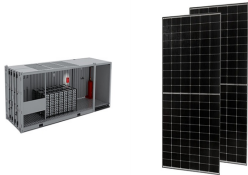


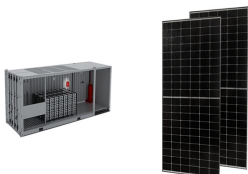
JAPANESE ENERGY STORAGE POWER SUPPLY PROCUREMENT



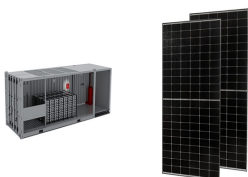
Why is Japan investing in utility-scale energy storage? r investment in utility-scale energy storage. JAPAN'S RENEWABLE ENERGY TRANSITION Since 2012, the Japanese government has actively championed renewable energy as an environmentally friendly power source, resulting in renewable en



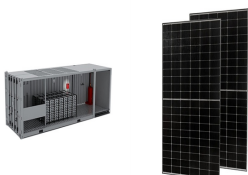
Does Japan have a regulatory framework for energy storage? es and help advance Japan into the next stage of its renewable energy transition. This briefing examines the regulatory framework for energy storage in Japan, draws comparisons with the European markets and seeks to identify the regulatory developmen



What are Japan's new battery energy storage regulations? The government is also reforming its battery energy storage system (BESS) regulations, with batteries set to play an important role in maximizing renewable energy supply and avoiding grid constraints. We look at the changes being implemented and what they mean for renewable energy projects in Japan.

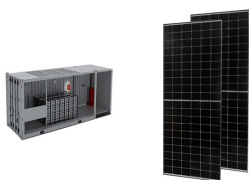


Can storage technology solve the storage problem in Japan? THE RENEWABLE ENERGY TRANSITION AND SOLVING THE STORAGE PROBLEM: A LOOK AT JAPAN The rapid growth of renewable energy in Japan raises new challen es regarding intermittency of power generation and grid connection and stability. Storage technologies have the potentialto resolve these iss

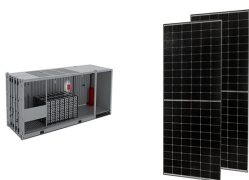


Does Japan have a solar power plant? t new-build renewable power plants in Japan include an energy storage component. The two largest solar PV power plants in Hokkaido, commis oned in July and October 2020, respectively, both include lithium ion batteries. One plant has generating capacity of 64.6MWp and battery output of 19.0MWh,

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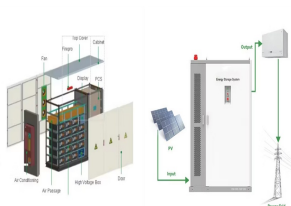
Should battery storage be installed in Japan? Installing battery storage would reduce the cost of upgrading the grid and avoid wasting clean generation. Most BESSs in Japan are currently co-located with renewable power installations, but the country is increasingly looking at installing standalone systems to provide grid balancing services.



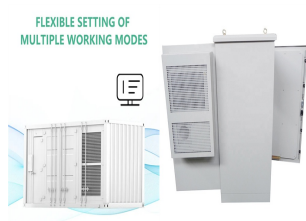
Battery Energy Storage Procurement Framework and Best Practices 2 Introduction The foundation of a successful battery energy storage system (BESS) project begins with a sound procurement process. This report is intended for electric cooperatives which have limited experience with BESS deployment.



Tesla's Megapack lithium-ion battery storage solution. Image: Tesla. Tesla will deliver a battery energy storage system (BESS) to a "Battery Power Park" project in Japan which will participate in various electricity market opportunities and help stabilise the grid on the northern island of Hokkaido.



energy comprising an increasingly larger proportion of Japan's overall power supply. According to the latest figures published by the Ministry of Economy, Transport and Industry (METI), in 2019 approximately 18.0% of overall power the electric power system in Japan. Energy storage can provide solutions to these issues. ??? Current Japanese



Winners of the procurement with BESS bids include Boralex, a Toronto Stock Exchange-listed renewable energy developer, with two projects: Hagersville Battery Energy Storage Park, a 300MW, 4-hour duration (1,200MWh) project in Ontario's Haldimand County and Tilbury Battery Storage Project, which will be a 80MW/320MWh system in the Municipality

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Why. Resolving issues facing the spread of renewable energy with large storage batteries. Despite the global trend toward decarbonization, the share of renewable energy in Japan remains at a low level of roughly 20%, as it is an unstable power source whose power generation is greatly affected by natural conditions, such as sunlight and wind, and because Japan's current power ???



procurement. It is important for Japan to provide policy support that benefits both exporting and importing countries, such as: large-scale energy storage By changing the physical properties and state of hydrogen (e.g. liquefaction), it is possible to Estimates of electricity demand and power supply composition in 2050 assuming the



In a separate release last week (26 August), ENERES said it has launched the third phase of an initiative to evaluate how electric vehicles (EVs) and residential stationary batteries can participate in combination to provide supply-demand adjustment to the power grid. The Energy Systems Integration Social Collaboration Research Division (ESI



Battery energy storage systems ("BESS") are playing an increasingly important role in the transition towards net zero. This briefing note focuses on (a) key differences between the FIT ???



