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| In the Matter of a Workshop File to Explore |) | |
| Legislative and Regulatory Means to Improve |) | |
| and Clarify Missouri's Renewable Energy |) | File No. EW-2011-0031 |
| Standard Law, Mo. Rev. Stat. §§ 393.1020 to |) | |
| 393.1030. |) | |

COMMENTS OF THE VOTE SOLAR INITIATIVE

Introduction

Vote Solar hereby respectfully submit the following comments in response to the Missouri Public Services Commission's workshop to explore legislative and regulatory means to improve and clarify Missouri's Renewable Energy Standard (RES) law (File No. EW-2011-0031). The Vote Solar Initiative (Vote Solar) is a nonprofit organization with active members throughout Missouri and the U.S. Our members are ratepayers, present and potential solar energy system owners and solar business owners. Vote Solar has participated in the Renewable Energy Standard (RES) rulemaking process since its inception. We have been participants in RES rulemaking in Arizona, Colorado, Illinois Ohio and other states. Our mission is to address global warming and energy independence by bringing solar energy into the mainstream.

The Commission asked stakeholders of Missouri's RES to provide legislative proposals and regulatory options in order to resolve the issue of geographic renewable generation sourcing. Vote Solar supports the Commission's efforts to address the economic and public policy implications of geographic sourcing.

Summary:

As the reasonable costs of the Renewable Energy Standard are going to be born by Missouri's investor-owned utility ratepayers, it stands to reason that Missouri ratepayers should share in the benefits associated with the new renewable generation. We note that systems connected to the distribution circuit of distribution companies provide grid benefits, such as reduced line loss, avoided transmission and distribution system upgrades, reduced congestion costs, enhanced local resource adequacy, and other ancillary benefits. Systems that provides these benefits can be construed to meet the present language in the Missouri RPS enabling legislation, and at the same time avoid a challenge under interstate commerce auspices.

In this manner, ratepayers reap the local grid benefits of solar energy, and the regulations fall within the accepted constitutional and legal principles protecting the unimpeded flow of interstate commerce. While not directly connected to the legal arguments at hand, we undertook an effort to calculate the employment and economic impacts of investing in local generation, and found substantial benefits.

Legal and Public Policy Implications

The Commission has requested comments on the legal implications of various eligibility schemes that are designed to maximize the benefits of the RES to Missouri citizens and ratepayers. Vote Solar understands the original "geographic sourcing" requirement, disallowed by the Joint Committee on Administrative Rules (JCAR), was "predicated on the desire for the RES to spur and incent economic development in the state of Missouri.¹" The desire to support the retention of benefits in-state is both understandable and laudable insofar as Missouri ratepayers are ultimately bearing the

¹ File No. EW-2011-0031, p.2.

cost of the program. However, in order to avoid being legally challenged, we recommend that eligibility rules comport with accepted constitutional and legal principles protecting the unimpeded flow of interstate commerce and are not seen as merely protectionist in nature. We believe the Missouri Public Service Commission *can* structure a program that can pass legal muster while ensuring that Missourians derive the associated benefits of renewable resource development.

We refer the PSC to the National Association of Regulatory Utility Commissioners' (NARUC) excellent analysis of legal issues surrounding geographic restrictions within state RPS programs², included here as an attachment. The study authors examine four schemes that comport closely with those proffered by the Missouri PSC: (a) a requirement that the renewable generator be *located* in the state or region; (b) a requirement that the renewable generator, wherever located, *produce benefits* for the state; (c) a requirement that in-state customers *physically consume* the renewable energy; and (d) a requirement that the renewable energy be *sold to consumers* in the state.

The NARUC analysis points to not only the legal risk associated with a geographic sourcing provision; it also suggests that a requirement to document the contract path may be administratively complex and undermine the transactional simplicity of a REC-based system. Further, the study authors question whether consumption in-state will result in the sought-after benefits: "The in-state sales requirement has no inherent connection to in-state benefits because it is possible to create

² See generally, Nancy Rader and Scott Hempling, *The Renewable Portfolio Standard: A Practical Guide*, National Association of Regulatory Utility Commissioners (Feb. 2001), available at: <http://www.naruc.affiniscape.com/associations/1773/files/rps.pdf>

contract paths from very distant generators that provide few if any benefits to the in-state purchasing consumer.³”

Grid Benefits

Distributed renewable generation has the potential to offer many benefits to Missouri. Distributed generation is strategically located and interconnected in a manner that optimizes delivery to load. As such, distributed generation offers locational benefits that include: (i) increased capacity of distribution transformers at the generation site and at the substation level during peak periods, which reduces line losses and increases transformer life; (ii) avoided distribution system upgrades when DG is located on areas of the distribution grid (or feeders) that are capacity constrained; (iii) avoided transmission system upgrades that are required to access large-scale renewable resources located far from load; (iv) meeting local resource adequacy needs; (v) reducing congestion costs; and (vi) reducing transmission line losses.

