



May 10, 2023

Committee on Energy, Utilities and Technology
100 State House Station
Augusta, ME 04333

Chairman Lawrence, Chairman Zeigler, and honorable members of the Energy, Utilities, and Technology Committee,

Thank you for the opportunity to testify **in support of LD 327, *An Act to Provide Maine Ratepayers with Equitable Access to Interconnection of Distributed Energy Resources***.

I speak to you today as the Vice President of Workforce Development and Interconnection Policy for ReVision Energy, a 400-person, employee-owned B Corp headquartered in Maine and guided by a mission of building our just and equitable electric future. ReVision works towards this mission through the design, installation, and service of solar photovoltaic (PV) systems, electrical storage systems, electric vehicle charging infrastructure, and heat pumps in Maine, New Hampshire, and Massachusetts. My role is to support our efforts at addressing two of the most critical constraints for our business related to the deployment of solar energy systems: workforce development and utility interconnection.

We were strong proponents of LD 1100, *An Act to Support the Continued Access to Solar Energy and Battery Storage by Maine Homes and Businesses*, which was passed by the 130th legislature in 2021. LD 1100 was a response to significant barriers faced by ReVision Energy and other solar companies in Maine with interconnecting fast track solar projects for utility customers. We were pleased with the legislature's leadership in passing LD 1100 to modernize the state's interconnection rules to reflect the important lessons learned in other states that had experienced significant growth of interconnected solar facilities. We recognized in 2021 that – left unaddressed – issues that were being experienced by customers seeking to interconnect facilities of several hundred kilowatts would soon affect customers seeking to install facilities of just a few kilowatts.

Interconnection issues are increasing in frequency and complexity

In the time since LD 1100 was enacted, we have seen our concern about the expansion of interconnection challenges come to fruition. Customers seeking to interconnect even the smallest of residential facilities have been told by Versant Power that the grid is insufficient – even on circuits where no large, megawatt-scale facilities are interconnected. Customers who have sought resolution through the Maine Public Utilities Commission (MPUC) have found an inability to get the relief afforded them under the state's interconnection rules or have found the cost of representation by an individual with sufficient technical expertise to assist with their effort prohibitive.

This has put companies such as ours in the position of needing to represent customers at MPUC or risk the precedent that customers are denied the rights afforded them under the state's interconnection rules. Without intervention, these issues will continue to grow and affect wider swaths of the state. Additionally, these interconnection issues need to be addressed to ensure Maine can fulfill the state's climate plan.

The complexity of interconnect will continue to grow with the rapid increase in the use of energy storage systems (batteries) and of vehicle-to-grid devices that allow homes and businesses to utilize an electric vehicle to reduce peak load for a customer or for the grid requires Maine to be proactive in its regulatory environment. As has been experienced over the past 3-4 years, a reliance on antiquated interconnection rules provides unnecessary obstruction to Maine utility customers seeking to invest in distributed energy resources.

Results of interconnection evaluation from LD 1100

We are extremely appreciative of the technical challenges interconnection poses to utilities and their regulators. We are also supportive of and outspoken proponents for protecting the safety and reliability of Maine's electrical grid. With these priorities, we were pleased to see the Interstate Renewable Energy Council (IREC) awarded the contract resulting from LD 1100 to evaluate Maine's interconnection rules. IREC is the foremost authority in the U.S. related to the interconnection of renewable energy facilities and periodically publishes its *Model Interconnection Procedures*. Maine's small generator interconnection procedures (SGIPs), as detailed in MPUC Chapter 324, were originally based on the 2005 edition of IREC's *Model Interconnection Procedures*. In the thirteen years since Maine adopted Chapter 324, IREC has updated its procedures three times, including its most recent publication in 2019. During that same period, Maine has made minor changes to its SGIPs.

IREC's SGIPs are aligned with those of the Federal Energy Regulatory Commission.

As a result of LD 1100, IREC authored a report for MPUC entitled *Interconnection Standards, Practices, and Procedures to Support Access to Solar Energy and Battery Storage for Maine Homes and Businesses*. This report provided an evaluation of Maine's interconnection rules and made recommendations on how to best modernize them in a manner consistent with national best practices as represented by the improvements to IREC's *Model Interconnection Procedures* between 2005 until 2019. The report also highlights model interconnection procedures for batteries, or energy storage systems, as detailed in the *Toolkit & Guidance for the Interconnection of Energy Storage & Solar-Plus-Storage*. This report is also known as the BATRIES report, as it was developed under the Building a Technically Reliable Interconnection Evolution for Storage (BATRIES) project team. This team included IREC, the Electric Power Research Institute, New Hampshire Electric Co-op, Solar Energy Industries Association, California Solar and Storage Association, and PacifiCorp.

