



SIERRA CLUB

MAINE CHAPTER

PO Box 1374
Yarmouth, ME
Phone: (207) 761-5616
www.sierraclub.org/maine

To: Committee on Energy, Utilities and Technology
From: David Gibson, Sierra Club Maine
Date: March 9, 2021
Re: Testimony in Support of LD 528: **An Act To Advance Energy Storage in Maine**

Senator Lawrence, Representative Berry, and members of the Committee on Energy, Utilities and Technology: my name is David Gibson, and I represent Sierra Club Maine and our 22,000 supporters and members across the state. We voice our support for this legislation: *LD 528 An Act To Advance Energy Storage in Maine*.

This bill creates a goal for statewide energy storage and adds energy storage systems to the technologies that Efficiency Maine Trust can fund. Energy storage is critical for the future of the energy grid and maintaining stable and reliable energy supplies in Maine. While there is a lot of ongoing research and development for new energy storage technologies, it is essential that we rapidly deploy the existing technologies and ramp up energy storage throughout the state.

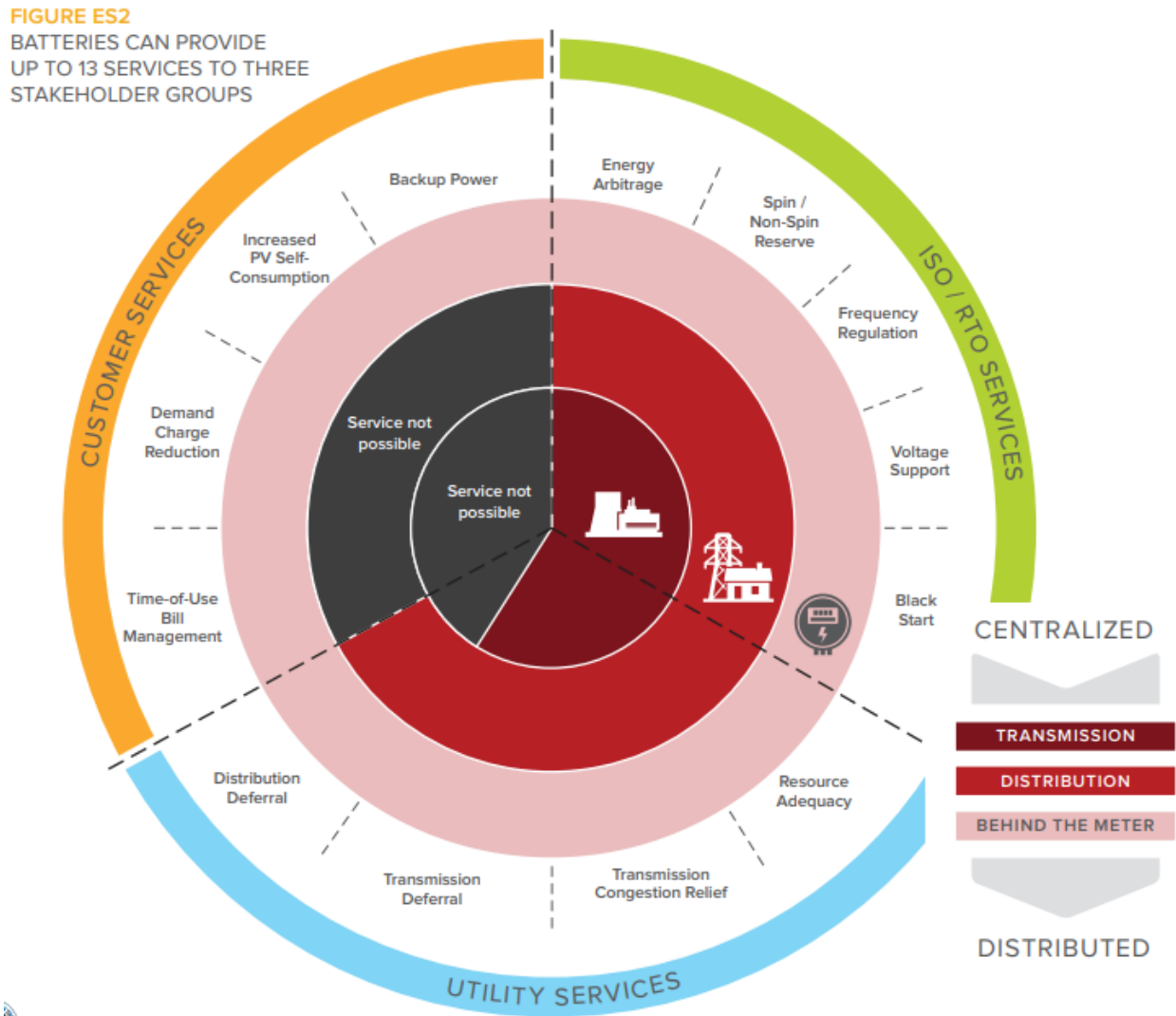
I have attached a study from the Rocky Mountain Institute, 'The Economics of Battery Energy Storage: How Multi-use, Customer-sited Batteries Deliver the Most Services and Value to Customers and the Grid' (<https://rmi.org/wp-content/uploads/2017/03/RMI-TheEconomicsOfBatteryEnergyStorage-FullReport-FINAL.pdf>) This study highlights how customer-sited batteries (behind the meter in homes, businesses and public buildings) can provide all the same benefits as larger centralized storage systems, plus the additional benefits of backup power, increased PV self-consumption, demand charge reduction, and time-of-use bill management. As the report says, "The further downstream battery-based energy storage systems are located on the electricity system, the more services they can offer to the system at large." The diagram below comes from this RMI study.

I would encourage the committee to require that at least half of the 100MW storage goal be achieved through customer-sited, behind the meter energy storage. There are several large grid-tied projects that are being planned or in development that could easily exceed the 100MW goal in the next few years (<https://www.pressherald.com/2021/03/08/giant-batteries-coming-to-maine-to-soak-up-send-out-excess-energy/>). Including a specific goal for behind the meter storage will make this more ambitious, and provide the maximum benefits to the citizens of Maine, and the state's electricity grid.

50MW would equal 3,703 Tesla Powerwall batteries (which have 13.5kWh of usable storage: https://www.tesla.com/sites/default/files/pdfs/powerwall/Powerwall%20AC_Datasheet_en_northamerica.pdf). While this appears overly ambitious if only Tesla Powerwalls are used, when combined with larger battery systems (which currently provide 100 kWh to 500+ kWh in usable storage:

<https://www.etcc-ca.com/reports/commercial-behind-meter-battery-energy-storage-system-mv-study>) in commercial, industrial and public buildings, 50 MW of behind the meter storage is feasible within the next 5 years.

Graphic from RMI study, showing the variety of benefits that energy storage can provide:



Please consider adding a specific requirement for behind the meter storage to this bill. Sierra Club Maine supports this legislation to increase energy storage deployment in Maine.

Thank you Senator Vitelli for bringing this forward.

We ask this committee to vote
 LD 528 Ought to Pass.