



April 9, 2015

Office of the Public Advocate Testimony on LD 1073 “An Act to Lower Energy Costs and Increase Access to Solar Energy for Agricultural Businesses”

Chairman Dion, Chairman Woodsome and Members of the Energy, Utilities and Technology Committee,

The Office of the Public Advocate testifies in opposition to 1073, An Act to Lower Energy Costs and Increase Access to Solar Energy for Agricultural Businesses. The bill singles out a specific category of customers for an increased level of subsidy to promote solar installation, increasing costs to all ratepayers without any corresponding benefits to those ratepayers. More broadly, we have concerns about using net metering as the foundation for the state’s solar policy.

The bill provides for subsidies to be paid by all ratepayers to promote installation of solar for “agricultural business.” These subsidies take two forms:

1. A solar energy rebate to be administered by the Efficiency Maine Trust, funded by an assessment on transmission and distribution utilities of 0.005 cents per kilowatt-hour for an approximate cost of \$525,000 annually.¹
2. Elimination of the current limitation that requires net metering credits to expire after one year. Customers will be compensated for any net metering credits that have not been used by end of the year at a wholesale electricity rate to be determined by the Commission.

The bill is silent as to why “agricultural businesses” alone should be provided this significant additional incentive or what, if any, benefits this additional cost will provide to customers who do not qualify as agricultural businesses. We are concerned that the policy would result in an inequitable shift of costs and benefits between one category of utility customers and all other ratepayers.

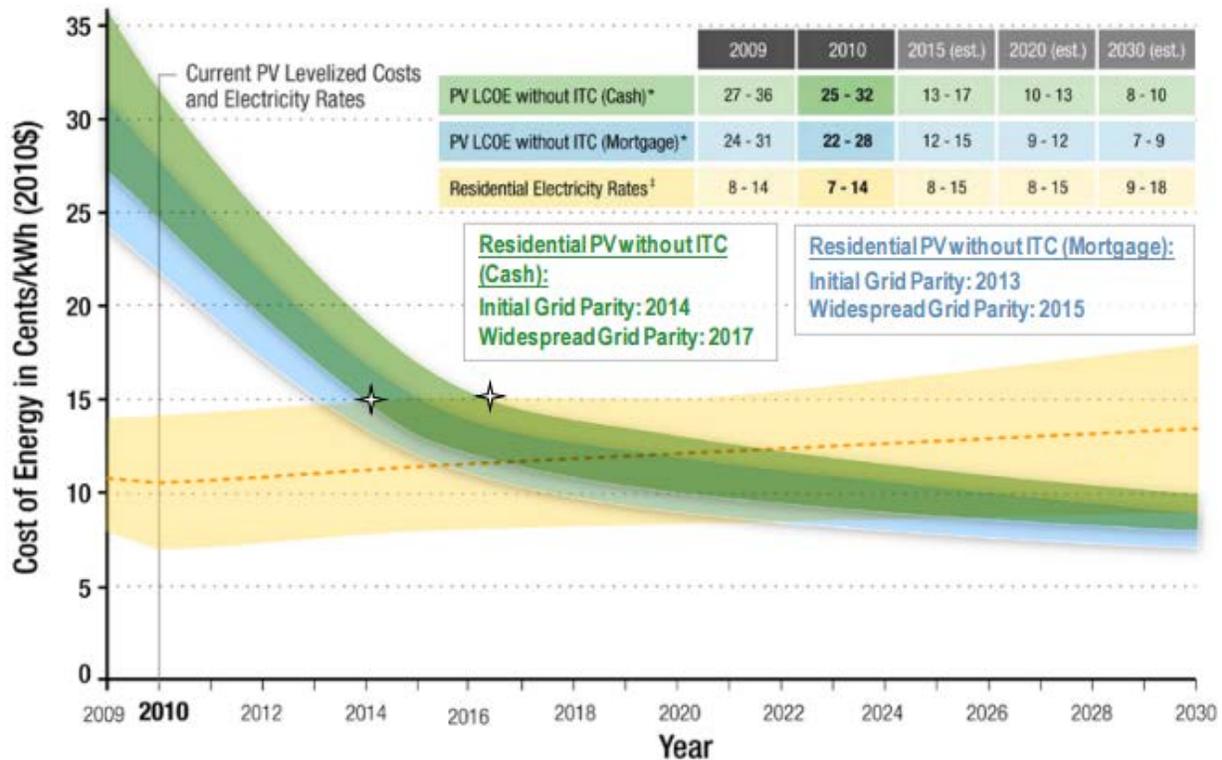
More fundamentally, we have concerns that the bill builds on the state’s existing net metering policy as the basis for expanded subsidy to promote distributed solar generation.

