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Office of the Public Advocate Testimony in Opposition to LD 1263 "An Act to Create Jobs and Promote Investment in Maine's Economy through Increased Access to Solar Energy"

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

The Office of the Public Advocate testifies in opposition to LD 1263, An Act to Create Jobs and Promote Investment in Maine's Economy through Increased Access to Solar Energy. The bill continues and expands upon net metering as a foundation for Maine policy incentivizing solar generation. This, coupled with the additional solar incentives proposed in the bill, would result in a solar policy that would benefit net metering customers at the expense of all other customers. However, we believe the bill provides an important and thoughtful first step in developing a sustainable solar policy for this state, and look forward to participating in the efforts to achieve this goal.

I. The bill includes measures that would expand net metering in a manner that would exacerbate concerns about cost shifting and appropriate pricing.

In my prior testimony on LD 1073 I described the risk to electricity customers of using net metering as the foundation for the state's solar policy. Specifically, because net metering customers are credited at the full retail rate for electricity produced by their facilities, they contribute less than other customers to the costs of the transmission and distribution system, resulting in potential shift of costs from one set of customers to another. And, as the installed costs for solar PV decline and retail electricity prices increase, net metering will lead to electricity customers paying more than is necessary for solar

generation. While neither concern is currently a significant issue in Maine, experience in other states has shown that it is likely to be in the future.[1]

While the bill introduces a new incentive structure for solar generation in the form of solar renewable energy credits (SRECs), it continues to rely on net metering as a core component of the state's solar incentive policy. The bill also expands net metering in significant ways, by:

- Increasing the current limits on virtual net metering from 10 customers to 50 or more; and
- Raising the cap on the size of a facility eligible for net energy billing from 660 kW to 1 MW.

Other provisions, such as reserving full SREC credits for facilities with shared ownership, also promote virtual net metering. These provisions, while potentially offering economies of scale that could lower the costs of solar installation for participating customers, will exacerbate the risk of cost shifting associated with using net metering to incentivize solar.

II. The solar incentives proposed in the bill would benefit net metering customers at the expense of all other customers.

Much of the bill is devoted to creating a market for solar renewable energy credits (SRECs) to provide additional incentive for new solar energy generation facilities. Based on our preliminary analysis, the SREC targets set forth in the bill would support the installation of about 16 MW of new solar generation per year from 2016 to 2019, and about 32 MW per year from 2020 to 2022. Estimating the actual cost of these incentives is difficult to do reliably, because one of the defining characteristics of SREC markets to date is their volatility.[2] In their pure form the price of an SREC is set based on the supply of solar energy production in the market. Assuming that the market is undersupplied initially, the price would be at or near the alternative compliance payment initially, and would drop after

[1] *See* , The Future of Solar Economics and Policy, http://ilsr.org/future-net-metering-distributed-solar/.

[2] For this reason, if the Committee pursues and SREC-based incentive program, it should consider appropriate consumer protections to ensure that customers understand the potential for the economics of their solar installations to shift with changes in SREC prices. *See* Solar panel investors upset as SREC values drop, SOUTH JERSEY TIMES, (Oct. 23, 2011), http://www.nj.com/gloucester-county/index.ssf/2011/10/solar_panel_investors_upset_as.html

that. We would be happy to work with other parties to provide the Committee with estimates of the likely cost impacts under various scenarios.

As the Commission's value of solar study demonstrates, the addition of solar generation to Maine's electric grid also provides quantifiable benefits to customers that should be considered alongside these costs. But it is not enough to simply compare the total benefits and costs. The allocation of these benefits and costs is important in determining whether a policy is equitable, and ultimately, sustainable.

The tables below assigns the various benefits identified in the Commission's Value of Solar study to three different groups: all customers, non-net metering customers, and society at large. For simplicity's sake, we have used the values in the Commission's Study, though not all of these values are appropriate or can be monetized. Table 1 shows the allocation of benefits and costs under current policy based on the first year value of solar for Central Maine Power.

