CLEAN GRID ALLIANCE

FACT SHEET

Battery Energy Storage Systems (BESS): Benefits

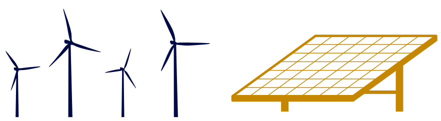
Lower Electricity Costs & Reduce Ratepayer Bills

Energy storage technologies reduce energy system costs, and lower rates for consumers by optimizing the grid, bolstering reliability, and enabling a clean grid

How Does Storage Reduce Energy Costs?

Supports the Integration of More Wind and Solar Generation

- Wind and solar are the cheapest sources of electricity. Higher integration of renewables means more cost-effective sources of electricity

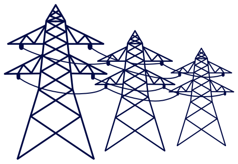


Reduces Energy Waste

- Helps eliminate energy waste and maximizes the benefits of renewable energy
- Stores energy when there is excess supply to reduce curtailment of generation facilities, and use energy when needed

Improves Grid Efficiency

- Instantly dispatchable to function as generation and load, helps the grid adjust to fluctuations in demand and supply, optimizing grid efficiency, alleviating transmission congestion, and increasing grid flexibility
  - Reduces overall system costs



Limits Costly Energy Imports & Increases Energy Security

- Improves energy security and maximizes the use of affordable electricity produced in the US

FACT SHEET

Battery Energy Storage Systems (BESS): Benefits

Energy Storage Enhances Grid Reliability & Resilience

Across the US, states are choosing energy storage as the best and most cost-effective way to improve grid resilience and reliability

How Does Storage Strengthen Grid Reliability?

Frequency Response and Regulation

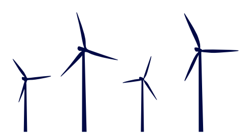
- Ensures the moment-to-moment stability of the electric system at all times

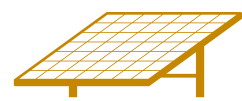
Peaking Capacity

- Meets short-term spikes in electric system demand that otherwise requires use of lower-efficiency, high-cost generation resources

Maximizing Renewable Energy Resources

- Reduces curtailment of renewable generation resources and maximizes their contribution to the system reliability

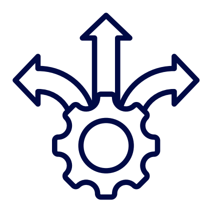




Grid Infrastructure Support

- Relieves transmission and distribution infrastructure congestion, prevents reliability violations on power lines, and creates more flexibility in the power system

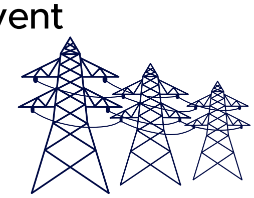
Increasing Operational Flexibility



- Facilitates efficient integration of diverse generation resources and improves the ability of the electric grid to adapt rapidly to changes in demand and generation

Improving Grid Resilience

- Serves as back-up power for the grid system to minimize and prevent power outages from extreme weather



CleanGridAlliance.org

Sources:
1. American Clean Power Association. https://cleanpower.org/facts/clean-energy-storage/

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