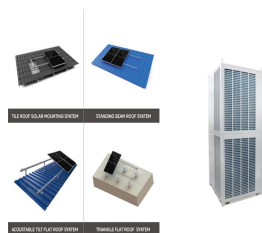
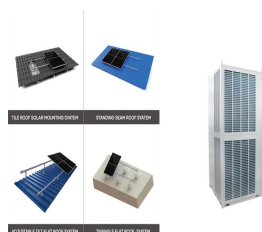


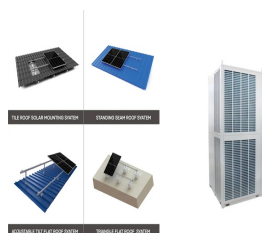
# IRAQ CHINA ENERGY STORAGE



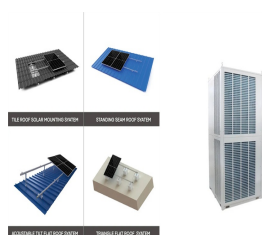
How does China's dominance in Iraq affect Iraq's energy sector? China's dominance in Iraq's energy sector creates political interdependence between the two countries. China is the world's largest crude oil importer, importing more than 11 million barrels daily. Almost half of this import need is supplied from Middle Eastern countries, although Russia is the single-largest supply of crude oil to China.



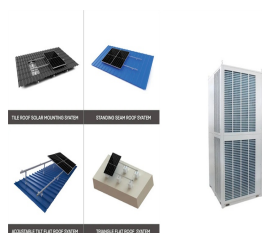
Does China buy oil from Iraq? China expands its energy footprint The oil trade is the central pillar of the bilateral relationship, with China accounting for about 30% of Iraq's oil exports. China's purchases of oil from Iraq, its third-largest supplier, increased by nearly 50% in 2022 over the previous year, part of an overall surge in trade.



Does China have energy ties with Iraq? Yet China's energy ties with Iraq extend well beyond trade in crude oil. China's leading state-owned energy enterprises have established a strong foothold in Iraq's upstream, midstream, and downstream market.

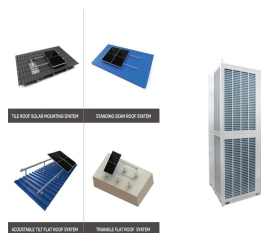


Can China exploit oil and gas fields in Iraq? China, which was already one of the leading operators of oil and gas fields in Iraq, has won the rights to exploit 10 more oil and gas fields in the recent licensing tenders. Iraqi Oil Minister Hayan Abdulghani emphasized that the agreements will increase Iraq's proven oil reserves to 160 billion barrels.

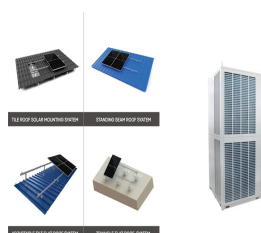


Can China build a new oil refinery in Iraq? Iraq's Ministry of Oil (MoO) recently awarded contracts to a Chinese consortium to develop a refinery in the Dhi Qar Governorate and to state-owned China National Chemical Engineering Co. (CNCEC) to build a new integrated refining and petrochemicals complex to be fully funded by the Chinese government on the al-Faw Peninsula.

# IRAQ CHINA ENERGY STORAGE



How important is China to Iraq's oil policy? The fact that Chinese companies have shown precise determination in front of the Gulf capital and obtained the licenses of these oil and gas fields is critical in showing China's importance to the oil policy in Iraq.



The first phase of the world's largest sodium-ion battery energy storage system (BESS), in China, has come online. The first 50MW/100MWh portion of the project in Qianjiang, Hubei province has been completed and put into operation, state-owned media outlet Yicai Global and technology provider HiNa Battery said this week.



Although the energy storage market in MENA is bound to grow, several barriers exist that hinder the integration of ESS and the ramping up of investments. Financial, regulatory, and market barriers need to be addressed via policy Iraq 5% of electricity generation by 2025, 20% by 2030 2025 & 2030 < 1% of installed capacity



Iraq Solar Energy Storage System Ess Residential Use Integrated Smart Home System All in One Power Station, Find Details and Price about Energy Storage System Home LiFePO4 Lithium Batteries from Iraq Solar Energy Storage System Ess Residential Use Integrated Smart Home System All in One Power Station - Shenzhen UPSEN Electronic Co., LTD.



