



JAPAN NRG WEEKLY

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Feb. 20, 2023

NEWS

TOP

- [Power utility data breach scandal widens to more companies](#) with potential repercussions also for unrelated renewables players
- [Lawmakers want reactor "replacement" policy to open new sites](#) for development of nuclear power generation
- [TEPCO to receive ¥400 billion in emergency bank loans](#) as high fuel costs damage financials; JERA also mulls capital raise

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- METI to push demand response capabilities for home appliances
- Government relaxes fire safety rules on lithium-ion batteries
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OIL, GAS & MINING

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- INPEX wins bid for two oil exploration licenses in Malaysia
- LNG stocks of power utilities rise 6 percent; keep above average
- Japanese imports of crude, thermal coal, and LNG rise in January

ANALYSIS

[HYDROGEN POWER: JAPAN AND CHINA SEEK TO FORGE TIES THAT DEFY GEOPOLITICAL TENSIONS](#)

Amidst rising geopolitical tensions, China and Japan want to coordinate efforts for the development of hydrogen-fueled power generation, which is an integral part of both nations' strategy for a clean energy transition. Japan is betting on hydrogen as a reliable and cost-effective replacement of fossil energy that's less exposed to geopolitical risks. China needs decarbonization solutions that can be built rapidly and scaled up. Japan's and China's hydrogen sectors working together could potentially resolve the challenges that all countries face.

[FORGING CONSENSUS; THE INFLUENCE OF PARLIAMENTARY GROUPS ON ENERGY POLICIES](#)

Energy-related parliamentary groups often consist solely of ruling LDP members. While they don't directly impact the government's plans, their influence and advocacy often have major implications for the long-term direction of policy. Specialized groups in the Diet serve as channels to connect with each industry or seek to realize new ideas. They participate in the preparatory stage each time the government must update its Basic Energy Plan, which is reviewed every three years. *Japan NRG* takes a closer look at the main groups in the Diet and the major players behind the scenes.

GLOBAL VIEW

A wrap of top energy news from around the world.

EVENTS SCHEDULE

A selection of events to keep an eye on in 2023.

JAPAN NRG WEEKLY

Events

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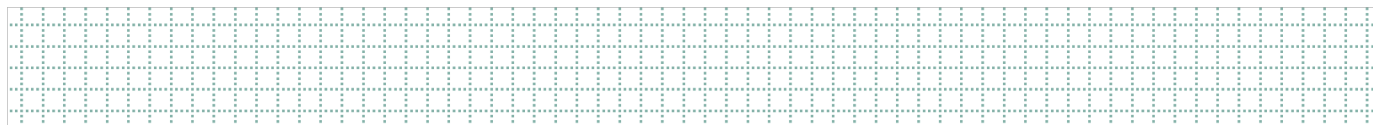
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OFTEN USED ACRONYMS

METI	The Ministry of Energy, 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		

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NEWS: ENERGY TRANSITION & POLICY



METI asks Kyushu and Chubu power companies to report on unauthorized data access

(Government statement, Feb. 14)

- METI asked Kyushu Electric, Kyushu Electric Transmission and Distribution, Chubu Electric Power Miraiz and Chubu Electric Power Grid to file reports on unauthorized access to customer data of renewable operators.
- The data possibly included names, addresses, phone numbers and email addresses.
- METI said up to 1.57 million accounts may have been affected but has not clarified the number of individuals impacted.
- *CONTEXT: The scope of data breaches in the industry has widened rapidly in recent weeks. At least five or six major utilities are now suspected of allowing staff from the generation side of the group business to access data of related transmissions companies and even METI databases. This damages the credibility of the industry liberalization that was orchestrated by METI.*
- *TAKEAWAY: METI's announcement on the possible personal data breach brings the case to another level. In the context of the Electricity Business Act, the renewables operators are victims, but under the Personal Information Protection Act, the renewables operators could be held liable for failing to set firewalls to protect customer data. The Personal Information Protection Act requires companies to file incident reports to the Personal Information Protection Commission (PPC) if data of over 1,000 persons has been exposed.*
- METI did not say credit card and bank account data were exposed, meaning the risk of financial damages is nearly zero. However, the situation puts renewable operators under strain as the privacy act requires them to inform customers that their data was breached.

Laws relating to unauthorized power user data access

Regulator	Regulation	Actions
Electricity and Gas Market Surveillance Commission	Electricity Business Act	Commission probe launched
Ministry of Economy, Trade and Industry	Act on Special Measures to Promote Renewable Energy	METI asked power companies to file reports and can launch on-site probes if needed
Japan Fair Trade Commission	Anti-Monopoly Act	Renewable operators can file complaints if they suffer from abuse of superior positions and other unlawful practices
Personal Information Protection Commission	Personal Information Protection Act	Renewable operators need to file incident reports to PPC and inform customers
Prefectural police	Act to Prohibit Unauthorized Data Access	Renewable operators can file criminal complaints

- SIDE DEVELOPMENT:

- Editorial: [Power companies flout reforms](#)

- (Shukan Economist, Feb. 21)

- CONTEXT: *This is an opinion article written by the editorial team.*
 - Fallout continues from revelations that six electricity companies improperly accessed subscriber information.
 - The separation of generation and transmission functions was the centerpiece of a state deregulation plan introduced in 1999.
 - However, despite concerns about the need to stop confidential information being exchanged between generators and TSOs (transmission system operators), pushback from the industry resulted in an arrangement that merely ensured “legal separation”.
 - While the industry made repeated assurances that it would follow the rules, the latest scandal shows that the big power companies have ignored the spirit of industry reforms.
-

LDP to promote NPP replacement with new sites to build new NPPs

(Denki Shimbun, Feb. 17)

- The Federation of LDP Diet Members for Promoting Replacement of Nuclear Reactors met on Feb 16 in the House of Representatives.
 - Chairwoman Ms. Tomomi Inada said: “While it’s appreciated that replacement of old NPPs was included in the GX program, it’s on the premise that new NPPs are built on the site of decommissioned reactors. However,... to usher in much safer NPPs, the building of “replacement” NPPs on new sites must also be allowed.”
 - About 40 LDP members (including proxy) attended the meeting.
 - TAKEAWAY: [Japan has not started commercial operations at an entirely new nuclear power generation site for almost 30 years. All reactors built in-between were additional units at existing station. Thus, establishing a new site for a nuclear power plant is seen as a major hurdle. These lawmakers hope to extend the “replacement” idea to include reactors at new sites. For example, if a utility says it doesn’t have space to build a new next-gen reactor at the NPP site where it is decommissioning a unit, it would be able to claim the right to locate the new unit at a different location.](#)
-

