

ENERGY STORAGE INDUSTRY IN SICHUAN AND CHONGQING



Why is the energy storage industry developing in Sichuan & Chongqing?

"The development of the new energy storage industry in Sichuan and Chongqing has a good foundation with innate resource advantages, strong scientific and technological strength, and powerful market demand," said Huang Yulin, deputy to the National People's Congress (NPC) from Chongqing.



Is Chongqing and Sichuan good for energy security? Chongqing- Experts said that Southwest China's Sichuan Province and Chongqing Municipality enjoy access to hydropower and natural gas resources. Still, the energy security capabilities of both places, especially the Chengdu-Chongqing economic circle, don't match their actual development needs.



Can natural gas chemical industry clusters be built in Sichuan-Chongqing area? Construction of natural gas chemical industry clusters in the Sichuan-Chongqing area: necessity, feasibility and implementation measures Nat Gas Ind, 41(6)(2021), pp. 111-119 View in ScopusGoogle Scholar LiyangZhu, BoXiong, ZhijunWang, et al.



Why is Sichuan a good place to find shale gas? Due to its regional tectonic stability and good gas preservation conditions, the southern Sichuan has the excellent conditions for continuous shale gas reservoir. The PetroChian Southwest Oil & Gasfield Company is the pioneer of shale gas exploration and development in China.



How will the natural gas industry evolve in the Sichuan Basin? It is predictable that the natural gas industry in the Sichuan Basin will start in a new peak growth period and a high-quality development period in the next decade, and its yearly natural gas production will exceed 1000 x 108m³, and the yearly natural gas production of PetroChina Southwest Oil & Gasfield Company will reach 800 x 108m³ in 2030.

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Is gas exploration possible in the Sichuan Basin? With respect to the highest proportion of 60% (for the Permian Basin in the US), the cumulative proved gas reserves in the Sichuan Basin may reach $24 \times 10^{12} \text{ m}^3$, four times that of present reserves, this reveals a large potential of gas exploration for sustained production increase.



Sinopec will continue the geological evaluation and engineering process of the tight sandstone shale gas reserves in the Sichuan Basin to expand the scale of reserves in the Bazhong region. In November last year, Sinopec announced a major shale gas discovery with a proven reserve of 145.968 bcm in the Sichuan Basin, in southwestern China.



The role of natural gas in guiding the energy revolution in China is discussed, with an emphasis on natural gas utilization in the Sichuan-Chongqing gas province, which takes the lead in China's



m^3 , with an average annual growth of 15% the primary energy mix, the proportion of natural gas rose from 2.3% to 5.9%. At present, natural gas has extended to more than 90% of the 337



At present, Sichuan and Chongqing have completed the layout of the entire hydrogen industrial chain, which has gathered more than 200 enterprises and research institutes engaged in the production, storage, transportation, refueling, and usage of hydrogen energy.

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Zonergy's industry status has seen rapid improvements. In 2021, it's domestic shipments of energy storage system integrators ranked 8th; in 2022, it entered the top 30 innovative energy storage companies in China, ranking 24th, and ranking 17th a?|



Annual gas production will reach $800 \times 10^8 \text{ m}^3$ by 2030, when the modernized gas industrial system for integrated production, transmission, storage, and marketing could a?|



Located in the Western part of Chongqing, Tongliang has made strides in new energy storage, a sector that defines its modern industrial landscape. The district secured a significant investment of 13 billion RMB (about \$1.83 billion) for the Chongqing Haichen Energy Storage Base project.



Next, the equipment manufacturing industry in Sichuan and Chongqing is expected to capitalize on digitization, networking, and intellectualization, to intensify coordination between upstream and downstream players.



