

To: The Department of Public Service

From: David Westman and Abby White, Efficiency Vermont

Re: Comments related to Act 53, Energy Storage Study Report – Public Review Draft

Date: October 31, 2017

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Please accept our comments on the content of the draft Energy Storage Report enacted in Act 53. VEIC sees storage as an integral part of our energy system and as a strategic resource to help achieve the goals set forth in the Comprehensive Energy Plan. Efficient and beneficial energy storage, if deployed equitably and strategically, has the potential to yield substantial cost savings and boost the resilience of our energy system. It will help business customers avoid expensive demand charges, help utilities manage and reduce peak demand, and help the state optimize the use of its current energy infrastructure.

Below are more specific comments related to the content in the draft report:

***EEU activities section***

The content contained in the *EEU activities* section on page 33, underplays the role EEUs could play in catalyzing the market for storage, ensuring cost-effectiveness, and bringing solutions to scale statewide. This potential role includes working upstream with manufacturers to specify and engineer products well-suited for Vermont, mobilizing and training contractors on how to sell and install solutions, and helping to buy down up-front costs to improve the cost-effectiveness of storage. Furthermore, the resources of the EEUs dedicated to low-income customers could be leveraged and directed to improve access and affordability of storage, helping to reduce the energy burden for Vermont's most vulnerable populations.

Additionally, the separate, concurrent report of Act 77 is unrelated and does not serve as a useful reference in this section. It does not objectively contemplate the role of EEUs in catalyzing storage or reducing peak demand.

As is being implemented in Massachusetts (per the "State of Charge" report), Vermont's energy efficiency programs could serve an immediate and valuable role in leveraging the state's existing EEU resources and customer relationships to explore and demonstrate behind the meter storage solutions to cost-effectively reduce peak demand, and avoid lost opportunities as Efficiency Vermont is engaging with customers on comprehensive efficiency solutions.

***Modifications of existing or development of new programs and incentives section***

In regard to the section titled *Modifications of existing or development of new programs and incentives* (p. 34), we believe all state energy programs ought to be aligned in meeting the

state's storage needs, to ensure resources are oriented toward the common goals set forth in the Comprehensive Energy Plan. To that end, the section titled *EEU consideration* (p. 33) should be located either within or directly next to the section titled *Modification of existing or development of new programs and incentives*. This proximity would allow for EEU resources and activities to be more readily considered in helping to meet the state energy storage needs—as is being considered for other state energy transformation initiatives specified in the draft (i.e. CEDF, Standard Offer, Net Metering, RES Tier III).

### **Rate design and the importance of market signals**

We concur with comments in the rate design section that emphasize the need for clear market mechanisms to transfer portions of the system benefits of storage to end-users. In considering potential solutions, the electric utilities' rates and demand reduction programs should be evaluated for whether they convey market signals to effectively drive customer behavior. End-use customers should receive a fair portion of the value of the system benefits they are creating through use of storage.

### **Customer equity and access to information**

When it comes to behind-the-meter storage solutions, it's important to ensure that all customers have the opportunity to participate no matter their income, geographic location, or type of building they occupy. To improve the affordability and accessibility of this technology, particularly for low-income customers, the EEUs could leverage their existing services for low-income populations.

Moreover, across both residential and commercial ratepayers, Vermonters view their energy costs holistically, and all energy-related choices—including storage—should be part of a comprehensive dialogue when addressing energy needs. Whether it be an energy-efficient, all-electric, photovoltaic-enabled, net-zero modular home (for which battery storage is essential for customers' peace of mind related to outages), or a small manufacturer trying to reduce production costs by optimizing both their efficiency and peak-shifting opportunities, storage and energy efficient are inherently intertwined.

To address customers' needs holistically, the State should leverage the entities already in place to effectively and efficiently deploy energy storage to end-use customers. The expertise of the EEUs in vetting and screening technologies, understanding key customer value propositions, designing incentives to overcome key customer adoption barriers, and driving customer adoption through supply chain development and other channels, ought to be applied to this new technology, such that storage can be effectively integrated with deep efficiency, demand response, and distributed generation to decarbonize our energy system.