PM Kishida calls for more discussions on NPP reaction reactor extensions

(Reuters, Feb. 17)

- METI Minister Yasutoshi Nishimura said PM Kishida has requested more in-depth discussions on extending the operational years of NPPs, and to be well prepared for Diet deliberations, before it faces approval in the Cabinet meeting.
- Mr. Nishimura will especially work on safety regulations. He said: “We hope to win Cabinet approval as soon as possible, but a certain amount of time will be needed to proceed in a careful manner.”
- TAKEAWAY: [PM Kishida’s request is a countermeasure to some within the nuclear industry regulator, the NRA, that oppose the government’s decision to dismiss the years a reactor spent idle post-Fukushima from their operating license term. Normally, NRA commissioners vote unanimously but when it came to this matter there was disagreement at the Feb 13 vote. To avoid the opposition lawmakers using NRA’s stance to criticize the government, Kishida is turning to METI for additional assurances on safety aspects.](#)

METI to push demand-response capabilities for home appliances

(Japan NRG, Feb. 15)

- METI plans to push the introduction of electricity demand-response (DR) capabilities on air conditioners, water heaters, televisions and other home appliances to improve energy efficiency and encourage consumer shift to non-fossil power.
- The ministry is studying the system in Australia, which has mandated selected home appliances to be equipped with smart DR capabilities.
- The Air Conditioner and Water Heater Standards Working Group of Energy Conservation Sub-Panel will write the specific standards and requirements.
- **TAKEAWAY:** Prof. Matsumura Toshihiro of Tokyo University who serves the Energy Conservation Sub-Panel told METI that sophisticated power market mechanisms are essential to make DR work. Consuming power when there's abundant solar power helps cut back on fossil fuel use, but the present system doesn't allow consumers to be rewarded financially.

METI seeks public input on TEPCO Energy Partner, Hokkaido Electric's rate hike plans

(Government statement, Feb. 14)

- TEPCO Energy Partner plans a hike averaging 29.31%, and Hokkaido Electric 34.87%, both effective June 1. Public submission of opinion closes on April 20.

Government relaxes fire safety rules on lithium-ion batteries

(Government statement, Feb. 15)

- The Ministry of Internal Affairs and Communications will relax fire safety rules on lithium-ion batteries for power storage and EVs, to be consistent with international rules and to increase investments.
- In-house storage systems must not be over 6 meters high, and floor space is limited to 1,000 square meters. Systems with built-in water sprinklers can exceed this limit.
- Battery systems won't be required to keep distance from schools and residential areas.
- Safety measurements of EV batteries will change.
- Field tests on the newly proposed standards were held in 2022. The new standards will be effective after revising the relevant ministry ordinances.

LDP Diet members create federation to promote domestic renewable energy equipment

(Denki Shimbun, Feb. 16)

- Nearly 80 LDP diet members established a Federation to Promote Developing Domestic Technologies of Renewable Energy Equipment. PM Kishida is among the initiators.
- The federation will prioritize the domestic development and production of PV solar cells and floating type offshore wind plants. Currently, a large part of the components of renewable energy infrastructure built in Japan is imported from other countries.
- The global market for offshore wind power plant equipment is dominated by EU and Chinese manufacturers. The federation wants to build a supply chain focused on domestic manufacturers.

- **TAKEAWAY:** This new LDP initiative is in line with the national energy transition roadmap – the GX program. The roadmap calls for development of domestic supply chains in next-gen solar technologies including Perovskite PV cells and for floating offshore wind power plants. The LDP's goal is to support the government's target of raising renewable energy's share in the power mix to 36-38% by 2030. The government believes the target cannot be met if Japan relies solely on imports of renewable energy equipment.
- For further details on how lawmaker groups can have an impact on national energy policy, see this week's Analysis section.

Vice-Minister suspected of perjury over donation from wind developer

(Bunshun, Feb. 8)

- Sources allege that Parliamentary Vice-Minister for Foreign Affairs Akimoto Masatoshi got a ¥1.8 million donation from an advisor to renewables solutions provider Renova.
- Facing questions in the Diet, Akimoto denied getting such a donation.
- During his time as Parliamentary Secretary for Land, Infrastructure and Transport (2017-2018), Akimoto was heavily involved in the promotion of offshore wind farms.
- Optimism about the prospects for the industry saw Renova's share price increase from less than ¥600 in 2017 to over ¥6,000 in 2021.

Osaka Gas, MHI and IBM to develop platform to trade value of e-methane supply chain

(Denki Shimbun, Feb. 16)

- Osaka Gas, MHI and Japan IBM will develop an experimental platform to trade the environmental value for the total supply chain of e-methane. The system makes the value tangible by visualizing the amount of CO2 that's reduced through the use of the cleaner fuel.
- Developing such a system is a world first. The three companies started the Proof of Concept in October 2022, and will start marketing it in late FY2024.
- **CONTEXT:** *It is expected that e-methane will be transported in Japan through existing natural gas pipelines. Since this means that the "clean" gas is mixed in with natural gas, a new system is needed to measure and monitor the environmental impact. The gains (i.e., the reductions in CO2 achieved by applying e-methane) could then be coined as carbon credits.*
- **TAKEAWAY:** E-methane, which is synthesized methane made from hydrogen and recycled CO2, is listed as one of three carbon recycling technologies in the GX. By synthesizing methane, METI hoped to replace 1% of natural gas by 2030, and 90% of natural gas by 2050. These plans, however, are now being reviewed and may be downgraded.

JERA and TAQA sign MoU for cooperation on renewable energy and decarbonization

(Company statement, Feb. 15)

- JERA signed an MoU with the UAE's Abu Dhabi National Energy (TAQA) to produce green ammonia and to explore opportunities to decarbonize the region.
- The two companies have a relationship since 2003; this MoU will open up more opportunities for collaboration on green projects in the Middle East.