According to work by the China Energy Storage Alliance's (CNESA) in-house research group, the country now has around 33.1GW of installed energy storage project capacity in total, with global cumulative capacity now at about 186.1GW. These figures include all forms of energy storage including pumped hydro, which still accounts for more than 90

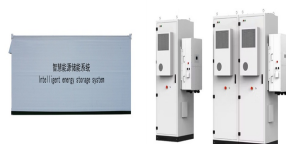


Battery energy storage systems: the technology of tomorrow. The market for battery energy storage systems (BESS) is rapidly expanding, and it is estimated to grow to \$14.8bn by 2027. In 2023, the total installed capacity of BES stood at 45.4GW and is set to increase to 372.4GW in 2030.

# IRAQ CHINA ENERGY STORAGE



Chinese companies are well positioned to participate in Iraq's efforts to expand its oil production capacity and develop domestic gas supplies, as they are actively engaged in various energy-related undertakings throughout the country. However, if indeed China's strategy is, as some have suggested, to become the dominant player in Iraq's economy, achieving that a?|



On May 14th, China's National Development and Reform Commission (NDRC) and the National Energy Administration (NEA) jointly issued the "Basic Rules for the Operation of the Power Market" (hereinafter referred to as the "Rules").



The construction of the new Nasiriyah crude oil storage project has begun, with CNPC poised to deliver by 2025. In late 2022, Iraq signed a contract with CNOOC to advance an exploration project for an offshore oil block near Basra. The Iraqi government plans to produce up to 12 gigawatts of solar energy by 2030. Iraq and China are also



VANTOM POWER is the leading provider of Battery Energy Storage Systems (BESS) in Iraq. During more than 10 years of experience in the energy storage industry, we have . China's first major energy storage station powered by sodium-ion batteries has begun operating, according to its manufacturer, marking a step forward in commercializing a



With its Kuwait Energy takeover complete, China's United Energy Group is pushing full-steam ahead at Faihaa oil field a?? one of Iraq's key "new" assets. Output is set to quadruple in the next three years and hit 260,000 b/d by 2026.

# IRAQ CHINA ENERGY STORAGE



Fierce competition in China's domestic energy storage market by BESS providers has been noted in the last few years. Energy-Storage.news" publisher Solar Media will host the 2nd Energy Storage Summit Asia, 9-10 July 2024 in Singapore. The event will help give clarity on this nascent, yet quickly growing market, bringing together a community



In China, coal is still playing a dominant role in China's energy grid for heating, ventilating, and air conditioning (HVAC), which has a huge impact on the environment [1]. Nowadays, the percentage of respiratory diseases caused by air pollution is more than 30% in China, and the air pollution index is 2-5 times the highest standard recommended by World a?|



The Commission said the project will help boost new energy storage technologies, encourage the use of renewable energy and make use of the disused salt cavern. China has taken a bullish approach to the technology. As reported by Energy-Storage.news last month, a 300MWh CAES unit was connected to the grid in Jiangsu.



of goodwill and to build confidence with Iraq's new leadership, China wrote off \$6.7 billion of Iraq's outstanding debt obligations. China forgave the debt incurred during Saddam's regime to facilitate access to bidding for oil and infrastructure projects.<sup>3</sup> Simultaneously, China embraced a policy of diplomatic restraint toward



A 100MWh gravity-based energy storage system developed by Energy Vault is expected to begin construction in China in the second quarter of this year, the Swiss-American startup has claimed.



