

Opening Statement of the Honorable Fred Upton
Subcommittee on Energy
“Powering America: The Role of Energy Storage in the Nation’s Electricity System”
July 18, 2018

On this day, one year ago, the energy subcommittee launched its “Powering America” hearing series focused on the nation’s electricity system. Over the past year, the committee has explored important topics such as wholesale power markets, electric generation, infrastructure – both transmission and distribution, reliability, and technological innovation. Today’s hearing is the eleventh hearing in this series and explores the important topic of large-scale energy storage.

Electricity is a fundamental and essential part of our everyday lives, and the interruption of which has far-reaching impacts on our livelihoods, health, welfare, and national security. This is why it is important to utilize all forms of tools and technologies, including energy storage, to help ensure our nation’s electric grid is reliable and resilient.

For example, one electric utility, who serves my home state of Michigan, recognized the value of energy storage early on. In 2002, AEP demonstrated the use of a sodium sulfur battery for the first time in the U.S. By 2008, AEP had deployed three 2 megawatt batteries across the United States.

Large-scale energy storage has benefits and unique attributes that can improve the reliability and resiliency of the nation’s electric grid.

Energy storage can help manage peak electricity load; provide essential reliability services such as – voltage and frequency control; improve reserve capacity; and provide black start capability.

The electricity industry is responsible for planning and preparing for disruptions to the supply of electricity. The 2017 Atlantic hurricane season was unprecedented – multiple storms in close successions slammed into the Gulf Coast, Puerto Rico, and the U.S. Virgin Islands. These storms left behind catastrophic damage which resulted in major disruptions of electricity to millions of Americans across the nation.

When power outages occur, electricity providers can use energy storage as a “black start” resource to restore electricity quickly. Black start is when a power plant is turned back on after an outage without the help of the transmission system. Because energy storage resources have a reserve of electricity available, they can provide the necessary power to bring other power plants back online. This is important because in emergency situations associated with electricity outages, access to electricity from the transmission system is often not possible.

Demand for electricity varies depending on a variety of factors, including the time of day, season, and region of the United States. An example of this is during warmer summer months, a greater amount of electricity is consumed through air conditioning compared to cooler spring or fall months.

During these times of peak electricity consumption, more expensive generation units are generally used to meet the increased demand. Energy storage allows for electricity to be stored during off-peak times when electricity is less expensive, and then deployed during these periods of high demand. The ability for energy storage to “energy time-shift” can reduce costs for electricity providers, which can lead to savings for consumers.

Today’s panel of witnesses represent different aspects of the electricity industry when it comes to energy storage. Thank you for taking the time to join us today and I look forward to your perspectives on how energy storage improves the nation’s electric grid.