

JAPAN S ENERGY STORAGE STRATEGY



Does Japan have a strategic energy plan? The first is turmoil at the international level. Japan's sixth (and current) Strategic Energy Plan was approved by the Cabinet in October 2021, several months before events like Russia's incursion into Ukraine and the Israel-Hamas war further widened already creeping fractures in international society.



What are Japan's Energy plans? Japan's 6th Strategic Energy Plan (released in 2021) and the GX (Green Transformation) Decarbonization Power Supply Bill (released in 2023) target increasing the share of non-fossil fuel generation sources to 59% of the generation mix by 2030 compared with 31% in 2022.



Does Japan have a regulatory framework for energy storage? This briefing examines the regulatory framework for energy storage in Japan, draws comparisons with the European markets and seeks to identify the regulatory developments and help advance Japan into the next stage of its renewable energy transition.



Battery storage is urgently needed for the renewable energy transition, and is expected to play a huge role in Japan's future power system. Businesses see battery storage as a complement to their renewable energy strategy, and a strong opportunity to improve their bottom line while accelerating their path to decarbonization.



1 INTRODUCTION 1.1 Overview on the current energy structure of Japan. Japan is the third largest economy in the world and the fourth largest exporter, while local fossil energy resources are limited. Consequently, the current energy supply conditions in Japan are unmistakably sensitive to global issues such as energy security, a drawdown of energy resources.



3.1 Japan's 90% Clean ENERGY . 24 . Grid Can Dependably Meet Electricity Demand with Large Additions of RE and Energy Storage 3.2 Clean Energy Deployment . 32 . Can Reduce Wholesale Electricity Costs By 6% 3.3 90% Clean Energy Deployment . 36. Can Reduce Fossil Fuel

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Import Costs By 85%, Bolstering Japan's Energy Security

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At the same time, another important theme is to overcome the challenges Japan's energy supply-demand structure faces. On the major premise of safety, efforts will be made for e nergy security and economic efficiency of energy while promoting climate change countermeasures (S+3E).



Japan, however, is betting on another resource to become the backbone of its net-zero transition ??? hydrogen. While this may be ambitious compared to renewable energy, Japan's hydrogen strategy will be long, challenging and costly. Not ideal in a world racing against the clock. The Sluggish Progress of Japan



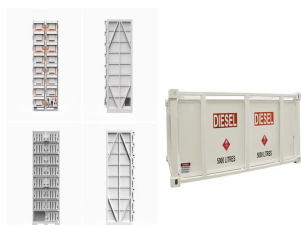
: METI releases strategy for Battery Storage. From our hydrogen presentation, you may recall that 20% of Japan's energy currently comes from renewable sources, with a goal to increase this to 36-38% according to the latest Basic Energy Plan by the Agency for Natural Resources and Energy. Given the widespread use of solar panels



In a world first, the two companies launched a demonstration of an energy storage system that deploys a wide range of old EV batteries which can connect to the grid. This development holds potential to extend the life of batteries, and as a result can help to partly insulate Japan from disruptions in international supply chains.



Yet, despite growing criticism of Japan's LNG expansion agenda as part of its overall strategy, opposing it will be challenging, as energy planners continue to view natural gas as a necessary



Earlier, the strategy was designed to build a domestic hydrogen market ahead of the rest of the world by establishing the hydrogen technology. However, given Japan's energy demand, the growth of the domestic hydrogen market is likely to be limited.³ In contrast, the global hydrogen

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market is

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Clean Energy Strategy Interim Report (Outline) May 2022, METI ??<< Toward two ambitious goals, namely, carbon neutrality by 2050 and GHG reduction by 46% in FY2030, future directions have been stipulated in the diffusion of stationary energy storage systems, ??<< It is necessary to promote growth and development of Japan's economy while



While Japan sees reliance on hydrocarbon as inevitable in the short term, the country seeks for the long term to shift the source of hydrogen and fuel cells from fossil fuels like natural gas to renewable energy, including a growing volume of domestically sourced renewable energy. Strategy. In 2017, Japan issued the Basic Hydrogen Strategy



US asset manager Stonepeak has entered Japan's energy storage market, forming a partnership with CATL-backed developer CHC. for our decision to pursue this partnership with CHC which we believe will be a strong fit for our global renewables strategy." Energy-Storage.news" publisher Solar Media will host the 2nd Energy Storage Summit



Smart Japan is an online media services provider specializing in energy conservation, storage and generation. METI formulated the Innovative Energy Strategy, and launched it on April 18, 2016. On the 19th, the following day, the Energy and Environment Innovation Strategy (NESTI 2050), which was compiled by the Council for Science, ???



