



MARCH 3, 2025

ANALYSIS

AFTER A STRONG FIRST YEAR, SALES OUTLOOK FOR JAPAN'S GX BONDS APPEARS MIXED

- In Feb 2024, Japan announced a plan to sell ¥20 trillion worth of bonds tied to funding a 10-year, ¥150 trillion GX (green transformation) agenda.
- The sales started well, but the issuance pipeline is now thinning. Officials need to amplify their GX messaging to capitalize on Japan's status as a financial safe haven.

ENERGY JOBS IN JAPAN: OPPORTUNITIES IN DIVERSITY

- The BESS sector has been flooded with new players; Hydrogen and ammonia tech are having healthy growth; Grid technology is highlighted in both the GX and Strategic Energy Plan.
- How does this play out in the human resource market?

ASIA PACIFIC REVIEW

This column provides a brief overview of the region's main energy events from the past week

NEWS

GENERAL OUTLOOK AND TRENDS

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- PM to launch council to coordinate development of data centers and power plants

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- ANRE to expand scope of eligible sources for LTDA decarbonization capacity auction
- Spot electricity trading rises for third consecutive month

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- NYK gets approval for world's first ammonia-fueled bunkering ship

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- Yonden Engineering begins field test for PSCs on wind turbines

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- JERA issues transition-linked bonds with a 10-year maturity

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- Chugoku Electric restores monitoring equipment at Shimane NPP

TRADITIONAL FUELS

- ENEOS to partially suspend ethylene production at domestic refinery
- LNG stocks down from previous week, down YoY

CARBON CAPTURE & SYNTHETIC FUELS

- ANRE proposes calculation method for non-fossil value of CCS
- Designation of a specific area for CCS off Hokkaido

EVENTS

- Mar 5 “REvision2025” International Symposium hosted by Renewable Energy Institute @ Tokyo, Japan
- Mar 31 End of Japan’s fiscal year 2024
- May 3-6 May Golden Week Holidays

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BOOK A STAND

OFTEN-USED ACRONYMS

METI	The Ministry of Economy, Trade and Industry	mmbtu	Million British Thermal Units
MoE	Ministry of Environment	mb/d	Million barrels per day
ANRE	Agency for Natural Resources and Energy	mtoe	Million Tons of Oil Equivalent
NEDO	New Energy and Industrial Technology Development Organization	kWh	Kilowatt hours (electricity generation volume)
TEPCO	Tokyo Electric Power Company	FIT	Feed-in Tariff
KEPCO	Kansai Electric Power Company	FIP	Feed-in Premium
EPCO	Electric Power Company	SAF	Sustainable Aviation Fuel
JCC	Japan Crude Cocktail	NPP	Nuclear power plant
JKM	Japan Korea Market, the Platt’s LNG benchmark	JOGMEC	Japan Organization for Metals and Energy Security
CCUS	Carbon Capture, Utilization and Storage		
OCCTO	Organization for Cross-regional Coordination of Transmission Operators		
NRA	Nuclear Regulation Authority		
GX	Green Transformation		

NEWS: GENERAL POLICY AND TRENDS

METI announces Cabinet approval of 7th Basic Energy Plan

(Government statement, Feb 18)

- On Feb 18, METI announced the Cabinet approval of the 7th Basic Energy Plan. There were no major changes, but some wording of the original draft was changed.
- With regard to nuclear power, which garnered the most attention, the following two points were added:
 - Sincerely consider concerns about nuclear safety;
 - Take responsibility for dealing with any accidents that may occur;
- Regarding renewable energy, several terms were added, and the promotion of renewable energy projects other than FIT/FIP systems was added.
- In the section on Japan-U.S. cooperation, originally specific examples were given based on the Inflation Reduction Act, but these were revised to take into account the latest trends in President Trump's energy policy.
- There were a large number of public comments – 41,421 – seven times the number received in the previous survey, and a record high. Many comments were posted by the same account, possibly generated by AI and sent from the same address.
- In the end, the target for the 2040 national power mix was set at 40-50% renewables, 20% nuclear, and 30-40% thermal power; and it calls to make maximum use of both renewables and nuclear power plants.
- **CONTEXT:** *The Basic Energy Plan is formulated in order to set the main direction of national energy policy. The 7th Plan draft was presented on Dec 17, 2024; and public comments were accepted until Jan 26.*
- **SIDE DEVELOPMENT:**

[Cabinet approves GX2040 Vision](#)

(Government statement, Feb 18)

- METI announced Cabinet approval of the GX2040 Vision. The original draft received 516 comments as feedback, but only a few clarifications were added; the final draft remained as initially proposed.
 - In the section on Creating a Market that Leads to a GX Industry, some additions and revisions were made to the "Basic Approach" and "Active Procurement of GX Products and Services" sections.
 - In the section on Carbon Pricing, an explanation of the fossil fuel levy was added, stating that "the cost of using fossil fuels is largely borne by society as a whole".
 - The govt will work to realize the Vision by integrating energy policy with industrial structure and growth.
 - **CONTEXT:** *In 2023, the GX Promotion Act and the GX Decarbonization Power Supply Act were passed, and the GX Promotion Strategy was decided by the Cabinet. To share the goals of GX initiatives among the public and private sectors, the GX Promotion Strategy was revised and the GX 2040 Vision was created. The draft was presented on Dec 26, 2024, and public comments accepted until Jan 26.*
 - **SIDE DEVELOPMENT:**
- [Cabinet approval of Plan for Global Warming Countermeasures](#)
- (Government statement, Feb 18)
- MoE announced Cabinet approval of the Plan for Global Warming Countermeasures and submission of Japan's Nationally Determined Contribution (NDC) to the UN Convention on Climate Change.
 - Japan aims to reduce its GHG emissions 60% in FY2035 and 73% in FY2040, respectively, compared to its FY2013 levels.

- The govt received 3,211 public comments, and although there were both pros and cons for numerical targets, the December draft was finalized without substantial changes.
- The slightly revised Plan lists policies to achieve the emissions reduction.
- *CONTEXT: The Plan for Global Warming Countermeasures is a comprehensive plan based on the Act for Promotion of Global Warming Countermeasures, and is a revision of the previous plan approved by the Cabinet in Oct 2021. The draft Plan was presented on Dec 24, 2024, and public comments were accepted until Jan 26.*
- **TAKEAWAY:** The 7th Basic Energy Plan, the Plan for Global Warming Countermeasures, and the GX2040 Vision were all approved by the Cabinet at the same time and are seen as equal parts of the national energy strategy. They aim to simultaneously achieve stable energy supply, economic growth, and decarbonization. The numerical targets are strict, but serve as guidelines for achieving carbon neutrality by 2050. As the documents suggest, considerable further technology breakthroughs will be needed to achieve decarbonization.

