

Guo Chaobin, Wang Zhihui, Liu Kai, Li Cai. 2019. The application and research progress of special underground space[J]. ... carbon dioxide geological storage, compressed air energy storage, deep-well waste reinjection and radioactive waste disposal are briefly analyzed. With the development of SUS research, it is

Semantic Scholar extracted view of &quot;Comparison Analysis of Different Compressed Air Energy Storage Systems&quot; by Zhou Shengni et al. ... The promise and challenges of utility-scale compressed air energy storage in aquifers. Chaobin Guo Cai Li +7 authors L. Shen. Environmental Science, Engineering. Applied Energy. 2021; 27. PDF.

The feasibility and requirements of CAES have been proved by energy storage in air tanks, underground caverns and aquifers [8]. Air tank is considered as micro-CAES to conduct research with relatively small storage scale [9], [10] terms of grid scale CAES system, the feasibility and application has been demonstrated by compressed air energy storage in ...

The promise and challenges of utility-scale compressed air energy storage in aquifers Chaobin Guo<sup>1</sup>, Cai Li<sup>2</sup>, #, Keni Zhang<sup>3</sup>, Zuansi Cai<sup>4</sup>, Tianran Ma<sup>5</sup>, Federico Maggi<sup>2</sup>, Yixiang Gan<sup>2</sup>, ...

This report documents the results of a comprehensive investigation into the practical feasibility for Compressed Air Energy Storage (CAES) in Porous Media. Natural gas porous media storage technology developed from seventy years of experience by the natural gas storage industry is applied to the investigation of CAES in porous media. A major objective of this investigation is ...

DOI: 10.1016/J.ENCONMAN.2015.03.072 Corpus ID: 93800542; Thermodynamic impact of aquifer permeability on the performance of a compressed air energy storage plant @article{Pei2015ThermodynamicIO, title={Thermodynamic impact of aquifer permeability on the performance of a compressed air energy storage plant}, author={Peng Pei and Scott F. Korom ...

Abstract Compressed air energy storage in aquifers (CAESA) can be considered a novel and potential large-scale energy storage technology in the future. However, currently, the research on CAESA is relatively scarce and no actual engineering practices have yet been performed due to a lack of detailed theoretical and technical support. This article provides a ...

Compressed air energy storage in aquifers has been considered to be a potential solution to overcoming the scale limitation of air storage space in the CAES technology and making use of ...

Author(s): Guo, Chaobin; Pan, Lehua; Zhang, Keni; Oldenburg, Curtis M; Li, Cai; Li, Yi | Abstract: CAESA

(compressed air energy storage in aquifers) attracts more and more attention as the increase need of large scale energy storage. The comparison of CAESA and CAESC (compressed air energy storage in caverns) can help on understanding the performance of ...

DOI: 10.1016/j.apenergy.2024.123329 Corpus ID: 269520630; The underground performance analysis of compressed air energy storage in aquifers through field testing @article{Li2024TheUP, title={The underground performance analysis of compressed air energy storage in aquifers through field testing}, author={Yi Li and Hao Wang and Jinsheng Wang and Litang Hu and ...

HE Qingcheng, LI Cai, GUO Chaobin, et al. Geological carbon storage and compressed gas energy storage: current status, challenges, and prospects[J]. Hydrogeology & Engineering Geology, 2024, 51(4): 1-9. ... operating compressed air salt cavern energy storage power plants. China has abundant salt cavern resources, albeit

Compressed air energy storage (CAES) is one of the promising technologies to store the renewable energies such as surplus solar and wind energy in a grid scale. ... of a novel approach to coupling compressed air energy storage in aquifers with geothermal energy,&quot; Applied Energy, Elsevier, vol. 279(C). Guo, Chaobin & Li, Cai & Zhang, Keni & Cai ...

