



**Edison Electric
INSTITUTE**

Power by Association

**Written Comments:
Michigan House Bills 5861-5865**

Adam Benshoff, Executive Director, Regulatory Affairs, Edison Electric Institute

May 22, 2018

TESTIMONY

Good morning. Thank you for the opportunity to be here today. My name is Adam Benshoff and I am the Executive Director of Regulatory Affairs at the Edison Electric Institute.

For those that may not be familiar, EEI is the association that represents all U.S. investor-owned electric companies, international affiliates, and associate members worldwide. Our members operate in both restructured and vertically integrated settings, provide electricity for 220 million Americans, and located in all 50 states and the District of Columbia. In 2017, electric companies invested approximately \$113 billion—investment that went toward modernizing the energy grid and transitioning to even cleaner generation sources, such as solar and wind power. Such investment not only benefits customers by enhancing electric reliability and resiliency, but has a direct economic impact in every state as the electric power industry supports over 7 million jobs. We also supply nearly all of the wind and hydro and almost 70% of the solar power across the country as we continue the transition to a cleaner generation fleet.

As an industry representative, my goal here is simple: To bring a national perspective to the suite of bills under consideration by the committee and to provide some information that may be valuable for understanding both the original purpose and current limitations of net metering. My comments fall into three categories.

First, I'd like to talk about net metering as a policy and explain why so many states are choosing to move beyond net metering.

Policymakers across the country have started evaluating options beyond net metering on the grounds that the policy is neither efficient nor equitable. Seventeen (17) states

already have changed or replaced net metering, and at least another six (6) are reviewing net metering with the intention of amending or replacing the policy.¹ You may wonder: Why is there such widespread movement away from net metering? Answering the question requires first understanding net metering's original purpose.²

Net metering dates back to the early 1980s. The original intent was to incent installation of small wind turbines and solar panels at a time when these technologies were prohibitively expensive. Four decades later, we are in a different world—renewables costs have fallen dramatically and made these technologies accessible to a growing number of customers.

As a policy tool, net metering is quite simple. It was—and remains—a basic billing mechanism that allows a customer with distributed generation to “spin back” their meter to reflect the amount of electricity they produce. This blunt instrument allows distributed generation customers to see a reduction in their bills consistent with the amount of self-generation they consume.

However, it also pays them the same rate that they would pay the electric company for any excess power that they send back to the grid. That is, despite the fact that they are providing only generation, they are paid the full “bundled rate,” which includes not just the cost of power generation, but the entire suite of fixed costs associated with delivery power to the customer – even though they are using the distribution system to send this power to the energy grid. Therefore, when net metering customers are compensated at the retail rate, they are typically getting paid not just for the power they are producing, but for the distribution grid and services they are utilizing. The common argument of distributed generation advocates is that distributed generation customers provide greater benefits than they do costs. But this claim has not been adequately substantiated and is too often taken as truth without proper evaluation and verification.

Let's narrow the discussion to private rooftop solar customers for an example. It has been shown time and time again in studies across the country that private solar customers rely on the grid 24 hours a day, every day of the year—meaning they may, in fact, cost more to serve than customers without private rooftop solar.³ These

¹ See ongoing activity in Arkansas, Idaho, Kentucky, Louisiana, Michigan, and Montana.

² Contrary to the opinion of some, changing net metering or distributed generation compensation does not in any way remove the right of customers to generate their own electricity.

³ Some states are moving to put these customers in their own rate class because they are markedly different from their residential counterparts.

customers' reliance on both the electric company and the energy grid is not just at night or when clouds pass over the sun:

- These customers rely on the grid to push power back to the energy grid.
- They need the electric company and the energy grid to provide them power when their systems are not large enough to cover their energy needs.
- And they rely on the energy grid in intra-minute increments when appliances turn on and require more voltage than can be supported by their solar systems.
- All these instances of reliance are not few and far between. They are constant and put burdens on both the electric company and the energy grid.
- Yes, there are some instances where distributed generation can provide locational benefits to the energy grid. Locational benefits cannot just be assumed; however, they must be carefully determined by each electric company.