- JERA wants to establish a “Clean Energy Supply Infrastructure Base” to foster decarbonization and renewables growth in the Middle East.
- *CONTEXT: Abu Dhabi National Energy Company is one of the largest listed integrated utilities in the Middle East. JERA and Abu Dhabi National Energy Company have a long-standing working relationship, having previously collaborated on the Umm Al Nar Independent Power and Water Plant (IWPP) project in 2003.*

JERA and Aboitiz Power to study ammonia co-firing in the Philippines

(Company statement, Feb. 10)

- JERA signed a MoU for a joint study on ammonia co-firing at Aboitiz Power’s coal-fired power plants in the Philippines.
- Since December 2021, Aboitiz has been developing hydrogen and ammonia supply chains in the Philippines for decarbonization with investment from JERA.
- *CONTEXT: JERA bought a 27% stake in Aboitiz in 2021.*
- SIDE DEVELOPMENT:

[Kawasaki Heavy and Aboitiz Power sign MoU on decarbonization in the Philippines](#)

(Company statement, Feb. 13)

- Kawasaki Heavy Industries and the Philippines utility Aboitiz Power signed an MoU to build a renewable energy system that won’t disrupt the existing grid. The companies claim that using software for virtual synchronous generators (VSG) will help maintain local grid stability.
- The new system would help with quick recovery in the aftermath of natural disasters and blackouts as well as stabilizing the Philippines’ microgrid operations.

Iwatani and Cosmo Oil to build hydrogen station supply chain for truck terminals

(Company statement, Feb. 14)

- Iwatani and Cosmo Oil set up Iwatani Cosmo Hydrogen Station to start a hydrogen supply business in 2024, to refuel the growing fleet of FCEVs on the road.
- The first refueling station will be in Cosmo’s Keihin Truck Terminal service station, Japan’s biggest truck terminal and logistics hub in the greater Tokyo area.
- The hydrogen station will be able to refuel swiftly to comply with growing demands from commercial use of FCEVs.

Nissan and Renault to invest \$600 million in new EV business in India

(Company statement, Feb. 13)

- Nissan and Renault will invest \$600 million and increase EV production and R&D activities in Chennai, India for transitioning to carbon-neutral manufacturing.
- The companies will introduce six new EV models, including four SUVs, engineered and built in Chennai.
- The RNAIPL plant plans to transition to 100% renewable energy by 2045, and reduce energy consumption by 50% compared to today.

Sumitomo Electric invests to expand vanadium redox flow battery business in the U.S.

(Company statement, Feb. 13)

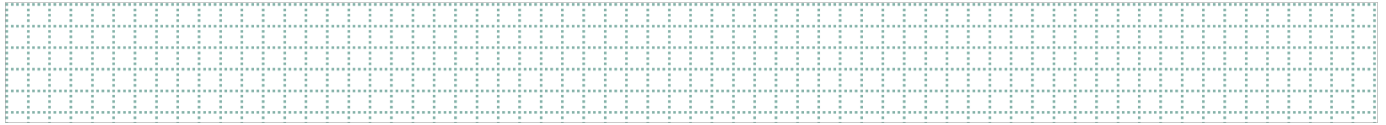
- Sumitomo Electric Industries will expand its vanadium redox flow battery business in the U.S., investing \$7.6 million in local production and installation systems.
- The redox flow technology offers some 20 years of battery life and is highly regarded for its use in applications such as grid-side supply and demand adjustment, microgrid operation in emergencies, and energy trading in the ancillary services market.
- *CONTEXT: Sumitomo Electric hopes that its North American manufacturing base will be able to meet the increasing global demand for large-scale storage batteries. The company began developing redox flow batteries in 1985 and commercialized them in 2001.*

TEPCO to lower number of radionuclides monitored in Fukushima treated water

(Denki Shimbun, Feb. 15)

- TEPCO will change the number of radionuclides it monitors in treated water at the Fukushima nuclear site. At present, the number is 64 (including tritium) and the new number will be 30.
- TEPCO held discussions with IAEA and the industry regulator NRA and plans to amend its monitoring accordingly.
- The utility will continue to monitor the other radionuclides on a voluntary basis.
- *CONTEXT: Water at the Fukushima site is processed through a system known as ALPS to remove harmful levels of radionuclides. A large volume of water has already passed through the ALPS system and the utility says it is running out of storage space for all the water. TEPCO plans to start releasing treated water into the ocean later this year and has promised to ensure the release meets international safety standards.*

NEWS: POWER MARKETS



TEPCO to receive ¥400 billion in emergency loans from major banks

(Nikkei, Feb. 14)

- A group of major Japanese banks will provide TEPCO with ¥400 billion in emergency loans as the utility struggles with high fuel costs and a weak yen. The loan will be disbursed as early as April.
- JERA is also considering raising ¥200 billion from banks to boost its capital.
- TEPCO's lenders include: the Development Bank of Japan (¥90 billion), Sumitomo Mitsui Banking Corporation (¥83 billion), Mizuho Bank (¥62 billion), and Nippon Life (¥39 billion yen).
- In June, TEPCO applied to METI to raise the regulated tariffs that two-thirds of households subscribe to by an average of 29%. The company explained to the lenders that the price increases will result in a profit of about ¥300 billion in 2023.
- *CONTEXT: TEPCO recently posted financial results for the period from April to December, which showed a loss of ¥651 billion. The deficit was the largest since 2003, when TEPCO began disclosing quarterly financial results, and the first time in 10 years that TEPCO has posted a loss in this period.*

Construction begins next month on Japan's first privately funded offshore wind farm

(Kitanihon Broadcasting, Feb. 14)

- In March, wind power developer Venti Japan and Shimizu Corp will start construction of an offshore wind power plant in Nyuzen Town, Toyama Prefecture. This is reportedly Japan's first wind plant that's completely funded by private capital. Total cost is about ¥6 billion.
- Three 152-meter wind turbines, with output of 3 MW, will be installed.
- Production of onshore equipment began in October 2022.
- Completion is planned for August 2023; operation starts in September 2023.

Itochu invests in 160 MW Texas wind farm, to supply electricity to Facebook parent Meta

(Nikkan Kogyo Shimbun, Feb. 16)

- Itochu invested in a 160 MW wind farm being built in Texas by General Electric.
- The facility, which will be completed by year's end, will supply electricity to Meta, the parent company of Facebook.
- **SIDE DEVELOPMENT:**

[Itochu to supply Amazon with renewably-generated electricity](#)

(Nikkei, Feb. 14)

- Itochu will build 700 solar farms across Japan to supply Amazon.com with power.
- The project will require investment of over ¥10 billion by 2024.
- Electricity generated will be sold under a 20-year power purchasing agreement (PPA).

