



Creating energy storage solutions

There is no battery on the market that can match the potential of pumped storage. We believe this is the sustainable solution the industry needs to address energy storage.

As an industry leader in pumped-storage plant design and upgrade, Stantec offers a full range of services to address the issues that face project developers and owners from planning and design to environmental acceptability and economic soundness through construction. Since the 1960s, we have been involved in over 16,000 MW of pumped storage with an operating 7,800 MW in the U.S. and 8,200 MW internationally.



55+

We have over 55 years of experience working international on pumped storage projects.

WHAT WE CAN DO FOR YOU:

Our firm is shaping the industry by embracing cutting-edge technology and utilizing our engineers' hands-on experience in all phases of the project life cycle. Our work integrates advances in design technology, materials, fabrication methods, and controls. These advances significantly improve efficiency, performance, operation, and project flexibility. Adjustable and variable speed technology enables greater savings in overall system production costs, provides larger amounts of various operating reserves, and delivers more value to the power system.

We specialize in all features of pumped storage projects:

- Power Generation Equipment Design Parameters and Specifications – Pumpturbines, generator-motors, substations
- Plant Systems – Auxiliary power, communication, mechanical and electrical balance of plant systems
- Water Conveyance Structures – Tunnels, pipelines, penstocks, and analysis using 3D fluid dynamics calculations
- Storage Facilities – Dams, spillways, intakes, 3D finite element modeling analysis
- Foundations – Foundation and materials testing, geotechnical investigations and treatment, rock mechanics
- High-voltage Transmission – Switchyards, gas insulated switch gear (GIS), control facilities

Pumped storage is a proven reliable technology with a 50 to 100 year design life, providing grid stability and reserving power for millions of homes. It is a superior solution that offers maximum flexibility to store energy from intermittent renewable resources.

Connect with us



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