

Pumped storage power station is valued at 40 billion





Overview

Operated by the State Grid Corporation of China, the facility boasts a total installed capacity of 3.6 million kilowatts and is designed to generate 6.61 billion kilowatt hours of electricity annually.

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SHIJIAZHUANG, Dec. 31 -- The Fengning pumped storage hydropower plant, the largest of its kind globally, has commenced full operation in the city of Chengde, north China's Hebei Province. Operated by the State Grid Corporation of China, the facility boasts a total installed capacity of 3.6 million.

The global Pumped Hydro Storage (PHS) market size was valued at USD 45.95 billion in 2023 and is projected to grow from USD 48.33 billion in 2024 to USD 129.01 billion by 2032, recording a CAGR of 13.06% during the forecast period. Europe dominated the global market with a share of 58.76% in 2023.

As per recent data, the Pumped Storage Power Station Market stood at USD 10.5 billion in 2024 and is projected to attain USD 16.2 billion by 2033, with a steady CAGR of 5.2% from 2026–2033. The Pumped Storage Power Station Market is undergoing a foundational shift, driven by rapid technological.

The global pumped storage power station market size was valued at approximately \$18 billion in 2023 and is projected to reach around \$30 billion by 2032, growing at a compound annual growth rate (CAGR) of 6.2% during the forecast period. This robust growth is driven by increasing demand for grid.

Pumped Storage Power Station Market size stood at USD 10.5 Billion in 2024 and is forecast to achieve USD 16.2 Billion by 2033, registering a 5.2% CAGR from 2026 to 2033. North America accounted for 20%, Asia Pacific 40%, Europe 25%, Latin America 5%, and Middle East & Africa 10%. Asia Pacific led. What is the global pumped hydro storage (PHS) market size?



Explore our premium consulting services designed to help you gain a competitive edge. The global Pumped Hydro Storage (PHS) market size was valued at USD 45.95 billion in 2023 and is projected to grow from USD 48.33 billion in 2024 to USD 129.01 billion by 2032, recording a CAGR of 13.06% during the forecast period.

How many pumped storage power stations were built in 2023?

In 2023, 239 pumped storage power station projects underwent updates, with a total capacity exceeding 316.735 GW and total investment exceeding trillions of yuan. The scale of pumped storage construction in each province is shown in Fig. 6. Fig. 6.

How long does it take to build a pumped storage power station?

The construction period of PSPSs is long, with large investments required. Typically, it takes 5–8 years to construct a 1.2 million kilowatt pumped storage power station, with investments ranging from tens of billions to hundreds of billions (Chen and Luo, 2020, Zhang et al., 2020, Zhang et al., 2019).

Can pumped storage stations be used as energy storage support?

With China continuously scaling up the construction of integrated clean energy bases like “hydro-wind-storage” and new energy bases such as “Shagohuang”, pumped storage stations, especially variable-speed ones, will be more widely applied as energy storage support in regional grids (China Power, 2023).

Why is pumped storage hydropower station important?

The pumped storage hydropower station has always played an important role in promoting economic development and rural revitalization. As a clean energy base, it is an important power support and energy infrastructure that meets the direction of national investment.

How much will China's pumped storage hydropower station invest?

It is expected that the pumped storage hydropower station will directly invest approximately 1.7 trillion yuan in the “14th Five-Year Plan” period, with a clear economic stimulus effect (China Renewable Energy Engineering Institute, 2022).



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Pumped Hydro Storage Market Size, Share , Industry Forecast ...

Pumped Hydro Storage MARKET OVERVIEW The global Pumped Hydro Storage Market size was valued at USD 4.586 Billion in 2024 and is projected to reach USD ...

World's Largest "Hydro Battery" Fully Operational

Second, the upper reservoir can store nearly 40 million kilowatt - hours of new energy electricity when full, and the 12 units are capable of operating at full capacity for 10.8 ...



China Records Hydropower Boom Amid Power Storage Push

China dominates global hydropower storage. Pumped storage remains the world's top long-duration storage technology. China's Fengning station alone can deliver 40 ...