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PM to launch public-private council to develop data centers and power plants

(Government statement, Feb 20)

- PM Ishiba ordered Minister Murakami (Ministry of Internal Affairs and Communications) and Minister Muto (METI) to launch a public-private council for the integrated development of data centers and power plants.
- To realize “Regional Development 2.0,” the govt will develop information and communication networks connecting AI, data centers, etc. as “infrastructure for a new era” to support GX and DX.
- In the GX2040 Vision approved by the Cabinet on Feb 18, the effective coordination of electricity and telecommunications (Watt-Bit Coordination) is also mentioned as a key point for GX industrial sites. Actual development will now be discussed.
- *CONTEXT: Both ministries have been discussing the relationship between electric power and telecom infrastructure in the "Expert Group on Digital Infrastructure Development", and released a summary document in October 2024. It seeks to guide the siting of data centers to locations where existing power infrastructure can be used, or near locations where power infrastructure is expected to be located in the future.*

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Emissions trading: revised bill approved by Cabinet

(Government statement, Feb 25)

- The govt approved a bill to amend the Act on Promotion of Smooth Transition to a Decarbonized Growth-Oriented Economic Structure, and the Act on the Promotion of Effective Utilization of Resources.
- Key measures include the legalization of an emissions trading system from FY2026. Also, it mandates businesses above a certain CO2 threshold to take part.
- There will be free allocation of emission allowances and a trading market with price controls. A fossil fuel levy will be implemented from FY2028.
- Financial support for GX-related industries will be backed by decarbonization transition bonds. Additionally, the bill mandates the use of recycled materials in designated products.
- *CONTEXT: Under the revised bill, companies emitting 100,000 tons or more of CO2 will have to join, with actual trading set to begin in FY2027. It will include around 300 to 400 companies in steel, power, and chemicals.*

NEWS: ELECTRICITY MARKETS

OCCTO taps Japanese group to build country's longest undersea cable

(Japan NRG, Government statement, Feb 26)

- OCCTO announced the winners to build the ¥1.5-¥1.8 trillion Hokkaido-Honshu Interconnection (Japan Sea Route), which will link Hokkaido and Honshu via an undersea transmission line along the Sea of Japan.
- The winning consortium consists of the transmission units of Hokkaido Electric, Tohoku Electric, TEPCO, and J-Power. They beat a group that media reports said included Frontier Power Ltd, a UK company, as well as GE Vernova and Stonepeak.
- *CONTEXT: The connection is vital to boosting renewable energy capacity nationwide as it will help deliver power from future wind farms off the coast of Hokkaido to main demand areas in central Japan. It will offer 2 GW of capacity and involve 800 km of subsea cables – Japan's longest undersea transmission link.*
- The winning consortium will conduct feasibility studies, and address technical and business challenges, before finalizing an implementation plan.
- This was the first time a foreign company had expressed interest in Japan's power grid expansion projects since OCCTO was established in 2015. However, announcing the winning bid, OCCTO said that only one bid was "qualified".
- **TAKEAWAY: Japan requires a major upgrade of its transmission network in order to fully develop renewable energy systems. The subsea routes, such as the one between Japan's north and central regions, face high costs and technical challenges. The govt will have to provide financial support. The appearance of an international bidder had sparked the possibility that the grid may be open to bidders outside of Japan's major utilities. But by saying that only one bidder was deemed qualified, OCCTO seemed to suggest that subsea cables will remain a strategic infrastructure where the govt prefers to deal with domestic companies.**
 - **SIDE DEVELOPMENT:**
[Japan to back undersea cable investments for national security](#)
 (Nikkei, Feb 26)
 - Japan is set to expand the production and installation of undersea communications cables, recognizing their critical role in national security.
 - The move is also part of an international trend to improve security measures amid ongoing geopolitical tensions.
 - *CONTEXT: Undersea cables handle 99% of Japan's international communications, yet their production has largely been driven by private firms. To strengthen the industry, METI plans to support capital investment and subsidize the construction of cable-laying ships, addressing a global shortage that has hindered large-scale projects.*
- **TAKEAWAY: The global undersea cable market is projected to grow from \$2.7 billion in 2022 to \$3.2 billion in 2028, fueled by the rise of AI-driven telecommunications.**
 - **SIDE DEVELOPMENT:**
[Toyo to collaborate with Kiso-Jiban on submarine cable engineering](#)
 (Company statement, Feb 19)
 - Toyo Construction inked an MoU with Kiso-Jiban Consultants to collaborate on submarine cable engineering services.
 - The goal is to establish a risk assessment methodology for submarine cable installation in Japan.
 - *CONTEXT: Complex submarine topography, geological features such as seabed fault activity, and submarine landslides along Japan's coastal areas pose significant risks to the installation and operation of submarine cables. Toyo Construction will offer a variety of services related to*

submarine cable installation, aiming to secure a large market share in the offshore construction sector.

ANRE eases requirements for reserve power supply

(Government statement, Feb 26)

- ANRE will relax some requirements for participating in the reserve power supply system. The next auction will include power sources that had to be replaced by other facilities to fulfil bid requirements in the capacity market. Current bids are limited to power sources that were unsuccessful or didn't bid for two consecutive years in the main auction round.
- *CONTEXT: In the capacity market, if the winning bidder's power source becomes unavailable due to generator failure, it can be replaced by another power source.*
- It is expected that bids in the reserve power supply system will be relatively high to cover the elevated unit operating costs. However, ANRE wants to play a near-supply capacity role by providing funds to cover costs (such as repairs) and prevent closures.
- As for the applicable period, initially bidders will be allowed to set the start and end period in terms of months, within a range of 12 to 36 months.
- A second call will be made during FY2025 for reserve power sources that originally set FY2026 and FY2027 as the first year for their application.
- *CONTEXT: In a questionnaire to power producers, some commented that "power supplies that have exited the capacity market by paying an economic penalty, power supplies that have been replaced due to generator failure, and power supplies that have won release auctions should also be allowed to bid in the reserve power supply system." ANRE took those considerations on board.*
- **TAKEAWAY:** Until the latest round of public-private discussions, there was a reluctance on the side of the bureaucrats to change participation requirements for this system. Officials have partially agreed to accept utility demands but with conditions. Whether that is enough to draw bids for the next auction for backup power sources is unclear, but it seems unlikely.