Renova to supply Tokyo Gas with green electricity and carbon credits

(Denki Shimbun, Feb. 16)

- Renova began selling renewably-generated electricity and carbon credits to Tokyo Gas under a PPA. While the electricity is generated by four solar farms in Mie with a combined output of less than 1 MW, Renova plans to increase total power sold to 1.3 MW by year's end.
- Tokyo Gas will on-sell the electricity and carbon credits to RE100 ("renewable energy 100") corporate clients.

JGC and MPS to build 10 GW of offshore floating wind power by 2030, using PelaFlex tech

(New Energy Business News, Feb. 14)

- Engineering major JGC Corp. will work with the British offshore floating wind technology company, Marine Power Systems (MPS), to install 10 GW of offshore wind power by 2030.
- These floating wind turbines will be utilized in deep waters. MPS' module type PelaFlex enables low-cost construction. JGC has experience in floating LNG plants.
- *CONTEXT: Tokyo plans for offshore wind to be a major renewable energy source by 2050. Floating wind farms far from shore, where winds tend to be stronger, are attractive because of Japan's densely populated coastal areas and sudden deep water, but they are more challenging to develop and the technology is still not at a commercial stage. MPS claims that PelaFlex offers a higher degree of system stability and zero tilt, reducing wear and tear on turbines and maximizing energy yields.*

Nippon Yusen will provide Siemens Gamesa with crew transfer service for offshore wind farm

(Denki Shimbun, Feb. 17)

- Nippon Yusen Kabushiki Kaisha (NYK) inked a contract with Siemens Gamesa for a crew transport vessel (CTV) for an offshore wind farm at Ishikari Bay New Port, Hokkaido that's scheduled to begin commercial operation in December 2023. This will be the first CTV operation inside Japan by NYK.
- The Ishikari Bay New Port Offshore Wind Farm will have 14 wind turbines made by Siemens Gamesa and cover about 500 ha.
- When operational, the CTV will transport maintenance workers between the offshore work site facilities and the onshore base.
- **TAKEAWAY:** The market for CTVs is expected to grow to over 100 vessels in about 20 years, taking off in 2026 when the construction of offshore wind power generation facilities in Japan is expected to begin in earnest.



(Source : Nippon Yusen)

TEPCO clips the wings of its power retailing unit as TCS gives up independent trading

(Diamond, Feb. 14)

- TEPCO Customer Service Service (TCS), a unit of TEPCO Energy Partners that was retailing electricity outside of the company's traditional Tokyo area, will be folded more closely into the parent company.
- TCS sought to expand TEPCO's business to sales of extra high voltage and high voltage electricity for corporate clients in the Kansai area. However, due to a sharp hike in fuel price, the unit's revenues are down.
- TCS will now be tasked with helping to retail the electricity produced by TEPCO Energy Partners and will no longer be in a position to purchase and sell electricity on its own. TCS quietly withdrew its JEPX membership in October 2022.
- **CONTEXT:** *TCS was once a major retailer in the Kansai region.*
- **TAKEAWAY:** *TCS became infamous for its role in the sudden surge of power prices in January 2021. The TEPCO unit has struggled to recover since then and faltered to create a business from pure retail of electricity (i.e., without also owning generation capacity). In the broader sense, this probably marks the end of TEPCO's ambitions to break into the Kansai region in any meaningful way.*

A 28 MW biomass power plant in Tottori to start operation in May 2026

(New Energy Business News, Feb. 17)

- Sakaiminato Energy Power – a consortium of Inabata & Co., NX Sakaiminato Kairiku, Sanko, Chubu Electric, Chubu Plant Service, and New Circle Energy – will fund a 28 MW wooden biomass power plant at Sakai Minato City in Tottori Pref.
- Construction starts in November 2023. Operation starts in May 2026. The plant will generate 200 GWh per year and power 64,000 houses in the region.

Influx plans 600 MW offshore wind project in Saga area

(New Energy Business News, Feb. 17)

- The MoE submitted comments on the environmental assessment for Karatsu offshore wind farm, asking its owner, Influx Inc., to minimize impact on residents and the area.
- 64 wind turbines with a total 600 MW of capacity will be installed off the coast of Karatsu City, Saga Pref.
- Renova Inc and Kansai Electric also plan offshore wind projects in this area.

Sompo Japan launches new service to calculation offshore wind insurance premiums

(Nikkei, Feb. 16)

- Insurer Sompo Japan will launch a new service to calculate insurance premiums for companies participating in public offshore wind power tenders.
- The company will offer multiple premiums in line with the risks associated with the sea area and equipment used, and will analyze the impact on the company's finances.
- **CONTEXT:** *This is the first insurance plan of its kind in Japan. It is meant to reduce the burden of preparing materials to be submitted at the time of the bidding.*

KEPCO to use drones for offshore wind turbines inspections

(Nikkei, Feb. 15)

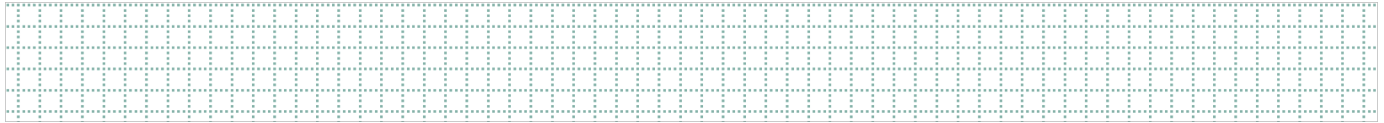
- Kansai Electric (KEPCO) will start inspections of offshore wind power generation facilities using drones in 2024. 5G antennas are installed at offshore wind farms and optical cables are laid between them and power generation facilities. Images taken by drones are sent to a monitoring center onshore for analysis.
- The conventional method for inspecting wind power generation equipment is for workers to climb up to the wind turbines using ropes and visually check for damage. This requires two days to check one turbine. With a drone, eight turbines can be inspected in the same time.