A realistic study is carried out for the future hybrid energy transmission in Sichuan Province (the province in China with the richest SG storage). For a hybrid energy transmission case (5 GW fuel

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Progress of Haichen Energy Storage Project: Delivery volume of Chongqing base will exceed 20GWh in 2024. most of the raw materials for the enterprise will be provided by local companies in Sichuan and Chongqing. Haichen's products: In 2024, in addition to the 280Ah series products, the leading 314Ah product of Haichen Energy Storage will



Chongqing - In 2022, the combined automobile production in Southwest China's Sichuan and Chongqing reached 3.18 million units, accounting for 12% of the national total, with 1.09 million units in Sichuan and 2.09 million units in Chongqing.. Achieving greater breakthroughs, Sichuan and Chongqing are joining forces to create a world-class intelligent a?|



The intelligent connected new energy vehicle(NEV) industry clusters emerging as a top priority in the Chengdu-Chongqing economic circle. Both Bishan and Sichuan's Suining City are pivotal in propelling this fast-paced industry growth. From January to May, NEV output in Sichuan and Chongqing has seen a 144% increase from last year



The project approval team has accumulated the experience of communication with local government departments in Chongqing in the early stage, fully solved the concerns of the competent government departments, and made detailed reports on production safety, environmental impact assessment, energy review, occupational health and health a?|

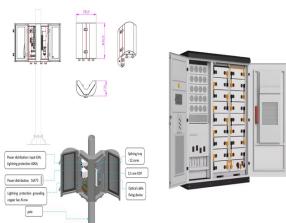


The Sichuan-Chongqing region is likely to become the leader in China's energy revolution4.1. The Sichuan-Chongqing region has two major resources: natural gas and hydropower. The Sichuan-Chongqing region has abundant hydropower resources, besides its natural gas resources (ranking the first in China).

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The Rongchanga??Dazu region in western Chongqing (eastern Sichuan Basin, China), known for its seismic activity, is a promising area for deep geothermal resource development; however, practical development is limited. Key geological understandings, such as heat flux, geothermal gradients, the nature of heat sources, thermal reservoir rock a?|



The International Energy Network reporter learned that Sichuan and Chongqing will jointly promote 20 major energy projects, involving energy networks, energy supply, peak storage and other fields, with a total investment of nearly 990 billion yuan, of which more than 4,000 will be invested during the "14th Five-Year Plan" period. 100 million yuan.



Chongqing attaches great importance to the development of energy storage industry and has identified new energy and new energy storage industry as one of the six characteristic a?|

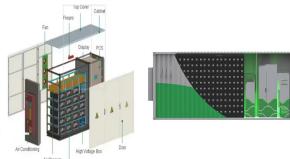


Energy storage industry. Improving the energy security mechanism in Sichuan-Chongqing and providing energy support for the high-quality development of the Chengdu-Chongqing economic circle is an urgent need to build Chengdu and Chongqing into a dual engine of high-quality growth in western China and even the whole country, said Jiang Weiping, a?|



Sichuan Province is the largest inland area for late-maturing citrus fruit production in China, and its climate conditions are a primary consideration for the cultivation of late-maturing citrus fruits. Based on meteorological data from 2010 to 2020 for the 18 prefecture-level cities and autonomous prefectures in Sichuan Province that cultivate late-maturing citrus fruits, along a?|

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The other major energy resource in the Sichuan-Chongqing region is hydropower: by the end of 2015, the installed capacity in Sichuan reached $6759*10^4$ kW.[1] upstream chemical industry



Energy structure and per capita income are the effective factors in Chongqing, showing negative and positive effects, respectively. (3) Analysis of four scenarios shows that the time range of the industrial carbon peak in the Sichuan-Chongqing region is 2030a??2035 and that its peak height ranges from 81.98 million tons to 87.64 million tons.



The southwest region (areas such as Sichuan and Chongqing) have been facing a continuous increase in electricity consumption in recent years, so a number of BTM commercial and a?|



International Energy Outlook (IEO) estimated that in 2050 natural gas would be the primary energy source from fossil fuel, driven by the industrial and power generation demand [1][2][3].



This paper reveals the overall pattern of new energy industry development in Chengdu-Chongqing economic zone by comprehensively analyzing the development status of photovoltaic, wind power, and

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This may be related to the current stage of the shale gas development in Chongqing and Sichuan and the available statistical data. (3) The projection eigenvalues of the Chongqing and Sichuan samples are 3.1184 and 1.6826, respectively. It indicates that the sustainability of shale gas industry in Chongqing is better than that in Sichuan.



Re-evaluating how urban and rural development can be integrated is a necessary step towards achieving the "dual-carbon" objective and facilitating a thorough transition towards a green and low-carbon economy and society. This study empirically investigates the geographical disparities, evolving patterns, and determinants of the effectiveness of a?