RES Retail Rate Impact Statement

As required by CSR 240-20.100(5), a retail rate impact shall be calculated since prudent costs of renewable energy resources directly attributable to RES compliance may not exceed one percent. The retail rate impact shall be calculated on an incremental basis for each planning year that includes the addition of renewable generation directly attributable to RES compliance through procurement or development of renewable energy resources, averaged over the succeeding ten (10)-year period, and shall exclude renewable energy resources owned or under contract prior to the effective date of the rule. According to the Rule, the RES retail rate impact shall be determined by subtracting the total retail revenue requirement incorporating an incremental non-renewable generation and purchased power portfolio from the total retail revenue requirement including an incremental RES-compliant generation and purchased power portfolio. The non-renewable generation and purchased power portfolio shall be determined by adding to the utility's existing generation and purchased power resource portfolio additional non-renewable resources sufficient to meet the utility's needs on a least-cost basis for the next ten (10) years. The RES-compliant portfolio shall be determined by adding to the utility's existing generation and purchased power resource portfolio an amount of renewable resources sufficient to achieve the standard set forth by the Rule and an amount of least-cost non-renewable resources, the combination of which is sufficient to meet the utility's needs for the next ten (10) years. It is prescribed that these renewable energy resource additions will utilize the most recent electric utility resource planning analysis. These comparisons will be conducted utilizing projections of the incremental revenue requirement for new renewable energy resources, less the avoided cost of fuel not purchased for non-renewable energy resources due to the addition of renewable energy resources. In addition, the projected impact on revenue requirements by non-renewable energy resources shall be increased by the expected value of greenhouse gas emissions compliance costs, assuming that such costs are made at the expected value of the cost per ton of greenhouse gas emissions allowances, cost per ton of a greenhouse gas emissions tax (e.g., a carbon tax), or the cost per ton of greenhouse gas emissions reductions for any greenhouse gas emission reduction technology that is applicable to the utility's generation portfolio, whichever is lower. Calculations of the expected value of costs associated with greenhouse gas emissions shall be derived by applying the probability of the occurrence of future greenhouse gas regulations to expected level(s) of costs per ton associated with those regulations over the next ten (10) years. Any variables utilized in the modeling shall be consistent with values established in prior rate proceedings, electric utility resource planning filings, or RES compliance plans, unless specific justification is provided for deviations. The comparison of the rate impact of renewable and non-renewable energy resources shall be conducted only when the electric utility proposes to add incremental renewable energy resource generation directly attributable to RES compliance through the procurement or development of renewable energy resources.

Empire currently meets the Missouri RES requirement on a total percentage basis with wind resources that were under contract prior to the effective date of the RES Rule. However, the Missouri regulations also require that two percent of the energy from renewable energy sources must be solar. In the past,

Empire has been exempted by statute from the solar requirement. On February 10, 2015 the Missouri Supreme Court overruled the solar rebate exemption that was extended to Empire in 2008. Empire has recently begun offering rebates for solar installations by customers in accordance with the tariffs on file with the Missouri Public Service Commission. Therefore, Empire has now calculated the retail rate impact based on its understanding of the Commission's Rules to determine if the two percent solar requirement can be met within the one percent retail rate cap.

In order to make the retail rate impact calculation, Empire began with the 2013 integrated resource plan (IRP) model and data set which is its most recent triennial electric utility resource planning analysis. This includes the assumptions for probable environmental costs. However, updates were made to many of the planning assumptions such as fuel costs, market prices and the load forecast based on the most recent information presented in the 2015 IRP Annual Update process. At the time of the analysis, Empire had about 36 existing Missouri retail customers with solar installations with a total installed capacity of about 178.5 kW that could be eligible for a rebate at the $2 per watt level. The rebate level changes over time and this rebate structure was considered in the analysis. Assumptions had to be made for new Missouri customer sited solar rebate participation over the next ten years, with the remainder of the two percent solar requirement met with solar renewable energy credits (SRECS). Since customer sited solar rebate participation is unknown, Empire analyzed five different participation level scenarios over the next decade. This ranges from the lowest case with one-eighth of one percent of eligible customers installing solar and requesting a rebate, to the highest case of one percent of eligible customers installing solar and requesting a rebate. Empire reviewed the customer solar participation levels of other regional utilities; took into account the declining solar rebate structure; the potential changes to solar equipment costs; and considered the demographics of its own service territory to develop this range of possible solar participation. The five scenarios were analyzed in the IRP planning models and compared to the updated base case.

Based on the five participation scenarios that were modeled to meet the two percent solar requirement and the assumptions therein, the one percent rate cap was never an issue. Since the amount of solar energy required is relatively small, no scenario came close to raising Missouri retail rates to the one percent level based on the one percent rate cap methodology described in the Rule. Based on this result, the solar plan—and the entire RES plan—contained in the amended RES compliance plan is within the one percent retail rate cap.

Empire will continue to monitor retail solar participation levels, SREC price forecasts and other planning assumptions. Empire will also continue to monitor the one percent retail rate cap issue as needed. Empire plans to file its next triennial IRP in 2016.