¹ Electricity use by Maine’s investor-owned T&D customers was about 10.5 billion kWh in 2014. 10.5 billion x .005 ¢/kWh = \$525,000.

The choice to subsidize a specific type of generation, or to set a goal of a certain level of capacity, is a policy decision for the Legislature, and the Commission’s recent value of solar study shows that solar can offer real benefits to ratepayers as a whole. However, there are less costly and more equitable ways to provide such subsidies and achieve those goals. Net metering raises real equity and cost concerns as the cost of solar installation and the level of adoption increases.

Net metering has its roots in a pre-restructuring environment: the Commission first adopted net metering in the early 1980s as a way to reduce costs for very small qualifying facilities—mostly small hydro. At the time, federal law required the utility to buy the output of these facilities at the utility’s avoided cost. It was modified to fit restructuring in the late 1990s, as a simple intuitive measure to promote small renewable systems through a subsidy paid by the utility and its general body of ratepayers. For most of the history of net metering in Maine, the use of net metering by solar PV—and any rate impact—was minimal because the retail rate was far lower than the levelized cost of PV.

As the chart below² shows, this is less and less true.



The PV cost information in this table is from 2011, but the general trend has continued.³

² National Renewable Energy Laboratory, An Economic Analysis of Photovoltaics versus Traditional Energy Sources: Where are we Now and Where Might We Be in the Near Future, Slide 24 (2011) available at <http://www.nrel.gov/docs/fy11osti/52311.pdf>.

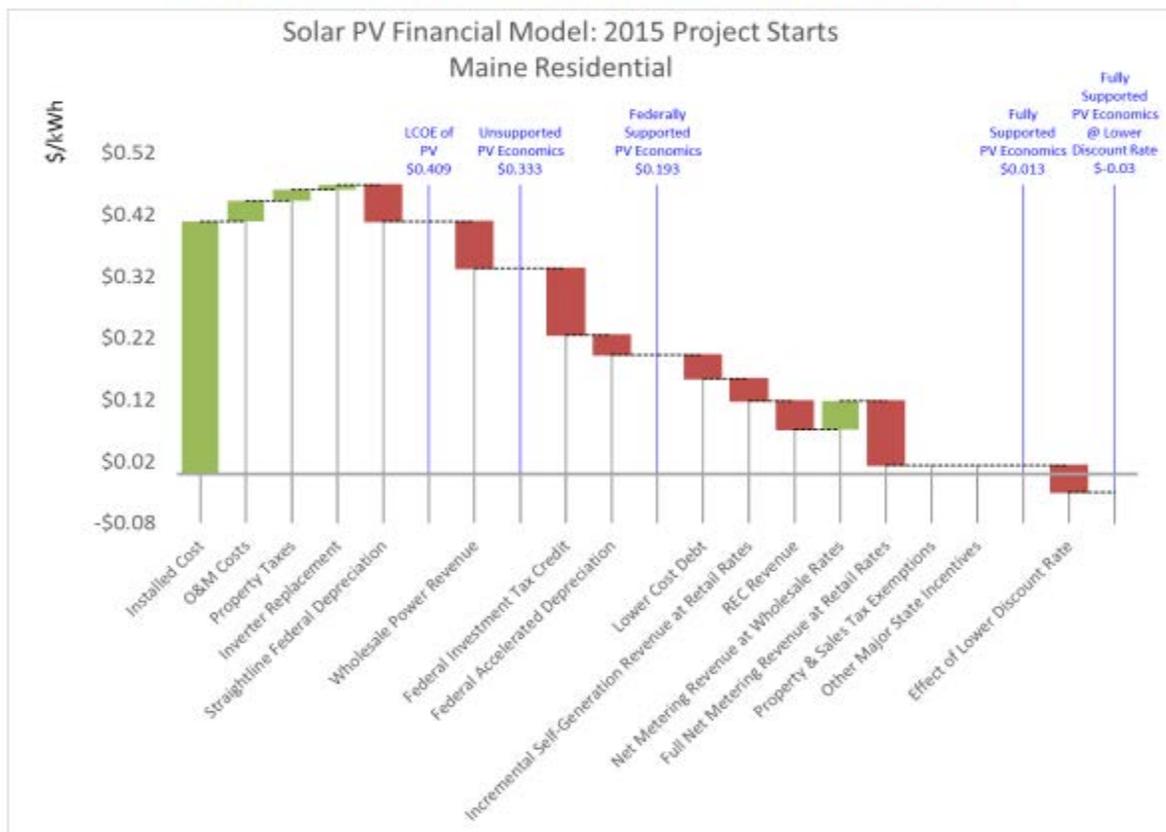
³ US Department of Energy, Photovoltaic System Pricing Trends: Historical, Recent and Near-Term Projections <http://www.nrel.gov/docs/fy14osti/62558.pdf>

