

# CHINA'S ENERGY STORAGE ELECTRICITY PRICES IN VARIOUS REGIONS



How to develop China's energy storage industry? Finally, in line with the development expectations of China's future electricity market, suggestions are proposed from four aspects: Market environment construction, electricity price formation mechanism, cost sharing path, and policy subsidy mechanism, to promote the healthy and rapid development of China's energy storage industry. 1. Introduction



What is the external value of energy storage in China? For China's most widely used dual-pricing system, the external value of energy storage in the market can be regarded as reflecting and radiating value through the electricity market and capacity market, where the capacity market includes some functions of the ancillary services market.



Does China have a mature electricity market mechanism? As of now, China has not yet developed a mature electricity market mechanism, and the operating and pricing mechanisms of new types of energy storage can refer to pumped storage plants, with two-part tariffs being the main mode of operation.



Why is energy storage a problem in China? However, due to the lack of a mature electricity market environment and corresponding mechanisms, current energy storage in China faces problems such as unclear operational models, insufficient cost recovery mechanisms, and a single investment entity, making it difficult to support the rapid development of the energy storage industry.



Do electricity prices in China track the average total costs? The coefficient of CONSTANT (  $\beta_0$  ) is negative and the coefficient of COST (  $\beta_1$  ) is 0.783. We have performed the Wald test to test the null hypothesis ( $H_0$ ):  $\beta_0 = 0$  and  $\beta_1 = 1$ , and found that it is rejected by our data at the 1% significance level. This implies that electricity prices in China do not track the average total costs.

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How can energy storage projects improve economic viability in China?  
The analysis points out that the improvement of electricity market mechanisms and rational subsidy policies are crucial for the economic viability of energy storage projects and are also key issues to focus on in the future development of energy storage operation models in China.



China is currently in the early stage of commercializing energy storage. As of 2017, the cumulative installed capacity of energy storage in China was 28.9 GW [5], accounting for ???



High deployment, low usage. To promote battery storage, China has implemented a number of policies, most notably the gradual rollout since 2017 of the "mandatory allocation of energy storage" policy (), ???



According to public industry data, newly installed capacity of energy storage projects in China soared to 16.5GW in 2022, of which installation of new energy storage projects hit a record high of 7.3GW/15.9GWh. The explosive growth of ???



Instead, energy storage should be allowed a fair and open market in which it is allowed to compete with other market entities. A sound market environment is the core for comprehensive commercial development of ???

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China, which relies heavily on coal power and imported energy, plans to significantly increase its battery storage capacity to over 100 gigawatts (GW) by year-end, marking a 43% rise year-over-year.



Market-based energy pricing reform is furthering in China. The country encourages the orderly market trading of electricity from various energy sources and works consistently to improve its feed-in tariff policies for new ???



New energy storage also faces high electricity costs, making these storage systems commercially unviable without subsidies. China's winning bid price for lithium iron phosphate energy storage in 2022 was largely in the ???