Among specific awards, China's CNOOC Iraq won a bid to develop for oil exploration Iraq's Block 7, that extends across the country's central and southern provinces of Diwaniya, Babil, Najaf, Wasit

# IRAQ CHINA ENERGY STORAGE



China expands its energy footprint. The oil trade is the central pillar of the bilateral relationship, with China accounting for about 30% of Iraq's oil exports. China's purchases of oil a?



can be said to be "year one" of energy storage in China, with the market showing signs of tremendous growth. 2019 was a somewhat confusing year for the energy storage industry, but Sungrow's energy storage business has relied on long-term cultivation and market advancement overseas, and its number of global systems integration



China is targeting a non-hydro energy storage installed capacity of 30GW by 2025 and grew its battery production output for energy storage by 146% last year, state media has said. The statement from the National Development and Reform Commission (NDRC) and the National Energy Administration said the deployment is part of efforts to boost



China's Rise in Iraq's Energy Sector: From Newcomer to Dominant Player While Iraqi leaders consistently emphasize the importance of Western investment. By Yerevan Saeed and Sardar Aziz for the Arab Gulf States Institute in Washington (AGSIW). Any opinions expressed are those of the author(s), and do not necessarily reflect the views of Iraq



This has led some flow battery companies like Austria's CellCube and others to focus on the commercial and industrial (C& I) and microgrid segment of the energy storage market, at least for the time being. Energy-Storage.news" publisher Solar Media will host the 1st Energy Storage Summit Asia, 11-12 July 2023 in Singapore. The event will



The Iraqi cabinet has given the green light to a 750-MW solar project that Chinese state-owned conglomerate Power Construction Corp of China (Power China) is planning to build in the south of the Arab country.

# IRAQ CHINA ENERGY STORAGE



Western and Chinese energy companies swiftly took advantage of Iraq's investment potential. While Western oil companies were primarily motivated by the prospect of profits from Iraq's a?]



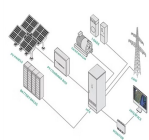
Energy Vault has connected its first commercial EVx gravity-based energy storage system to the grid in China, while construction has been launched on three others, all-in-all totalling 468MWh of capacity. The 25MW/100MWh project in Rudong, the company's first commercial grid-scale project using its proprietary EVx gravity energy storage



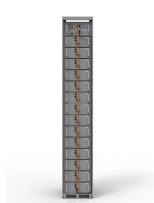
Energy Storage Technologies Empower Energy Transition report at the 2023 China International Energy Storage Conference. The report builds on the energy storage-related data released by the CEC for 2022. Based on a brief analysis of the global and Chinese energy storage markets in terms of size and future development, the publication delves into the



Wood Mackenzie's China grid-scale energy storage outlook is a 30+ page report containing charts, tables and graphs providing in-depth analysis of the Chinese grid-scale energy storage power market. The report covers key market trends and studies the key drivers and barriers for the grid-scale energy storage market in China, focusing on



China's current energy storage market. China's renewable sector is currently experiencing rapid growth. According to data from the National Energy Administration (NEA), as of April, the country's installed power generation capacity was about 2.41 billion kilowatts (KW), a year-on-year increase of 7.9 percent. China is aiming for 50



6 . The China Energy International Engineering Co. (Energy China) is about to embark on a milestone 1GW solar project in Iraq. The company noted that the project is located in Artawi, a?]

# IRAQ CHINA ENERGY STORAGE



Energy self-sufficiency (%) 419 449 Iraq COUNTRY INDICATORS AND SDGS TOTAL ENERGY SUPPLY (TES) Total energy supply in 2021 Renewable energy supply in 2021 58% 34% 7% 1% Oil Gas Nuclear Coal + others Renewables 73% 10% 17% Hydro/marine Wind Solar Bioenergy Geothermal 100% 99% 1% 0% 20% 40% 60% 80% 100%



(e.g. 70-80% in some cases), the need for long-term energy storage becomes crucial to smooth supply fluctuations over days, weeks or months. Along with high system flexibility, this calls for storage technologies with low energy costs and discharge rates, like pumped hydro systems, or new innovations to store electricity economically over longer



16 hours of energy storage in the upcoming projects in the UAE and Morocco. Today the total global energy storage capacity stands at 187.8 GW with over 181 GW of this capacity being attributed to pumped hydro storage systems. So far, pumped hydro storage has been the most commonly used storage solution. However, PV-plus-storage, as well as CSP



Saudi energy provider ACWA Power has signed an engineering, procurement, and construction (EPC) contract with China Energy Group Corporation (CEEC) for a 1.4GW solar project in Uzbekistan.