ENEOS switches Yatsushiro solar project to FIP

(Company Statement, Feb. 16)

- ENEOS will switch its 0.9 MW Yatsushiro solar project in Kumamoto Prefecture to the FIP tariff system, which places a premium on market pricing.
- The project entered commercial operation in December 2021.

NEWS: OIL, GAS & MINING



Petroleum Association says Sakhalin-2 is crucial for energy security

(Japan Maritime Daily, Feb. 19)

- Japan Petroleum Association head Kito Shun'ichi said that while he originally worried that a G7 decision to cap prices on Russian petroleum products would throw the market into chaos, the cap has not had a significant effect so far.
- On the question of whether Japanese oil companies should accept crude oil byproducts from Russia's Sakhalin-2 gas project, Kito said that access to LNG from Sakhalin-2 was very important for Japan's energy security, and it was vital that Japan also received crude oil byproducts as part of the arrangement.
- Kito said the Association would naturally cooperate with the government's plans to accept crude from Sakhalin-2.

Japan's LNG stocks rise to 2.56 mln tons, up from 2.42 mln tons last week

(Government data, Feb. 16)

- LNG stocks of 10 power grids stood at 2.56 million tons as of Feb 13, up from 2.42 million tons a week earlier.
- The end-February stocks last year were 1.69 million tons. The five-year average for this time of year is 1.98 million tons.

Jan crude oil imports up 6.4%, thermal coal up 1.3% and LNG up 0.5%

(Government data, Feb. 15)

- Japan imported 13.8 million kiloliters of crude oil in January, up 6.4% YoY.
- Thermal coal imports were 10.7 million tons, up 1.3%; LNG imports were 6.8 million tons, up 0.5%; and LPG imports 1.1 million tons, up 15.6%.

INPEX wins bid for two exploration licenses in Malaysia

(Company Statement, Feb. 15)

- INPEX won the bid for two offshore hydrocarbon exploration licenses off the coast of Sarawak in a public tender conducted by Malaysian state oil company Petronas.
- INPEX acquired a 52.5% interest in the deepwater block (Block 4E) and a 40% interest in the shallow water block (SK418).
- CONTEXT: *This acquisition follows the award of two offshore exploration concessions in Sabah (Malaysia) in 2012.*

- SIDE DEVELOPMENT:

- [INPEX signs CCS collaboration agreement with Malaysia's PETROS](#)

- (Company Statement, Feb. 15)

- INPEX signed a cooperation agreement with Petroleum Sarawak Berhad (PETROS) to develop a CCS (carbon capture and storage) project. The aim is to introduce CCS targeting large-scale emitters in Sarawak (Malaysia).
 - A feasibility study will be completed by February next year.

ANALYSIS

BY MAYUMI WATANABE

Japan and China Seek to Forge Hydrogen Ties that Defy Geopolitics

Hydrogen-fueled power generation is an integral part of both Japan's and China's strategy for the clean energy transition through 2050. Japan is betting on hydrogen as a reliable and cost-effective replacement of fossil energy that's less exposed to geopolitical risks. China needs decarbonization solutions that can rapidly be built and scaled up to meet the voracious energy needs of a country with 1.4 billion people.

Despite rising geopolitical tensions, China and Japan are also trying to manage and coordinate their efforts for the development of hydrogen energy. The latest efforts in this regard took place at the 16th Japan-China Energy Conservation and Environment Forum, held earlier this month.

The annual forum had its hiccups. It was delayed by two months and finally organized on a Japan national holiday. Keynote speeches by senior government and business leaders contained remarks expressing discontent on certain policy issues, such as semiconductors. In contrast, the mood in the hydrogen session was positive.

The hydrogen sector in the two countries seems keen to collaborate and resolve technical and cost challenges. As *Japan NRG* joined the forum, we couldn't help but feel that these resolutions could in turn beget fresh policy conflicts.

Similar goals, different paths

Japan's greenhouse gas emissions were 1.08 billion tons of CO₂ equivalent in 2021. Emissions from power plants and oil refineries accounted for 40%. The country's 2030 goal is to cut the total emissions down to 0.76 billion tons by 2030, and achieve carbon neutrality by 2050.

China's greenhouse gas emissions were 12.5 billion tons of CO₂ equivalent in 2021, or 32.9% of the world total. By 2030 Beijing plans to cut emissions per unit of GDP by more than 65% from 2005 levels, and reach carbon neutrality by 2060.

Both China and Japan are supporting breakthrough hydrogen energy solutions that will power their currently dirty steel, chemical and other manufacturing industries. Modernizing energy supply to these power-intensive sectors is both crucial and challenging.

During the Feb 11 forum, Tokyo and Beijing signed an agreement to deepen cooperation on carbon neutrality initiatives, notably hydrogen, between Japan's NEDO and AIST, and China's National Development Reform Commission. These agreements came just three months after Prime Minister Kishida and China's President Xi Jinping agreed to collaborate on carbon neutrality efforts, which was reconfirmed when the foreign ministers of the two countries met on Feb 2.

The two Asia Pacific neighbors share similar goals but stride different paths. Japan was the original pioneer in hydrogen power. In 2017, Tokyo announced the world's first national hydrogen strategy, and by 2021 its Basic Energy Plan officially stated that hydrogen will account for up to 1% of Japan's energy mix by 2030.

While China at first lagged behind, it's now racing forward at full speed. With its vast existing renewable capacity, as well as ample land, China can more readily build large hydrogen production facilities. In March 2022, China published the Medium and Long-Term Hydrogen Energy Industry Development Plan, which calls for hydrogen demand to reach 35 million tons by 2030.

Later this year, Sinopec Group, the world's largest oil refining, gas and petrochemical conglomerate, will launch a 20,000 tons/ year solar-powered hydrogen electrolysis plant, and the company is building a wind-powered 30,000 tons/ year hydrogen plant. Sinopec also plans offshore floating hydrogen production facilities; ocean water and wind power will help generate hydrogen.

Given its vast size, China is also keen to develop on-site hydrogen consumption. Li Shuai, an NDRC official, said the number of hydrogen projects has climbed to 190 and the use of fuel-cell vehicles (FCVs) is spreading fast at mines and ports.

It's a very different situation in Japan. Since the cost of domestically-produced renewables is very high, Japan will have to import hydrogen. Therefore, Tokyo plans to focus on the storage, shipping and usage of hydrogen. Toward that goal, a pilot project for transporting liquefied hydrogen from Australia was undertaken last year.

