



File No. EW-2009-0324

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MISSOURI RENEWABLE ENERGY WORKSHOP

Comments of Vote Solar on Renewable Energy Standard Rulemaking

The following comments are made on behalf of Vote Solar. Vote Solar is a nonprofit organization with members throughout Missouri and the U.S. that aims to address global warming and energy independence by bringing solar energy into the mainstream. Our organization has been an active stakeholder in the development of renewable energy standards specifically in relation to solar energy generation in many states throughout the country.

We appreciate the opportunity to provide comments following the latest revision of proposed rule Chapter 20, renewable energy standard. We appreciate the opportunity to provide these comments and commend the Commissioners and staff for moving quickly to create a regulatory environment that encourages solar energy development and in particular customer-sited solar photovoltaic energy systems.

The current rules display a sincere effort to bring new renewable energy generation to the state of Missouri. As written the rules will create an opportunity for and the ratepayers of Missouri to reap the benefits of solar, including: reduced strain on the electrical grid; avoided line loss; more stable energy prices; and, cleaner air. The 2% solar carve-out is also an economic development policy, which will bring much needed new jobs and economic growth to the state. Solar creates more jobs per megawatt than any other energy resource.

Vote Solar's comments on the solar portion of the RES are based on our eight year plus experience designing RES Rules. If implemented these comments will allow the solar industry to successfully fulfill the intention of the RES with minimal impact to ratepayers.

Our comments begin by addressing the three substantive issues that are critical to the establishment of a robust solar industry in Missouri. One, the linkage of the solar rebate program to a fixed, long term contracts for the SREC associated with the system and two, geographic location of the generation of SRECs and three, a process for establishing an SREC value.

SOLAR REBATE PROGRAM

Section 4, Solar Rebate, proposes rules for the \$2 per Watt rebate program for solar energy systems up to 25kW. Based on current solar prices, and solar incentives levels in other states with an emerging solar industry, the \$2/Watt rebate level will not be sufficient to drive customer-cited solar installations in Missouri. Since the current rule recognizes that rebate recipients will own any and all SRECs associated with their solar energy system and is modeled after the Colorado solar program, the implication is that SRECs will have a value providing an additional incentive stream to customer-generators. Vote Solar recommends revising the current proposed rule as follows.

A Standard Offer Contract for Solar Customer-Generators

We recommend making available a standard offer contract (SOC) from each utility for the purchase of SRECs for all customer-generators who receive the solar rebate. As is practice in Colorado, the SOC should specify a fixed value for SRECs for a fixed long term, typically 20 years. An appropriately set SREC value in addition to the solar rebate will allow investment in a small solar energy system to pencil out. A standard offer contract rewards performance of solar energy systems and spreads the cost of solar energy payments over a long period. The fixed incentive stream also allows customer generators easier financing.

Solar energy systems larger than 10 kW are typically financed through long term arrangements, which integrates well with SREC payments spread over many years. However, systems under 10kW are often too small to attract financing and the cost is born by the customer through simple arrangements. Therefore, best practices in solar programs such as Colorado or California, allow for a lump sum upfront payment for the estimated generation of SRECs. We recommend that the Commission allow a onetime payment for estimated SREC production for systems under 10kW. Experience has shown that the costs of metering and reporting the kWh output of small systems are significant compared to the value of the SRECs generated.

Standard Offer Contracts for Systems 25-100kW

A well designed solar program stimulates different segments of the solar industry, recognizing that small, mid-size and large solar installations have differing advantages. While small systems offer utility customers the opportunity to fix their energy prices for the next 30 years and drive local job creation, mid-size and large solar installations offer economies of scale that make them a better value for all ratepayer who share the cost of the programs. Therefore, we recommend the Commission adopt rules that establish differing incentives for these categories.

Again using the Colorado RPS as a model, Vote Solar recommends utilities make available a standard offer contract to all customer-generators with solar systems between 25kW and 100kW. Mid-sized projects are typically commercial solar systems used to offset customer load with access to financing. A 20 year SREC contract allows for these customers to obtain project financing. For projects this size participation in an open solicitation for solar energy is often too significant a portion of total project costs.

