

Research on the problems and countermeasures of oilfield energy storage

Is energy storage a precondition for large-scale integration and consumption?

So to speak, energy storage is the precondition of large-scale integration and consumption of RES. However, China's energy storage industry is at the exploration stage and far from commercialization. This restricts the development of RES to certain extent. For this reason, this paper will concentrate on China's energy storage industry.

What is the White Book for energy storage industry in 2014?

White book for energy storage industry in 2014. China Energy Storage Alliance 2014. China Electricity Council. The study on the development policy of energy storage industry. China Power Enterprise Management 3; 2015. p. 24-28. Global energy storage distribution: the US accounts for 40% and Japan accounts for 39%.

How to improve oil fracturing production?

It requires solving scientific issues such as well locations and development models, mechanisms and methods for enhancing oil recovery, and engineering and technical issues such as 3D well network, optimization of fracturing stimulation, production system and reasonable production technology and policy. 2.

Does China's energy storage industry have a comprehensive study?

However, because of the late start of China's energy storage industry, the comprehensive study for the whole industry is very few. We found a review which provided a relatively comprehensive analysis of the technical and economic issue of it. Compared with other studies, its research has a good comprehensiveness.

How will res' grid connection affect energy storage demand?

And the pressure of RES' grid connection will also force the acceleration of wind-solar energy storage. It is predicted that with the continuous development of smart grid and RES' grid connection, energy storage demand during the "13th Five-Year" will further arise and reach to 50 billion yuan in year 2020 .

Can artificial fracturing stimulate shale oil reservoirs?

Anhydrous (CO₂) fracturing and increasing vertical fracture height technologies Shale oil reservoirs are tight, so artificial fracturing stimulation can improve the flow conditions and increase the EUR. No water is found in Gulong shale oil reservoirs.

The development of large-scale energy storage in such salt formations presents scientific and technical challenges, including: (1) developing a multiscale progressive failure and characterization ...

To address these problems, Chinese marine administrative departments have conducted research, formulated relevant policies, and put them into effect. On March 31, 2017, the State Oceanic Administration released the

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"Regulations on the Management of Coastline Protection and Utilization" (hereinafter referred to as Regulations).

The Sulige gas field is a typical "three lows" (low permeability, low pressure, and low abundance) tight sandstone gas reservoir, with formation pressures often characterized by ...

the research on major basic scientific problems and countermeasures for national carbon neutrality; and will carry out special funding work for CCUS theory, technology, data- ...

Aiming at the four issues of underground storage state, exploitation mechanism, crude oil flow and efficient recovery, the key theoretical and technical issues and countermeasures for effective development of Gulong shale oil are put forward. ... The feasibility of development mode with early energy replenishment and recovery factor of 30% was ...

Corrosion is a major problem that affects most industries worldwide, causing devastating issues to the global economy. Corrosion is the deterioration of a material as a result of its interaction with its surroundings, and it can occur at any point or at any time during petroleum and natural gas processing.

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Based on the analysis of the production and operation situation of the crude oil gathering and transportation system in a certain oilfield: (1) the main problems of the completed gathering system under the current production and operation situation can be found; (2) the main factors that affect the energy consumption of the gathering and ...

First, it summarizes the developing status of energy storage industry in China. Then, this paper analyzes the existing problems of China's energy storage industry from the ...

<p>Technology innovation is becoming a source of power to lead the transition and development of global energy industry. The development of emerging industries in the energy field is rooted in the reality of China& #x2019;s energy conditions, the major strategic needs of the country, and the demands for innovation-driven energy development. & #x201C;Emerging energy ...

Comprehensive budget management is the core content of enterprise management, which has practical significance to reduce cost, improve efficiency, integrate resources and enhance enterprise value.

Problems and countermeasures of comprehensive budget management in oil and gas exploitation enterprises [J]. Friends of Accounting, 2018 (13): 47-50. How to improve the budget management of ...

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Currently, the energy structure with coal is given priority to in China. This situation would not change in a short time which results in massive CO₂ emissions and increased pressure to natural environment. Carbon capture and storage technology (known as CCS) is a carbon abatement technology that separates CO₂ from industrial production or energy ...

This paper analyzes the problems existing in the development of energy storage in some resource-poor areas of China, and conducts simulation calculations and profit and loss ...