The amount that distributed generation customers are overpaid for their electricity does, in fact, constitute a subsidy. The extent of the subsidy is actually easier to see in states such as Michigan where a robust wholesale market for electricity exists allowing us to directly compare the administratively set NEM price and a market driven wholesale price for the same electrons. Subsidizing private solar through NEM is a policy decision states can make, but it's certainly not competition.

Second, net metering does, indeed, shift costs to those customers who do not have, do not want, or cannot afford private distributed generation.

The shifting of costs from distributed generation customers to those customers without these resources is quite real. It has been documented and verified in several stakeholder-driven and Commission-backed studies. In California, for example, a study conducted for the Commission found that, given the rate structure in the state and the NEM program design at the time, NEM (if left unchanged) would produce an annual net cost of \$1.1 billion by 2020—costs that would be borne by customers without private solar systems.⁴

Similarly, Arizona Public Service (APS) found in two separate cost-of-service studies (COSS) that private solar customers typically paid between 36 and 38 percent of the

⁴ E3 for the California Public Utility Commission, [*California Net Energy Metering Ratepayer Impacts Evaluation*](#), October 2013.

actual hard dollar cost to provide them service.⁵ Other APS customers—ones without rooftop solar systems—were bearing those costs.

Now, I realize that I am in Michigan today, where the penetration of distributed generation is quite low. However, I want to underscore an important fact: even a small adoption of distributed generation creates a cost shift. The gross impact may be smaller than in California, but the impact is true and real—especially for lower-income customers.

I would also like to note that multiple studies have found that private solar customers tend to be more affluent than those without private solar. For example, one study for the Louisiana Public Service Commission (LPSC) found that private solar customers within the LPSC's jurisdiction had median household incomes of \$60,460 relative to the statewide median household income level of only \$44,673.⁶ This and other studies indicate that the more affluent private solar customers are being enriched at the expense of lower income customers.

Finally, the well-established and universally practiced principles of rate design leave no room for inclusion of speculative economic and social benefits.

In several of the bills in question, there is an effort to push for a particular methodology for “valuing” distributed generation. Assignment of “value” when it comes to a certain subset of resources is problematic for a number of reasons. Rates have historically been—and continue to be—based on an electric company’s verifiable “booked” costs through cost-of-service ratemaking. Even with the rise of distributed generation, traditional cost-of-service ratemaking remains the primary mechanism for protecting customers by basing prospective electric rates on readily observable and verifiable costs. Cost-of-service rates have kept electricity prices low for American families. It also keeps prices low for large commercial, manufacturing, and industrial customers for whom electricity often constitutes one of their largest expenses and for whom small changes in the prices of inputs can affect their competitiveness at home and abroad.

Changing long-standing ratemaking practice to include speculative “value” elements—environmental, economic, health, or otherwise—is not appropriate because such

⁵ Direct Testimony of L.Snook at [Attachment LRS-04DR](#), Arizona Corporation Commission Docket No. E-01345A-16-0036, June 1, 2016.

⁶ Acadian Consulting Group for the Louisiana PSC, “In re: Examination of the Comprehensive Costs and Benefits of Net Metering in Louisiana” September 2015.

elements cannot be quantified in a verifiable way. Even if they could be, such a value-based approach is not reflected in the pricing for any other clean energy resource. Why should one technology (or a subset of one technology) be rewarded more for providing benefits that other technologies can provide and, often, provide better and more cost-effectively? The answer is: They shouldn't. This is why no Commission anywhere in the country has allowed the inclusion of economic and social externalities in the compensation of distributed generation.