Vote Solar recommends the Commission require the utilities to have an open solicitation annually for acquiring SRECs from solar energy systems over 100 kW. Large systems can offer the lowest costs per kW and best value to all ratepayers. A RFP process will also help establish a floor for SREC prices.

Our recommendations of these solar program design elements is with the aim of increasing solar capacity while also driving down the price of solar installations resulting in the establishment of a stable, self supporting solar industry.

GEOGRAPHIC LOCATION OF SREC GENERATION

Many of the benefits of solar energy are greatest to the area where the solar is generated. Solar energy benefits such as reduction of peak demand for electricity, avoiding environmental damage from power plant emissions, helping the electric grid operate more efficiently by reducing line losses and saving investment capital by delaying costly upgrades to the electrical transmission and distribution system have been quantified for other states and are of significant value.¹ In exchange for supporting the costs of the solar program through energy rates, Missouri ratepayers deserve to have the benefits as well. For these reasons, the Commission should consider creating guidelines that direct the acquisition of SRECs from sources of power associated with delivery to Missouri customers.

SREC VALUE

The solar energy market in Missouri is nascent. Therefore a challenge for the Commission is to determine what is a fair market price for SRECs. Even in the most mature solar markets across the country, the establishment of SREC prices are based on artificial benchmarks. We recommend that the Commission establish an annual workshop process for setting SREC values for systems under 100kW. Since Missouri has no precedent on which to base the market value of SREC, the best calculation can be achieved by arriving at a fair price per kW for an installed solar electric systems minus the value of the retail power divided by the system generation over a set number of years. This gap between retail value of system output and total system cost represents the additional incentive necessary to make solar energy competitive. Annual workshops allow the Commission to best track market prices for solar energy and reflect that in SREC values.

¹ Quantifying the Benefits of Solar Power for California. Smeloff, Ed. 2005 The Vote Solar Initiative

Experience in California, New Jersey, and other states, has demonstrated that while the cost of modules is subject to global markets, the installation costs, which is half of the cost of solar, can be greatly reduced by a well-designed solar market. Reducing the costs of solar installations has been achieved through reducing paperwork, increase efficiency of permitting, and removing other local barriers to solar adoption. To that aim, the Commission should consider a simple, streamlined process for applications to the solar rebate program. Best design practices include a simple rolling electronic reservation system that requires projects to be completed within a year of reservation. A requirement for a documentation of progress such as building permit and purchase of materials can prevent non-viable projects from clogging the queue.

Other recommendations include striking the allowance of used or refurbished equipment to qualify for the solar rebate. The rebate level is predicated on the cost of new solar equipment and therefore could over incentivize a system comprised of lower cost used components.

We also recommend requiring the use of qualified installers for the application for a solar rebate. A list of qualified installers is important to ensure quality systems and to create a solar industry of qualified parties. The Commission or other reputable body should adopt a policy for maintaining said list.

Another issue that arose from our evaluation of the proposed RES rules is in regards to net metering. For the purpose of the solar rebate, upon which many layers of the solar program will be built, a net metering tariff is required. Net metering is a cost-effective billing arrangement where customers-generators receive fair value for excess solar energy flowing into the grid. Missouri's net metering rules should be expanded to allow for the participation of larger cost effective solar systems above 100kW.

In closing, Vote Solar would like to thank the Commission for the opportunity to offer these comments. We encourage the Commission to hold the third and final workshop on the rule development so as to incorporate this current round of comments into the final rule. If our organization can be of any assistance to the Commission with more detailed analysis or models from elsewhere in the United States, we offer our services.

This is an exciting time for Missouri to embark on the development of a solar industry and to reap the benefits of clean energy and green jobs that are its rewards.

Sincerely,

A handwritten signature in black ink, reading "Claudia Eyzaguirre". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

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