

Dear House Energy & Digital Infrastructure Committee,

I would like to offer comments on S.50, the proposal to increase the net-metering registration process from 15 kW to 25 kW. On its face it looks like a good idea. It offers opportunities to address about net-metering that are worth looking at.

My observations are based on living off-grid with solar since 1989, which has unintentionally given me insights into how renewable energy systems work. In my system (which has lead acid batteries and a backup gasoline generator that has also been propane in the past), I must rely on the solar power when it is being generated, and store it for cloudy and dark periods. When the batteries are low, I must run the generator to charge the batteries.

In Vermont's current net-metering program, people who generate electricity with solar panels get on-bill credits which can be banked if not used at the time of generation, and can offset winter bills (when it is cloudy for long periods of time) and nighttime consumption for heat pumps and EV charging. There is no connection between how much power is generated and consumed, leading to the potential for people who can afford it to overbuild their system. Net-metering customers are getting the high retail price for all the electricity generated, even when it is not used at the time it is generated.

Some states set a cap on the credit rate for excess generation, with lower compensation. I did a quick search, below is just one thing that came up. As part of S.50, please consider making the net-metering system more fair, especially for non-net-metering customers to whom these higher costs have shifted, raising their electric bills while net-metering customers who produce more than they use are receiving substantial benefits. S.50 currently creates an opportunity for overbuilding a system, banking more credits which can be used in winter and given to friends and family, that will result in cost-shifting to other non-net-metering customers.

Other states, notably California, have addressed excess generation through dramatic reductions in net-metering rates.

Summary: In a real renewable energy system, electricity generated needs to be used at the time it is generated, or stored in batteries. Battery storage has limits, measured in hours (lithium ion) or days (lead acid). — not months, which is how current over-sized net-metering systems are being compensated. Vermont has an opportunity to address the inequities that were built into the current system.

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<https://solarunitedneighbors.org/resources/net-metering-what-you-need-to-know/>

## **System capacity limit**

Utilities or public commissions often limit the total system capacity (system size) you may install. These policies usually cap a system's production at a certain percentage of your yearly electricity consumption, often between 100% and 150%.

### **Excess generation credit rate**

When your system produces more electricity than you need, it's called "excess generation" or "excess production." And thanks to net metering, your utility has to compensate you for it.

Typically, utilities will compensate you for any excess electricity you produce on a 12-month cycle. Where this is the case, you can use your excess production credits for up to a year.

The rate of compensation for this excess solar production varies greatly between utilities. Many utilities credit excess generation at the full retail rate, enabling the "one-to-one" crediting discussed above.

However, some utilities are moving towards crediting excess generation at a lower rate. Where this is the case, you'll want to install a system that will enable you to consume as much of your solar electricity on site as possible.

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