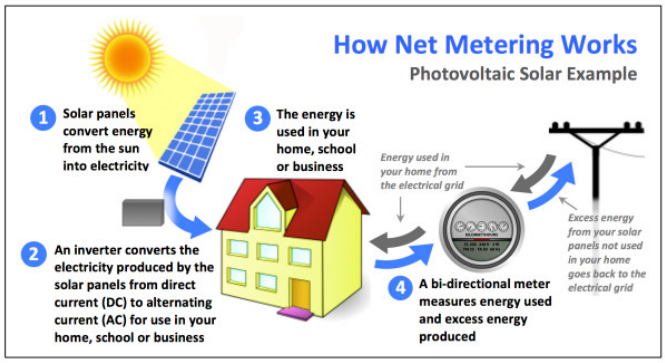
NET METERING 101

Net metering (NEM) is a policy that allows owners of solar energy systems to receive credit for electricity they export to the grid. Under net metering, solar customers reduce the amount of electricity needed from their utility by generating their own power, and utilities must buy any excess electricity not consumed on site – normally at a ratio of 1:1 (meaning: a kilowatt-hour exported equals a kilowatt-hour credited). State-mandated net metering rules exist in 41 states plus the District of Columbia,

For example, when a rooftop solar system produces more electricity than a home or business uses, the extra power is fed into the grid and can serve other customer loads nearby. When that happens, the customer's meter runs backwards, providing a credit that can be used during periods when power consumption exceeds solar energy generation. At the end of the billing cycle, customers are either charged for their net electricity usage or may have remaining credits that can be carried forward and applied in subsequent billing periods.



Basic Tenets of Net Metering

Net metering rules vary across the country, but generally include the following provisions:

- A requirement that certain utilities, such as investor owned utilities, offer net metering to customers
- A system size limit for residential (e.g. 25 kilowatts) and commercial (e.g. 2 megawatts) systems
- A requirement that utilities develop a net metering tariff that credits customers for any excess power production that exceeds on site power consumption, instructions for how utilities should carry over excess credits
- A clause that prohibits discriminatory rates as well as additional fees or charges for net metering customers

Benefits of Net Metering

Net metering is a critical policy for growing a strong, stable rooftop solar market as it provides the following benefits:

Local Job Creation

- The U.S. solar industry employs more than 208,000 Americans
- In 2015, solar employment grew 12 times faster than the national average employment rate and accounts for 1.2% of all jobs created since 2014
- Rooftop solar creates jobs that cannot be outsourced since installations must occur locally

Value for All Ratepayers & the Grid

Recent, independent studies show that net metering provides a financial benefit to all ratepayers and the grid:

- Maine study: found that distributed solar provides a benefit to all Mainers, with a value almost three times that of the retail rate
- Mississippi study: determined that net-metered solar projects would deliver a financial benefit to all Mississippians, and put downward pressure on electricity rates
- Nevada study: found that net-metered systems installed from 2004-2016 will provide $36 million to non-participating ratepayers over the systems' 25-year lifetimes
  - Net metered systems provide electricity generation at or near the point of consumption, which can reduce transmission and distribution costs as well as line losses
  - Net metered systems can also offset expensive power generation by producing electricity during periods of high demand when power is most costly

What Are Demand Charges?

Utilities across the country are attempting to change the way they charge residential customers for electricity. Rather than primarily billing customers based on the amount of electricity they consume, they are proposing to also bill them for their maximum electricity usage within a certain time period with a "demand charge." This would be like going to a coffee shop for a medium coffee but being charged for a large because that's the size you purchased the day before.

Traditionally, electricity bills reflect the total amount of electricity customers consume. The traditional rate structure is easy for customers to understand. They know the more they consume, the more they'll pay.

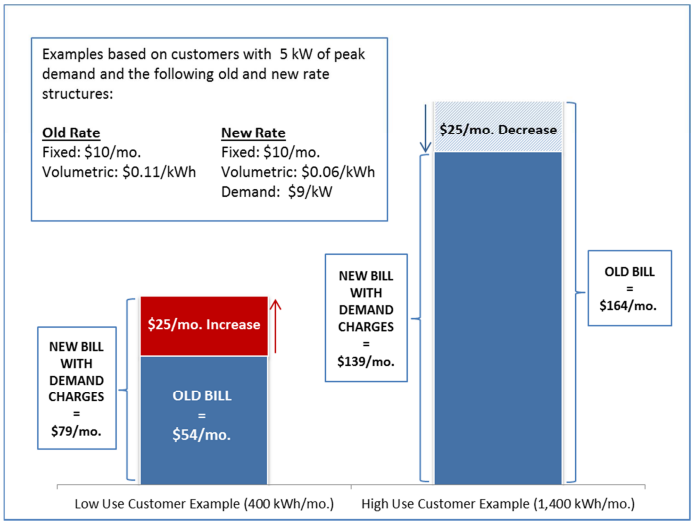
Demand charges completely change that billing structure. Instead of just being billed for the total amount of energy consumed, customers are also billed a fee based on a customer's maximum electricity usage during each month, averaged over a short period of time (typically 1-hour, 30-minute, or 15-minute intervals).

Demand Charges Are Complicated

If these new charges sound confusing, it's because they are. Demand charges are difficult for residential customers to understand and control. To avoid paying high demand charges each month, customers would need to closely monitor their electricity usage and limit simultaneous use of energy-intensive activities. For example, running multiple appliances at once, such as an oven and dishwasher, could trigger a customer's maximum demand for the month, setting the demand charge.

Demand Charges Are Unfair

Demand charges financially penalize customers for their highest demand generally over a 15- or 30-minute period, regardless of how much they reduce their energy usage every other minute of the month. So a customer whose electricity use stays fairly consistent over the course of the month could have the same demand charge as a customer who is on vacation all but one day during the month. Additionally, recent analysis suggests that demand charges shift costs to low use customers while reducing costs for high use customers.[1] Low energy users can include low-income or elderly customers who cannot afford to see their utility bills increase due to high demand charges.



Demand Charges Discourage Energy Conservation and Distributed Generation

Demand charges are being used to effectively limit customers' ability to choose their energy supply and to manage their energy costs. Customers with energy efficient homes or solar panels on their rooftops will likely see higher electricity bills due to new demand charges.[2]

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[1] Lazar, Jim. "Use Great Caution in Design of Residential Demand Charges," Natural Gas & Electricity Journal, November 2015, available at: https://www.raponline.org/document/download/id/7844.

[2] Bird, L.; Davidson, C.; McLaren, J.; and Miller, J. "Impact of Rate Design Alternatives on Residential Solar Customer Bills: Increased Fixed Charges, Minimum Bills and Demand-Based Rates," National Renewable Energy Laboratory, September 2015, available at: http://www.nrel.gov/docs/fy15osti/64850.pdf.