ANRE expands scope of eligible power sources for next LTDA

(Government statement, Feb 26)

- ANRE will expand the scope of eligible power sources for the next long-term decarbonization power auction (LTDA).
- As some operators began to consider installing CCS at existing thermal power plants, ANRE wants to support such investment. LTDA, the J-Credits carbon credits system, and GX based emissions trading system will all be instruments that the energy agency wants to use to encourage CCS investment.
- CCS-related projects will need to state minimum CO2 capture rates and annual CO2 storage rates, as well as offer details on when the technology would begin operating and how much kW of capacity it would cover. How the CCS tech would connect and work with other support systems will also be taken into consideration.
- Also added to the next round of bids will be long duration energy storage systems (LDES), such as liquid air energy storage and rock thermal storage. They will be subject to the same competitive conditions as pumped hydro.
- *CONTEXT: The second round of LTDA was held from Jan 20 to 27.*
- **TAKEAWAY:** Current LTDA auction bidders are undergoing government surveys to clarify their applications, with winners likely to be announced in mid April. LTDA has attracted interest from a broad range of energy sectors and stakeholders and is proving to be a catalyst for BESS, pumped hydro, nuclear and now possibly CCS

projects. Many hope the auction system will continue and be expanded as a natural successor to the FIT framework.

Spot electricity trading rises for third consecutive month

(Denki Shimbun, Feb 25)

- JEPX reported a 2.9% MoM increase in daily average spot trading in January, reaching 811 GWh, the third consecutive month of growth.
- Monthly trading rose 2.9% to 25.14 TWh, while its share of total power demand fell 0.6 points to 31%. Nationwide power demand increased 4.8% MoM and 2.4% YoY.
- System prices showed minor fluctuations, with the 24-hour average price up ¥0.18 to ¥12.43/ kWh, while peak prices fell by ¥0.33 to ¥9.77 /kWh. The highest spot price was ¥28/ kWh on Jan 9.
- Market segmentation continued, with Hokkaido having the highest regional price at ¥14.27 /kWh. The most constrained transmission was between Chubu and Kansai.

Hokuriku Electric might expand LNG use at Toyama Shinko power plant

(Denki Shimbun, Feb 28)

- Hokuriku Electric began reviewing plans to build a second LNG unit at the Toyama Shinko Thermal Power Plant in Imizu City, Toyama Pref.
- The company plans to introduce a 600 MW high-efficiency gas turbine combined cycle (GTCC) system, with operations to start in FY2033.
- *CONTEXT: Hokuriku Electric will decommission Unit 2 (coal-fired, 250 MW), as well as the currently suspended Unit 1 (heavy oil/crude oil-fired, 240 MW) at the Toyama Shinko site. Also, the utility will delay the planned decommissioning of Toyama Shinko's Unit 1 (coal, 250 MW), originally set for FY2024, until FY2028 in order to ensure short-term power supply stability.*

JERA fails to submit bids in wholesale power market due to system error

(Company statement, Feb 22)

- JERA failed to submit surplus power to the wholesale electricity market due to a system error, delaying the pricing process. The issue has now been resolved.
- *CONTEXT: Under government regulations, major utilities, including JERA, are required to offer surplus power in the market. The company was previously found to have manipulated prices in 2024, repeatedly failing to bid during periods of reduced power output. METI issued a business improvement recommendation to JERA in 2024 for market manipulation.*

Chubu Electric begins test of regional microgrid in Iida

(Company statement, Feb 25)

- Chubu Electric began test operation of a microgrid in Kawaji district, Iida City. It was built using the existing power distribution system, with new battery storage and an energy management system installed at the mega-solar power plant.
- In the event of a prolonged power outage due to a disaster, a small power grid uses local distribution lines between power plants. After field testing, the system is expected to be operational by 2030.

NEWS: HYDROGEN

Everfuel begins green hydrogen production, backed by Itochu and Osaka Gas

(Nikkei, Feb 28)

- Danish hydrogen company Everfuel, backed by Itochu Corp and Osaka Gas, launched green hydrogen production in Denmark, using renewable energy.
- With an annual production capacity of 3,000 tons, it is among Europe's largest hydrogen plants, despite industry-wide setbacks due to rising material costs.
- The 20-MW water electrolysis plant officially launched on Jan 28, 2025. It is Denmark's first commercial green hydrogen facility, initially supplying an adjacent oil refinery. The company also plans to supply fuel cell vehicle (FCV) trucks and buses, with full-scale operations targeted by late 2025.
- In early 2024, Itochu and Osaka Gas jointly acquired a roughly 10% stake in Everfuel via a SPC. They might increase that stake to over 20%.
- SIDE DEVELOPMENT:

[Toyota expands hydrogen production in Chubu region](#)

(Nikkei, Feb 26)

- Toyota, in collaboration with Chiyoda, will install 5 MW electrolysis equipment at its headquarters factory in Toyota City, Aichi Pref, by early 2026.
- The facility will produce 100 kg/ hour of hydrogen, doubling over time.
- CONTEXT: *Japan's hydrogen costs of ¥2,000/ kg remain higher than those in South Korea ¥1,000/ kg and China ¥700-900/ kg due to differences in hydrogen sourcing. Toyota is advocating for government subsidies to reduce fuel cell vehicle operation costs and make hydrogen more competitive with diesel.*

Toyota develops hydrogen engines for industrial vehicles

(Nikkei, Feb 25)

- Toyota began developing a hydrogen combustion engine designed for industrial vehicles, particularly large forklifts.
- The company aims to provide the logistics industry with a low-carbon alternative to traditional gasoline engines, with commercialization targeted for around 2030.
- Instead of developing a new system, Toyota will modify existing industrial vehicle engines to support hydrogen combustion, reducing development and production costs.
- CONTEXT: *Toyota is also researching the use of biofuels made from waste cooking oil as another low-carbon energy source. The company has done a field test of a biofuel-powered forklift at the Osaka-Kansai Expo construction site.*

NYK and Seatrrium secure AiP for ammonia-fueled bunkering vessel

(Company statement, Feb 25)

- NYK Line and Seatrrium Ltd, along with partner companies, received Approval in Principle (AiP) from ClassNK for the design of an ammonia-fueled bunkering vessel.
- The design integrates expertise from multiple consortium members, including IHI Power Systems' ammonia fuel engine and TB Global Technologies' bunkering boom.
- The vessel is slated for use in Singapore, and will become the world's first ammonia-fueled bunkering vessel.



