Energy Storage Systems

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**Electrical and Thermal Energy Storage Systems**

**Electrical energy storage systems**

- **Mechanical**
  - Pumped hydro - PHS
  - Compressed air - CAES
  - Flywheel - FES

- **Electrochemical**
  - Secondary batteries: Lead acid / NiCd / NiMh / Li / NaS
  - Flow batteries: Redox flow / Hybrid flow
  - Superconducting magnetic coil - SMEs

- **Chemical**
  - Hydrogen: Electrolyser / Fuel cell / SMG

- **Thermal**
  - Sensible heat storage: Molten salt / A-CAES

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**Energy Storage Technologies - Discharge Time, Application, and Power Rating**

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Lithium-ion battery

- Lithium-ion battery module

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Renewable Energies for Hydrogen and Fuel Cells

Thermal Energy Storage System from Renewables

Energy Storage and Auditing in Buildings, Experimental and Simulation

Power Demand Management Through Energy Storage