Building on that experience, later this year there'll be a pilot for shipping hydrogen converted into methylcyclohexane (MCH) from Australia. Panasonic, Denso and other companies have developed systems that integrate hydrogen with renewable power systems, to produce energy for their own corporate consumption.

Japan is also speeding up efforts to codify hydrogen safety rules and standards. The Hydrogen Center, a new unit of The High-Pressure Gas Safety Institute of Japan (KHK), was established last month. China endorsed these safety standards because any accident at hydrogen supply outlets could slow its spread elsewhere.

Hino Yukari, ANRE's new energy systems director, recounted Japan's plans for clusters of hydrogen consumers in the vicinity of major ports. Hydrogen bases will be set up at three large and five middle-sized ports, which will receive hydrogen imports, and then supply the molecules to nearby manufacturing plants.

Ms Hino believes that the two neighbors can complement each other in the development of hydrogen power. China has the largest fuel-cell vehicle market and the largest hydrogen production capacity. Meanwhile, Japan has the largest number of patents and diverse applications, ranging from hydrogen usage not limited to big power plants and mobility, but also at smaller plants for various industries.

What can Japan gain from China? Tokyo has expectations regarding China's ability to combat costs. China deals with large supply and demand on a day-to-day basis, and has always excelled in cost reductions. Its success in building up a large EV market in several years, as well as beating battery raw material and cost challenges, are raising hopes that they may achieve revolutionary cost cuts with hydrogen.

Price gaps between hydrogen and fossil fuels need to narrow, which is a challenge that all governments recognize. Closer Japan-China hydrogen ties have the potential to spur cost reduction breakthroughs. If this can be achieved, then it will cement their

dominance in the hydrogen industry, as well as benefit the entire world in managing a successful energy transition.

Comparing Japan and China's hydrogen developments

	Production	Storage/transport	Applications
Japan	Will rely on imports	Successful ship transport from Australia	Focus on on-site production/consumption; integration with other energy systems
China	Likely to grab sizable global share	Pipelines?	World leader of FC trucks and mobility applications

Political tensions remain an obstacle

Energy security is paramount for energy-starved Japan. But any possible dependency on China for hydrogen might defeat this goal. Japan recently enacted the Economic Security Act to rebuild supply chains of security-sensitive products such as LNG, storage batteries, rare earths among others.

While the two governments are boosting investments in the hydrogen sector, the vexing reality is that energy cannot stay isolated from geopolitical issues. And as events of the past year have made clear, geopolitics and energy go hand-in-hand.

During the forum, a senior Chinese NDRC official, He Lifeng, criticized Japan's semiconductor trade policy for lack of transparency. Japan's METI minister responded by saying that China needs to set strong rules on intellectual property protection and market competition. "Japan's NEDO and China's NDRC signed an agreement to promote hydrogen...but China needs to further improve IP and competition frameworks," said METI minister Nishimura.

The fragile political situation between the countries is unfortunately straining hydrogen collaboration. Despite China's geographical proximity to Japan and its potential as a major hydrogen supply base, Japan's mainstream hydrogen supply chains are currently focused on Australia and the Middle East. This is in line with the Biden administration's policy of 'friendshoring' – establishing supply chains with like-minded allies, and avoiding such ties with countries deemed 'unfriendly'.

Japan has hydrogen alliances with the U.S., the EU, Australia, India and other countries, including development of technologies and making sure that regulatory rules in the different countries harmonize with the others.

One Japanese company official who signed carbon neutrality projects with several Chinese partners said political uncertainties are putting the brakes on important projects, and inhibit the growth of business with China.

While 17 bilateral projects were signed at the forum, private sector participation was weak; just seven were with Japanese companies, such as MUFG Bank, Hitachi, Mitsubishi Electric, Ooparts, and Ituba Kyoso.

As geopolitical instability grows in the world, it remains to be seen whether the two countries will move closer or drift apart on energy issues. In that context, the recent NEDO/AIST-NDRC collaboration framework will be an interesting litmus test that will gauge the chances of successful Japanese-Chinese cooperation on energy.

International frameworks involving hydrogen in which Japan participates

EC/DoE/METI joint statement	Technical cooperation, standardization, communication	Japan, U.S., EU
Japan-EU Memorandum of Cooperation	To harmonize regulations and subsidies; standardization and hydrogen trade rules	Japan, EU
International Partnership for Hydrogen and Fuel Cell Economy	To accelerate the development of FCH technologies.	Japan, EU, India, UAE, U.S., UK, Australia, Canada, Chile, South Korea, Costa Rica, Brazil, South Africa, Switzerland
QUAD nations agreement	To promote ammonia and hydrogen technologies	Japan, U.S., Australia, India

ANALYSIS

BY MASUTOMO TAKEHIRO

Forging consensus:

The influence of Parliamentary Groups on Energy Policies

In Japan, energy-related parliamentary groups often consist solely of ruling LDP members, and although they don't directly and immediately impact the government's plans, their influence and advocacy often have major implications for the long-term direction of policy.

Similar to caucuses in the U.S. Congress, specialized groups in the Diet serve as channels to connect with each industry or seek to realize new policies. The members don't receive any status or benefit by joining one. But the Atomic Energy Basic Law enacted in 1955, (which paved the way for the use of nuclear power in Japan), is a prime example of how parliamentary groups can bring about new legislation.

Such groups in the Diet participate in the preparatory stage each time the government must update its Basic Energy Plan, which is reviewed every three years. Major groups in the Diet jockeyed to make the wording of that document more favorable to the interests of their constituents, though it has to accord with the Prime Minister's overall energy policy direction.

For instance, during the Suga administration, parliamentary groups active in renewable energy became more vocal than previously. Meanwhile, under Prime Minister Kishida those groups which focus on nuclear power are more confident in making bolder demands. This is in large part due to the urgency of the energy crisis since the drastic spike in energy prices following the start of full-fledged war in Ukraine in February 2022.

More recently, heavyweight politicians have helped launch parliamentary groups that promote new energy technologies such as biofuels and batteries. *Japan NRG* takes a closer look at the main groups in the Diet that are major players behind the scenes in the formulation of state energy policy.