In its report, IREC concluded the following:

- Improvements in Maine's dispute resolution procedures for customers who are experiencing interconnection issues "may need improvement to efficiently and fairly resolve disputes." One key recommendation by IREC for improving the process is the creation of an Ombudsperson position.
- "Maine's Procedures are not prepared to accommodate the unique features and capabilities of energy storage systems."
- The technical screening criteria for small projects "results in excessive screen failure without safety and reliability benefits."
- Interconnection of small projects could be streamlined by including a supplemental review process that has been outlined in IREC's *Model Interconnection Procedures* since 2013.
- Maine would benefit from increased utility transparency when the utility concludes that a proposed project has failed a conservative technical screen.

- The interconnection rules could be strengthened by further clarifying when larger interconnection facilities can reserve capacity of the distribution system during the development process.

In addition, IREC's report highlighted additional technical requirements being implemented by Versant Power that were inconsistent with utility best practices and may unnecessarily increase interconnection costs.

The report also provided recommendations on how MPUC could implement the provision of LD 1100 that prohibits certain residential and nonresidential customers – namely those who install solar to offset on-site electrical consumption – from paying for distribution upgrades without the cost of those upgrades being shouldered by ratepayers.

I have attached the IREC report and the BATRIES reports referenced by IREC with our digital filing for the committee's reference.

We are very appreciative of the work done by Senator Grohoski to bring light to these issues and to offer practical and tangible solutions that directly address several of the issues currently facing Maine homes and businesses seeking to interconnect solar and batteries and several issues for which Maine will see benefit in addressing proactively rather than reactively.

Interconnection Ombudsperson

As highlighted by IREC and experienced by Maine's interconnection customers, all related parties would benefit from a position within MPUC that has specific technical expertise related to interconnection issues. Currently, Maine customers are largely dependent upon local solar construction companies to represent them in technical proceedings at MPUC. This type of representation is costly and unsustainable, especially for small projects where the true costs to participate successfully in MPUC's dispute resolution process can be nearly as much as it costs to construct the facility.

Funding an interconnection ombudsperson through fees assessed on all interconnection customers subject to Maine's SGIPs will provide benefit for MPUC, the utilities, interconnection customers, and solar construction companies by reducing the number and complexity of conflicts for all parties.

While we appreciate MPUC's attempts to support interconnection customers through the dispute resolution process, it has been clear that additional and nuanced expertise is needed for interconnection customers to receive the relief outlined in LD 1100.

We are appreciative of the inclusion of provisions in LD 327 that establish an interconnection ombudsperson and stipulate the funding of that position primarily through interconnection fees and optionally through contributions from public sources, such as federal grants, and private sources. With significant federal investments in expanding the use of renewable energy, this would position Maine to potentially leverage those funds to defer interconnection costs and further decrease barriers to renewable energy development in Maine.

Battery interconnection

As highlighted by IREC, Maine's current SGIPs provide insufficient guidance for the interconnection of batteries. Customers are already experiencing increased barriers to interconnection and would benefit – as would utilities – from having clear requirements for systems that use batteries to avoid exporting

power to the grid. The provisions in Maine's SGIPs related to non-exporting facilities, also known as Level 3 facilities, date back to the original Chapter 324 rules adopted in 2009, which are in turn based on model SGIPs from 2005. Much has changed with regards to battery storage in the nearly two decades since those procedures were established.

We are seeing increasing adoption of grid-interconnected batteries and an increasing opportunity for them related to the value they can provide for customers and for all ratepayers. The Distributed Generation Stakeholder Group, which was formed in response to LD 936, issued a final report that concluded that "given proper dispatch incentives, battery storage can be deployed in conjunction with solar PV at incremental costs that are significantly less than incremental benefits."

As has been experience with the interconnection of solar photovoltaic systems, deployment of these technologies will be highly dependent upon the forethought of adopting interconnection procedures that are aligned with industry best practices, in this case the aforementioned BATRIES report.

ReVision Energy is appreciative of the clarification LD 327 makes in state law to specify the need for MPUC to adopt rules that are inclusive of energy storage systems.

Distribution cost waiver

In late 2022, MPUC opened a Notice of Inquiry (NOI) related to proposed changes to Maine's SGIPs that included provisions related to the distribution cost waiver required by LD 1100. In its NOI, MPUC indicated that it was considering the size of a facility as the criteria for eligibility for the cost waiver. In LD 1100, it appears that the legislature intended that the cost waiver exclusively serve residential and nonresidential customers that are "on-site solar energy generators." Our interpretation of this provision in LD 1100 is consistent with that of LD 327; namely that the cost waiver is intended for customers who are seeking to use solar energy to offset energy consumed at the same site.

