

# Power generation and grid storage policies







### **Overview**

The policy agenda calls for reliability-focused policy actions at the local, state and federal level, including supporting development of domestic supply chains, reforming interconnection, scaling energy storage technology, leveraging the benefits of distributed solar and storage, and investing in transmission infrastructure that brings reliable clean energy to every community. Why is grid-connected energy storage important?

As the electricity sector relies more on variable energy sources like wind and solar, grid-connected energy storage will become increasingly important to support reliable electricity supply. Storage can transfer electricity generated during hours when renewable energy is plentiful to meet demand at other times of the day.

What are the different types of energy storage policies?

Approximately 17 states have adopted some form of energy storage policies, which broadly fall into the following categories: procurement targets, regulatory adaption, demonstration programs, financial incentives, and consumer protections. Below we give an overview of each of these energy storage policy categories.

Will energy storage change the dynamics of a grid?

With widespread grid failures on this scale, energy storage would have to make up a much larger share of system capacity than it currently does to change the dynamics, although it can respond to sudden system fluctuations by providing ancillary services, like frequency and voltage regulation.

How do energy storage and demand response affect the grid?

As a result, the grid has historically relied on more flexible resources, such as natural gas or hydropower, to meet sudden changes in demand. Energy storage and demand response add additional flexible resources to the system operator's toolkit, providing them with more options for balancing the grid.



## What is a storage policy?

All of the states with a storage policy in place have a renewable portfolio standard or a nonbinding renewable energy goal. Regulatory changes can broaden competitive access to storage such as by updating resource planning requirements or permitting storage through rate proceedings.

When will the BPU start a grid-connected incentive program?

The BPU expects to launch the grid-connected incentive program in 2026. Consumer protection policies establish rights for customers who install energy storage. Two states have adopted legislation guaranteeing protections to customers who install energy storage.



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Energy Storage in Grids with High Penetration of Variable ...

Similarly, applications such as grid frequency and grid voltage stability require power to be absorbed or injected, making power cost (in dollars per kW or MW) a particularly important ...

Energy storage system policies: Way forward and opportunities ...

These policies are mostly concentrated around battery storage system, which is considered to be the fastest growing energy storage technology due to its efficiency, flexibility ...



Regulatory policies for enhancing grid stability through the

Battery Energy Storage Systems (BESS) have emerged as a crucial technology for mitigating these challenges by providing grid services such as frequency regulation, load balancing, and ...



<u>Utility-Scale Energy Storage: Technologies and Challenges for an</u>

But it can be hard to put storage technologies on a grid that wasn't designed for this use. Also, putting storage on the grid means navigating



varied state rules and regulations. ...





Regulation for variable renewable energy (e.g. electricity grid and

An electric power grid requires that the energy input matches the energy output to maintain grid stability. Regulations services adjust the output to meet demand, but the increase of ...

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