Hosoda Hiroyuki

Photo: The Asahi Shimbun

Nuclear energy

The *Parliamentary Group for Power Stability*, which is led by Speaker of the House of Representatives Hosoda Hiroyuki, has made a series of proposals to the government for the expansion of nuclear power, and, to a lesser degree, that of renewable energy sources. As a moderate supporter of nuclear power, the group has nevertheless stressed its importance, and called for the acceleration of NPP restarts in the aftermath of the Fukushima disaster.

In the past several years, instead of the conventional thinking of "reducing as much as possible", the group further endorsed the Basic Energy Plan's pledge to "utilize nuclear energy to the maximum degree". This group helped to convince the government to "start a discussion" to build new NPPs or replace existing plants. Their program became more pertinent when energy prices soared following the start of the Ukraine war.



Takaichi Sanae

Photo: The Asahi Shimbun

As a more progressive supporter of nuclear energy, the *Non-Partisan Parliamentary Group for Underground Nuclear Power Plants* surfaced right after the Fukushima crisis to showcase alternative technology in the nuclear sector. The group's current advisor is Takaichi Sanae, who rivaled PM Kishida in the presidential election for the LDP in 2021.

Next, there's the *Parliamentary Group for Replacement*, which also advocates for nuclear power. The group was founded in 2021 ahead of the Sixth Energy Strategic Plan by initiative of the late ex-PM Abe, former METI Minister Amari, and Hosoda, with Inada Tomomi as a top leader.

The group was the first in the Diet to openly advocate the building of new NPPs. Last summer, their voice was heard by PM Kishida when he officially welcomed the idea to develop and build next-generation innovative reactors that incorporate new safety measures.

Currently, this group is pressing the government for a Cabinet decision on replacement, overriding the current Basic Energy Plan. They believe that replacement is best achieved as a combination of decommissioning and new construction by each utility.

One example of the Replacement Group's work is the proposed construction of a next-generation reactor by Chugoku Electric in Yamaguchi Prefecture. Planning for this Kaminoseki NPP project began decades ago but was put on hold after the Fukushima accident. The utility is keen to restart the project, but since it would be an entirely new site for an NPP, it has found a clever workaround. Chugoku Electric is due to decommission Unit 1 at its Shimane NPP site, 250 kilometers further north. It wants the construction at Kaminoseki to count as a "replacement" for losing a reactor at the Shimane NPP location.



Shinayama Masahiko

Photo: The Asahi Shimbun

Renewable energy

Shibayama Masahiko leads the *Parliamentary Group for Renewable Energy*. Prior to the latest revision (the Sixth) of the Basic Energy Plan, he insisted that renewable energy should be mentioned as a "top priority", while raising to 45% or above the ratio of renewable energy to total energy output.

Recently, the group has been focusing on offshore wind power, requesting that the project planning process be accelerated and that the selection process be more transparent.

The *Parliamentary Group for Hydrogen Society Promotion* is headed by former METI Minister Obuchi Yuko. The group sees hydrogen as essential to a zero-carbon future. The hydrogen association also calls on the government to expand budgetary measures in order to promote the use of FCVs, FC buses, and FC forklifts and hydrogenize traditional transport facilities such as airplanes, ships, and trains.

Obuchi recently urged METI to work on the enactment of a hydrogen society promotion law. "Japan was the most advanced country in the world (in hydrogen), but competitors are catching up", she says.



Obuchi Yuko

Photo: The Asahi Shimbun



Amari Akira

Photo: The Asahi Shimbun

Storage batteries

Other than these more established energy groups, there are two new groups that have received wide attention. Launched by Abe and Amari in 2021, the *Parliamentary Group for Storage Battery* not surprisingly calls for promoting battery innovations. The group regards storage batteries as an “extremely important strategic field that will determine the fate of the country” and is studying measures to improve international competitiveness.

Specifically, the group requests the government to take action such as promoting virtual power plants (VPP) that utilize EVs and stationary storage batteries, as well as establishing large-scale production. It also proposes the creation of a ¥3 trillion fund for securing important mineral resources that are crucial in battery production.

In October 2022, the launch of the *Parliamentary Group for Biofuel Promotion* came under the media spotlight. This group, initiated by Amari, included both PM Kishida and his predecessor Suga, the former’s political rival, as members.



Suga Yoshihide

Photo: The Asahi Shimbun

They discuss the use of domestically produced biofuels and synthetic fuels in the aviation and automobile sectors. The group also calls on the government to support building production facilities to promote the use of SAF, and to exempt SAF-related raw materials from import tariffs.

All in all, parliamentary groups play a key role in conveying the voice of the respective industry to the national government. Not surprisingly, they seek opportunities to shape the direction of policy in their favor, typically when the Basic Energy Plan comes under review.

Their agendas and goals deserve even closer attention when the government is faced with a significant energy crisis that might lead to a drastic change in course, such as the Fukushima disaster or the Ukraine war. Moreover, the entangled web of interpersonal connections among key politicians reveals how energy politics is alive and well behind the scenes.

Name of Parliamentary Group	Year of Establishment	Key Members	Purpose
Power Stability	2013	Hosoda	Acceleration of nuclear reactor restarts
Underground Nuclear Power Plants	2011	Takaichi	Presentation of alternative nuclear technologies in the aftermath of Fukushima disaster
Replacement Nuclear Facilities	2021	Abe, Amari, Hosoda, Inada	Promotion of the building of new nuclear plants
Renewable Energy	2013	Shibayama	Expansion of renewable energy, rule-making in the offshore wind bid process
Hydrogen Society Promotion	2013	Obuchi	Expansion of hydrogen use in various transport facilities
Storage Batteries	2021	Abe, Amari	Enhancement of Japan’s competitiveness in the battery sector
Biofuels Promotion	2022	Amari, Kishida, Suga	Promotion of domestically produced SAF

Source: Media reports

GLOBAL VIEW

BY JOHN VAROLI

Below are some of last week's most important international energy developments monitored by the Japan NRG team because of their potential to impact energy supply and demand, as well as prices. We see the following as relevant to Japanese and international energy investors.

Australia/ Oil and gas

Woodside Energy will face a nearly \$4.4 billion expense this year after reviewing its methodology to calculate depreciation of oil and gas properties; for example, it took into account the scale of its portfolio since acquiring BHP Group's petroleum assets.