DNP and Yokohama Univ develop hydrogen leak detection system

(Company statement, Feb 25)

- Dai Nippon Printing (DNP), in collaboration with Yokohama National University, has developed a hydrogen leak detection system that uses a hydrogen-sensitive membrane combined with RFID technology.
- The system is designed to enhance safety in hydrogen-related facilities by providing early leak detection without requiring a power source.
- The sensor is a thin, flexible film, allowing it to be easily attached to hydrogen pipes, valve joints, and other critical areas.
- DNP aims to supply this hydrogen detection system to engineering firms, hydrogen station operators, and energy companies, targeting ¥3 billion in total sales by 2030.

Denyo and Teijin develop portable hydrogen fuel cell generator

(Company statement, Feb 17)

- Teijin and Denyo developed a 3 kVA-class hydrogen fuel cell generator using a fuel cell module from Intelligent Energy Ltd, a UK-based Teijin subsidiary.
- By incorporating Teijin Engineering's Ultressa, a large portable composite material container, the system can run continuously for 13.6 hours with a 130L hydrogen cylinder at 45 MPa or 6.7 hours at 19.6 MPa.

NEWS: SOLAR AND BATTERIES

Marubeni inks deal on procurement and sale of non-FIT solar power plants for HEXA

(Company statement, Feb 19)

- Marubeni agreed with developer HEXA Renewables to sell around 1,000 low-voltage, non-FIT solar power plants (100 MW total capacity) in Japan by the end of 2028.
- Marubeni will procure the power facilities and sell them to Singapore-based HEXA, which will be responsible for asset management and will supply clean electricity and environmental value to consumers through corporate PPAs.
- Sales contracts have been signed for about 200 sites with a total capacity of 20 MW.
- *CONTEXT: Marubeni New Power, a Marubeni subsidiary, holds preferential negotiation rights for corporate PPAs on the generated electricity. Marubeni has set up a systematic evaluation scheme for solar power plant procurement and aims to leverage its network and customer base to secure projects.*
- *CONTEXT: HEXA has several notable projects in Japan: in January 2025, Amazon announced a 10 MW offsite solar project in Hokkaido in collaboration with HEXA; in November 2024, HEXA partnered with Tokyo-based Bison Energy to accelerate the development of its pipeline of solar and BESS projects in Japan. HEXA also emerged as the top performer in Japan's first Long-Term Decarbonized Power Sources auction, securing contracts for 11 battery storage projects totaling 342 MW. Construction on the first of these began in October 2024.*
- **TAKEAWAY: HEXA Renewables has taken a collaborative approach to ramp up capacity in Japan's renewable energy landscape. This is likely the effect of private equity ownership, which seeks an accelerated capacity build up and in Japan that requires multiple strategic tie-ups. HEXA is owned by I Squared Capital.**

Yonden Engineering begins field test for PSCs on wind turbines

(Company statement, Feb 27)

- Yonden Engineering, a Shikoku Electric firm, began a field test with Sekisui Chemical to install film-type perovskite solar cells on wind turbines. The experiment will last four years.
- The experiment will verify whether PSCs can be installed in sites where conventional solar panels can't.
- The test involves attaching PSCs manufactured by Sekisui Chemical to the side of the conical wind turbine tower. Each solar cell measures around 0.25 meter squared, with a total of 20 panels to be used.
- *CONTEXT: The test site is exposed to volcanic ash from Sakurajima, thus the experiment will also evaluate the impact of ash and dust on PSC performance, in addition to their durability.*

Idemitsu Kosan to build lithium sulfide production facility in Chiba

(Company statement, Feb 27)

- Idemitsu Kosan plans lithium sulfide production at its plant in Ichihara City, Chiba Pref. It will produce about 1,000 tons/ year.
- Total investment is ¥21.3 billion, with ¥7.1 billion from govt subsidies. Completion is set for June 2027.
- Lithium sulfide is a key material for solid-state batteries, which are expected to significantly enhance EV performance. With Toyota's next-gen vehicles in mind, Idemitsu aims for commercialization by 2027–28.

- **CONTEXT:** Solid-state batteries replace traditional liquid electrolytes, improving charging speed and durability compared to Li-ion batteries. Idemitsu, which partnered with Toyota in 2023 for mass production, also plans to build a large-scale solid electrolyte plant at the Chiba site, with an investment decision expected in FY2025.

NEWS: WIND POWER AND OTHER RENEWABLES

Osaka Gas aims to nearly triple renewable energy capacity by 2040

(Nikkei, Feb 27)

- Osaka Gas said it will develop renewable energy sources and procure from other companies, aiming to increase its renewable energy to 10 GW by FY2040, almost 2.8 times the current amount.
- Up to 40% of city gas will be replaced with decarbonized fuels, such as e-methane, which is a synthesis of hydrogen and CO₂.
- **CONTEXT:** Osaka Gas has won a bid with Mitsui & Co for a large-scale wind farm off the coast of Murakame City and Tainai City in Niigata Prefecture. Osaka Gas president Masataka Fujiwara said that "offshore wind power will be our trump card in the future." Osaka Gas is developing solar power plants and other facilities, but the amount of land suitable for power generation in Japan is decreasing.
- **CONTEXT:** Osaka Gas' renewable energy portfolio is currently at 3.56 GW, and the company set a goal of increasing it to 5 GW by FY2030.

JERA issues ¥12.2 billion transition-linked bond with 10-year maturity

(Company statement, Feb 20)

- JERA issued a 10-year transition-linked bond worth ¥12.2 billion, with an annual interest rate of 1.83%.
- The company set a target to reduce its domestic CO₂ emission intensity to 0.477 kg-CO₂/ kWh or lower by FY2030. If the target is not met, JERA plans to donate 0.10% of the issuance amount to environmental conservation initiatives.
- **CONTEXT:** JERA announced its first transition-linked bond for ¥10 billion in February 2024.
- **TAKEAWAY:** The timing of JERA's first transition-linked bond last year coincided with the first issuance of GX Bonds, the government's climate transition bonds. (For an update on how well the GX fundraising program is going, see this week's Analysis section).