Author links open overlay panel Chaobin Guo a, Lehua Pan b, Keni Zhang a b, Curtis M. Oldenburg b, Cai Li c, Yi Li d. Show more. Add to Mendeley. Share. Cite. ... CAESA ...

and compressed air energy storage in aquifers Chaobin Guo a,d, Keni Zhang a,b, ?, Lehua Pan b, Zuansi Cai c, Cai Li d, YiLi e a School of Mechanical Engineering, Tongji University, Shanghai ...

DOI: 10.1016/J.APENERGY.2016.08.105 Corpus ID: 114295954; Comparison of compressed air energy storage process in aquifers and caverns based on the Huntorf CAES plant ...

Author links open overlay panel Chaobin Guo a, Cai Li b 1, Keni Zhang c, Zuansi Cai d, Tianran Ma e, Federico Maggi b, Yixiang Gan b, Abbas El-Zein b, Zhejun Pan f, Luming Shen b. Show more. Add to Mendeley. ... Compressed air energy storage has garnered much attention due to its advantages of long lifespan, low cost and little environmental ...

Numerical investigation of cycle performance in compressed air energy storage in aquifers Lichao Yanga, Zuansi Caib, Cai Lic, Qingcheng Hed, Yan Mad, Chaobin Guo d,\* a School of Water Resources and Environment, China University of Geosciences (Beijing), Beijing 100083, China b School of Engineering and the Built Environment, Edinburgh Napier University, Edinburgh ...

Geological Compressed Air Energy Storage (GCAES) can provide a flexible and efficient energy storage scheme for the large-scale deployment of intermittent clean energy, ...

A descriptive summary of research and development in compressed air energy storage technology is presented. Research funded primarily by the Department of Energy is described. Results of studies by other groups and experience at the Huntorf plant in West Germany are included. Feasibility studies performed by General Electric are summarized. The feasibility of ...

Different from conventional compressed air energy storage (CAES) systems, the advanced adiabatic compressed air energy storage (AA-CAES) system can store the compression heat which can be used to ...

Modelling A Field-Scale Compressed Air Energy Storage in Porous Rock Reservoirs Lichao Yang, Chaobin Guo, Cai Li, Qingcheng He, Keni Zhang, Zuansi ... Compressed Air Energy Storage (CAES) is one of the promising methods to store the surplus solar and wind energy in a grid scale. In this study, we used a non-isothermal multiphase flow simulator ...

CAESA (compressed air energy storage in aquifers) attracts more and more attention as the increase need of large scale energy storage. The comparison of CAESA and CAESC (compressed air energy storage in caverns) can help on understanding the performance of CAESA, since there is no on running CAESA project. ... Guo, Chaobin & Pan, Lehua & Zhang ...

Compressed air energy storage in aquifers (CAESA) has been considered a potential large-scale energy storage technology. However, due to the lack of actual field tests, research on the underground processes is still in the stage of theoretical analysis and requires further understanding. ... Guo, Chaobin & Pan, Lehua & Zhang, Keni & Oldenburg ...

Author(s): Guo, Chaobin; Pan, Lehua; Zhang, Keni; Oldenburg, Curtis M; Li, Cai; Li, Yi | Abstract: CAESA (compressed air energy storage in aquifers) attracts more and more attention as the ...

DOI: 10.1016/j.apenergy.2020.115044 Corpus ID: 218967243; Numerical investigation of cycle performance in compressed air energy storage in aquifers @article{Yang2020NumericalIO, title={Numerical investigation of cycle performance in compressed air energy storage in aquifers}, author={Lichao Yang and Zuansi Cai and Cai Li and Qingcheng He and Yan Ma and Chaobin ...

GUO Chaobin, WANG Zhihui, LIU Kai, LI Cai. 2019. The application and research progress of special underground space[J]. Geology in China, 46(3): 482-492. doi: 10.12029/gc20190304 ... carbon dioxide geological storage, compressed air energy storage, deep-well waste reinjection and radioactive waste disposal are briefly analyzed. With the ...