According to Japan's 6th Strategic Energy Plan, battery storage will be increased as a distributed source of electricity closer to end users and within microgrids. This new policy ???



Japan's first strategy, released in December 2017, was the world's first national. hydrogen strategy; however, the energy landscape has changed drastically since then. CCS storage capacity- Hydrogen and ammonia are expected to make up ???

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Kishida first announced that Japan would promote the development of technologies such as carbon capture and storage; carbon capture, utilization, and storage; and hydrogen and ammonia. At home, the government announced the scenario that renewables would constitute 50%???60% of Japan's total power generation at most, with nuclear power



Strategy" so that taking measures to combat global warming could lead to growth. Firstly, it outlined a path to firmly ensure Japan's energy security and to accelerate decarbonization. A short-term transition away from a reliance on Russia is necessary for Japan to reduce its current dependence. In addition to energy



Japan, where energy resources are limited, has led globally by formulating the Basic Hydrogen Strategy in 2017 and advancing the development of hydrogen-related technologies. According to a report released by the European Patent Office and the International Energy Agency, Japan accounted for 24% of hydrogen-related patent applications worldwide



Low-cost solar PV and wind, when balanced by storage, transmission, and demand management, offer a reliable and affordable pathway to deep cut in emissions that is enabled by the switch to renewable energy for power generation and renewable electrification of transport, heat, and industry [4]. This pathway can be readily applied to many countries with ???



Energy demand reduction can halve carbon capture and storage requirements. ??? Energy demand reduction can offset cost increases due to technology constraints. Analysis of Japan's energy and environment strategy after the Fukushima nuclear plant accident. Energy Pol, 62 (2013), pp. 1216-1225. View PDF View article View in Scopus Google

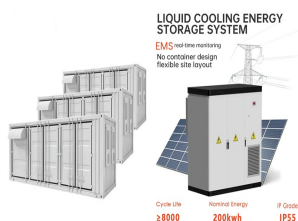
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Japan is one of the most talked-about emerging grid-scale energy storage markets in Asia, and as such, it featured prominently at the Energy Storage Summit Asia, held in Singapore earlier this month. Andy Colthorpe moderated a panel discussion, "Growing the Japanese storage market" on the first day of the event, which was hosted by our



The strategy specifies 14 promising fields that are expected to grow, and provides them with action plans from the viewpoints of both industrial and energy policies. Japan upholds an ambitious goal while showing realistic pathways toward it wherever possible. The strategy directs all available policies to supporting positive efforts by



Japans policy towards battery technology for energy storage systems is outlined in both Japans 2014 Strategic Energy Plan and the 2014 revision of the Japan Revitalization Strategy. In Japans Revitalization strategy, Japan has the stated goal to capture 50% of the global market for storage batteries by 2020. 2. The Energy Storage Sector a.



You can read about the basics of the project and their background, with a rapid construction timeline that began in September 2022, and how the developer is one among many to spot the opportunities at present and that lie ahead for batteries in Japan, in our news report from 27 June. Below, we speak in further depth with Mahdi Behrangrad, head of energy ???



METI Unveils Green Growth Strategy to Support Japan's 2050 Carbon Neutral Goal ; The full introduction of renewable energy sources, such as offshore wind power, is a prerequisite to the decarbonization of the electricity sector. Japan will promote the development of technologies for Carbon Capture, Utilization and Storage (CCUS) and



The 2nd Japan-Korea Energy Cooperation Dialogue Held (May 25, 2023)
News Release Japan-U.S. Energy Security Dialogue held between Mr. Minami Ryo, Deputy Commissioner for International Policy on Carbon Neutrality, and Mr. Geoffrey Pyatt, Assistant Secretary of State of the

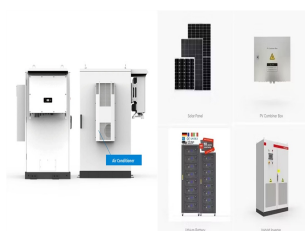
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United States (December 1, 2022) News Release

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energy savings in the short term and supply energy through domestic energy such as restart of nuclear power generation and acceleration of install of renewable energy in the middle to long term. Combining and implementing such short, middle and long-term measures are essential in the development of an exit strategy for the subsidy program. 2



Japan's energy storage vehicles embody a pioneering approach to sustainable mobility, showcasing innovative technologies that enhance efficiency and environmental stewardship. 1. These vehicles often integrate advanced battery systems that significantly optimize energy usage.