

Energy Storage Market Transformation

What is Energy Storage?

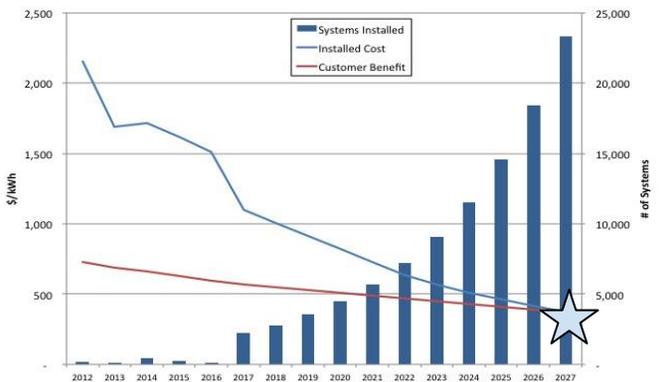
Energy storage can mean a number of technologies, such as lithium ion batteries or flow batteries, used to store energy from a generation source, such as a solar PV system, for use at a later time. Energy storage technologies give customers and utilities the ability to control the flow of electrons in an efficient manner, effectively solving for the intermittency of renewable energy and allowing for an ever greater reliance on renewables.

How Does Solar + Energy Storage Work?



When the sun is shining, a solar energy system can recharge an on-site storage device. Then, when the sun goes down, the storage device can be used to meet evening or night-time electricity demand. With the right incentives and controls, storage devices can be highly flexible and dynamic, storing and/or discharging electrons to the grid. In this way, storage technologies are one of the most important and effective tools for grid operators to increase use of renewable energy and build a more resilient and reliable grid.

Achieving Market Transformation



*This chart represents the potential growth of energy storage in California.

*Energy storage costs remain high, but with the help of consistent incentives, prices will come down as the industry becomes more established.

* The California legislature has the opportunity to propel the industry so that storage is widely available to all utility customers.

Distributed Energy Storage

Ratepayer Benefits:

Customers need more choices to protect against rising energy costs and confusing rate structures like “Time-of-Use” which are slated to become the default residential rate structure in a couple of years. Energy storage gives consumers greater flexibility especially when paired with on-site renewable energy.

Locating storage where energy is consumed also reduces the need to build expensive grid infrastructure.

Getting to 100%:

If California is to achieve 100% renewable energy and a zero carbon future, distributed energy storage sited near customer load will be key.

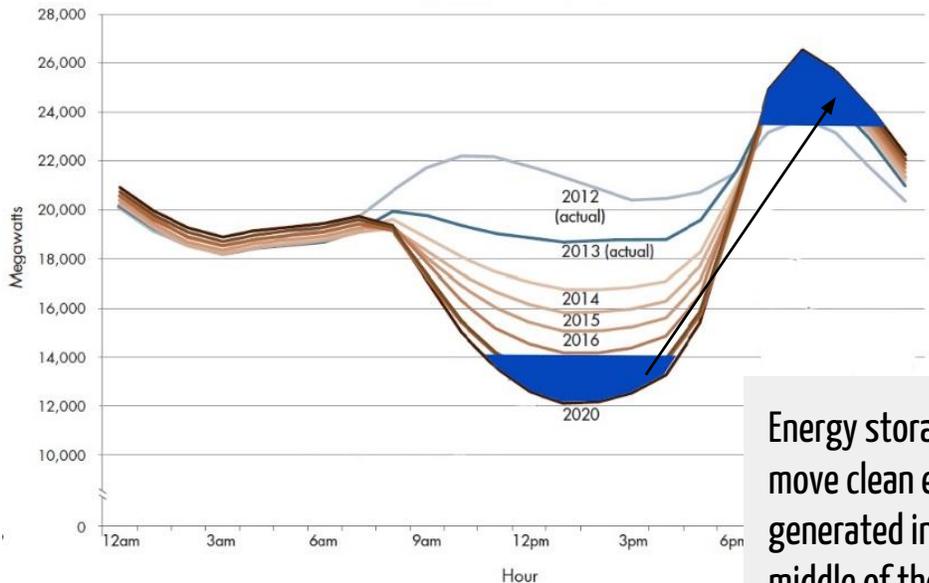
More distributed energy storage also means less reliance on natural gas plants during peak demand and more on home-grown and renewable solar energy.

California Leadership:

Ten years ago, California transformed the solar market, bringing rooftop solar to scale, and spurring innovation and jobs along the way.

Today, California needs to continue building out this localized clean energy marketplace by adding storage to the mix. California’s innovation economy depends on maintaining our world class leadership on clean energy development and management.

Energy storage is a dual solution — absorbing clean energy when it is abundant and providing power at times of peak usage. This reduces the need to “ramp” energy production with inefficient peaker plants.



Energy storage can move clean energy generated in the middle of the day to the evening.

Bills in the Legislature

AB 1033 (Ting)

AB 1030 would direct the CPUC to engage in multiple policy initiatives to achieve market transformation of customer-sited energy storage. Steps taken by the CPUC today can effectively bring down costs by encouraging competition and innovation in the market and increasing reliability of supply chains, technology and installation costs.

SB 700 (Wiener)

SB 700 would extend current storage incentives to bring down costs for on-site energy storage technologies. The bill would drive down costs through a tiered rebate program while giving consumers and the storage industry certainty over a period of ten years. The program would also support storage for low-income, residential, commercial, schools, and agricultural consumers as well as consumers living in disadvantaged communities.