Global Pumped Storage Power Station Market Research Report ...

The global Pumped Storage Power Station market was valued at US\$ million in 2023 and is anticipated to reach US\$ million by 2030,



witnessing a CAGR of % during the forecast period ...



[9.876 billion, Shaanxi Shahe pumped storage power ...](#)

Recently, the Power Construction Corporation of China (Power) unveiled a huge investment plan: the Shaanxi Shahe Pumped Storage Power ...



World's largest pumped storage hydropower plant in full operation ...

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World's largest pumped storage hydropower plant in full operation ...

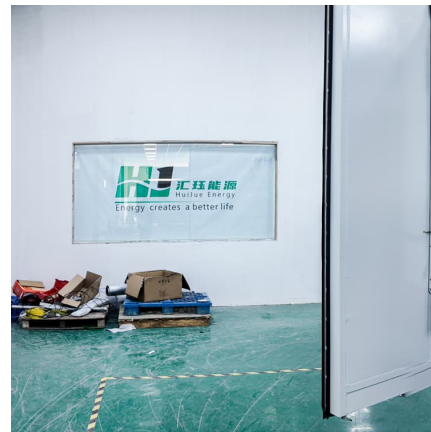
A drone photo taken on Dec. 31, 2024 shows a reservoir of Fengning pumped-storage power station in Fengning Manchu Autonomous County, north China's Hebei Province. Fengning ...





[Research on the Evaluation Index System of Pumped...](#)

Abstract. This paper considers the objective factors of national rural revitalization strategy and pumped storage power station construction and operation. Then, based on the principle of ...



National Hydropower Association 2021 Pumped Storage Report

Executive Summary This is the third Pumped Storage Report White Paper prepared by the National Hydropower Association's Pumped Storage Development Council (Council). The first ...

[Germany Pumped Storage Power Station Market Size 2026](#)

Germany Pumped Storage Power Station Market size was valued at USD 2 Billion in 2024 and is projected to reach USD 3 Billion by 2033, growing at a CAGR of 5.6% ...



Pumped Storage Power Station Market Size, Key Highlights

Pumped Storage Power Station Market size was valued at USD 10.5 Billion in 2024 and is projected to reach USD 16.2 Billion by 2033, exhibiting a CAGR of 5.2% from 2026 to 2033.



World's largest pumped storage hydropower plant in full operation ...

A drone photo taken on Dec 31, 2024 shows the underground workshop of Fengning pumped-storage power station in Fengning Manchu autonomous county, North China's Hebei province.



Pumped Hydro Storage [PHS] Market Size , Global Share, 2032

The global Pumped Hydro Storage (PHS) market size was valued at USD 45.95 billion in 2023 and is projected to grow from USD 48.33 billion in 2024 to USD 129.01 billion by ...



Analysis on the Influence of Pumped Storage Power Station ...

Abstract. Pumped-storage power stations are often built in economically less developed rural areas due to the objective requirements of the project. Their construction and operation can ...



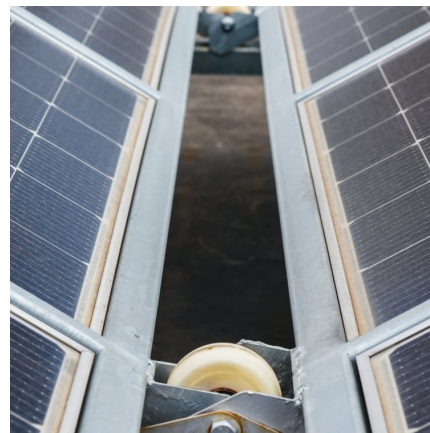


[North America Pumped Storage Power Station Market Size](#)

North America Pumped Storage Power Station Market size was valued at USD 8 Billion in 2024 and is projected to reach USD 12 Billion by 2033, growing at a CAGR of 5.8% from 2026 to 2033.

