

Hydro Pumped Storage System

Hydro pumped storage is a hydroelectric energy storage system using excess energy to pump water to a higher reservoir. When demand increases, the stored water is released back through a turbine to generate electricity.



System Overview

Hydro Pumped Storage Technology

Hydro pumped storage is a highly reliable hydroelectric energy storage system designed to balance electrical grids. By utilizing two reservoirs at different elevations, the system manages energy by pumping water during off-peak hours and generating electricity during periods of high demand. This mature technology provides essential large-scale storage capabilities, significantly improving grid stability and overall operational efficiency.

Technical Components

System Components

- Upper Reservoir
- Lower Reservoir
- Pump-Turbine
- Generator-Motor

Operational Mechanics

Operating Modes

Energy Storage, Energy Generation, Grid Balancing

Key Features

Technology Attributes

Mature Technology • Reliable • Large-Scale Storage • High Efficiency