Kansai Electric joins Hirakata Zero Carbon Promotion Project

(Company statement, Feb 26)

- Kansai Electric joins the Hirakata Zero Carbon Promotion Project.
- The project launches in April and will promote the bulk purchase of electricity for Hirakata City-owned facilities, the installation of solar power through PPAs, and the conversion of lighting to LEDs.
- Kansai Electric will manage the project's completion, and will promote this pilot across Japan.
- **CONTEXT:** The Hirakata Zero Carbon Promotion Project proposed by Hirakata City, Osaka was selected by the MoE for the "FY2024 Regional Decarbonization Transition and Renewable Energy Promotion Grant" under the "Priority Measures Acceleration Project". This project promotes regional decarbonization under national and local coordination.

NEWS: NUCLEAR ENERGY

TEPCO's Kashiwazaki-Kariwa NPP faces further delays

(Company statement, Feb 27)

- TEPCO said that anti-terrorism construction work at Kashiwazaki-Kariwa NPP Units 6 and 7 will face a delay. Completion of the special safety facility for Unit 7 is now slated for Aug 2029. Unit 6's completion is now planned for Sept 2031.
- TEPCO had planned to complete the new facility for Unit 7 by March 2025, and for Unit 6 by Sept 2026.
- *CONTEXT: The reasons behind the delays in completion are reported to be linked to difficulties in securing workers, materials, and the designs. Meanwhile, in March, the Niigata Pref Assembly will invite officials from ANRE and other agencies to explain nuclear policies. They'll focus on Kashiwazaki-Kariwa. This will be the first time national representatives address the assembly on the issue.*
- *CONTEXT: According to the NRA, a counterterrorism facility is designed to prevent, detect, and respond to threats. It utilizes physical barriers, surveillance systems, cybersecurity measures, and armed security personnel. These facilities often coordinate with law enforcement and intel agencies.*
- **TAKEAWAY:** These delays further complicate the situation at Kashiwazaki-Kariwa and, as a consequence, TEPCO's financials. In theory, Unit 7's restart is still possible this summer, but the reactor must stop when the regulatory deadline (Oct 13) for the facility's completion passes. The utility (and the govt) will hope that they can push through a restart for Unit 7 before that Oct deadline to cover the peak power demand period during the summer months. But for that, they still need Niigata governor's public sign up. Meanwhile, TEPCO will likely put more effort into restarting Unit 6, which should load nuclear fuel in June. As Unit 6 has more flexible regulatory deadlines, TEPCO would like to have it operating starting October 2025 when Unit 7 must shut down. As the next step, TEPCO hopes that Unit 7 will be back online in 2029 and substitute Unit 6 as the latter comes up against its own regulatory deadline. Both of the units would not be online simultaneously until Sept 2031 in a best-case scenario.
 - **SIDE DEVELOPMENT:**
[TEPCO gets approval for changes to safety regulations at Kashiwazaki-Kariwa](#)
 (Company statement, Feb 28)
 - TEPCO obtained approval for its application for changes to the safety regulations of Kashiwazaki-Kariwa NPP.
 - On Aug 29 2024, TEPCO submitted the application to the NRA. It submitted a supplementary document to the NRA on Jan 30.
- **TAKEAWAY:** Approval helps TEPCO in loading fuel and then restarting Unit 6, something the company sees as crucial due to the mandatory shut-down of Unit 7 in October.

Chugoku Electric restores monitoring equipment at Shimane NPP

(Company statement, Feb 22)

- Chugoku Electric said that the malfunction in the monitoring equipment at Shimane NPP Unit 2 has been restored.
- *CONTEXT: The malfunction affected one of two monitoring systems used to track hydrogen and oxygen concentrations in case of an accident.*
- **SIDE DEVELOPMENT:**
[Temporary increase in gas monitor readings at Oi NPP](#)
 (Company statement, Feb 27)

- An operator at Oi NPP Unit 3 observed an increase in the exhaust stack gas monitor readings, (peak was 1,191 cpm, normal is 480 cpm). The readings returned to normal soon afterwards.
- A review of on-site operations revealed that sampling rack replacement work was being carried out at the waste processing building of Units 3 and 4.

NEWS: TRADITIONAL FUELS

ENEOS to partially suspend ethylene production at Kawasaki refinery

(Jiji, Feb 26)

- ENEOS will partially suspend its ethylene production unit at Kawasaki Refinery (Kawasaki City, Kanagawa Pref) due to low domestic demand.
- To reduce fixed costs, ENEOS plans to suspend ethylene production by late FY2027.
- *CONTEXT: Due to declining domestic demand for petrochemicals, as well as growing competition in Asia and expansion of such facilities, especially in China, Japan's ethylene production units are operating at low capacity.*

NTT Docomo enters the gas retail business

(Denki Shimbun, Feb 26)

- NTT Docomo said it will begin selling city gas for households in the Kanto and Kansai regions.
- The service, "Docomo Gas," is set to launch in June, aiming to get more than 100,000 customers, and will consider expanding into other city gas service areas.
- The company will partner with Tokyo Gas and Osaka Gas.

LNG stocks down from previous week, down YoY

(Government data, Feb 26)

- As of Feb 23, the LNG stocks of 10 power utilities were 1.94 Mt, down 3.5% from the previous week (2.01 Mt), down 11% from end Feb 2024 (2.18 Mt), and down 11% from the 5-year average of 2.18 Mt.
- *CONTEXT: Nationwide temperatures picked up considerably in the last week of February, but are forecast to dip again in early March.*

NEWS: CARBON CAPTURE & SYNTHETIC FUELS

Designation of a specific area for CCS off Hokkaido

(Government statement, Feb 21)

- Under the CCS Business Act, METI designated an area off Tomakomai, Hokkaido to allow for permit applications for exploratory drilling.
- This marks the first designation of a "specific area" under the CCS Act since it took effect on Nov 18, 2024.

