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Office of the Public Advocate Testimony on LD 1649 “An Act to Modernize Maine’s Solar Power Policy and Encourage Economic Development”

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

The Office of the Public Advocate testifies in Support of LD 1649, An Act to Modernize Maine’s Solar Power Policy and Encourage Economic Development.

This bill is the result of a process started by this committee one year ago. Last session, this committee spent a great deal of time discussing solar policy for Maine. When no consensus could be found on the legislation before you, you asked us—as you have on many issues—to go out, work together and hammer out a solution that reflected a consensus between the parties. Over the last eight months, against all odds, we have done that.

In the public hearings on solar legislation last session I described our office’s concerns about the potential effect on ratepayers of the state’s existing net metering policy and the specific solar policy proposals before the Legislature. These included:

- Because net metering allows customers to fully offset their variable electricity charges, these customers contribute less to the costs of the transmission and distribution system, creating a potential for cost shifting between solar and non-solar customers.
- As the costs of solar PV decline and retail electricity prices increase over time, net metering will result in all customers paying more and more for a resource that should cost less and less.
- Focusing our policy exclusively on rooftop solar excluded the opportunities for larger, more cost-effective solar installations. Moreover, proposals to pursue larger community solar projects at retail rates undercut the economies of scale of these larger projects.
- For a variety of reasons, net metering excluded many customers, and in some cases whole classes of customers, from the opportunity to use distributed generation to reduce their electricity bills.

To be clear, this was not a criticism of distributed generation in general or solar in particular, but about the outdated mechanism most jurisdictions have chosen to support these technologies. There is strong evidence—in Maine—that with the right incentives, distributed generation resources can provide concrete benefits to ratepayers.

The legislation we are presenting today addresses each of these concerns. The bill:

- Revises how we pay for the output of small scale distributed generation, so that it captures as much value as possible, and ensures that these customers contribute their share for their use of the transmission and distribution system.
- Uses market mechanisms to drive down costs to ratepayers, where possible.
- Expands the solar market to procure the least expensive, most valuable solar.
- Provides opportunities for all customers, including large commercial and industrial customers, to reduce their electricity bills by using distributed generation.
- Includes a mechanism for fairly and transparently allocating costs and benefits across all customers.

Others who will testify today came to this process with different motivations, they get different things from this bill, but this is why we are here today in support.

Financial Analysis

But these aren't the only reasons. The statutory mandate of our office is to represent the interests of ratepayers, so over the course of this process we developed a model to estimate the cost of this legislation to Maine ratepayers. Attached to this testimony is a summary of this analysis. It shows long-term net direct benefits to ratepayers of more than \$55 million, and when direct benefits are accounted for, benefits of more than \$122 million.

In developing our model, we used the best available data, and because the model estimated the rate impact over twenty years, we were conservative in nearly every assumption we made. Moreover, we developed this publicly and transparently, sharing it with stakeholders and the Commission - asking "tell us where we're wrong." When they did, we revised our assumptions accordingly. I would be happy to spend time with committee members or other stakeholders working through our underlying assumptions to better understand how we arrived at these figures.

Big Picture, Looking Ahead

Finally, as this committee is likely aware, the Public Utilities Commission is currently poised to review its existing net metering policy as a result of CMP having reached its 1% cap earlier this year. This is not an effort to simply avoid that debate. We're game.

Moreover, I trust that if this Committee fails to act, the Commission will act within their existing authority to implement a net metering policy in a manner that is in the best interests of ratepayers.

What we have tried to avoid is an intense debate over the wrong thing. Low cost distributed generation resources are coming. The costs of storage technologies are declining at a rate similar to that of solar. We don't currently have a way of bringing these small scale resources into the energy and REC markets that we use to support other traditional forms of generation. This bill changes this sub-optimal status quo.

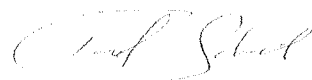
We have a choice: to either create scalable and financially sustainable frameworks to bring these resources into the market and capture these cost savings, or be stuck reacting, later. As I have tried to make clear, net metering is not this framework. We think this bill is. It gives the Commission a forward looking framework and statutory authority that they don't have now.

There is another way to respond. We can exclude these resources instead of recognizing their potential market value and label them "above market". This is implicitly a choice to use other types of resources to meet our energy needs. If we don't offer a mechanism to integrate distributed generation, we are making a choice to rely on grid scale resources, more transmission investment, and an uncoordinated and inefficient roll out of distributed generation resources.

