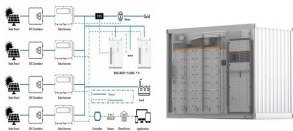


PETROCHINA ENERGY STORAGE FRAMEWORK



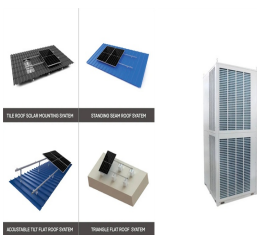
Arifin said that Indonesia and China have a good foundation for cooperation in areas such as energy and mineral resources, and have achieved mutual benefit, win-win results and common development. At present, the pace of energy transformation in the world is accelerating, and energy security and sustainability are becoming increasingly crucial.



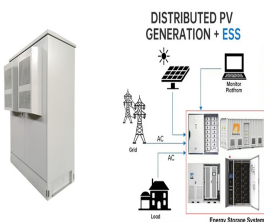
PetroChina, a subsidiary of China National Petroleum Corporation (CNPC), is the largest oil and gas producer and distributor in China and one of the leading energy and utilities companies in Asia



PetroChina, which reported its highest profit for seven years, will tap wind, solar and geothermal resources as it steps up efforts to help the country achieve net-zero emissions ???



07 GOVERNANCE FRAMEWORK 10 MANAGEMENT SYSTEM 12 COMMUNICATING AND INTERACTING WITH STAKEHOLDERS ENERGY AND THE ENVIRONMENT 16 ENERGY AND THE FUTURE 18 RESPONSE TO CLIMATE CHANGE PetroChina Company Limited (hereinafter referred to as "the Company", "we" or "us") is a joint stock limited



increasing the proportion of natural gas in the energy mix to 15% by 2030. ??? Beyond natural gas, there is general aim to intensify development of new energy sources from 2021-25 with geothermal, solar, wind and hydrogen mentioned. PetroChina states that it also aims to increase use of Carbon Capture, Utilization and Storage (CCUS) but there

PETROCHINA ENERGY STORAGE FRAMEWORK



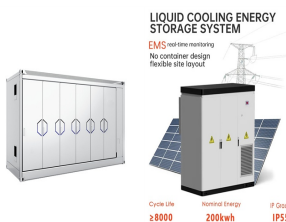
owned subsidiary of PetroChina International Co., Ltd. (Executive Director: Tian Jinghui; "PCI"), to that ENEOS and PCJP should maintain and continue the current strategic framework of utilizing the who aims to strengthen the platform for stable energy supply in the Asia-Pacific region, and as a result reached a final agreement with



In a bid to incentivise the creation of energy storage in Ireland, the government is developing a policy framework to help deliver their objectives in this area of its Climate Action Plan which is targeting a proportion of renewable electricity to up to 80% by 2030.. These objectives include supporting the integration of high volumes of renewable generation by ???



Prof. Caineng Zou, a member of the Chinese Academy of Sciences, currently works at the Research Institute of Petroleum Exploration & Development, the China National Petroleum Corporation (CNPC). His research interests include petroleum geology, exploration and energy strategy. He serves as the scientist-in-chief for the new energy at CNPC, and the president of ???



As global warming intensifies, carbon capture, utilization, and storage (CCUS) technology is widely used to reduce greenhouse gas emissions. CO2-enhanced oil recovery (CO2-EOR) technology has, once again, received attention, which can achieve the dual benefits of oil recovery and CO2 storage. However, flexibly and effectively predicting the CO2 flooding ???

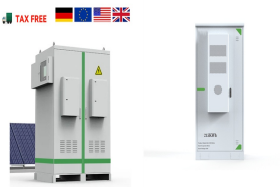


Governance framework and mechanisms P9-14, 60-61 Compliance management P12 Low oil prices P4, 6 Technological innovation to enhance quality and efficiency P18-22 Natural gas P21-22 Alternative Energy P22 International Cooperation P23, 50, 56 the Belt and Road initiative P23, 56 Carbon capture and storage P34 Energy conservation P33

PETROCHINA ENERGY STORAGE FRAMEWORK



PRESS RELEASE PetroChina signs on to the Oil & Gas Decarbonization Charter; Member companies comprising 42% of global oil production committed to joint efforts in reducing carbon emissions Chinese state-run company joins COP28-launched global industry drive to decarbonize oil and gas sector. WUHAN, 22 JULY 2024 ??? PetroChina today became the newest Signatory ???



