

Understanding Net Metering

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What is Net Metering?

Net metering allows an owner of rooftop solar panels to participate in the electric grid as a distributed energy producer. When the solar panel produces more power than the home is using, the power is sent back onto the grid to be used by other customers. The meter “spins” backwards, subtracting the power sent onto the grid from the total power used by the consumer. That is how net metering gets its name — consumers are charged only for their net electricity use.

The Regressive Effects of Net Metering

A chief concern with net metering is that these state-level policies are regressive, a term that refers to policies that disproportionately help the wealthy, disproportionately harm the poor, or both. Net metering is regressive in both of these ways. The large upfront costs of installing solar panels, combined with the fact that most homeowners tend to be wealthier than renters, mean that net metering primarily benefits the wealthy.

Net metering can result in a reverse Robin Hood effect when households who cannot afford solar panels subsidize those who can afford them. Many policymakers and utilities are concerned that maintenance costs will be shifted onto non-solar customers and that net metering may require increased electricity rates. Because low-income individuals spend a greater proportion of their earnings on energy needs, they are disproportionately impacted by increased energy costs and cost shifting created by net metering.

How to Limit Regressive Effects: Pay the Wholesale Rate

One of the simplest ways of mitigating this regressive effect is by changing the compensation level for net metering from the retail rate to the wholesale rate. The retail rate includes the costs of distribution, transmission, and generation, while the wholesale rate largely reflects only the cost of generation. Electricity providers buy electricity at the lower wholesale rate and then charge a markup that then pays for the grid’s maintenance and repairs. A simple way to think about these two rates is that it is the difference between buying a small amount of groceries at a store (at the retail rate) compared to buying a large amount directly from the producer (at the wholesale rate). Figure 1 below shows a high-level breakdown of these two types of electricity rates.

The difference between the wholesale rate and the retail rate can be significant. In Utah, for example, the retail rate is between 10 and 11 cents per kWh and the wholesale rate is about three cents. Figure 2 compares the retail rate and wholesale rates in Utah.

Since wholesale rates reflect the cost of electricity generation, crediting or paying rooftop solar customers at the same rate other generators receive is a simple alternative to retail net metering rates. Although this will entail a longer repayment time period for those investing in solar, paying the wholesale rate instead of the retail rate will insulate non-solar customers and low-income individuals from retail rate net metering’s regressive effects.

Figure 1: Retail Rate Components Compared to Wholesale Rate Components

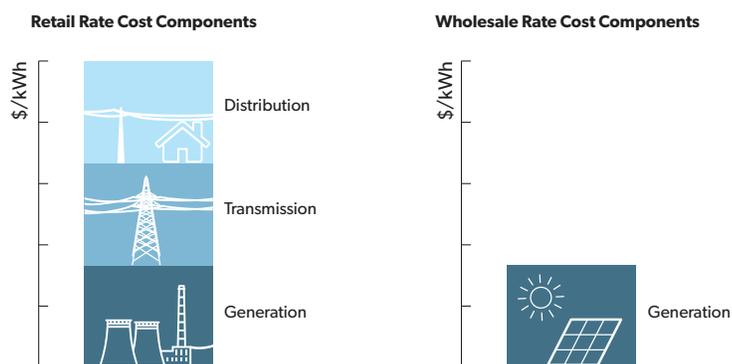


Figure 2: Utah’s Wholesale Rate and Retail Rate Comparison