At some point, these two lines will converge, then cross: the levelized cost of solar PV will be less than retail rates, at which point a net metering customer will make a profit on their solar production. This drives widespread adoption of solar PV. This trend has struck first in those states with high electricity prices and abundant sunshine (California, Hawaii, Arizona), but if these trends continue it will eventually happen everywhere. ⁴

Once these lines cross, and as they diverge, net metering becomes increasingly lucrative for solar energy producers. It also means that all ratepayers are paying more than is necessary to shift the grid to solar energy, assuming that is the goal. Even prior to restructuring, regulators placed limits on the level of profit a vertically integrated utility could earn on its generation. Net metering customers are subject to no such limitations.

We are not yet at this point in Maine. The chart below is taken from a study done by ICF International for ISO New England in February of this year.⁵ It shows that under current policy in Maine, residential solar PV is more or less a break even proposition in Maine.

Exhibit A-4: Maine Residential PV Drivers, 2015 Project Starts



⁴ For a broader, national analysis of this issue by a solar advocate, see <http://ilsr.org/future-net-metering-distributed-solar/>

⁵ http://www.iso-ne.com/static-assets/documents/2015/02/icf_economic_drivers_of_pv_report_for_iso_ne_2_27_15.pdf

The calculation is by its nature not precise, but it provides a rough approximation that generally accords with what we have heard from solar providers. The levelized cost of solar PV, after all costs and subsidies are taken into effect, is close enough that small changes in installed cost, projected retail rates, the level of subsidy, or the assumed discount rate can make the economics profitable. We are seeing this in the growth of net energy billing customers.

CMP Net Energy Billing Customers, 2012-2013

	NEB Customers	Total Capacity (kW)	Total Electricity Generated (kWh)
2012	1,007	5,425.26	6,738,258
2013	1,302	7,587.56	9,357,606
2014	1,604	10,744.92	12,833,620

Much of the national debate around net metering has focused on the so-called “utility death spiral” and how utilities have responded with changes to make it less economic to install solar (increased fixed charges) or place restrictions on the ability of customers to install solar. This is much less of an issue in Maine, as a result of restructuring. Increased production from solar doesn’t threaten the value of (or profits from) from the utility’s existing or planned generation investment, because Maine’s investor-owned T&D utilities don’t own generation. There is some potential erosion of T&D revenues, but the utilities will be made whole, either through a decoupling mechanism like CMP, or through more frequent rate cases.

Any shortfall in collection of T&D charges will be paid for by other ratepayers. At scale, this could create significant inequities, but at the moment we’re nowhere near scale. As solar installations grow—and they will—or T&D rates rise (as projected), this potential cost-shifting will become more and more significant. And at some point we will need to think about whether this is equitable or not.

As this committee thinks about building a solar policy for the State of Maine, I urge you to think about how to build a policy that is sustainable over the long term. Net metering is a poor foundation on which to build the state’s solar policy. Those states that have built their solar incentive programs on a foundation of net metering, notably Massachusetts, are now reconsidering their commitment to those policies.

Maine has the advantage of not having been a leader, and learning the lessons of others. The Value of Solar Study recently completed by the Commission provides a host of possible alternatives to net metering, that address the shortcomings described above, such as a feed-in tariff or value of solar tariff. It also provides useful, Maine-specific information that could be used to develop a solar policy that allocate costs in a manner that equitably benefits all ratepayers.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Timothy R. Schneider".

Timothy R. Schneider
Public Advocate