



MARKET PLANNING

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Challenge #4: A uniform approach toward developing resource adequacy compensation for LDES technologies does not exist, in either regulated markets or competitive markets.

Recommendation 4.1: Develop improved and standardized methods to determine the capacity value of all generation and storage resources, including LDES. Future capacity accreditation studies should represent diverse storage durations.

Recommendation 4.2: Establish a framework that allows developers to enter interconnection queues with one storage duration and then extend the duration later when there is more demand for LDES.

Recommendation 4.3: Establish an interconnection mechanism that enables certain resources that are in high demand and can be developed quickly to jump the queue.



Challenge #6: There is presently a lack of resources regarding how to evaluate grid upgrades or expansions that will be necessary to accommodate both new variable renewable generation sites and LDES systems.

Recommendation 6.1: Research locational grid infrastructure implications/constraints/needs associated with different storage technologies.

Recommendation 6.2: Identify areas on the grid that have sufficient capacity, or require less upgrades, to support the interconnection of storage resources.

Challenge #9: LDES use cases require market changes.

Recommendation 9.1: Implement new market products that capture storage costs and generate more efficient market prices.

Recommendation 9.2: Extend electricity market dispatch optimization horizons.

Recommendation 9.3: FERC and ISOs/RTOs should work to remove the obstacles preventing full market participation by large dispatchable loads in wholesale markets, with a focus on the tariff changes and modernization needs to enable those resources to contribute their range of services into the market.

Recommendation 9.4: State PUCs and utilities should pursue granular tariffs that accurately capture the marginal cost and benefits of loads based on time of use on transmission, distribution, energy and fuel adjustment charges.

Challenge #10: ISO and RTO markets will need to develop support mechanisms.

Recommendation 10.1: Establish technology-neutral, market-based compensation mechanisms to support the reliability and renewable-firming services that LDES provides, which are distinct from energy and capacity revenues.

Challenge #11: State-level policymaking specific to LDES has been very limited.

Recommendation 11.1: Establish reporting requirements on state/regional decarbonization policies and objectives to assist with federal oversight.

Recommendation 11.2: Establish best practices on how to conduct the cost/benefit analysis required by recent California regulation that mandates procurement of LDES, particularly in a wholesale electricity market framework.