This delineation is important, as it recognizes that utility customers are subject to the grid infrastructure serving them – something over which they have little to no influence. The distribution cost waiver – something well outlined in IREC's report for MPUC – serves to buffer individual interconnection customers from excessive utility upgrade costs by spreading those costs across all interconnection customers.

There have been a number of issues since the October 2022 deadline for MPUC to adopt a method for implementing the distribution cost waiver that would have been more readily resolved through the methods recommended by IREC. We appreciate the language in LD 327 that clarifies the intent of this provision in LD 1100 and provides explicit guidance to MPUC related to language that may have been less clear in the original legislation.

Monitoring provisions

While unrelated to the interconnection provisions of LD 1100 and the report issued by IREC, the clarification of MPUC's responsibilities related to *Monitoring* as outlined in Section 3 of LD 327 and the report related to the implementation of the C&I tariff rate are critical provisions of this legislation.

ReVision Energy has significant concern with the manner in which net energy billing (NEB) costs have been presented to the legislature and the public. It appears that lost utility revenue is being equated with ratepayer costs. This has resulted in the legislature and the public attempting to evaluate the merits of energy policy with incomplete information. In responsibly evaluating the cost effectiveness of Maine's NEB policy, it is critical that – through this committee – the legislature is provided with accurate

data related to the real costs to ratepayers of the program and the real benefits. Thus far, it appears the legislature and the public is receiving neither.

Maine state law requires MPUC to monitor “the likely relative costs *and benefits* for ratepayers from solar energy development” (*my emphasis*). To date, the only analysis that we have seen that contemplates the costs and benefits of Maine’s net energy billing program is a 2021 report from Daymark Energy Advisors. The Daymark study provides a far different conclusion about the net costs and benefits of solar development in Maine. The managing consultant on this study was Carrie Gilbert, Governor Mills’ nominee to replace Randall Davis at MPUC.

In adopting the Maine Solar Energy Act a decade ago, the legislature identified the importance of having MPUC provide complete numbers to policymakers to inform decisions related to state energy policy. ReVision Energy supports the language in Section 3 and Section 4 of LD 327 that explicitly details which benefits of solar energy development need to be captured to inform responsible political debate and the requirement that MPUC provide this reporting annually. The benefits are consistent with those evaluated by Daymark and those evaluated by the Distributed Generation Stakeholder Group when considering a successor for Maine’s current NEB program.

Report on the C&I Tariff

In addition to providing a more comprehensive analysis of the costs and benefits of NEB, LD 327 also requires MPUC to perform a thorough evaluation of the manner in which previous legislation has been implemented. Specifically, LD 327 requires a thorough evaluation of the way MPUC opted to implement the commercial and industrial tariff for NEB facilities.

As this committee is aware, there have been concerns about the costs of NEB resulting from the passage of LD 1711 in 2019. Such concerns led to the protraction of Maine’s NEB program by reducing the eligible facility size and decoupling the C&I tariff from retail electricity rates.

The original purpose of the C&I tariff was to increase the accessibility of NEB to medium-sized businesses subject to demand charges. The solution was to provide those customers with a compensation mechanism at a rate less than that received through NEB by small business customers. It is concerning that a program that was explicitly designed to maximize benefits for all ratepayers and established an NEB rate that is less than the standard NEB credit would be deemed as much more costly to ratepayers. Yet, the Daymark study concluded just that. In its report, Daymark concludes, “The kWh program provides net benefits, while the Tariff Rate program is more costly to non-participating customers. This is due to the structural differences between the two programs.”

The structural difference is that the kWh program is settled as load reduction (much like energy efficiency) and the tariff program is settled as wholesale generation. This is a striking conclusion and one that – to our knowledge – has not been fully evaluated by either the legislature nor MPUC. LD 327 requires MPUC to perform that evaluation. We are confident that the evaluation will identify key steps that can be taken to implement the C&I tariff in a manner that extracts greater value for ratepayers.

Conclusion

Thank you for the opportunity to provide testimony on this important legislation. While technical and nuanced in scope, LD 327 is an example of solid legislation that serves to clarify key policy priorities in a manner that allocates costs where they are most appropriate, strengthens policymaking by providing complete information to legislators for consideration in their decision-making process, and seeks to

address long-term liability to ratepayers by evaluating whether directives from the legislature have been implemented to the greatest public benefit.

I appreciate your consideration of this testimony and will plan to attend the work session on this bill to assist the committee in any manner that I can.

Sincerely,

A handwritten signature in black ink, reading "Vaughan Woodruff". The signature is written in a cursive, flowing style with a large initial "V".

Vaughan Woodruff
VP of Workforce Development and Interconnection Policy