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Missouri Public Service Commission

Workshop Docket # EW-2017-0245

200 Madison St

Jefferson City, MO 65101

Sun Solar is grateful for this opportunity to address the PSC Staff and Commissioners with regards to several important energy issues in our state. Workshop dockets like this provide an excellent opportunity for stakeholders to learn from one another with respect to issues we all care about to find common ground.

About Sun Solar

Sun Solar provides photovoltaic and energy efficiency solutions to our customers. We primarily serve the residential sector, though we also have a commercial division. Our company began working in Missouri in 2012 and have been growing steadily since then. We have offices in Houston, Springfield, St. Louis, Columbia, Kansas City, and Columbia, SC and employ somewhere between 120-150 Missourians depending on the time of year. In 2016, we installed over 8 MWs of distributed solar, and we are currently on track to surpass that number in 2017.

Comments Regarding the Regulation of Solar Energy

First and foremost, Sun Solar would like to point out that there is already a burdensome set of laws and regulations for the solar energy industry in Missouri. Relative to other states with thriving solar sectors, we have some of the strictest net metering and interconnection standards, as well as laws which severely limit the ways in which solar can interact in the marketplace.

Missouri’s current net metering law contains the following restrictions and growth prohibitions, which many other states do not have:

* 100kW per meter installation limit – This system size cap appears arbitrary. There are other restrictions in the law related to the customer-generator’s annual energy consumption which naturally impose system size limitations. The 100kW cap serves no purpose other than to stifle growth.

Solution - We would like to see this system size cap repealed entirely, leaving system sizing up to the customer and their annual electricity consumption.

* No more than 1% growth of solar capacity relative to a utility’s peak hour load per utility per year – Again, this appears to be an arbitrary growth limitation which we would like to see removed.
* No more than 5% of a utility’s previous annual peak hour load can come from solar – This number again appears to be chosen at random. There are several examples of utility grids in the US which have gone far beyond the 5% limitation and have not seen any legitimate transmission or distribution issues as a result. Hawaii, for example, didn’t begin to put limitations on their net metering program until 2014 when well over 12% of their customers had installed net metered solar systems.

Solution - This limit should be at least doubled, and when met should trigger a study to analyze the current impacts of distributed generation on the grid and ways to improve the grid to allow further penetration.

* Monthly limitation on customer reimbursement for energy given to the utility – The value of the energy that customers put onto the grid has been a subject of debate for many years. One study in Missouri showed that the value of distributed solar generation *exceeds* retail rates, for example (Net Metering: The Benefits and the Costs, MEI 2015). That being the case, we can be sure that the value exceeds solely the wholesale price of electricity – the utility is able to avoid many costs which would otherwise be socialized to all rate payers including line losses, transmission and distribution upgrade costs, environmental mitigation costs, etc.

Solution - Ideally, we would like to see a full third-party value of solar study done across the entire state which takes into account the costs and benefits to Missouri ratepayers for distributed generation. At the least, we would like to see customers who invest in solar be given full retail credit for all of the energy that they generate on an *annual*, not monthly, basis.

* Excessive redundancy in system design with regards to system disconnects – Currently, the vast majority of solar installations are designed to have multiple points of disconnect. The NEC’s chapter on solar requires “PV disconnecting means shall be installed at a readily accessible location either on the outside of a building or structure or inside nearest the point of entrance of the system conductors.” By this safety standard, nearly all commercially available inverters themselves would meet NEC standards, as the majority of them have external disconnecting means (many of which are lockable).

Inverters also are required by the NEC to shut down instantaneously should grid power no longer be present. This shutdown occurs in less than 1 second, guaranteeing safety for the utility’s equipment and personnel.

The freedom that Missouri’s net metering statute allows for utilities to require a “switch, circuit breaker, fuse, or other easily accessible device or feature located in immediate proximity to the customer-generator’s metering equipment that would allow a utility worker the ability to manually and instantly disconnect the unit from the utility’s electric distribution system” is almost universally met by standard solar equipment and anything the utility requires beyond that simply adds to the cost of a solar installation.

Solution – Arkansas has an excellent standard which would ensure all systems are as safe as can be while minimizing excessive additive costs. The state rules require an external manual disconnect which is accessible at all times, but allows flexibility if the following three requirements are met:

1) The inverter equipment must be designed to shut down or disconnect and cannot be manually overridden by the customer upon loss of utility service;

2) The inverter must be warranted by the manufacturer to shut down or disconnect upon loss of utility service; and

3) The inverter must he properly installed and operated, and inspected and/or tested by utility personnel.

Outside of the regulations that the PSC uses to oversee the solar industry, the majority of permitting authorities in the state have very strict regulations that solar installations must adhere to. Not only must our companies meet the electrical codes outlined by each jurisdiction and pass multiple rounds of in-person inspections, we must also go through similar processes for fire, structural, and any other code the city would have use adhere to (i.e. historical districts). Missouri’s codes for solar are some of the most stringent in the country, which guarantees an industry installing safe and thoroughly designed systems.

There are further opportunities in other areas of Missouri utility law that are preventing further solar growth. The prohibition on any entity aside from a regulated utility from selling any energy on a retail level, thus preventing consumers from entering into Power Purchase Agreements with a solar company is a prominent example. Enabling PPAs have been a proven example in other states of how opening up the energy market to consumer choice grows the economy and helps create more jobs. Most PPAs would still need to be net metered systems, which would ensure that they are subject to the same process of checks and balances as other systems.

Overall, we are grateful that we have gotten to opportunity to help thousands of Missourians save money on their electric bills and stabilize their costs for decades to come. While we continue to grow, we believe that there is still further room for improvement and that opening up the distributed solar market further would put downward pressure on the electrical market in the state, create more jobs that provide a great family-supporting wage, and attract more sustainability-minded companies to expand in our state.

Comments on PACE

Sun Solar offers PACE financing to our clients where it is available, both residential and commercial. It has been a useful tool in lowering the barrier to entry to those who wish to control their utility costs but don’t qualify for traditional financing. It’s also an excellent opportunity for financially savvy people to go solar while continuing to leverage their current cash position for other purchases – PACE financing is “below the line” debt and doesn’t count against one’s debt-to-income ratio.

While PACE is only statutorily authorized to finance clean energy projects, its oversight comes from financial regulators. The technologies that are being financed themselves are already regulated by the PSC where applicable. We believe that it is not the place of the Public Service Commission to regulate the means that customers use to finance their clean energy projects and should thus stay clear of regulating PACE.

Sincerely,

Mark Walter
Business Development