

Pumped storage hydropower (PSH) plants built in abandoned mine shafts can convert intermittent electricity into useful energy. However, studies on basic theories and key technologies are a pressing issue.

There are a number of applications and uses of abandoned mines, such as pumped storage, compressed air storage, salt cavern gas/oil storage construction, carbon dioxide storage and utilization ...

Energies 2023, 16, 3143 of 16 is a key tool for managing the operation of the power grid owing to its quick starting and high reliability. 2.1. Mode of Abandoned-Mine Pumped Storage

Reutilization of mine water as a heat storage medium in abandoned mines Florian Hahn<sup>1</sup>, Gregor Bussmann, Felix Jagert<sup>1</sup>, Roman Ignacy, Rolf Bracke<sup>1</sup>, Torsten Seidel<sup>2</sup> <sup>1</sup>Bochum University ...

According to the storage requirements of abandoned mine pumped storage, the roadways with a bend angle of 15° or 30°; in Model A and 15°; in Model B can be used as water ...

This Q& A features two authors of the recently released technical report, "PUSHing for Storage, A Case for Repurposing Decommissioned Mines for Pumped Underground Storage Hydro," who share the scope and promise ...

The Asturian Central Coal Basin in northern Spain has been an exploited coal mining area for many decades and its network of tunnels extends among more than 30 mines. Parts of this ...

6 ???#0183; A mine storage uses the cleanest media, water, and the most reliable power, gravity, to accomplish an energy storage system. The height difference between two reservoirs is what ...

The number of abandoned coal mines will reach 15000 by 2030 in China, and the corresponding volume of abandoned underground space will be 9 billion m<sup>3</sup>, which can offer a good choice ...

The results show that, taking 100 MW as the minimum installed scale, 91 abandoned mines suitable for the construction of pumped storage power stations are screened out in the Yellow River basin, with a total ...

The repurposing of abandoned open-pit coal mines into pumped storage hydropower (PSH) can help with the storage of renewable energy, improve mine environments, and provide added economic value. Construction ...

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