

**Comments re: Ameren Missouri's 2014 Integrated Resource Plan**

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**INTRODUCTION**

Ameren Missouri's proposed 2014 Integrated Resource Plan ("IRP") comes at a critical time in which the Company must establish resource allocation plans to meet important federal and state requirements. These requirements are in line with a general nationwide effort, a transition away from traditional fossil fuel generation and toward renewable, distributed generation. In addition to its obligation to comply with Missouri's own Renewable Energy Standard ("RES"), Ameren Missouri must also plan for compliance with the Environmental Protection Agency's ("EPA") Clean Power Plan, which will require the Company to achieve roughly a 21% net reduction in carbon emissions from its current generation portfolio. Ameren Missouri's 2014 IRP proposes non-compliance with both of these requirements.

In Chapter 9 of its 2014 filing, Ameren Missouri provides explanation for the selection of its "Balanced" renewable energy scenario, its preferred scenario for the time period of 2015-2034. Chapter 9 also includes modeling for several other scenarios and renewable energy development options, such as an "unconstrained" RES compliance scenario, RES compliance with various levels of energy efficiency investment, and a potential Keokuk hydroelectric facility expansion. Renew Missouri considers Ameren Missouri's IRP proposal with respect to renewable energy to be deficient in a number of ways. The below are Renew Missouri's comments on Ameren Missouri's renewable energy plans in its 2014 IRP.

**NONCOMPLIANCE WITH MISSOURI'S RES**

Ameren Missouri's 2014 IRP reveals that the Company is not planning to comply with the requirements of Missouri's RES through calendar year 2034. Ameren Missouri's IRP is deficient for this basic reason. The deficiency stems from a distinction between what Ameren Missouri terms its "unconstrained" RES compliance scenario and its "constrained" compliance scenario (i.e. limited by the 1% retail rate impact, Section 393.1030, RSMo).

Ameren's "unconstrained" RES compliance scenario envisions an addition of 59 MW of new solar and 1,114 MW of new wind between 2015 and 2034 (Chapter 9, pg. 6-7). This reflects the amount of renewable energy needed for Ameren to comply with the RES law's 15% staircase by 2021, according to Ameren. By contrast, Ameren's "constrained" RES compliance scenario anticipates an addition of 26 MW of new solar and 242 MW of new wind (Chapter 9, pg. 6-7). This "constrained" scenario is limited, Ameren claims, by the RES law's "1% cost cap," in reference to the provision in the RES law that limits the amount a utility must spend in compliance to 1% of what the utility otherwise would have spent.<sup>1</sup> Provisions for precisely how to perform this comparison between renewable investment and hypothetical nonrenewable investment are included in the Commission's rule at 4 CSR 240-20.100(5)(B).

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<sup>1</sup> "(1) A maximum average retail rate increase of one percent determined by estimating and comparing the electric utility's cost of compliance with least-cost renewable generation and the cost of continuing to generate or purchase electricity from entirely nonrenewable sources, taking into proper account future environmental regulatory risk including the risk of greenhouse gas regulation." § 393.1030.2(1), RSMo.

**Deficiency.** Ameren has yet to calculate the 1% retail rate impact pursuant to the requirements of 4 CSR 240-20.100(5). Not only has Ameren failed to perform the required calculation every year from 2010 through 2015, but it has also made no effort to calculate what the retail rate impact limit may be from 2015 through 2034. Ameren's claimed 1% limit appears to be merely 1% of the Company's anticipated revenue requirement through 2034, an estimate which has nothing to do with the above-quoted language in Section 393.1030.2(1), RSMo or in the Commission's rule at 4 CSR 240-20.100(5)(B) ("Section (5)(B)"). Ameren's "constrained" RES compliance plan is therefore deficient because it drastically underestimates the minimum limit Ameren must spend before legally being allowed to be in noncompliance with the stairsteps of the RES. Ameren Missouri's preferred renewable portfolio should more closely reflect the Company's "unconstrained" RES compliance scenario.

