Swiss air-cooled energy storage project

Overview

In a pilot project, electricity is being stored for the first time in a building using compressed air storage technology. During the compression the air heats up. Storing high pressure air at over 500 °C is technically difficult for a number of reasons and not very efficient. With the development of the start-up Green-Y Energy AG and the SBTC, it is possible to store renewable energy and release it as electricity, heat and cold as required. AA-CAES addresses a new technology for electrical-energy storage: Advanced Compressed Air Energy Storage. Energy storage using compressed air becomes efficient when the heat produced during compression is also stored, as is the case in this pilot plant, which features a storage tank each for latent heat. For the first time, a pilot project called Alacaes is developing a new system that stores electricity in the form of compressed air in the Swiss Alps, with the support of the Swiss Energy Ministry.

Article Content

Compressed Air Storage · Swiss Energy Storage Overview by BFH ...

Storing high pressure air at over 500 °C is technically difficult for a number of reasons and not very efficient. Therefore the air is usually cooled down before storing it in underground caverns. But for ...

A huge battery made of air

Deep in a cavern in the Swiss Alps, an innovative system that stores electricity as compressed air is being developed in a pilot project that is a world ...

Energy storage innovation in Switzerland: a potential to ...

For the first time, a pilot project called Alacaes is developing a new system that stores electricity in the form of compressed air in the Swiss Alps, ...

Compressed-air energy storage

OverviewTypesCompressors and expandersStorageEnvironmental ImpactHistoryProjectsStorage thermodynamics

Compression of air creates heat; the air is warmer after compression. Expansion removes heat. If no extra heat is added, the air will be much colder after expansion. If the heat generated during compression can be stored and used during expansion, then the efficiency of the storage improves considerably. There are several ways in which a CAES system can deal with heat. Air storage can be adiabatic, diabatic, isothermal, or near-isothermal.

AA-CAES: Advanced adiabatic compressed air energy storage

AA-CAES addresses a new technology for electrical-energy storage: Advanced Compressed Air Energy Storage.

The State of Vaud gets behind compressed air energy storage

Compressed air energy storage, an innovative technology to meet the needs of power networks that increasingly rely on electricity form renewable energy sources, has been under ...

Green-Y Energy AG – Swiss Battery Technology Center

With the development of the start-up Green-Y Energy AG and the SBTC, it is possible to store renewable energy and release it as electricity, heat and cold as required.

Mountain Tunnels Store Compressed Air and Heat

In the present project, the scientists developed a storage tank that absorbs the heat generated during air compression and releases it ...

Revolutionary electricity storage with heating/cooling system for ...

SCHWEIZER KAPITAL GLOBAL IMPACT FUND AG is investing CHF 2 million in the Swiss start-up Green-Y Energy AG to develop a sustainable compressed air energy storage system ...

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: https://www.proton-engineering.eu
Email: info@proton-engineering.eu
Phone: +1 832 471 8952
Address: 12345 Lake City Way, Suite 200, Houston, TX 77001, USA

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