cumulative probability distribution of the value of performance measures specified in section 4 CSR 240-22.060(2).

Another section of the IRP rules, 4 CSR 240-22.060(4)A, requires a summary tabulation that shows the performance of each alternative resource plan as measured by each of the same measures.

So, one section of the rule requires cumulative probability distributions of the 6 or more performance measures, and another section requires summary tabulations of the same measures, which is simply another form of the same information.

The primary decision criterion is just one of these measures, namely the present value of revenue requirements. The ranking of plans on present value of revenue requirements is typically consistent with the ranking of plans on the remaining measures. Therefore, once the cumulative probability distribution has been provided for the plans for the present value of revenue requirements measure, it is redundant and adds little to no value to additionally provide cumulative probability distributions for the remaining measures. This is particularly true since summary tables for these other measures are provided per another section of the IRP rules as mentioned above.

Ameren Missouri has used the same approach in its 2008, 2011 and 2014 IRP filings.

#### **4 CSR 240-22.070 – Resource Acquisition Strategy Selection**

Ameren Missouri is not requesting any variances at this time for 4 CSR 240-22.070.

#### **4 CSR 240-22.080 – Filing Schedule, Filing Requirements and Stakeholder Process**

Ameren Missouri is requesting the following variances for 4 CSR 240-22.080:

##### ***(1) 4 CSR 240-22.080 (2)(C)2***

###### **Current Requirement:**

The technical volume(s) shall be organized by chapters corresponding to 4 CSR 240-22.030-4 CSR 240-22.070.

###### **Proposed Alternative:**

The technical volume(s) shall be organized in a logical manner but not necessarily as the chapters corresponding to 4 CSR 240-22.030-4 CSR 240-22.070. Rule references will be provided as footnotes and cross-referenced in a table organized according to the Chapter 22 rules to make it easy for stakeholders to assess compliance.

###### **Rationale:**

Even though the chapters will not be organized precisely as 4 CSR 240-22.030-4 CSR 240-22.070 mainly due to having multiple chapters for Supply Side Analysis instead of one, it will be easy to find out which section of the rule they correspond to. Ameren Missouri has followed a similar approach in its 2011 and 2014 IRPs, and IRP Annual Update filings and has received positive feedback from the stakeholders.

##### ***(2) 4 CSR 240-22.080 (5)(A)***

###### **Current Requirement:**

The utility shall convene at least one (1) meeting of the stakeholder group prior to the triennial compliance plan filing to present a draft of the triennial compliance filing corresponding to 4 CSR 240-22.030–4 CSR 240-22.050 and to present an overview of its proposed alternative resource plans and intended procedures and analyses to meet the requirements of 4 CSR 240-22.060 and 4 CSR 240-22.070. The stakeholders shall make a good faith effort to provide comments on the information provided by the utility, to identify additional alternative resource plans, and to identify where the utility’s analyses and intended approaches may not meet the objectives of the rules.

###### **Proposed Alternative:**

The utility shall convene at least one (1) meeting of the stakeholder group prior to the triennial compliance plan filing to present a draft of the

triennial compliance filing corresponding to 4 CSR 240-22.030–4 CSR 240-22.050 and to present an overview of its proposed alternative resource plans and intended procedures and analyses to meet the requirements of 4 CSR 240-22.060 and 4 CSR 240-22.070. The DSM Potential Study will serve as the draft chapter for 4 CSR 240-22.050. The stakeholders shall make a good faith effort to provide comments on the information provided by the utility, to identify additional alternative resource plans, and to identify where the utility’s analyses and intended approaches may not meet the objectives of the rules.

**Rationale:**

The Potential Study serves as the primary basis for the demand side resource analysis in the IRP. The Potential Study is not scheduled to be complete early enough to allow time for Ameren Missouri to use the results from that and prepare a draft compliance filing that will resemble final DSM chapter more closely. Ameren Missouri believes that having a robust analysis for DSM potential will allow for a better final report than diverting attention from the potential study write-up for the purpose of drafting the chapter in a format that resembles the final filing version.