The difference between Ameren's claimed 1% limit and the 1% calculation required by law and rule is not negligible. In fact, it is the difference between more than 700 MW of new renewable generation coming online in the next 5 years or not. A correct calculation of the 1% would most likely allow Ameren to reach the 15% stairstep by 2021 or soon thereafter. If Ameren were to correctly perform the Section (5)(B) calculation, it would be required to compare the cost of extra wind and solar investments to the cost of meeting that same demand with investments in traditional fossil fuel generation. In the current environment, the cost of new wind generation is comparable to the cost of new natural gas combined cycle capacity. Even assuming that new wind would cost slightly more than new natural gas for the entirety of the 20-year IRP period, Ameren would still have to build many thousands of megawatts of wind before it even approached its 1% retail rate impact. Furthermore, the Section (5)(B) calculation would require Ameren to place a value on not achieving compliance with environmental regulations, most notably the EPA's Clean Power Plan. Bearing this in mind, it is hard to imagine a scenario wherein Ameren Missouri would ever reach its 1% retail rate impact before meeting the RES' 15% stairstep.

**Deficiency.** Ameren has also failed to consider the cost implications of purchasing SRECs from customers with distributed generation in its service territory over the 2015-2034 time period. Ameren projects 614 MW of customer PV to be added to its system by 2034. The RES law and rules allow utilities to offer a standard offer contract for purchasing SRECs from customers. Moreover, by offering solar rebates pursuant to Section 393.1030.3, RSMo, Ameren would obtain 10 years of SRECs for any rebate-recipient. These RES compliance options were not considered by Ameren Missouri.

#### NONCOMPLIANCE WITH EPA'S CLEAN POWER PLAN

Environmental legal mandates looming within the planning horizon present utilities with probable environmental costs as defined in 4 CSR 240-22.020(47). Plans must be designed to meet these mandates. 4 CSR 240-22.060(3)(A). EPA's proposed Clean Power Plan, scheduled to be finalized this summer, requires emitters to achieve specified CO<sub>2</sub> emission reductions under § 111(d) of the Clean Air Act. Ameren plans to meet its required carbon reduction target four years later than EPA's timeline of 2030. Furthermore, Ameren admits that it intends to bend the EPA to its will by pushing back the interim 2020 reduction goals (Chapter 10, pp. 17-9) so that Ameren can implement its PRP regardless of what the rest of the nation does. Ameren does not assign a probability to this particular scenario.

**Deficiency.** Ameren's "Balanced" portfolio fails to achieve compliance with the EPA's proposed Clean Power Plan. To comply with the requirements of 4 CSR 240-22.020(47) and 4 CSR 240-22.060(3)(A), Ameren's preferred resource plan for renewables should be altered to achieve compliance with EPA's proposed reductions within the specified time period.

## SOLAR

Ameren's evaluation of solar and wind options is so vague as to be deficient under 4CSR 240-22.040(1), which requires the utility to "identify a variety of potential supply-side resource options which the utility can reasonably expect to use, develop, implement, or acquire," which options shall "include full or partial ownership of new plants using existing generation technologies..."

Ameren's preferred plan includes 45 megawatts of solar photovoltaics, but the only project the company identifies is an already-existing 5.7 MW solar farm in O'Fallon (Chapter 6, p. 24). Chapter 6, Appendix C, p. 1, characterizes solar only in terms of a 1 MW increment of PV. An accurate assessment must include the costs of financing and assembling larger increments. It must also compare the costs and benefits of subsidizing customer-sited solar, as specified by Section 393.1030.3, RSMo.

In addition, Ameren projects 614 MW of customer PV to be added to its system by 2034, which could defer the addition of combined-cycle gas in that year and result in a lower PVRR (Chapter 10, pp. 14–5). But the company dismisses customer PV in section 6.2.5.1, "Utility-Scale Solar vs. Customer-Owned Solar" (Chapter 6, p. 25). This discussion makes questionable assumptions:

- "a customer-owned project...is not financed by the customer;"
- Ameren says that utility scale projects will realize economies of scale, not noting that the utility pays nothing for a customer-sited system except perhaps a rebate;
- "slightly higher fixed O&M costs for the customer-owned installation," not noting that these are not utility costs but avoided costs;
- The assumptions do not include avoided energy and T&D costs attributable to DG.