Widely distributed aquifers have been proposed as effective storage reservoirs for compressed air energy storage (CAES). This aims to overcome the limitations of geological conditions for conventional utility-scale CAES, which has to date used caverns as the storage reservoirs. As a promising technology, compressed air

energy storage in aquifers (CAESA) has received ...

To solve the fluctuation and instability of renewable energy, a large-scale energy storage technology is considered to be an effective way. Due to the merits of large energy storage scale and long storage period, compressed air energy storage has attracted extensive attention and research. The working principle and advantages as well as research status of compressed ...

Author links open overlay panel Chaobin Guo a, Lehua Pan b, Keni Zhang a b, Curtis M. Oldenburg b, Cai Li c, Yi Li d. Show more. Add to Mendeley. Share. Cite. ... CAESA (compressed air energy storage in aquifers) attracts more and more attention as the increase need of large scale energy storage. The compassion of CAESA and CAESC (compressed ...

This study summarizes the test activities that are being conducted at the Pittsfield aquifer test site, concerning the field evaluation of a typical aquifer for storing and cycling compressed air under conditions approaching those existing in a full scale CAES operation. The CAES (compressed air energy storage) aquifer experiment is a research project which draws its basic knowledge from ...

Most related items These are the items that most often cite the same works as this one and are cited by the same works as this one. Yang, Lichao & Cai, Zuansi & Li, Cai & He, Qingcheng & Ma, Yan & Guo, Chaobin, 2020. Numerical investigation of cycle performance in compressed air energy storage in aquifers

Numerical assessments of the effects of injected air temperature and well configuration on the cycle performance in compressed air energy storage in aquifers. Publication. Geological Society, London, Special Publications ... "editors": None, "authors": "Lichao Yang | Zuansi Cai | Cai Li | Chaobin Guo | Qingcheng He", "chairs": None ...

Semantic Scholar extracted view of "COMPRESSED-AIR STORAGE CAVERNS AT HUNTORF" by F. Crotagino et al. ... Chaobin Guo L. Pan Keni Zhang C. Oldenburg Cai Li Yi Li. Environmental Science, Engineering. 2016; 94. PDF. ... (West Germany) 290-MW compressed air energy storage system that uses compressed air storage in salt domes, the problems ...

Guo et al. [92] suggested that, for a 200-system-cycles energy storage plant with a 3-hour continuous air pumping rate of 8 kg/s on a daily basis (3 MW energy storage), the optimum range of permeability for a 250-m thick storage formation with a radius of 2 km is 150-220 mD. This range may vary depending on the energy storage objective and ...

Author(s): Guo, Chaobin; Zhang, Keni; Pan, Lehua; Cai, Zuansi; Li, Cai; Li, Yi | Abstract: Different from conventional compressed air energy storage (CAES) systems, the advanced adiabatic compressed air energy storage (AA-CAES) system can store the compression heat which can be used to reheat air during the electricity generation stage. Thus, AA-CAES system can achieve ...

1 1 Comparison and understanding the thermodynamic processes of compressed air energy 2 storage in cavern and aquifer 3 . 4 . Chaobin Guo. a, Lehua Pan. b, Curtis M. Oldenburg. b, Keni Zhang. a, b, \*, Cai Li. c, Yi Li. d. 5 . a School of Mechanical Engineering, Tongji University, Shanghai 201804, PR China

(2017): Comparison of compressed air energy storage process in aquifers and caverns based on the Huntorf CAES plant, 2016, Applied Energy, 181, 342-356 [3] Guo, C., Zhang, K., Pan, L., Cai, Z., Li, C. and Li Y.

(2017): Numerical investigation of a joint approach to thermal energy storage and compressed air storage in aquifers,

Web: <https://shutters-alkazar.eu>

Chat online: <https://tawk.to/chat/667676879d7f358570d23f9d/1i0vbu11i?web=https://shutters-alkazar.eu>