

# A simple introduction to the economics of storage: shifting demand and supply over time and space

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## Abstract

The literature on electrical energy storage (EES) is technical and complex and this paper aims to quantify the potential contribution and clarify the costs and value of different types of EES and compare these to peaking generation and interconnectors. Worldwide, dams have 2,700 times the storage capacity of pumped storage, which accounts for 99% of conventional EES, batteries making up the rest. Indirect use of hydro power, and in future, electric vehicle batteries adds to their value and if accessible at reasonable cost, would be cheaper than conventional EES. EES, peakers and DC interconnectors can offer flexibility services which considerably enhance their value, but hopes of a battery revolution for a future smarter electricity system should not be exaggerated.

**Key words:** electrical energy storage, interconnectors, flexibility services

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