Given this set of assumptions, Ameren incorrectly concludes that utility-scale solar is lower-cost.

Customer costs of PV are irrelevant to the utility, yet this is the comparison Ameren makes—project cost for the utility versus the customer for a system the size of the O'Fallon solar farm (5.745 MW), something no customer would ever build (Chapter 6, p. 26, Table 6.15). The solar rebate payable to customers has been declining since the passage of HB 142 in 2013. It stands at \$1.50/W through June 2015, falls to \$1.00 through June 2016, \$0.50 through June 2019, \$0.25 through June 2020, and zero thereafter. § 393.1030.3, RSMo. Paying these rebates to customers as an incentive to bear the rest of the cost themselves would come out far cheaper than utility self-build.

**Deficiency.** Ameren has failed to consider compliance with the RES mandate as required by 4 CSR 240-22.010(2)(A) and 4 CSR 240-22.060(3)(A)1 because Ameren is required to continue paying the solar rebate as long as its compliance costs, exclusive of utility investments solar, do not exceed the 1% retail rate impact. § 393.1030.2(1), RSMo, as amended by HB 142 (2013). Calculation of the rebate payments necessary to comply with the RES solar carve-out with customer-sited solar would again demonstrate that it is the lower-cost option.

**Deficiency.** Ameren's treatment of distributed generation is also deficient because the company puts DG under demand-side options, while the new rule places DG in supply-side resources. 4 CSR 240-22.040(1) ("technologies for distributed generation").

## WIND

Wind is the least-cost new generation resource on a levelized cost of energy (LCOE) basis (Chapter 6, p. 34, Fig. 6.9, and p. 35, Table 6.21). As noted above, the RES and its 1% retail rate impact limit should therefore be no constraint on wind. A growing number of studies show that higher penetrations of wind do not impair grid reliability and may even improve it. (Please refer to the attached studies from The Analysis Group and the Brattle Group.)<sup>2 3</sup> Furthermore, a more aggressive approach to wind, acknowledging it as the lowest-cost resource, would greatly enhance Ameren's ability to satisfy the CPP.

**Deficiency.** Ameren's "Balanced" renewable portfolio includes 400 MW of wind, which is part of its preferred resource plan (PRP). Ameren never explains its rationale for 400 MW. The utility must devise an alternative resource plan that optimally complies with legal mandates. 4CSR 240-22.060(3)(A)5. The IRP is deficient for offering no explanation of why 400 MW of wind is optimal, particularly given the IRP's planned noncompliance with both State and Federal legal requirements.

## HYDRO

Renew Missouri neither supports nor opposes plans to expand Keokuk. However, Renew Missouri strongly opposes attempts to claim output or RECs from Keokuk for RES compliance, as the RES specifically bars compliance from hydro facilities larger than 10 MW.<sup>4</sup> Any expansion of the Keokuk Hydroelectric generation facility would therefore play no role in Ameren Missouri's ability to comply with Missouri's RES.

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<sup>2</sup> Analysis Group, "Electric System Reliability and EPA's Clean Power Plan: Tools and Practices." Feb. 2015. [http://www.eenews.net/assets/2015/02/19/document\\_gw\\_04.pdf](http://www.eenews.net/assets/2015/02/19/document_gw_04.pdf)

<sup>3</sup> The Brattle Group, "EPA's Clean Power Plan and Reliability: Assessing NERC's Initial Reliability Review." Feb. 2015. <http://info.aee.net/hs-fs/hub/211732/file-2486162659-pdf/PDF/EPAs-Clean-Power-Plan--Reliability-Brattle.pdf>

<sup>4</sup> "(5) "Renewable energy resources", electric energy produced from... hydropower (not including pumped storage) that does not require a new diversion or impoundment of water and that has a nameplate rating of ten megawatts or less..." § 393.1025, RSMo.