The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

March 5, 2019

The Honorable Martha Fuller Clark, Chair
Energy and Natural Resources Committee
State House, Room 103
Concord, New Hampshire 03301

RE: SB 204, AN ACT relative to distributed energy resources and consumer energy storage

Dear Chair Fuller Clark and Members of the Committee:

Thank you for the opportunity to testify on Senate Bill 204. This bill amends RSA 374-G, relative to utility investment in distributed energy resources, to clarify the eligibility of energy storage to qualify as a distributed energy resource. The New Hampshire Department of Environmental Services (NHDES) offers the following information for the committee's consideration.

Historically, electricity is the only commodity produced at the same rate that it is consumed. Energy storage, inclusive of electric batteries, fuel cells, pumped hydro, compressed air, and flywheels, changes this by providing energy when needed and absorbing it when in excess. Storage can support the development of a grid that is cleaner, more decentralized, resilient, and open for rapid innovation by absorbing energy when it is cheap and plentiful.[1] This includes during those times when intermittent renewable energy resources, such as solar and wind power, are generating, as well as during overnight periods when electricity demand is lowest. This stored energy can later be dispatched as necessary, whether during a peak electricity demand event, power outage, or when renewable energy resources are not available.[2]

As storage capacity expands and enables peak load reductions, the resulting economic and environmental benefits will grow. Such peak shaving "results in savings across the entire regional energy grid for all customers by reducing the need to run older, more expensive generation facilities during peak periods, and by deferring or avoiding the need to build new generation and transmission infrastructure."[3] By using the energy from storage instead of from the transmission system, the state can reduce its coincident peak and, therefore, save on transmission costs and the associated generation emissions. This reduction in costs would benefit all customers as transmission costs are

[1] OSI (2018). **New Hampshire 10-Year State Energy Strategy**, NH Office of Strategic Initiativeshttps://www.nh.gov/osi/energy/programs/documents/2018-10-year-state-energy-strategy.pdf, pg. 36.

[2] Gheorghiu, I. (2019). **New Hampshire Regulators Approve Utility-Owned Residential Tesla Battery Pilot**, https://www.utilitydive.com/news/new-hampshire-regulators-approve-utility-owned-residential-tesla-battery-pi/546364/, (Last accessed February 11, 2019).

[3] OSI (2018). **New Hampshire 10-Year State Energy Strategy**, NH Office of Strategic Initiatives, https://www.nh.gov/osi/energy/programs/documents/2018-10-year-state-energy-strategy.pdf, pg. 40.

based on a coincident peak load; meaning the state's share of load at the time of the ISO-New England peak.[4]

Storage can also increase the resilience to grid disruption by reducing the time and resources needed to restore power to critical facilities such as hospitals, shelters, and wastewater treatment facilities,[5] as well as be utilized by industrial facilities to maintain operations. Resiliency is of increasing importance as the top five most significant power outages have all occurred during the past decade. Each of these storms affected more than 230,000 customers, with outage durations that exceeded 100 hours (see attached).[6] Energy storage offers the potential to reduce extreme weather impacts on critical infrastructure and economic disruption to businesses.

Thank you again for the opportunity to comment on SB 204. If you have any questions or require further information, please contact either Chris Skoglund, Climate and Energy Program Manager, (Christopher.Skoglund@des.nh.gov, 271-7624) or Rebecca Ohler, Administrator, Technical Services Bureau (Rebecca.Ohler@des.nh.gov, 271-6749).

Sincerely,

Robert R. Scott
Commissioner

cc: Sponsors SB 204: Senators Watters, Feltes, Fuller Clark, Morgan, Hennessey; Representatives Oxenham, Somssich

[4] Liberty Utilities (2017). Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities Request for Approval of Battery Storage Pilot, pg. 8, http://www.puc.state.nh.us/regulatory/docketbk/2017/17-189/initial%20filing%20-%20petition/17-189_2017-12-01_gsec_dtestimony_tebbetts.pdf

[5] NREL (2014). **Distributed Solar PV For Electricity System Resiliency**, https://www.nrel.gov/docs/fy15osti/62631.pdf, pg. 1. (Last accessed February 11, 2018).

[6] PUC (2019). **New Hampshire Historical Outages All Utilities For Wide Scale Storms**, NH PUC Safety Division, https://www.puc.nh.gov/Safety/safety-pdfs/Safety-Chart-Of-Historical-Storms.pdf, (Last Accessed February 11, 2018).