PETROCHINA has finished building a large tank farm for its greenfield refinery and petrochemical complex in southern China's province of Guangdong, the state-backed Shanghai Petroleum and Natural Gas Exchange said in a report. PetroChina builds major storage for new south China refinery: report. Published Fri, Sep 2, 2022 ? 03:05 PM



5. Existing Policy framework for promotion of Energy Storage Systems 3
 5.1 Legal Status to ESS 4 5.2 Energy Storage Obligation 4 5.3 Waiver of Inter State Transmission System Charges 4 5.4 Rules for replacement of Diesel Generator (DG) sets with RE/Storage 5 5.5 Guidelines for Procurement and Utilization of Battery Energy Storage



UK's major BP (LON: BP) and peer PetroChina (SHA: 601857) will work together on the construction of an onshore carbon capture, utilization, and storage (CCUS) cluster in Hainan, the southernmost province of China, global oil and gas news source Upstream reported.. The collaboration was formalized via a memorandum of understanding (MoU) ???



The "Electricity storage policy framework for Ireland" is published with regard to the many responses received, the ongoing engagement and views of key stakeholders, storage systems in Ireland's energy transitions. These 10 actions, the section in which they are discussed, the primary stakeholders and timelines are detailed below.

PETROCHINA ENERGY STORAGE FRAMEWORK



Carbon capture, utilization, and storage (CCUS) Climate-related risks Energy conservation Production safety low- carbon and high-efficiency energy resources. PetroChina has accelerated construction of key cross-border and domestic gas pipelines, facilitating the import of natural gas and LNG. The governance framework is constituted by



, Beijing - PetroChina Company Limited ("PetroChina", SEHK stock code 0857; NYSE symbol PTR) announced today that PetroChina has entered into a framework agreement with the State Forestry Administration ("SFA") on the development of forest bio-fuel and officially kicked off the construction of the first batch of forest bio-fuel



PetroChina Q3 briefing included the announcement to invest us\$1.5bn annually between 2021 & 2025. PetroChina plans to spend about Yuan 10 billion (\$1.49 billion) annually in the next five years for low carbon emission transitions as part of the company's effort to meet Beijing's call for carbon neutrality by 2050, Wei Fang, Assistant Secretary to the Board & Head ???

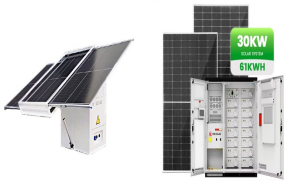


China's integrated giant PetroChina will invest efforts to boost domestic oil and gas output, intensify international trading activities, as well as grow renewable energies to ???



Advanced Energy Storage Technology Research Center, Shenzhen Institute of Advanced Technology, Chinese Academy of Sciences, Shenzhen, 518055 China PetroChina Shenzhen New Energy Research Institute Co., LTD., Shenzhen, 518054 China. structured composite of Sn with diamond-like carbon (DLC/Sn-DLC) as an artificial protective layer. The

PETROCHINA ENERGY STORAGE FRAMEWORK



The NiSe/Ni@C electrode delivers enhanced Na + storage performance in terms of high specific capacity (490 mA h g⁻¹) and excellent rate capability (546 mA h g⁻¹) at a current of 5.0 A g⁻¹ over 2000 cycles. This study can provide in-depth insights into the interface effect in hybrid structures and shed light on designing energy storage materials.



Regular public disclosure of available pipeline transportation and storage capacity Provision of fair access to infrastructure to all qualified users The majority of PipeChina's assets will include the NOCs' long-distance oil and natural gas pipelines and some of their LNG import terminals and storage facilities.⁸ In 2019, PetroChina



Ionic covalent organic frameworks featuring both crystallinity and charged sites have aroused tremendous attention from scientific community. The adjustable textural structures, well-defined channels and abundant charged sites of ionic COFs facilitate great potential in diverse aspects, such as separation, ion conduction, sensing, catalysis and energy storage. In ???



Carbon capture, utilization and storage (CCUS) has attracted much international attention. This technology is proven to be the most important means of reducing CO₂ produced by burning fossil energy . In recent years, demonstration and application studies of CCUS projects have been conducted in China and elsewhere .



Sources: See appendix. PipeChina will be responsible for the operation of China's major oil and natural gas pipelines, some LNG import terminals and storage facilities and the construction of new midstream infrastructure.

PETROCHINA ENERGY STORAGE FRAMEWORK



Deep underground energy storage is the use of deep underground spaces for large-scale energy storage, which is an important way to provide a stable supply of clean energy, enable a strategic petroleum reserve, and promote the peak shaving of natural gas. Rock salt formations are ideal geological media for large-scale energy storage, and China