

Dear Energy & Technology Committee,,

First, allow me to introduce myself. I currently work as a technical consultant on battery and fuel-cell technologies. Previously, I was a researcher at United Technologies Research Center (UTRC), where I led a team that developed advanced batteries and fuel cells, both of which were focused on grid-scale applications.

It is good to see that CT is looking to promote grid-scale energy storage. As you know, increased energy storage on the grid can bring many benefits, including improved efficiency and reliability, as well as higher utilization of renewable energy (e.g., solar and wind). Therefore, I would like to bring to your attention a major flaw in HB 5351, as written. The primary objective is to encourage the deployment of 1000 megawatts (MW) of energy storage. However, MW is a measure of power, not energy. Energy is measured in MWh (Energy = Power * Time = MW * hours = MWh). Why is this important? **Because short-duration energy storage** (i.e., approximately 1-hour of discharge at rated power, or less) **is already commercially viable and has already been done all over the U.S.** So, as written, all the utilities have to do is continue to install these short-duration systems to comply (e.g., they will deploy 1,000 MW and \leq 1,000 MWh), which will not have much of an impact with respect to anything beyond “ancillary services” on the grid. Although this is important, it is not new, does not really need encouragement (a positive value proposition exists for these systems), and it does not push the energy-storage market to where the societal impacts will be much greater (e.g., enable higher use of renewables, like wind and solar). What is really needed is longer duration electrical-energy storage. If the goal is to encourage progress in the energy-storage field challenge, then the bill should state something like 1,000 MW of new energy storage with each system having an Energy-to-power ratio of at least 4 hours.

Please add an Energy Metric to your Energy Storage bill. I would recommend that it should be 1,000 MW and 4,000 MWh total.

Sincerely,

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