- *CONTEXT: Japan's Basic Energy Plan and GX2040 Vision set the goal to launch CCS projects by 2030. The CCS Business Act established a regulatory framework, including a permit system for CO2 storage projects. Tomakomai is the site of Japan's first large-scale CCS demo project. METI estimates it has a CO2 storage potential of 1.5 to 2 Mt. Tomakomai is one of Japan's five potential CCS storage sites, and METI will now designate the others.*

Govt to expand 'blue carbon' CO2 absorption by 2040

(Denki Shimbun, Feb 28)

- The govt set a target to expand CO2 absorption via "blue carbon" – the process by which seagrasses and seaweeds absorb and store CO2 – to 1 Mt by FY2035, and 2 Mt by FY2040.
- *CONTEXT: In the "Greenhouse Gas Inventory Emissions and Absorption Report" submitted to the UN Framework Convention on Climate Change last April, Japan reported 350,000 tons of CO2 absorption through blue carbon for FY2022.*
- Although Japan's blue carbon absorption capacity was estimated at 520,000 tons in 1990, it has been declining yearly due to rising sea temperatures.
- *CONTEXT: Japan made history in April 2024 by being the first country to include seaweed-based CO2 absorption in its greenhouse gas inventory submitted to the UN.*
- The govt also plans to report blue carbon absorption in the inventory for FY2023, which is set to be submitted in April this year.
- To improve the accuracy of blue carbon calculations, MLIT is developing a new technology that enables higher-precision measurement of seaweed bed conditions. It involves drones equipped with laser sensors capable of penetrating underwater to measure the volume of seaweed beds in three dimensions.

ANRE proposes calculation method for non-fossil value of CCS

(Government statement, Feb 26)

- ANRE proposed a method for calculating the non-fossil value of CCS under the Act on Sophisticated Methods of Energy Supply Structures.
- In particular, the agency wants to clarify how to calculate CO2 storage when CCS is installed at a thermal power plant co-fired with biomass and fossil fuels (BECCS). According to the agency, the CO2 storage volume will be calculated based on the existing arrangement for biomass rules under the Act.
- *CONTEXT: The Act on Sophisticated Methods of Energy Supply Structures requires the use of a certain percentage of non-fossil energy sources for electricity and other purposes. The law was amended in 2022 to require electric utilities to use CCS, as well as the use of non-fossil energy sources.*

MOL and KEPCO ink MoU for carbon credit business

(Company statement, Feb 27)

- Mitsui O.S.K. Lines (MOL) and KEPCO signed an MoU to assess the feasibility of projects that generate carbon credits by removing CO2 from the atmosphere. The evaluation will focus on Africa and Southeast Asia.
- MOL has a target of removing 2.2 Mt of CO2 by 2030. KEPCO is trying to establish a framework for creating, selling, and trading credits.

- *CONTEXT: Removal-based credits derive from direct CO2 removal from the atmosphere. For example, they can be nature-based solutions such as afforestation or soil carbon sequestration. The other type is technology-based solutions such as DACCS or BECCS.*

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Cosmo Energy mulls SAF and biodiesel production

(Company statement, Feb 21)

- Cosmo Energy will explore the production of sustainable aviation fuel (SAF) and biodiesel at its former refinery in Sakaide City, Kagawa Pref. A final investment decision is expected by FY2026, with operations targeted for FY2029 or later.
- The annual production capacity is expected to be 150,000 kiloliters of SAF and 17,000 kiloliters of RD, with sales aimed at airlines and construction companies.
- *CONTEXT: The Sakaide Logistics Base was a refinery until 2013, when operations ceased due to declining domestic demand for fuel oil.*
- **SIDE DEVELOPMENT:**

[ENEOS and Mitsubishi begin design for SAF facility](#)

(Company statement, Feb 20)

- ENEOS and Mitsubishi Corp plan a SAF production facility in Wakayama Pref, to be built on the premises of ENEOS' site in Arida City.
- It's expected to begin operations in FY2028 or later.
- *CONTEXT: Since 2022, the two firms have been jointly studying SAF production, with ENEOS conducting a feasibility study at the Wakayama site. Although oil refining operations ceased in 2023, the new SAF facility will produce about 400,000 kiloliters of SAF per year, with used cooking oil and other feedstocks.*

ANALYSIS

BY WILL FEE

After a Strong First Year, Sales Outlook for Japan's GX Bonds Appears Mixed

In February 2024, the Japanese government announced a bold plan to sell ¥20 trillion worth of bonds directly tied to funding a 10-year, ¥150 trillion GX (green transformation) agenda. The program is meant to accelerate the nation's decarbonization drive to meet a legally mandated net-zero target by 2050.

After a year, about ¥3 trillion worth of the 5- and 10- year bonds, known as 'GX bonds' or 'GX economic transition bonds', have been sold over six separate rounds of auctions. That means 15% of the 10-year target has already been reached inside the first 12 months, putting the fundraising ahead of schedule.

But the strong start is showing signs of slowing down. Takeup from outside Japan (which was around 20% of GX bond sales) has been lower than hoped. It's a sign that overseas investors are either unconvinced by the GX plan or simply oblivious to it. In the world of proliferating green, transition, sustainability and related finance, there's been a lack of clear messaging around GX bonds or marketing of them internationally.

International fundraising for decarbonization has admittedly become more difficult since the re-election of President Donald Trump. The returning U.S. president has rolled back many of his predecessor's climate initiatives and waged war on principles like ESG, instead calling on investors and businesses to recalibrate towards pure profits. The U.S. Energy Secretary Chris Wright has even dubbed 2050 net zero aspirations as a "terrible" idea that is costly and inefficient.

With recent elections in Germany suggesting a rebalancing in Europe's energy stance, the collective move toward international decarbonization, once so assured, is on shakier ground.

All this could, despite the wider uncertainty, prove a tailwind for Japan and its green finance sector.

Despite a change of administration in October that resulted in a minority government, the country remains socially cohesive and politically stable. State spending on clean energy is at record levels. METI's request at the end of last year for an additional ¥982 billion from the supplementary budget for the GX program speaks of a desire to uphold energy transition goals packaged under the GX banner by the previous Prime Minister Kishida.

As such, investors who wish to maintain their green energy goals could pivot away from unpredictable markets in North America and Europe towards Japan. But officials in Tokyo will need to amplify their GX messaging if they hope to capitalize on Japan's status as a financial safe haven.

Headwinds

After a strong start, weaker sales of the GX bonds are projected over coming years. Only four auctions are scheduled for this coming fiscal year (April 2025 through March 2026) to raise ¥1.2 trillion, compared to six issuances for a total of nearly ¥3 trillion in the 12 months from February 2024. That's a 60% dropoff.

