Energy Storage Technology Advancement Partnership

Partnering with states to leverage funding and accelerate the deployment of energy storage

U.S. DEPARTMENT OF ENERGY | Electricity Delivery & Energy Reliability

Energy Storage Program

Clean Energy States Alliance

Batteries, flywheels, above-ground compressed air, micro pumped hydro, and other forms of energy storage may be able to provide significant support to the integration of renewable energy in the United States. Public funding and support are critical to accelerate progress, achieve cost reductions, and encourage widespread deployment of these technologies.

Overview

The Energy Storage Technology Advancement Partnership (ESTAP) is a new, cooperative funding and information-sharing partnership between the U.S. Department of Energy (DOE) and interested states that aims to accelerate the commercialization and deployment of energy storage technologies in the United States via joint funding and coordination. Facilitated by the Clean Energy States Alliance, ESTAP is funded by Sandia National Laboratories and implemented in cooperation with the DOE Office of Electricity Delivery and Energy Reliability (OE).

ESTAP engages in a variety activities to promote energy storage technologies, including:

- Creating a State Energy Storage Network
- Conducting surveys on state energy storage activities
- Working with stakeholders to initiate and develop energy storage projects
- Hosting webinars on various energy storage topics to educate stakeholders

Joining the State Energy Storage Network

ESTAP invites interested state and other entities that are administering public funds for clean energy projects to join the State Energy Storage Network. Projects must include energy storage technologies such as batteries, flywheels, aboveground compressed air, and micro pumped hydro.

Members must be willing to commit some state-based funding to support the partnership. States will retain full discretion to apply state-specific criteria to any projects where state funding is awarded as a cost share.

Members of the network will help develop recommendations for implementing the funding partnership and a structure for advancing cooperation and information sharing.

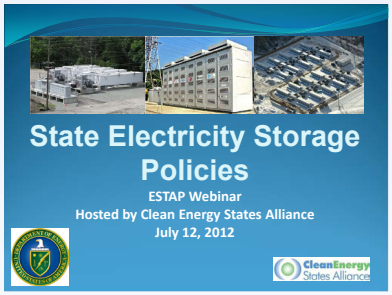
Other interested stakeholders, including manufacturers, universities, utilities, and other end users within states, are encouraged to participate in conjunction with state agencies.

States and Stakeholders Show Strong Interest in Energy Storage Partnerships

The preliminary results of ESTAP's survey of states and stakeholders show that 75% of states and 80% of stakeholders are "very interested" in partnering with DOE to advance energy storage, and 77% of stakeholders are "very interested" in partnering with states to advance energy storage.

Outreach to Energy Storage Community

ESTAP frequently collaborates with key stakeholders in the energy storage community to present free webinars about different topics, such as State Electricity Storage Policies (cover slide shown below). For a full list of archived webinars, see the ESTAP website.



Program Summary

Eligible technologies:	Batteries, flywheels, above-ground compressed air, and micro pumped hydro
Potential applications:	Balancing renewables, facilitation of plug-in hybrid electric vehicle power demands, power outages, deferred transmission and distribution, end-user benefits, and ancillary services
Project size:	Determined on a case-by-case basis
Approximate project cost:	$2 million–$6 million
State match expected (can include private funds):	50% or greater ($500,000 for a $1 million project)

Activities

Activity	Status
Create the State Energy Storage Network (for states) and a stakeholder network (for other project stakeholders)	Ongoing
Conduct initial surveys: • Survey states on storage activities and goals • Survey stakeholders on industry needs for federal and state support	Complete
Work with states and energy storage industry to initiate and develop energy storage projects.	Ongoing
Hold information-sharing webinars on technologies and applications	Ongoing

Free Educational Webinars on Energy Storage

Some of the topics covered in the free information-sharing webinars offered by ESTAP include:

- 2020 Strategic Analysis of Energy Storage in California
- Energy Storage and Renewable Portfolio Standards
- Federal Regulator Energy Storage Policy
- State Electricity Storage Policies
- Energy Storage Solutions for Microgrids

Benefits of Participation

- Allows stakeholders to work closely with the U.S. Department of Energy on near-term joint funding and technology deployment
- Connects participants with a network of leading states supporting energy storage technology
- Facilitates faster progress in energy storage commercialization and economic development
- Provides technical consulting in the development of the project and independent third-party testing and evaluation once a system is installed

Project Partners

- Sandia National Laboratories
  http://www.sandia.gov
- Clean Energy States Alliance
  http://www.cleanenergystates.org

For More Information

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Related Reading

Clean Energy States Alliance, "Energy Storage Technology Advancement Partnership, *http://www.cleanenergystates.org/projects/energy-storage-technology-advancement-partnership/*.

Sandia National Laboratories, "Energy Storage Systems Program (ESS)," http://www.sandia.gov/ess/.

Importance of Energy Storage

Large-scale, low-cost energy storage is needed to improve the reliability, resiliency, and efficiency of next-generation power grids. Energy storage can reduce power fluctuations, enhance system flexibility, and enable the storage and dispatch of electricity generated by variable renewable energy sources such as wind, solar, and water power. The Office of Electricity Delivery and Energy Reliability Energy Storage Program funds applied research, device development, bench and field testing, and analysis to help improve the performance and reduce the cost of energy storage technologies.

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