What this diverse group of stakeholders has attempted to do over the past six months is to go another way: to build is a technology neutral platform that will eventually allow these small scale distributed resources, like solar PV, energy storage, combined heat and power, to participate—and compete—side by side in the region's electricity markets. Instead of repetitive and unproductive fights over net metering, we can discuss how best to optimize these resources and integrate them into our markets. By being proactive in the face of uncertain technological change, we can manage and benefit from distributed resources, instead of engaging in wasteful fights over net metering caps.

The Office of the Public Advocate looks forward to working with the Committee on LD 1649, and completing the task that you have charged us with. We will be present at the work session to assist the Committee in its consideration of this bill.

Respectfully submitted,



Timothy R. Schneider
Public Advocate

Office of the Public Advocate LD 1649 - Summary of Ratepayer Costs and Benefits

Under the program set forth in LD 1649, payments to distributed generators are fixed under contracts between the generator and the standard buyer (T&D utility). The standard buyer then has the responsibility of selling the output in a way that maximizes the value to all ratepayers. Any difference between the price paid under the contracts and the revenue received from these sales would be shared **fairly** and **transparently** across all electricity customers.

The table below describes the major categories of costs and benefits and provides an estimate of each over the 20-year life of these contracts. The values, in 2015 dollars, are based on a financial model developed by the Office of the Public Advocate and refined based on feedback received from participants in the Public Utilities Commission's stakeholder process.

Program Revenue

Energy	\$342,867,000
The energy produced by each solar installation installed under the program will be aggregated and sold into the region's wholesale electricity markets. Because much of the output of solar generation matches periods of peak demand, the price is expected to be higher than average wholesale electricity prices over this period.	
Renewable Energy Credits	\$85,589,000
Renewable energy credits will be aggregated and sold to help Maine and other New England states meet their renewable portfolio standards. This revenue estimate represents a substantial discount over current renewable energy credit prices, to reflect that the value of these credits may decline over time.	
Capacity	\$52,770,000
The value of these resources in ISO New England's forward capacity market, which provides annual payments to generators in return for the assurance that they will be available in future years.	
Total Program Revenue	\$481,226,000
Indirect Ratepayer Benefits	\$66,832,000
These benefits include avoided transmission investment, lower capacity payments, lower energy market prices, avoided fuel volatility, and the integration costs associated with additional variable generation. While these benefits and costs would accrue to all ratepayers and reduce their bills, they would not appear on the balance sheet of the standard buyer.	

Program Costs

Contract Payments

Under the program, participating customers will receive a set price for each kilowatt hour their systems produce. This differs from net metering, where payments to customers can rise or fall with changes in retail electricity prices in retail electricity prices.

Residential & Small Business (118 MW – 60% export rate)	\$173,681,000
Commercial & Industrial (25 MW)	\$50,050,000
Community Solar (45 MW)	\$99,175,000
Grid Scale (60 MW)	\$95,944,000

Program Administrative Costs \$5,000,000

These estimated costs include the costs to the transmission and distribution utilities of serving as the standard buyer, and for the public utilities commission to administer the program.

Integration Costs \$2,078,000

Costs associated with the addition of additional variable resources

Total Program Costs \$425,928,000

Net program impact without indirect benefits \$ 55,298,000

Net program impact indirect benefits \$122,130,000

Snap Shot of Monthly Bill Impact (direct benefits only)			
Residential	Small Commercial	Medium C&I	Large C&I
530 kWh	920 kWh	14000 kWh	550,000 kWh
(\$0.15)	(\$0.26)	(\$4.00)	(\$158.00)

2. Rates. The commission shall establish the rates to be paid for the output of distributed generation resources under a contract between a residential and small business customer and the standard buyer described in subsection 1.

The initial rate paid to new installations must decline as the total level of new residential and small business capacity relative to the targets in section 3475, subsection 4 increases.

Rates must be sufficient to ensure that total capacity of installations meet the residential and small business installation targets set forth in section 3475, subsection 4. In determining whether rates will be sufficient, the commission shall consider independent analysis of installation costs and development projections in establishing the rates, including but not limited to those from the United States Department of Energy, Office of Energy Efficiency and Renewable Energy, National Renewable Energy Laboratory.