Recommendation

We recommend that the PSC implement the law with the language as passed and as intended by the Missouri electorate. However, the language ‘sold to Missouri customers’ may pose a challenge to implement and track. Therefore we propose the Commission use a simpler interpretation of the law where eligible renewables are connected to the electric distribution grid. By definition, any renewable generation connected to the distribution grid is sold to Missouri customers. .

³ Id. At A-7.

The basis for this eligibility requirement is to assure that ratepayers of Missouri's investor-owned utilities derive the reliability and distribution system benefits of distributed renewable resources.

This recommendation defines eligibility of the basis of benefits conferred to the state, rather than provenance, and is therefore more likely to be judged pursuant to the less exacting *Pike v. Bruce Church* balancing test⁴. Moreover, although the target benefit is reliability enhancement, it will also have, as an incidental benefit, the local job creation benefits that served as a predicate for the PSC's original geographic sourcing proposal. Lastly, and perhaps most importantly, our recommendation is consistent with the intent of the RES law.

Economic Implications

While this is in no way connected to the legal argument, we note that there are additional benefits associated with solar generation. To wit, solar creates more jobs per megawatt than any other energy source.⁵ This incidental benefit of requiring solar systems to serve the distribution network will result in sustained job creation and economic impact in the area where they are located. To quantify these benefits, we modeled for the development of solar energy as required under the specific benchmark of the RES using the Jobs and Economic Development Impact Model (JEDI). The JEDI was developed by the National Renewable Energy Lab using the IMPLAN analysis and database.

⁴ 397 U.S. 137 (1970). Under the *Pike* balancing test, a facially neutral law which imposes an incidental burden on interstate commerce will nevertheless be upheld unless the burdens "are clearly excessive in relation to the putative local benefits."

⁵ Renewable Energy Policy Project, *The Work That Goes Into Renewable Energy*, November 2001.

The 2% solar requirement within the RES can be estimated using retail sales data from the applicable investor owned utilities provided by the Energy Information Administration. From this data, we can accurately project the solar requirements for each year the RES is in effect. The cumulative solar capacity required under the RES is approximately 155 MWs.

Findings:

The types of jobs created by the solar industry are sales, engineering, installation and construction jobs that are inherently local and can not be outsourced. These jobs offer high wages and offer employment both to specialized professionals and unskilled labor.

| Projected Employment Impacts of Installing 155 MW Solar | Employment Benefits |
|--|----------------------------|
| Total Construction Period Jobs (11year construction period) | 4733 |
| Long-term O&M Jobs (25 year operation cycle) | 95 |
| Lifetime Earnings - \$000 (2010) | \$222,196 |
| Lifetime Economic Output - \$000 (2010) | \$560,005 |
| Lifetime Sales & Property Taxes Paid - \$000 (2010) | \$282,101 |

Explanation of the JEDI results:

JEDI output presents job creation in jobs-years. This is a standard term for evaluating job creation. One job-year equals the employment of one individual for 2080 hours. No

manufacturing for solar panels or components was assumed for the state of Missouri. Presently, there is little to no solar component or panel manufacturing in the state and in the interest of presenting representative results, all manufacturing jobs and related economic benefit were excluded from the model. Economic benefits include direct, indirect and induced benefits.

Model Assumptions:

For the model we made the necessary assumptions on installed costs for residential, large commercial and utility scale solar based on best available industry and government data. We declined those values based on averages from industry data. We made assumptions about the segmentation of the solar industry in Missouri. Our assumptions split the development of the required solar into residential, large commercial and utility scale solar evenly. This segmentation is based on best predictions of market growth and limitations within Missouri's current net metering law. The model required state tax information which we took from the Missouri State Tax Commission and Missouri Department of Economic Development webpages. These assumptions are best predictions for a solar industry where to date there has been little activity.

Conclusion:

While we recommend that the PSC solicit a final recommendation from their own council, we believe the original language "sold to Missouri electric energy retail customers" can be implemented and tracked through a program requiring eligible

generation connected to the distribution network and that this approach would be likely pass constitutional muster with regards to interstate commerce.

Respectfully Submitted,

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