

ACORN ENERGY CO-OPERATIVE  
Comments to S. 230 to the Vermont House Natural Resources Committee  
April 14, 2016

My name is Benjamin Marks, thank you for the opportunity to address the House on S.230. Like the members of this committee, I wear many hats. I am an attorney who principally practices regulatory law before the PSB. I represented the town of Cornwall in its recent public response regarding the Vermont Gas International Paper pipeline. I also chair the Cornwall Select Board, although I am not here to speak to you on the Town's behalf. I also installed a 7 kW solar system at my home in Cornwall and have some sense of what the motivations are for homeowners to make similar installations.

However, I am here to speak on behalf of the Acorn Energy Cooperative of Middlebury (AEC), on whose Board I sit, and which has developed an innovative community solar model, one that will be adversely affected by S.230 and by PSB Rule 5.100, with which this bill is linked.

Over the past five to seven years, something amazing has happened, is happening, right outside those doors. Vermonters have voluntarily invested millions of dollars of their own money in building numerous distributed, green, electricity-generating facilities, which are producing their greatest amount of energy at the state's summer peak.

I would submit that they have done this because they prefer to be owners of renewable energy facilities rather than renters, and because we have been in a sweet spot where federal and utility-based incentives made these investments economically attractive. The investment in small and medium scale solar by private homeowners and developers has drawn into the state millions of dollars in federal tax credits (e.g., the 30% ITC), which greatly reduces the high capital costs of still-emerging power production technologies. Just as we encourage investment by utilities in the state's infrastructure, we should also encourage investment by private individuals in the state's clean energy future. For the past five years we have had that encouragement. Well, that is about to come to a halt.

The current bill, S.230, reflects fear: fear that the character of our state is changing, fear that we won't like what the future looks like, fear for our landscape, our farmland – and I am sympathetic to those fears. But S.230, as drafted, creates winners and losers; if you are lucky enough to be a homeowner with a south facing roof or some unshaded land, you may be a winner. If you live in the woods, or in an apartment, or if your roof faces the wrong direction, after the passage of S.230 (and the approval of Rule 5.100 across the street), you are destined to be a loser, and unlikely to personally own a piece of the solar revolution (i.e., group net metering projects).

Community Solar—true community solar, in which Vermonters actually own electricity generation credits from offsite panels that power their homes—can help mitigate the problem that S.230 creates by allowing Vermonters to aggregate their resources. I propose two changes to S.230 that would encourage real community solar in Vermont:

- **Exempt residential and community solar from the penalty of retiring/retaining RECs**, whether installed on a single home or in group form. Forcing a potential small scale solar system investor to give up his RECs makes no sense. It is a tax in the wrong direction and will decrease the flow into Vermont of federal tax incentives to prospective solar system purchasers and will set back Vermont's goal of achieving 90% renewable energy by 2050. Changing the current system of subsidies for small

solar without considering the motivations of individuals and businesses making those investments risks all of the benefits that the federal investment tax credit has conferred upon Vermonters. Because the PSB and DPS are focused mainly on utilities and ratepayers, they may have missed what driving private investors away from these projects will cost the state. Only the legislature can balance the needs of taxpayer, ratepayers, and utilities; but that balance is lacking from the current proposals.

- **Create an additional “favored” group of “true” community solar projects,** in which Vermonters can aggregate their hard-earned money and invest it together.

I’d like to discuss what true community solar would look like. From Acorn Energy Co-op's perspective, it is a series of group projects with the following attributes:

- Ownership of solar panels by local Vermont taxpayers or entities owned by Vermont taxpayers whose capital is aggregated, either using the Vermont Small Business Offering Exemption or otherwise;
- Federal tax incentives that stay in Vermont with Vermont taxpayers – whether businesses or individuals;
- Projects that are installed by Vermont solar installers; and
- Projects that are sited so as not to intrude on neighbors and sensitive viewscapes, and that fit within the criteria established by the host town.

As S.230 stands, Vermont businesses and individuals who don’t meet the siting eligibility requirements will have no way to participate in the solar ownership future. While there is mention of residential solar in the list of preferred sites, there are many Vermonters who cannot build residential solar. A short and incomplete list of those includes: renters, those living in apartments, those living on small or poorly situated lots, or those owning roofs that don’t face south. Even as the Vermont Small Business Offering Exemption and the existing net metering tariffs have made innovative structures like the Acorn Energy Coop’s community solar project possible, S.230 and Rule 5.100 will eliminate the financial viability of those projects.

The legislature should want Acorn Energy Co-op and people like us to continue investing in community solar. But forcing the sale of RECs drives away environmentalists, and penalizing investors for REC retention drives away economic rationalists. You are left with the folks who were building solar before the solar adder was put in place, which is a very small number of people: wealthy environmentalists or true believers who can afford to ignore the low rate of return. **Remember: it took over a decade to get to the original net metered cap of 5% of peak load and fewer than 2 years to go from 5% to 15%.**

It is certainly possible to reach the state’s goal of 90% renewables by 2050 without medium sized or residential solar. But the alternative is larger projects that are difficult to hide and that will exclude individual or aggregated ownership. You can hide a 150 kW project in the middle of an apple orchard, behind a berm or barn. We hid our first project behind the police station in Middlebury and few even know it is there. But you cannot hide a 5 megawatt solar project or keep it from changing Vermont’s landscape. It is our position that smaller distributed projects that are owned by community members ought to be a part of this mix.

In Acorn Energy Co-op's current model, a Vermont business with a need to shield income from taxes (our Series A investor) invests approximately 55% of the money to design, permit, and construct a 150 kW solar array installed by a Vermont solar installer. Off-takers (our Series B investors under the Vermont Small Business Offering Exemption) invest the remaining amount in return for credits on their electric bills. The Series A investor is repaid using federal tax credits and the accelerated depreciation that solar equipment is allowed, and then transfers the array ownership to the Series B investors for a nominal amount.

Winners under this model are: 1) homeowners and businesses who now own their green electric production, 2) a Vermont business who has shielded tax obligations with a federal subsidy, 3) Vermont solar installers, and 4) the state as a whole, which is that much closer to its green energy goals.

We hope that this win-win-win-win strategy is something that the legislature would want to encourage as we work towards achieving our ambitious 90% renewables by 2050 goal.

Solar Adder (or Adjustor). AEC has watched the solar adder go from 6 cents to 5.3 cents for home systems to 4.3 cents for group systems, and we have generally understood that such gradual reductions reflect decreased system capital and operating costs. We were surprised when recent proposals accelerated those reductions and even caused the “adder” to go negative. Our cost models project that, with current building costs, we could not afford to build another project that would be economically viable if these new solar adders take effect. We ask that if the solar adder is to be reduced, that the legislature adjust it gradually at the same pace as industry costs decline. Finally, penalizing REC retention rather than giving incentives is counterproductive and will severely undercut the solar industry.

Enacting S.230 as proposed in conjunction with Rule 5.100 is likely to discourage small to medium community solar projects because investors in those smaller projects will not fund them. What will be left will be large, centralized solar projects. Acorn Energy Coop believes the smaller more distributed community model is one that that the state should both embrace and encourage.

Thank you.