Executive Summary

More and more Americans every year are able to produce their own electricity. As the cost of solar continues to plummet, homeowners and businesses are increasingly interested in offsetting their electric use through the adoption of residential and commercial solar. Where net energy metering, or “net metering,” laws are in place, individuals, businesses, utilities, ratepayers, and society as a whole see substantial benefits. Net Metering is law in 38 states, Washington D.C., and four U.S. territories; seven other states have distributed generation compensation policies that go beyond net metering. Missouri utilities have been required by law to offer net metering to solar customers since 2008.1 However, Missouri’s Net Metering law can, and should, be updated in order for the state to maximize its energy independence, preserve basic energy fairness, and achieve the greatest economic benefits.

What Is Net Metering?

Net metering is the fair compensation to owners of distributed electricity generation (usually solar panels) for the many benefits that their electricity provides to the electrical grid as a whole. Net metered solar offsets the electrical needs of a residence or commercial space where the solar panels are sited, allowing the
property owner to reduce their monthly electricity bill. When the customer is producing more power than needed, the excess energy flows onto the grid where it is used by neighbors and other utility customers; the utility company then credits the generating customer’s bill for such excess. Net metering policies allow for solar owners to get the full value of the energy they generate themselves, while still staying connected to the utility grid for when they need additional power (e.g. at night). Net metering also creates many benefits for utilities and for other non-solar ratepayers by reducing the demand placed on the electrical grid during peak operating hours, and by reducing the need for utilities to generate and distribute power. Finally, net metering policies can decrease dependence on fossil fuels while stimulating local economies by providing technical, manufacturing, and maintenance jobs in solar production and construction.

The Net Metering & Easy Connection Act (Section 386.890 RSMo) permits any Missouri utility customer to generate their own energy as a means of offsetting their utility bill. The law applies to all electric utilities, including municipal utilities and rural electric cooperatives. Individual energy generation is most commonly achieved through the use of on-site photovoltaic solar arrays, but the law also allows for wind, solar thermal, hydroelectric, hydrogen fuel cells, and other sources certified by the Division of Energy. Missouri utility customers are permitted by law to install systems up to 100 kW, one of the lowest caps of any net metering policy in the nation. Missouri net metered customers are given a kWh bill credit for every excess kWh they provide to the utility. However, if the customer generated more kWhs than they received from the utility at the end of the month, the utility is only required to compensate the customer at the “avoided fuel cost” rate, or the money the utility saves for not having to produce those kWhs themselves. Unlike other states with an “annual true up” policy, Missouri’s net metering statute does not allow customers to roll over excess credits to future months, such as the winter months when solar production decreases.
Individuals and businesses utilizing net metering see substantial reductions in their annual energy costs. While net metering requires an initial investment in on-site solar panels, there are government sponsored programs available to consumers which can lower these costs. Property Assessed Clean Energy (“PACE”) provides net gains to customers by fully financing the initial cost of the investment through locally approved lenders.² That loan is subsequently recovered through a charge that is applied to a customer’s annual property tax assessment over the course of 10 to 20 years. Homeowners can also take advantage of the Solar Investment Tax Credit (“ITC”) to offset the cost of their arrays. The ITC offers a dollar-to-dollar income tax credit for up to 30% of the cost the solar system, but will only be available in Missouri until 2023.³ Expanding and renewing these tax credits is an appropriate direction for the Missouri Legislature to take in the coming years, as the benefits of net metering expand so far beyond the individual.

For example, the electrical grid and utility companies themselves see benefits via avoided energy costs, avoided capital investments, and avoided costs of environmental compliance. Additionally, net metered solar reduces financial risks, as the price of solar is more stable than the price of fossil fuels. Finally, a decentralized grid provides energy security. Decentralized grids reduce strain on the transmission system as well as the amount of energy lost over lengthy distribution lines. They also protect customers in one region from problems experienced in another.

A utility company’s entire rate base benefits when net metered solar supplements the grid as net metered solar reduces a utility company’s operating costs by reducing energy waste, the amount of energy generated by the utility, and the need for investment in power plants and other infrastructure. Net metered solar helps to maintain lower

² https://www.energy.gov/eere/slsc/property-assessed-clean-energy-programs
electricity rates for all customers, whether or not they participate in net metering themselves. A decentralized grid competes with otherwise monopolistic utilities to keep electricity rates low. Solar energy also reduces pollutants and avoids greenhouse gas emissions, contributing to the social and environmental health of Missouri.

Finally, Missouri’s economy is stimulated by the job creation that solar investment provides. Missouri’s clean energy sector, which grew three times faster than the overall job market in 2017, employs over 3,000 Missourians in solar.4 These numbers are expected to grow as more individuals and businesses invest in their own net metered solar. Again, it would behoove the Legislature to promote increased solar adoption throughout Missouri, taking advantage of the available tax incentives, in order to boost the energy security of both individuals and of the state, while simultaneously growing the economy and offering employment opportunities.

Thus, utility companies would be able to derive a greater amount of their energy needs from decentralized solar systems, enabling them to achieve their Renewable Energy Standard requirements (set at 15% by Missouri law). Utility companies could see greater, more useful energy generation by offering larger incentives to customers who install western-facing solar arrays. Western-facing solar arrays generate more power throughout the latter part of the day, which would greatly reduce strains placed on the grid during a time of peak demand. Policymakers should require utilities to compensate net metered customers with western-facing panels at the retail rate of electricity, rather than at the avoided cost, to encourage growth at residential and commercial sites.

Finally, policymakers should seriously consider extending the current tax incentives and solar financing measures. While concerns about the “duck curve” and “unfair” cost distributions have been floated, the current amount of net metered solar in Missouri is far too low for such concerns to carry serious weight and critics’ concerns of “subsidizing” solar for individuals and businesses do not outweigh the benefits like reduced strain the grid, distributed and secured power, and competitive electricity rates.

**Conclusion**

Net metering in Missouri is certainly a strong, sound policy - but there is room for improvement. Policymakers have several unique opportunities available to them to support energy independence, a decentralized - therefore safer - grid, and the Missouri economy as a whole.