

# **Does traditional electricity need energy storage**





## Overview

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Why do we need energy storage?

Because power systems are balanced at the system level, no dedicated backup with energy storage is needed for any single technology. Storage is most economical when operated to maximise the economic benefit of an entire system. Don't we need storage to reduce curtailment?

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Why is electric energy storage important?

Electric energy storage can also increase the predictability of integrating renewables like wind and solar onto the power grid. Currently, global storage capacity is less than 2 percent of the total electric power production capacity. Costs for batteries have decreased significantly in the past few years and are expected to continue to decline.

How is energy stored?

**Mechanical Energy Storage:** Energy is stored through mechanical means, such as compressing air or using flywheels. Compressed Air Energy Storage (CAES) and flywheels are examples of this technology. **Hydrogen Storage:** Surplus electricity is used to produce hydrogen through electrolysis.

How can energy storage be used in a power plant?

For example, wind farms often generate more power at night when winds speeds are high but demand for electricity is low. Electric energy storage could be used to shift this output to periods of high demand. Similarly, storage could capture excess overnight generation from a baseload nuclear power plant.



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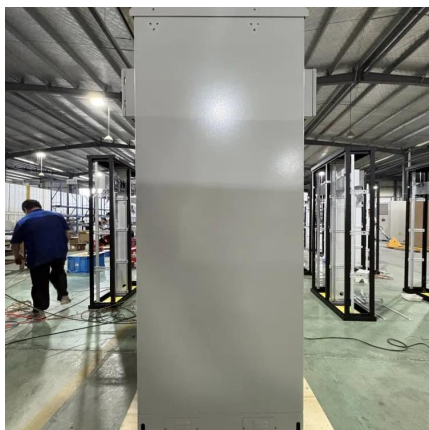


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