In summary, I'd like to note that net metering has played an important role in the evolution of solar development in the United States. But, as a policy, net metering is the equivalent of looking in the rearview mirror. In this critical period of infrastructure transformation across the country, it benefits customers to have a regulatory structure that is dynamic and responsive. This can be achieved through strong energy policy and cost-based rate designs, both of which are fair to all customers and ensure reliability and affordability in the process

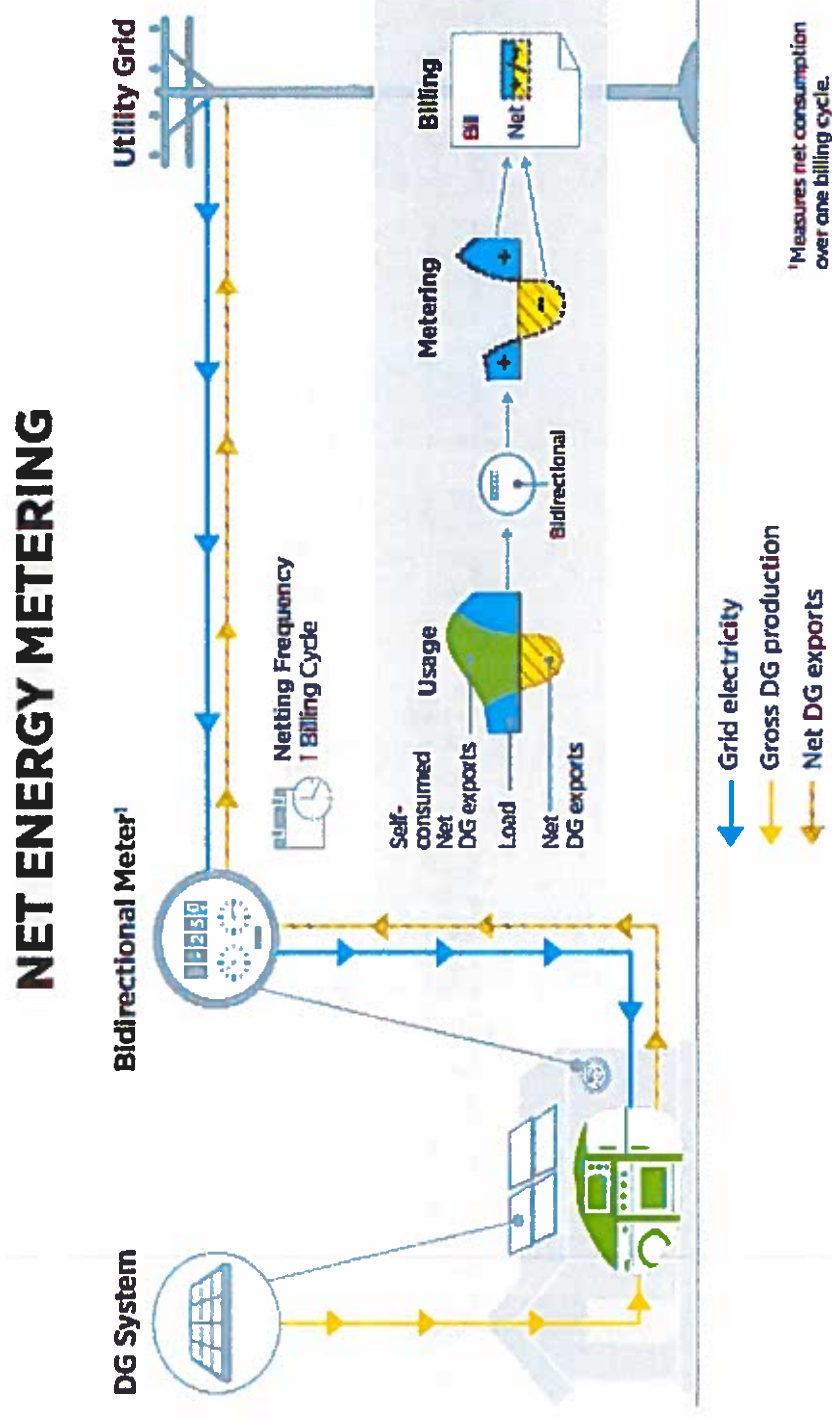
Thank you for allowing me to speak here today. I am happy to answer any questions you may have.

