# Pumped storage project application process

How does a pumped storage hydropower project work?
Pumped storage hydropower projects use electricity to store potential energy by moving water between an upper and lower reservoir. Using electricity from the grid to pump water from a lower elevation,PSH creates potential energy in the form of water stored at an upper elevation,which is why it is often referred to as a "water battery".

What is a pumped storage hydropower facility?
Pumped storage hydropower facilities use water and gravity to create and store renewable energy. Learn more about this energy storage technology and how it can help support the 100% clean energy grid the country--and the world--needs.

What is a pumped storage plant?
Pumped storage plants,like other hydroelectric plants,can respond to load changes within seconds. The most important use for pumped storage has traditionally been to balance baseload powerplants,but they may also be used to abatethe fluctuating output of intermittent energy sources.

How does a pumped storage system work?
Most pumped storage projects include a water level monitoring and control systemfor their upper and lower reservoirs' operation. Many of these systems include automatic features designed to initiate pump/turbine shutdown if the water level rises above preset maximum values.

What makes a pumped storage project unique?
Every Pumped Storage project has very unique design featuresthat may make some of the items discussed in this document unnecessary or less beneficial. Each item mentioned in this document is intended to challenge the owner to question and evaluate the need and benefit to their particular project.

When should a pumped storage project be staffed?
The January 13, 2006 FERC letter or more current FERC guidance should be considered by the licensee when determining the staffing of a pumped storage project. Un-staffed operation should only be considered when robust fail safe systems, procedures and processes are in place to support unattended operation.

process. A similar pumped storage project was proposed by KPUD in 2009 and was discussed with stakeholders. This similar project, referred to as the JD Pool Pumped Storage Hydroelectric Project, included a larger footprint and project boundary. However, this proposal did not advance beyond the feasibility stage.

Types of Pumped Storage Plants: Countries like China and the United States implement diverse pumped storage projects, including open-loop systems connected to natural water sources and closed-loop "off-river"

sites. These variations cater to different geographic and energy demand characteristics .

The Project is located here because the site offers a rare combination of features needed for a good pumped storage project. These valuable features include topography (high vertical drop over a short distance), proximity to an electric transmission hub, geology, and a ...

Transforming the U.S. Market with a New Application of Ternary-Type Pumped Storage Hydropower Technology [HydroWIRES] ... Since 2000 only one new pumped storage hydropower project has been constructed in the United States. ... work aims to develop a prototype enhanced PSH model for incorporation into MISO"s multi-stage market clearing process ...

The White Pine Pumped Storage Project is a 1,000 megawatt energy storage project under development in White Pine County, Nevada. ... White Pine Waterpower filed an application for a Preliminary Permit to initiate the FERC licensing process for the project . October 2017 - FERC issued the Preliminary Permit .

A closed-loop pumped storage project is generally defined as a pumped storage project that utilizes reservoirs situated at locations other than natural waterways, lakes, wetlands, and other natural surface water features, and may rely on temporary withdrawals from surface waters or groundwater for the sole purpose of initial fill or the

HOW DOES PUMPED STORAGE HYDROPOWER WORK? Pumped storage hydropower (PSH) is one of the most-common and well-established types of energy storage technologies and currently accounts for 96% of all utility-scale energy storage capacity in the United States. PSH facilities store and generate electricity by moving water between two reservoirs at different ...