

The Research Council of Oman (TRC) is underway, which aims to develop and implement an innovative concept of a sustainable thermally driven cooling system in combination with a HT-ATES in...

We conducted a geoscientific feasibility study for the development of a high-temperature thermal aquifer energy storage system (HT-ATES) outside the capital of Muscat, northern Oman.

Controlling parameters of a mono-well high-temperature aquifer thermal energy storage in porous media, northern Oman. Publication. Petroleum Geoscience ... "published\_date": "August 2019", ...

A geoscientific feasibility study for the development of a high-temperature aquifer thermal energy storage system in Muscat, Oman is presented. Results show that ATES performance will be significantly influenced by metre-scale reservoir heterogeneities.

The Impact of Reservoir Heterogeneities on High-Temperature Aquifer Thermal Energy Storage Systems. A Case Study from Northern Oman Author(s) Winterleitner, G; Sch&#252;t, F; Wenzlaff, C; Huenges, E Year. 2018 Is Peer Reviewed? Yes Journal. Geothermics ISSN: 0375 ...

Analogously, sensible thermal energy storage in the high temperature range can be called high temperature sensible thermal energy storage or HTS-TES. Since in the high and ultra-high ranges there can be a higher temperature level in the storage than that of the process of energy utilization (e.g. HE), the process control may require a special ...

Enhancing electricity supply mix in Oman with energy storage systems: a case study . &#215; Close Log In ... 3000 500-750 130-500 130-515 130-515 Medium temperature applications High-temperature applications short-term storage high-temperature applications Long-term storage Short-term storage Short-term storage Short-term storage Thermal 50 ...

We conducted a geoscientific feasibility study for the development of a high-temperature thermal aquifer energy storage system (HT-ATES) outside the capital of Muscat, northern Oman. The aquifer storage is part of a solar geothermal cooling project for the sustainable and continuous cooling of office buildings.

We investigated a high-temperature (HT) mono-well system (c. 100&#176;C), where the well screens are separated vertically within the aquifer, as an alternative to conventional doublet ATES systems for an underground storage in northern Oman. We analysed the impact of thermal inference between injection and extraction well screens on the heat ...

HEATSTORE SWITZERLAND: New opportunities of geothermal district heating network sustainable

growth by high temperature aquifer thermal energy storage development. In: Proceedings World Geothermal Congress 2020. ... Ueckert, Martina, Niessner, Reinhard, Baumann, Thomas, 2016. High temperature aquifer storage. In: Proceedings, 41st Workshop ...

Aquifer thermal energy storage (ATES) as a complement to fluctuating renewable energy systems is a promising technology to guarantee a continuous energy supply. A mono-well system, where the well screens are separated vertically within one aquifer, is investigated to realize an underground storage in northern Oman. In this study,

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The main contributions of this paper include the following: Reviewing the status of three utility-scale energy storage options: pumped hydroelectric energy storage (PHES), compressed air ...

High-performance, thermally resilient polymer dielectrics are essential for film capacitors used in advanced electronic devices and renewable energy systems, particularly at elevated temperatures where conventional polymers fail to perform. Compositing polymers with nanofillers is a well-established approach

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HT-ATES (high-temperature aquifer thermal energy storage) systems are a future option to shift large amounts of high-temperature excess heat from summer to winter using the deep underground. Among ...  
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