GX Bond Auctions to Date

Date	Duration	Issue number	Nominal coupon	Amount raised (billion yen)
February 14, 2024	10-year	1	0.7%	799.5
February 27, 2024	5-year	1	0.3%	799.8
May 28, 2024	10-year	2	1.0%	349.6
July 18, 2024	5-year	2	0.5%	349.6
October 22, 2024	10-year	2	1.0%	350.0
January 29, 2025	5-year	2	0.5%	349.8

Scheduled GX Bond Auctions

Date	Duration	Planned issue amount
July 2025	5-year	Approx. ¥300 billion yen
October 2025	10-years	Approx. ¥300 billion yen
January 2026	5-year	Approx. ¥300 billion yen
March 2026	10-years	Approx. ¥300 billion yen

The scheduled bond sales will alternate between 5-year and 10-year maturities, and no sales are currently announced for FY2026, which will start in April 2026.

Assuming the average pace of GX bonds sales from the first two years is maintained, the government should meet its ¥20-trillion, 10-year fundraising target. However, should the sales mirror the pace planned for FY2025, then there would be a shortfall of almost 30%.

How government bonds perform affects financing by the private sector. The volume of green and other decarbonization related bonds by Japanese companies has already weakened.

NTT Finance, for example, was once Japan's leading investor in green bonds. Out of a total of around ¥2 trillions raised in green finance, the company – a financial subsidiary of the formerly public telecoms monopoly NTT Corp – issued ¥600 billion in green bonds in 2023 alone. In 2024, that number dropped to zero.

The reasoning provided by companies like NTT is that certain financial products like green bonds are too restrictive. Green bonds, for example, apply specifically to investments in renewable energy, energy efficiency, wastewater management and similar. This limits the actions that businesses may want to undertake in other elements of ESG. In some cases, companies also want to invest in decarbonization technologies that are not currently accepted within the 'green' label.

Another reason for a slowdown in issuances has been waning investor enthusiasm due to the difficulty of re-sale. While a return on investment is possible with environmental bonds issued on the primary market, by the time they reach the secondary market, the chances of turning a profit are greatly reduced.

That is why a large chunk of the GX bond purchases so far, just like general Japanese government bonds, were made by the Bank of Japan (BoJ) and other government-affiliated entities. At the first auction last February, around 50% of the purchases were made by either the BoJ (35%) or the Government Pension Investment Fund (GPIF, 14%).

Given the perceived lack of a ‘greenium’ (green premium) – a lower yield, and therefore cheaper borrowing costs based on the issuer’s ability to meet its climate targets – Japanese state entities have experienced trouble reselling the bonds, particularly to overseas investors. A lack of international awareness of the GX program and scepticism among some in the green finance community about the merits of the GX strategy have also played a role.

Overseas Investment

The GX moniker was popularized by the previous Kishida administration to refer to the nation’s long-standing decarbonization efforts. It dovetailed with another state program, the DX (digital transformation) initiative, and was largely synonymous with the terms “net zero” and “decarbonization” in Japanese energy lexicon.

The GX bonds are meant to service a wide range of state initiatives in clean energy, which span renewables, the introduction of hydrogen and ammonia as fuels, synthetic fuels, and even a greater use of nuclear power. That broad reach places them into the category of ‘transition bonds’ rather than the stricter ‘green bonds.’ The ‘transition’ label allows for various technologies and applications as long as they deliver decarbonization benefits.

For many western investors, however, the ‘transition’ label feels fuzzy. It also allows for financing of more contentious technologies, such as the burning of ammonia or hydrogen alongside coal or natural gas (also known as co-firing). This technology is opposed by many environmental groups and consultancies such as BloombergNEF.

To add to the confusion, according to the Climate Bonds Initiative, the international organization that reviewed the issuance, GX Bonds do not allow for the allocation of funding to co-firing but they can be used to finance R&D into such technologies. The Climate Bonds Initiative says the GX Bond is, to all extents and purposes, a ‘green bond’. But given the R&D allowance and the broader remits of the GX program in general, investors find it tough to draw the lines.

With the pool of specifically ‘green’ financing much larger globally than ‘transition’ financing, Japan will need to either persuade international investors of the merits of the latter or create bonds that cater to international investor interests.

Looking Forward

The Trump administration’s anti-green energy turn has changed the calculus for global investors and corporations. Last year, BlackRock, the world’s largest investment firm, significantly scaled back its fund allocation to environmental and social issues. On February 27, BP said it would cut investments in renewables and return focus to oil and gas.

It’s possible that pressure from the Trump administration or elsewhere will persuade Japan to tone down its environmental policies and affect GX bond sales. But recent geopolitical developments could well prove a tailwind for the program. Amid major international shifts, the stability offered by Japan’s transition bonds will create a sizable niche.

After all, not all businesses are abandoning their environmental and sustainability goals. With brisk deregulation in the U.S., Japan's more stable and steady approach could make the country appear as a safe haven for environmental financing.

What's more, Japan's commitments are deeper than top-level policy. Japanese regions are struggling with demographic and other socioeconomic challenges and are invested heavily in the GX vision as a driver of economic revitalization. The regions are boosting their own spending to attract companies working in GX-related products and services.

Areas such as Hokkaido and Kyushu are competing for the mantle of national GX leader, and global green finance leaders are more attentive than before to adjusting various categories to support this enthusiasm.

Last month, Kyoto City sold ¥6 billion in what were labeled as green bonds although the use of funds is labeled as climate adaptation-oriented riparian works. That area, often translated as "resilience," did not get explicitly included in the 'green' bond framework until late in 2024, when the Climate Bond Initiative released an update to its green bond taxonomy. The update specifically addressed "climate resilience investment opportunities" as an area for financing.

The broadening of what is termed 'green' or what is designated as 'climate-aligned' will always be disputed and some of the GX approach may raise eyebrows. Still, at a time of uncertainty, Japan's commitment to GX – and better marketing – could make for an attractive global proposition.

ANALYSIS

BY ANDREW STATTER

Energy Jobs in Japan: Opportunities in Diversity

Smart Energy Expo at Tokyo Big Sight has always been a major event covering the full energy and electricity value chains, but this year it was noticeably larger and more diverse.

The BESS sector has been flooded with new players, primarily from China looking to capitalize on the growing energy storage market. Hydrogen and ammonia technologies are having healthy growth of global and domestic technology players as METI's CfD scheme sends positive signals to the market.

Grid technology has been clearly highlighted in both the GX and Strategic Energy Plan, which has led to clear growth in both hardware and software solutions in this space.

As we had previously shared, the new Strategic Energy Plan is shifting to an outlook where total energy demand will increase, and therefore moving toward a technology inclusive strategy with a sense of A+B rather than A or B as the path forward for Japan.