END REMARKS

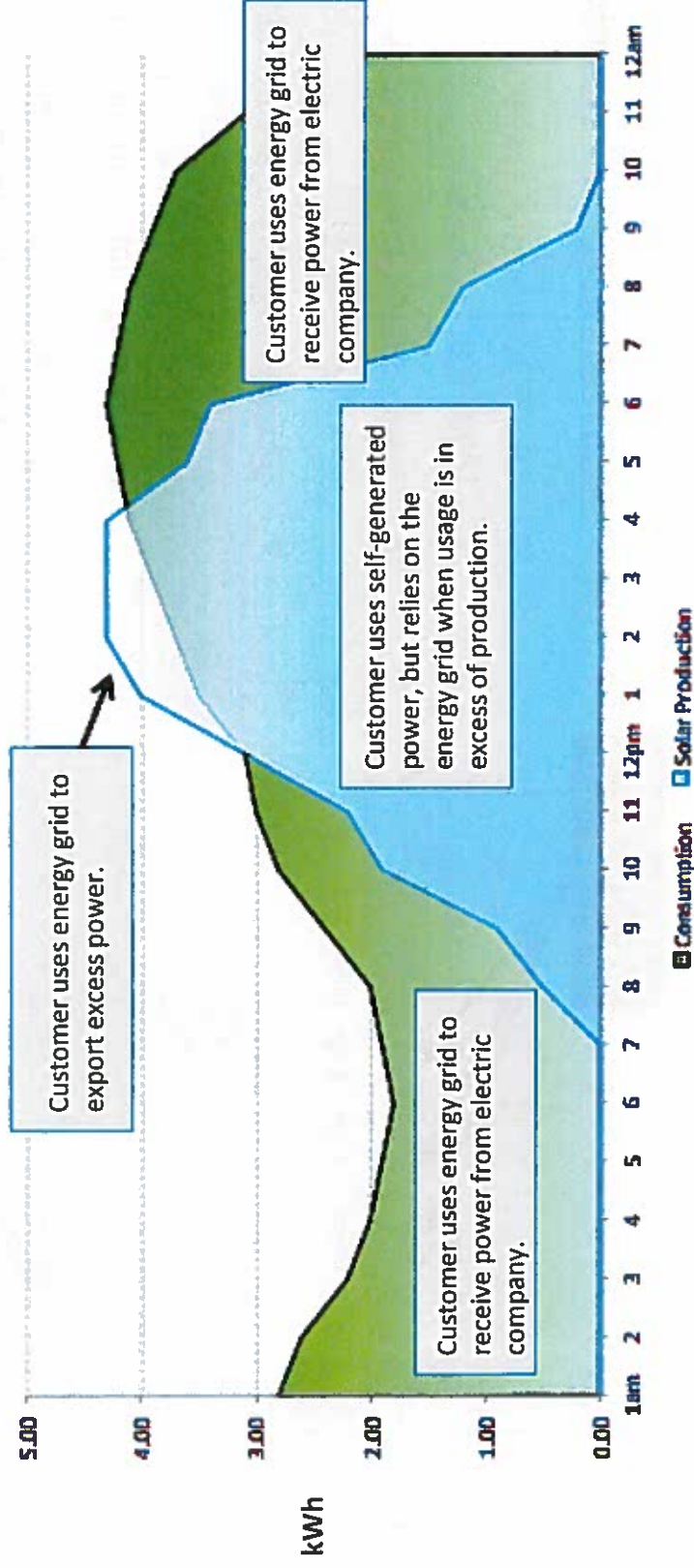
Understanding the Impact of Net Metering



How Does Net Energy Metering Work?