Table 1 – Allocation of Benefits and Costs of Solar for Central Maine Power Customers, First Year Value 2015

	All CMP Customers	Society	Net Metering Customer
Avoided Energy Cost			$0.061
Avoided Generation Capacity Cost	$0.015		
Avoided Reserve Generation Capacity Cost	$0.002		
Solar Integration Cost	($0.002)		
Avoided Transmission Capacity Cost	$0.014		
Net Social Cost of Carbon		$0.021	
Net Social Cost of SO2		$0.051	
Net Social Cost of NOx		$0.011	
Market Price Response	$0.009		
Avoided Fuel Price Uncertainty	$0.000		
Avoided T&D Charges	($0.063)		$0.063
Levelized Cost of Solar Installation			$0.193[3]
Total	($0.01)	$0.083	($0.061)

[3] ICF International, Economic Drivers of PV Report for ISO-New England (Feb. 27, 2015) *available at* http://www.iso-ne.com/static-assets/documents/2015/02/icf_economic_drivers_of_pv_report_for_iso_ne_2_27_15.pdf

As this table suggests, at current retail electricity prices and solar installation costs, net metering in Maine does not implicate many of our concerns. We are probably not paying more than we need to for solar generation, and the net costs to all customers from avoided T&D charges are arguably offset by the various benefits identified by the Commission's Value of Solar Study. However, the trend lines for the largest figures in this table—energy costs (↑), T&D charges (↑), and costs of solar installation (↓)—will over time increase the benefits to net metering customers, and increase costs for all customers.

Table 2 shows the same allocation based on the 25 year levelized values for Central Maine Power from the Value of Solar Study, using the first year prices for solar market stabilization contracts proposed in the bill.

Table 2 – Allocation of Benefits and Costs of Solar for Central Maine Power Customers, 25 Year Levelized Value, 2015

	All CMP Customers	Society	Net Metering Customer
Avoided Energy Cost			$0.081
Avoided Generation Capacity Cost	$0.040		
Avoided Reserve Generation Capacity Cost	$0.005		
Solar Integration Cost	($0.005)		
Avoided Transmission Capacity Cost	$0.016		
Net Social Cost of Carbon		$0.021	
Net Social Cost of SO2		$0.062	
Net Social Cost of NOx		$0.013	
Market Price Response	$0.066		
Avoided Fuel Price Uncertainty	$0.037		
Avoided T&D Charges	($0.063)		$0.063
SREC Price	($0.160)		$0.160
Levelized Cost of Solar Installation			$0.193
Total	($0.064)	$0.096	$0.111

This table tells a different story. Here, the combination of net metering, plus the long term solar market stabilization contracts for SRECs at 16 cents/kWh would result in 1) an inequitable allocation of costs and benefits between net metering customers and all other customers, and 2) all customers paying more than necessary to encourage the construction of solar generation. A functioning SREC market could, over time, decrease the price of SRECs to the minimum level necessary to support cost effective solar investment, mitigating these concerns. But the inclusion of long-term market stabilization contracts in the bill, and experience in other states, suggests that a market that actually worked this way would not provide the price certainty needed to foster sustainable investment in solar generation.

However, the table also shows that there is plenty of value to go around. Our primary concern is that the incentives that the Legislature adopts should be equitable and sustainable. It should be possible to craft a solar policy that equitably allocates costs and benefits in a way that results in benefits to both net metering and non-net metering customers. And the analysis in the Commission's Value of Solar Study is an important first step toward such a policy.[4] We would welcome the opportunity to work with this Committee and other stakeholders in building an equitable and sustainable solar policy for the State of Maine.

Respectfully submitted,

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Public Advocate

[4] In addition to providing a comprehensive summary of potential support mechanisms, the study includes many low or no-cost implementation options that should be part of any comprehensive state solar policy. Maine PUC Value of Solar Study at p. 156.