[Pumped Storage Power Station Market Size & Trends for](#)

Pumped Storage Power Station Market size was valued at USD 10.5 Billion in 2024 and is projected to reach USD 16.2 Billion by 2033, exhibiting a CAGR of 5.2% from 2026 to 2033.



Optimization of sizing and operation of pumped hydro storage ...

To optimally manage possible overgeneration from non-programmable renewable energy sources, such as photovoltaic power plants and wind power plants, a ...

Pumped storage provides grid reliability even with net ...

Pumped hydro storage plants serve an important role on electric power systems: they improve system-wide efficiency and reliability by allowing ...

...



Pumped storage power stations in China: The past, the present, ...

The pumped storage power station (PSPS) is a special power source that has flexible operation modes and multiple functions. With the rapid economic development in ...

Pumped Storage Hydropower

Current Status Pumped storage hydro - "the World's Water Battery" Pumped storage hydropower (PSH) currently accounts for over 90% of storage capacity and stored energy in grid scale ...



[World's largest pumped storage power plant fully ...](#)

The Fengning Pumped Storage Power Station, the world's largest facility of its kind, has commenced full operations with the commissioning of its ...



[pumped storage power station is valued at 40 billion](#)

Dominion Energy's Bath County Hydroelectric pumped storage power station, the largest in the world, generates enough energy to power more than 750,000 homes



Heilongjiang Yabuli pumped storage power station project signed ...

[Heilongjiang Yabuli pumped storage power station project signed]On March 18, 2023, at the project signing ceremony of the Heilongjiang Industrial Investment and Open Cooperation ...

Construction of World's Largest Pumped-Storage Power Station ...

According to the company, the Fengning pumped-storage power station, valued 19.2 billion yuan, is a national key project with an installed capacity of 3.6 million kW.



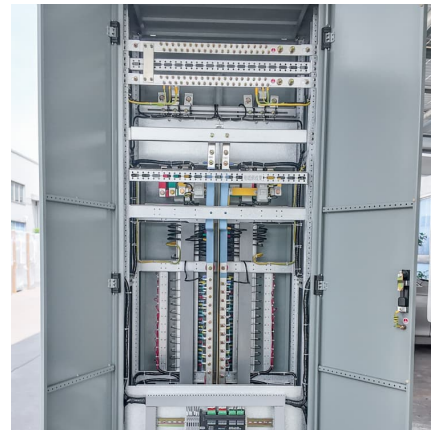
[World's largest pumped storage hydropower plant in ...](#)

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Asia pumped storage power station

The global pumped storage power station market size was valued at approximately \$18 billion in 2023 and is projected to reach around \$30 billion by 2032, growing at a compound annual ...



Pumped Storage Power Station Market

The global pumped storage power station market size was valued at approximately \$18 billion in 2023 and is projected to reach around \$30 billion by 2032, growing at a compound annual ...

9.876 billion, Shaanxi Shahe pumped storage power station ...

Recently, the Power Construction Corporation of China (Power) unveiled a huge investment plan: the Shaanxi Shahe Pumped Storage Power Station Project, which will cost ...



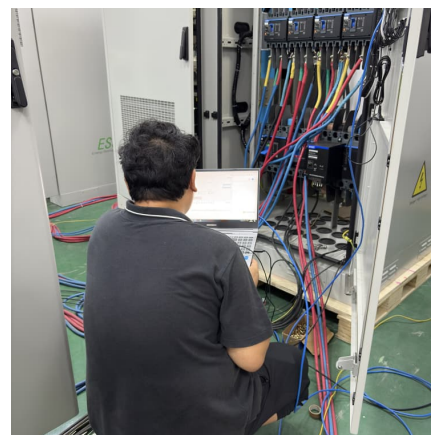


???? , ?????? pumped storage hydropower ...

China now has the world's biggest carbon market and biggest clean power generation system: the installed capacity of renewable energy has ...

Construction of pumped storage power stations among cascade ...

Hence, to support the high-quality power supply, this research explores the complementary characteristics of the clean energy base building different types of pumped ...



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