Under the current 6th Strategic Energy Plan formulated in October 2021, Japan expects LNG to account for 20% of power supply sources in fiscal year 2030-31 (April-March), compared with a 37% share of LNG in FY 2019-20. so it is important for Japan to secure various procurement frameworks by enhancing its relationships with LNG supply

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Although the Japanese market's total estimated potential exceeds 5GW for such systems, the current bidding volume was only 1.09 GW. HDRE's procurement of 73 MW in this round represents a strategic entry for the Taiwanese ???



2GW Ontario storage procurement. Following the province's largest ever energy storage procurement, the IESO is launching a second procurement (LT2 RFP) which the system operator will split into three different streams to secure capacity and energy into the ???



Introduction. Japan is aiming to source 36-38% of its electricity generation from renewable sources by FY2030 1 and achieve carbon neutrality by 2050, while at the same time maintaining a stable and affordable supply. The amendment of the Act on Special Measures Concerning Procurement of Electricity from Renewable Energy Sources by Electricity Utilities (Act No.108 ???



The islands of Hokkaido and Kyushu, at opposite geographical ends of Japan's biggest populated island, Honshu, are Japanese renewable energy development hotspots and, more recently, have become the place to be for battery storage too. Yesterday, Energy-Storage.news reported that major Japanese conglomerate Marubeni is building a 103MWh 4 ???

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Gotion will supply battery cells, modules, BMS and other components, while Edison Power, a provider of renewable energy solutions since 1991, will look after customers, carry out engineering, procurement and construction (EPC) duties, operation and maintenance (O& M) and provide other various "market-side services".



The LDES portion is split between 1GW of multi-day energy storage, and another 1GW of energy storage with a discharge duration of 12 hours or more. The CPUC has said it wants resources that do not use lithium-ion batteries or pumped hydro energy storage (PHES) technologies, which are already commercialised and deployed at scale.



Primary energy sources? 1/4 ? Primary forms of energy, including oil, natural gas, coal, nuclear power, solar power, and wind power. Energy self-sufficiency rate? 1/4 ? The percentage of the primary energy resources required for people's daily life and economic activities which can be produced or acquired in their own country.

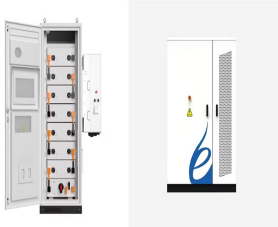


The proportion of renewable energy in Japan's energy mix has been growing year on year in recent years, from 16.0% in 2017 to more than 20% today. The country expects to achieve a 40% share of renewable energy by 2030, making it a major source of electricity supply and reducing total carbon emissions by 46% [1]. Figure 1. Japan's energy mix



The Japanese government issued an interim report on its "Clean Energy Strategy" in May. While aiming to achieve the goals of carbon neutrality by 2050 and a 46% reduction in greenhouse gas emissions in fiscal 2030, further growth will be achieved by ensuring a stable and affordable energy supply for the future.

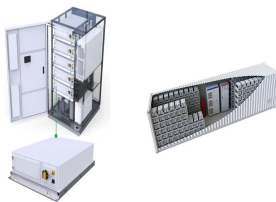
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At a meeting with energy experts to discuss fossil fuel procurement, the Ministry of Economy, Trade and Industry (METI) outlined possible measures, including financial support for securing storage



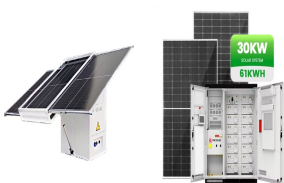
The Megapack installation is based on Tesla's integrated solution which includes lithium-ion (Li-ion) batteries, power conversion system (PCS, described as "power conditioner" in Japanese industry parlance), thermal management and controls. It is listed as available in Japan in 2-hour duration (1927.2kW/3854.4kWh) and 4-hour duration ???



In August, Japanese prime minister Fumio Kishida called for an acceleration in the introduction of stationary battery storage along with a power grid expansion, to enable the planned increase in renewable capacity. BESS will provide an important source of backup power to support the higher share of intermittent generation. OCCTO estimates that



d. Japans Legal and Policy Landscape as it relates to the Energy Storage and Renewable Sectors i. 1970-1990s ii. 21st Century iii. Japans Current Legal and Regulatory Infrastructure iv. Current Energy Storage Market Target 5. Market Characteristics of the Energy Storage Market in Japan e. Market Size f. Primary Firms of Japan's Energy Storage



We hope that reading this article helped update your understanding of the current energy situation in Japan. Please take this as an opportunity to think about the future of Japan's energy. For more detailed information about the energy situation in Japan, please refer to Japan's Energy 2021, with some of the figures updated in this article.