



Bedrock Energy Storage System

Who is bedrock Energy Corp?

Bedrock Energy Corp. is an energy storage project developer with a focus on large-scale grid storage solutions. Our current project, a Compressed Air Energy Storage (CAES) development known as the Bayfield and Stanley Facility, is located in Bluewater, Ontario with the potential to power the entire region.

What is bedrock's compressed air energy storage project?

Bedrock's Compressed Air Energy Storage project (CAES) is an innovative plan to use proven technology to address energy waste, safeguard the environment, and stabilize energy costs, ushering in a more sustainable future for Ontario and for Canada. EFFICIENT. RESILIENT. SUSTAINABLE.

How much energy does Bedrock Store?

Bedrock's CAES solution can store up to 520 megawatts; enough energy to power 624,000 homes in Southern Ontario. That's equivalent to all of the homes in Hamilton, London and Waterloo Region combined. Making an impact where it counts.

Can a compressed air energy storage system be used in porous rock?

Because a Compressed Air Energy Storage System (CAES) in porous rock would be an innovation upon proven technology, and the first application of its kind not only in Ontario, but anywhere in the world, it is with great appreciation that we have received an amended regulation from the Ontario government to allow us to proceed.

What is borehole thermal energy storage (BTES)?

Borehole Thermal Energy Storage (BTES) has the same working principle as ATEs, however it is a closed-loop system that stores thermal energy in the bedrock using borehole heat exchangers (sometimes > 100 wells) (Fig. 6).

What is rock cavern thermal energy storage?

Rock Cavern Thermal Energy Storage (CTES) resorts to engineered rock caverns as the underground water reservoir (Fig. 6). Caverns can be mined specifically to serve as TES reservoirs, but CTES can also be accomplished by recommissioning abandoned mines.

Bedrock Energy, a technology company designing and constructing geothermal heating and cooling systems, has installed a geothermal borefield and heating and cooling system at Building D of the Penn Field ...

Our current project, a Compressed Air Energy Storage (CAES) development known as the Bayfield and Stanley Facility, is located in Bluewater, Ontario with the potential to power the entire region. Both of the reservoirs in ...

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Assessing the optimal placement and design of a large-scale high temperature energy storage system in crystalline bedrock is a challenging task. This study applies and evaluates various methods and strategies for pre ...

In the past few decades, electricity production depended on fossil fuels due to their reliability and efficiency [1]. Fossil fuels have many effects on the environment and directly ...

P_{dis} and η_{dis} are the discharge power and efficiency and E_{EES} is the capacity of the EES system.
2.2.4 Bedrock Energy Storage System. The BES system utilizes drilling holes in ...

Thermal energy storage (TES) is the storage of thermal energy for later reuse. Employing widely different technologies, it allows surplus thermal energy to be stored for hours, days, or months. Scale both of storage and use vary from ...

The Bedrock Energy team (source: Bedrock Energy) Texas-based Bedrock Energy (Bedrock) has announced the completion of its inaugural geothermal project, a geothermal borefield and heating and cooling system at ...