Belgium/ Energy efficiency

Ineos secured €3.5 billion in financing for a new energy-efficient petrochemical facility in Belgium. The company, controlled by the UK's richest man Jim Ratcliffe, plans to develop its "Project ONE" cracker in Antwerp.

China/ LNG

China National Petroleum Corp will soon ink a deal to buy LNG from QatarEnergy over nearly 30 years. This will be the second such deal between Qatar and China, the world's No. 2 LNG buyer.

Coal/ Record profits

Commodity trader Glencore's profits hit a record \$34 billion, in large part driven by soaring coal demand. Also, hedge funds such as Third Point, Makuria Investment Management and Odey Asset Management reaped record profits from coal's renaissance. The price of thermal coal has more than tripled in less than two years.

EU/ Cars

The European Parliament approved a law that in essence will ban the sale of new petrol and diesel cars from 2035, aiming to speed up the switch to EVs. By 2035, carmakers must achieve a 100% cut in CO2 emissions from new cars sold in the EU.

France/ Nuclear power

In 2022, nuclear power giant EDF had a record net loss of €17.9 billion, as the company faced an unprecedented number of outages at its reactors that led output to fall to a 34-year low. In the end, EDF had to buy electricity on the market to supply customers.

Germany/ Hydrogen

Germany and Belgium held their first energy summit, and agreed to develop hydrogen infrastructure, with the goal of connecting theirs by 2028. The two will also increase the flow of LNG from Belgium to Germany, and to cooperate more on energy in the North Sea.

Indonesia/ Palm oil

Indonesia and Malaysia, the world's biggest palm oil producers, will send envoys to the EU to discuss its new deforestation law that requires companies to show when and where their palm oil was produced. Also, it must show it wasn't grown on land deforested after 2020.

Israel/ Oil

The country's first-ever stream of oil exports has launched from Energean's Karish development in the eastern Mediterranean. Energean, which is listed in London, has grown rapidly since founded by Greek banker Mathios Rigas in 2007.

Oil and gas/ Record profits

In 2022, the global oil and gas industry's total annual profits soared to about \$4 trillion, almost triple the usual average of \$1.5 trillion, said the International Energy Agency (IEA).

U.S./ Batteries

Ford will licence technology from Chinese battery group CATL for use in a \$3.5 billion factory to be built in Michigan as it accelerates a push into EVs. The deal comes as new U.S. tax credits for EVs take effect under the Inflation Reduction Act.

2023 EVENTS CALENDAR

A selection of domestic and international events we believe will have an impact on Japanese energy

January	<ul style="list-style-type: none"> ○ METI Minister Yasutoshi Nishimura met with US DOE Secretary Jennifer M. Granholm in Washington D.C ○ PM Kishida met with IEA Executive Director Fatih Birol in Paris ○ Kishida-Biden summit meeting (January 13) ○ Last day to solicit public comments about GX (January 22) ○ Indonesia takes over as chair of the ASEAN for 2023 ○ JCCP (Japan Cooperation Center for Petroleum and Sustainable Energy) Symposium (January 26) ○ Japan's parliament convenes (late January) ○ Lunar New Year (January 21-27) ○ Ammonia as Fuel World Summit (January 30-February 2) ○ Toyota group launches trial runs of FC truck transport system ○ IMO carbon regulation enters into force for all ships ○ China expected to announce the volume of rare earth production permitted by the government for the first months of 2023
February	<ul style="list-style-type: none"> ○ Japan Energy Summit (February 28-March 2) ○ FIT solar auction (February 20-March 3) ○ IEA Global Methane Tracker 2023 release (TBD) ○ GX roadmap to be approved in a Cabinet meeting (February)
March	<ul style="list-style-type: none"> ○ REvision 2023 Symposium by Renewable Energy Institute (March 8) ○ Japan Atomic Industrial Forum Seminar (March 13) ○ World Smart Energy Week (March 15-17) ○ Small solar, wind operators subject to tighter technical rules due to Electricity Business Act amendments (March 20) ○ FIT on-shore wind auction (March 6-17) ○ IPCC to release sixth assessment report ○ End of 2022/2023 Japanese fiscal year ○ China hosts National People's Congress to appoint top government officials
April	<ul style="list-style-type: none"> ○ Enforcement of Acts to Promote Non-Fossil Energy and Sophisticated Supply Structure enters Phase II (April 1) ○ Amendments to Energy Conservation Act take effect (April 1) ○ Process for non-firm renewable connection to local transmission lines starts (April 1) ○ Rare earth mining will require state licensing (April 1) ○ Canadian Sigma Lithium to start commercial production at its Brazilian mine, one of the five largest lithium projects in the world ○ GX League becomes fully operational ○ Eurus, Cosmo and Looop to bring online Japan's largest onshore wind farm ○ Japan holds local elections for governors, mayors and legislatures

May	<ul style="list-style-type: none"> ○ May Golden Week holidays (May 3-5) ○ General election in Thailand (May 7) ○ World Hydrogen Summit (May 9-11) ○ G7 Hiroshima Summit (May 19-21)
June	<ul style="list-style-type: none"> ○ 35th OPEC and non-OPEC ministerial meeting (June 4) ○ IEA annual global conference on energy efficiency (June 6-8) ○ General and presidential election in Turkey (June 18) ○ Lithium Supply and Battery Raw Materials 2023 (June 20-22) ○ Happo Noshiro, Murakami-Tainai, Oga-Katagami-Akita and Saikai-Eshima wind project auctions close (June 30) ○ JERA, Shikoku Electric start running new coal power plants
July	<ul style="list-style-type: none"> ○ LNG 2023 World Conference (July 10-14)
August	<ul style="list-style-type: none"> ○ China expected to announce the volume quota allowances of rare earth production for the balance of 2023
September	<ul style="list-style-type: none"> ○ G20 New Delhi Summit (September 9-10) ○ 2023 UN SDG Summit (September 19-20)
October	<ul style="list-style-type: none"> ○ IEA World Energy Outlook 2023 Release ○ BP Energy Outlook 2023 Release ○ Connecting Green Hydrogen Japan 2023 ○ Japan Wind Energy 2023 summit
November	<ul style="list-style-type: none"> ○ COP 28 (November 30-December 12) ○ U.S. hosts the APEC summit in San Francisco
December	<ul style="list-style-type: none"> ○ ASEAN-Japan summit to mark 50 years of cooperation ○ Last market trading day (December 30)

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