Rates must be set at levels that ensure that total annual contract payments for solar distributed generation resources procured under this section are not expected to exceed \$10.5 million per year in 2022, if the installation targets in section 3475, subsection 4 are met. For the purpose of this analysis, the commission shall assume system performance that reflects the best available data on actual performance of solar distributed generation resources in Maine, an export rate of 50% and shall not include the effect of the adjustment mechanism in subsection 3. Rates set under this section may be constant or increase over the term of the contract.

The commission may establish separate rates for specific types of distributed generation resources, or additional incentives or a per kilowatt hour increase for resources with attributes that maximize benefits or lower costs to all customers.

3. Rate adjustment mechanism. The commission shall establish an adjustment mechanism to ensure that the procurement targets can be met across reasonable future assumptions by automatically increase increasing rates for new customers by a specified amount if total distributed solar generation capacity installed by residential and small business customers under this section is less than 85% of the applicable target established

in section 3475, subsection 4. The evaluation to determine whether this adjustment is triggered shall occur at six month intervals.

11. Program review. By one year after the effective date of rules adopted pursuant to section 10, or 14 MW of capacity have been installed by residential and small business customers pursuant to this section, whichever is earlier, the commission shall initiate an expedited proceeding to determine whether:

A. the installation targets in section 3475, subsection 4 are likely to be met through 2022; and

B. the total cost to all customers are likely to be less than if the installation targets in section 3475, subsection 4 were installed under the commission's net energy billing rules.

B. ~~If, at the one year mark at the time of this review, the commission concludes that there is not sufficient information to conduct this evaluation, commission may defer this evaluation for an additional six months. PUC determines that sufficient time to measure the program has not taken place, the review will be moved to 18 months.~~

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Upon review, ~~if~~ the commission concludes that both conditions under paragraphs A and B will be met, the rules established pursuant to section 10 shall remain in effect, and net energy billing pursuant to 35-A M.R.S. 3209-A is not available to new customers in the future.

If the commission concludes that the condition under paragraph A or B will not be met, the commission shall make findings regarding the reasons the condition will not be met, and provide a report summarizing its conclusions to the joint standing committee of the Legislature having jurisdiction over utility matters within thirty days of the start of the

~~Second-First Regular Session of the 129th Legislature.~~ If the commission determines that these rules cannot be modified to enable the program to meet procurement targets or reduce costs so that conditions under paragraphs A and B are likely to be met in the future, it shall make and submit such changes to the ~~Second-First Regular Session of the~~

Comment [HJ1]: These would change back

129th Legislature. If the commission determines that these rules cannot be modified to meet these targets or reduce costs, the commission shall review its net energy billing rules or recommend alternative mechanisms to support distributed generation in a manner that benefit all ratepayers. If the commission does not propose changes to the rules adopted pursuant to section 10, or new rules are not adopted within sixty days of the adjournment of the ~~Second~~First Regular Session of the 129th Legislature, net energy billing pursuant to 35-A M.R.S. 3209-A shall be available to new customers on that date.

7. Existing net energy billing customers. A customer who has elected net energy billing pursuant to section 3209-A prior to the effective date of rules established pursuant to subsection 10 shall continue to be eligible for compensation in the form of a kilowatt-hour credit on the customer's monthly electricity bill for generation in excess of their consumption for that month, that may be carried forward and applied to their subsequent monthly electricity bills over 12 months, or its financial equivalent, for 12 years from the effective date of rules established pursuant to subsection 10. The commission shall establish a process to permit these customers to enter into contracts and receive payments under subsections 1 and 2, notwithstanding any limitation on facility size in subsection 1.

Notwithstanding any limitation on facility size in subsection 1, a customers who has elected net energy billing between January 1, 2016 and the effective date of the rules established pursuant to subsection 10 may choose to enter into a contract at the initial rate established by the commission under subsection 2 prior to any decline in rate, provided that these customers make such election within one year of the effective date of these rules.

The capacity of an existing net energy billing customer who has installed a solar distributed generation resources and participated in net energy billing under section 3209-A prior to the effective date of rules established pursuant to subsection 10 and elects to enter into a long term contract under this subsection may not be counted against the

procurement target in section 3475, subsection 4 or the cap on total annual contract payments under subsection 2 or trigger any decline in prices.

No later than December 31, 2028, the commission shall initiate a proceeding to consider methods to allow an owner of a distributed generation resource to continue to offset that owner's consumption and receive fair compensation for exported power in a manner that benefits all ratepayers.

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