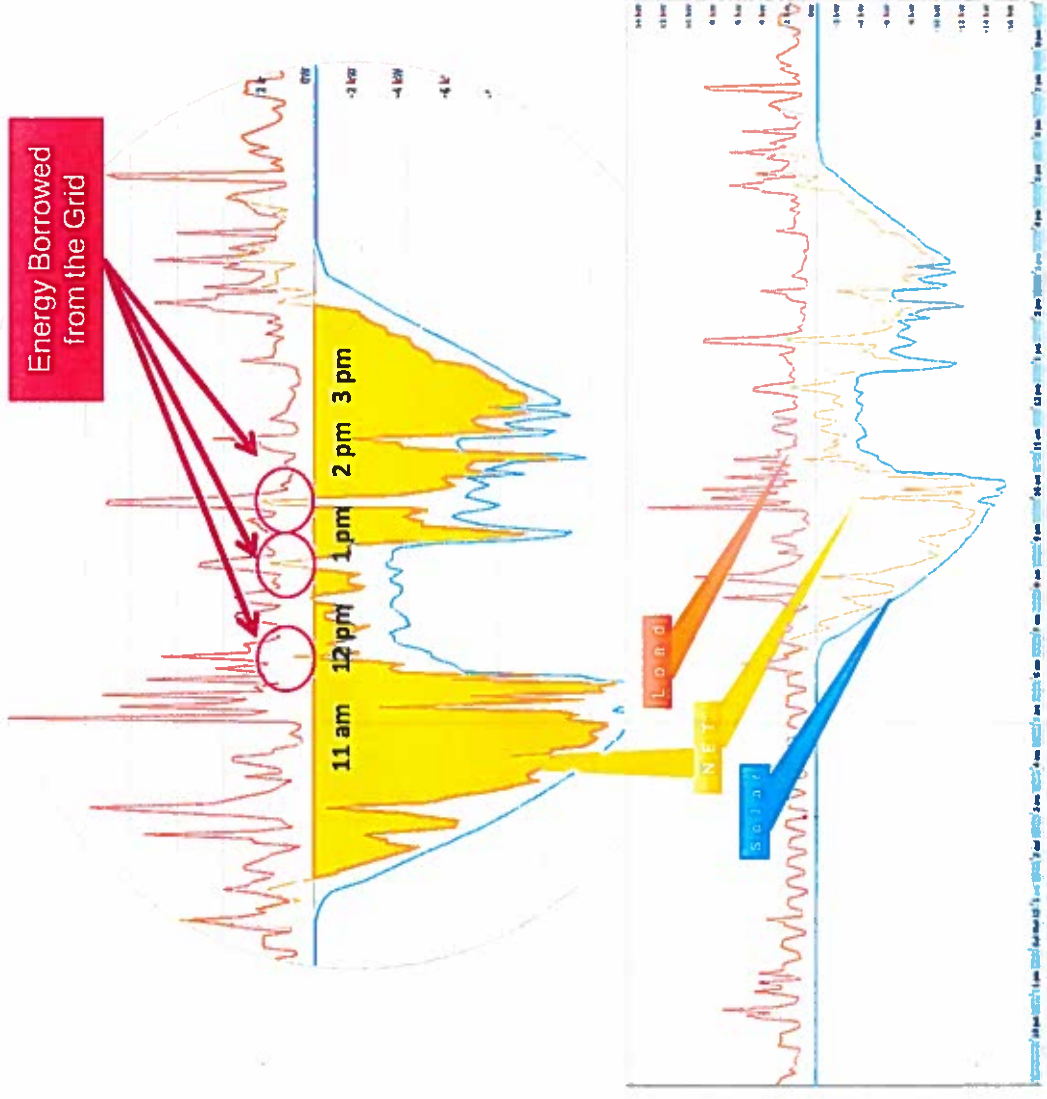


Private Solar Customers Rely on the Energy Grid Throughout the Day



Source: Value of the Grid to DG Customers, IEE, October 2013

Closer Look at Private Solar Reveals Greater Reliance on Energy Grid



Energy Profile of Private Solar Customer

- 19 kW residential system (Avg. size is ~5 kW)
- 1-second data reveals consistent use of energy grid
- Despite large PV system, customer still uses the energy grid morning and evening, during cloud shear, and during high loading times
- For average-sized systems (~5KW), reliance on the energy grid would be higher in both frequency and magnitude

Source: Real-time customer data used with permission from PEPCO/Exelon

Recognizing Challenges of Net Metering, States Are Changing Policies