How does this play out in the human resource market?

More players, same talent = Supply & demand imbalance

Renewable and BESS developers, power trading firms, fuel cell technology companies, weather and load forecasting technologies, and hardware OEMs – All these are areas with more players now than just a couple of years ago. The first movers in any given area had the advantage to pick up the bilingual, experienced and qualified talent who were willing to take on a new challenge.

Today, in many segments that willing minority have already made their move, yet more players hunger for the same talent. The result? It's the same as the imbalance in the supply and demand of electricity, we see a price spike. Companies looking to attract the top talent, those who are ready to 'plug and play', will have to pay a premium to attract them, and are likely to face competition to secure the best hires.

A key example of this imbalance is clear in electrical engineering talent that has an understanding of grid connection and operations. TSOs have traditionally had a large workforce of this type of professional, however this pool is being headhunted out to developers faster than TSOs can replace them - with talent enticed by flatter business models, higher salaries and more operational freedom. Not only does this affect the competition for this talent pool, but it also leaves the TSOs understaffed. With record-high grid connection requests, as PV solar development shifts to higher volume, the smaller scale projects and LTDA bids for BESS projects are increasing and the TSO grid teams are becoming overworked, creating a clear bottleneck beyond talent demand.

The next outside talent revolution?

In the early 2010s, with the wild west era of Japan's lucrative FIT program for renewable energy projects, the same massive demand on a small talent pool was also clearly seen. The result was a highly diverse hiring strategy from developers keen to seize upon the opportunity that the FIT presented. People shifted primarily from sales and real estate to take on positions in land origination, project development, etc. For the Japanese talent pool, the focus was taken off industry experience and hard skills, and people were hired for potential to learn and soft skills such as communication and commercial sense. Global developers and EPC firms brought experienced people from

overseas with hard skills and experience in solar project development, management, design and construction, regardless of language skills.

As we enter into a more diverse, data-driven and connected energy system, the current talent market already in the energy industry is again not enough to satisfy the demand of all players in the market. The need to attract and hire those with transferable skills from other industries, or bring in talent from energy markets abroad, is increasing again.

Clarity, attraction and education the keys to success

In order to hire from non-obvious talent pools, hiring companies will need to be clear on what core skills are necessary, and what is trainable. Can a commodity trader who understands trading, credit and merchant risk become an asset once you teach her the intricacies of the power market? How much value can a structural engineer with experience in European floating wind projects add if you invest in hiring an interpreter to work alongside him?

Next, the education and attraction pieces will need to go hand in hand. Ambitious talent flocked to the solar industry in the FIT boom for the simple chance to earn big. This was the world's most lucrative FIT program at the time – the attraction piece was akin to a goldrush in colonial days. Now, with a more complex market and various business models, telling a clear story to talent and creating a strong unique selling point for your business is more important than ever.

Onboarding and education are key to making that new hire stick. Approximately 37% of employees who leave a company do so within their first year. The top reason cited for leaving during this period is a lack of career development, which could be mitigated by outlining a clear career roadmap and providing adequate training during the onboarding process. This is especially important in the current market landscape since competitors entering the market after you will most certainly have a target laser sighted on your employees.

Diverse opportunities + diverse talent the way forward?

As the energy market becomes more complex, with multiple asset types emerging as solutions, opportunities for talent become more diverse. Done right, increasing the mix of talent from both different industry and technical backgrounds fosters innovation, adaptability, and competitive advantage.

Diverse experiences bring fresh perspectives that drive problem-solving and the development of novel solutions. Employees from varied sectors introduce best practices, enhancing agility and helping companies identify new opportunities while avoiding industry blind spots. Decision-making improves as different viewpoints challenge deeply entrenched (and sometimes counterproductive) assumptions and reduce groupthink, leading to more balanced strategies.

Additionally, technical diversity enhances customer understanding, encourages cross-disciplinary collaboration, and fosters a culture of continuous learning. This not only broadens team capabilities but also boosts employee engagement and retention, ultimately creating a more resilient, innovative, and adaptable workforce.

Andrew Statter is a Partner at Titan GreenTech, an executive recruitment agency focused on the clean energy space.

ASIA ENERGY REVIEW

BY JOHN VAROLI

A brief overview of the region's main energy events from the past week

Australia / Pumped storage

At “Pumped Storage: Powering Australia’s Energy Future”, New South Wales Minister for Energy Penny Sharpe called for long-duration pumped storage to support the energy transition and ensure grid stability.

China / Clean energy

China launched the world’s first 660 MW circulating fluidized bed (CFB) steam generator. Developed by Harbin Electric Corporation and located in Shaanxi, this project establishes a new global benchmark for efficiency and performance in power generation.

China / Nuclear fusion

China’s nuclear fusion reactor, the Experimental Advanced Superconducting Tokamak, set a record for the longest sustained, stable nuclear fusion reaction – for 17 minutes 46 seconds, smashing its own previous 2023 world record of 6 minutes and 43 seconds.

India / Coal

India generated a record amount of electricity from coal, as net generation from coal and lignite increased by 5% to a record 1.36 TWh in 2024, from 1.29 TWh in 2023

India / Solar power

India increased its solar energy capacity by 25.2 GW in 2024, surging from only 8.3 GW added the previous year, reported Mercom.

India / Battery storage

Adani Green Energy won a bid for 1.25 GW energy storage capacity from pumped hydro storage projects. The bid was awarded by Uttar Pradesh Power Corp and will be located in Uttar Pradesh, and is expected to be completed by 2031.

Indonesia / Battery storage

The country launched its first and largest containerized battery energy storage system (CBESS) for solar power. SUN Energy said the project has a capacity of 644 kW-peak; the 1 MWh battery storage system is housed in a 20-foot container.

Philippines / New power projects

The Dept of Energy endorsed 11 new power projects, amounting to a total capacity of 4.5 GW, for System Impact Study approval by the National Grid Corp. The projects span various energy sources, including hydropower, wind, coal, and battery energy storage systems (BESS).

Singapore / Renewables

In its survey of more than 500 senior business leaders, 57% plan to invest in solar energy by 2030. Their other investment options were hydropower (40%), bioenergy (29%), mobile nuclear (26%) and wind energy (16%).

South Korea / Nuclear power

After an eight year hiatus, energy officials from South Korea and Vietnam have agreed to consider resuming the two countries’ nuclear energy ties.

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