Currently, the global energy development is in the transformation period from fossil fuel to new and renewable energy resources. Renewable energy development as a major response to address the issues of climate change and energy security gets much attention in recent years [2]. Fig. 3 shows the structure of the primary energy consumption from 2006 to ...

References [1] Chen Minjie. The existing Problem and Countermeasures of Domestic Oil and Gas Storage and Transportation Systems [J]. China Petroleum and Chemical Industry Standards and Quality,

Study on the problems and Countermeasures of Oil and Gas Storage and Transportation Systems in China HUA Jinsong¹
a LI Huaixin² LIU Yang³ c1 Hebei Tangshan Jidong Oil and gas gathering and transport ...

[3] Han Gaotian. Security Problems and Countermeasures in the Oil Gas Storage and Oil Transportation [J]. Henan Science and Technology, 2011, 12: 62. [4] Wang Haixiu Discussion on Problems and Countermeasures in Oil Gas Storage and Transportation Engineering Professional Teaching [J]. Chemical Higher Education, 2011, 05: 53-55. [5] Li Xin.

Based on literature research in combination with the practice of CO₂ flooding and storage in Jilin Oilfield, this study assesses the key problems in CO₂ flooding and storage, proposing the ...

Abstract--New energy storage is an important technology and basic equipment for building a new power system. What's more, it is an important support for achieving the goal of ...

Due to the international economic growth reliance on petroleum, corrosion is a critical problem for refineries and it has attracted considerable attention in recent times.

In this study, the emission of greenhouse gases such as carbon dioxide is an important factor contributing to global climate change. These crises have further exacerbated the growing structural weaknesses of the past decade. We support governments and private sector clients in addressing the ongoing crisis and rebuilding. Even if the Sustainable Development ...

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Therefore, based on the existing reviews, this paper studies the develop status, existing problems and countermeasures of the energy storage industry in China from a deeper level to further boost the technical progress, accelerate the construction of micro-grid, guarantee the safe and stable operation of electric power system, and promote the ...

Jiangsu Oilfield adopts vertical well large-scale energy storage fracturing technology, which has been applied in well A3. The self spraying production has reached 81 days, and the cumulative oil production after 3 months of pump production is 9.39 \times 10⁵ kg. The daily oil production has been stable for a long time at over 10 3 kg [73].

Pumped storage is a method of mechanical energy storage. The energy storage power of pumped storage ranges from 100 to 2000 MW and lasts for 4-10 h, and the energy storage cost is 480-800 USD per kilowatt. Pumped storage has incomparable technical and economic advantages, which will enable the construction of pumped storage power stations ...

Discussion on problems and countermeasures in oil gas storage and transportation systems [J]. China Petroleum and Chemical Industry standards and quality, 2012,01: 293.

The elasticity coefficient method is used to forecast China's total energy consumption demand in 2025. The concept of Incremental Contribution Value of Sub-energy (ICVS, i.e. contribution value of ...

To solve these problems, the energy storage is added to the renewable energy power generation system to provide a stable and high-quality power supply. The excess electrical energy is stored and stably supplied to the grid when needed, which perfectly solves the shortcomings of renewable energy. ... In the research of energy storage, the United ...

After more than ten years of research and engineering practice in salt cavern gas storage, the engineering technology of geology, drilling, leaching, completion, operation and monitoring system has been established. With the rapid growth of domestic consumption of natural gas, the requirement of underground gas storage is increasing.

PetroChina Daqing Oilfield Co., Ltd., Daqing 163002, China Abstract: Aiming at the four issues of underground storage state, exploitation mechanism, crude oil flow and efficient ...

This paper systematically reviews the trend of carbon dioxide capture, utilization and storage (CCUS) industry in the world and China, presents the CCUS projects, clusters, technologies and strategies/policies, and analyzes the CCUS challenges and countermeasures in China based on the comparison of CCUS industrial development at home and abroad.

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Problems and Countermeasures of Shandong Energy Storage Technology Na Ding¹, Zhenyu Dong¹, Liye Huang¹ 18620519@qq , 978585997@qq , 191137346@qq ... 3.5 Research and development of energy storage technology can hardly meet the demand of carbon reduction

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