EU-Japan Centre for Industrial Cooperation
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Legislation and Policy News

Ministry of the Environment Collaborates with World Bank to Build Carbon Market

On January 31, the Ministry of the Environment announced that it would start collaborating with the World Bank on expanding the Joint Crediting Mechanism (JCM) and implementing Article 6 of the Paris Agreement. The following five listed is the main initiatives to be implemented. 1) Cooperation in the Paris Agreement Article 6 Implementation Partnership (A6IP), 2) Initiatives through the World Bank Market Mechanism Implementation Fund (PMI), 3) Collaboration through international events, 4) Carbon Pricing Leadership Coalition (CPLC), 5) Innovative climate measures. Among them, the World Bank Market Mechanism Implementation Fund (PMI) is supporting the design and introduction of market mechanisms (emissions trading schemes, carbon taxes, credit schemes including Article 6 of the Paris Agreement) as measures against global warming in emerging and developing countries. In the efforts through PMI, Japan will make use of its experience in the JCM, which it has been involved in, to provide human resources and expand the implementation of Article 6. The Japanese government will quantitatively evaluate Japan's contribution to the reduction and absorption of greenhouse gas emissions achieved through the transfer of excellent decarbonization technologies and the implementation of countermeasures to developing countries.

MOE website:
https://www.env.go.jp/content/000107848.pdf

METI holds "Nuclear Supply Chain Symposium"

The Agency for Natural Resources and Energy of the Ministry of Economy, Trade and Industry (METI) announced on February 3 that it will hold a symposium on March 6 to discuss measures to maintain and strengthen domestic and international nuclear power supply chains by domestic nuclear power companies. This symposium will be held in collaboration with relevant

organizations such as the regional Bureaus of METI and the Japan Atomic Industry Association, as an opportunity to launch the Nuclear Supply Chain Platform established by METI as a framework to support nuclear-related companies. In addition to the announcement of the establishment of the platform, it will discuss measures to maintain and strengthen the nuclear power supply chain, such as overseas expansion by Japanese companies, business succession, and support for human resource development. METI also intends to jointly build a nuclear power supply chain with friendly countries by inviting overseas nuclear power companies and holding an exhibition to introduce the technologies and achievements of domestic nuclear power suppliers.

METI website:
https://www.meti.go.jp/press/2022/02/20230203001/20230203001.html

Investing JP¥ 10 trillion to nurture start-up companies, government's 5-year start-up plan

In November last year, the Japanese government presented a "5-year start-up plan" aimed at nurturing start-up companies. And on February 6, the English version of the draft was posted on the Cabinet Office website. According to the draft, the proposal sets a goal of increasing domestic investment from the current JP¥ 800 billion per year to JP¥ 10 trillion in five years from now, in FY2027. In the future, the number of start-up companies will be increased to 100,000, and the number of unlisted “unicorns” with a corporate value of $1 billion or more will be increased to 100, each more than 10 times the current level. In order to achieve these goals, the plan has three pillars: (1) Building human resources and networks for creating startups, (2) Strengthening funding for startups and diversifying exit strategies, and (3) Promoting open innovation. And 49 specific initiatives have been set up in the three pillars. In terms of taxation, the government will extend the period of preferential treatment for stock options (the right to purchase its own shares), which allows employees of start-up companies to benefit from rising stock prices. It will also provide incentives for large companies to acquire existing issued shares so that new companies can grow through mergers and acquisitions (M&A) with large companies. It also helps entrepreneurs sell their shares and reinvest in other start-ups. Regarding preferential tax treatment, it was reflected in the "FY2023

Tax Reform Outline" announced in December last year, and preparations are being made for its actual institutionalization.

Startup Development Five-year Plan on the cabinet secretariate website:
https://www.cas.go.jp/jp/seisaku/atarashii_sihonsyugi/pdf/sdfyplan2022en.pdf

Roadmap for the Startup Development Five-Year Plan on the cabinet secretariate website:
https://www.cas.go.jp/jp/seisaku/atarashii_sihonsyugi/pdf/sdfyplan_roadmap2022en.pdf

Basic Policy for the Realization of GX" was approved by the Cabinet

In order to realize a decarbonized society and provide a stable supply of energy, the government has decided the basic policy at the cabinet meeting on Feb. 10, such as maximizing the use of nuclear power generation and introducing carbon pricing, in which companies bear the costs according to the amount of carbon dioxide emitted. First, in order to achieve both a stable supply of energy and the realization of a decarbonized society, it has set out a policy of maximizing the use of nuclear power plants while giving top priority to safety. In addition to promoting the development and construction of next-generation nuclear reactors on the premises of decommissioned nuclear power plants, the operating period of nuclear power plants, which is set to be a maximum of 60 years, is trying to be able to drive over the upper limit. On the other hand, toward the introduction of carbon pricing, the government will start full-scale operation of emissions trading, which will allow companies to trade the amount of emissions that they have reduced in the market, from FY2026. Companies and oil wholesalers will be required to pay a "levy" according to the amount of emissions. Furthermore, in order to support private sector investment toward decarbonization, the government will issue new government bonds called "GX Economic Transition Bonds" over a period of 10 years starting next fiscal year of around JP¥ 20 trillion. The government is aiming to enact related bills during the current ordinary session of the Diet.

METI website (in Japanese):
https://www.meti.go.jp/press/2022/02/20230210002/20230210002.html

Relaxation of masks, from March 13, individual judgment regardless of whether indoors or outdoors

On February 10, the government decided to apply new guidelines on wearing masks as a countermeasure against the COVID-19 from March 13, leaving it to individual judgment regardless of whether it is indoors or outdoors. There is no legal basis for requiring people to wear masks, but the government recommended wearing them to prevent the spread of infection. On the other hand, the Infectious Diseases Control Law stipulates that it is the public's responsibility to take the necessary precautions to prevent infectious diseases, even if it does not specifically state masks. The new guidelines will eliminate the need for masks on shinkansen trains and express buses where everyone can be seated, while recommending that they continue to be worn on crowded commuter trains and buses. It is also recommended when visiting medical institutions and facilities for the elderly. New rules have also been established for wearing at school, and will apply from April 1. Students are not required to wear them in classes and other educational activities, and students can attend graduation ceremonies before that day without masks.

Cabinet secretariate website (in Japanese):
https://corona.go.jp/news/news_20230210_02.html

Ministry of Economy, Trade and Industry and Tokyo Stock Exchange establish SX brands

On February 10, the Ministry of Economy, Trade and Industry (METI) and the Tokyo Stock Exchange established a policy that they will designate companies that incorporate social sustainability issues and needs into their own growth and promote corporate value creation as Sustainability Transformation brands to list it on the securities market as a new SX brands.

Through the release of the SX brands, METI hopes to (1) encourage corporate management to change their mindset and expects management reform through dialogue and engagement with investors, and (2) inform investors in Japan and overseas of the direction of reform that Japanese companies are heading in, which will lead to a reevaluation of Japanese stocks as a whole and the formation of new expectations for Japanese stocks in the future.

The "SX brands Evaluation Committee," which is scheduled to be formed in the near future, will formulate detailed screening criteria for the SX brands, and then begin accepting applications for the "SX brands 2024" around July 2023, with the selection results to be announced in the spring of 2024.

METI website (in Japanese):
https://www.meti.go.jp/press/2022/02/20230210001/20230210001.html

METI holds DX Summit, official public-private event of G7 digital and technology ministerial meeting

In preparation for the G7 Gunma Takasaki Digital and Technology Ministerial Meeting (to be held on April 29 and 30), the Ministry of Economy, Trade and Industry (METI) and the World Economic Forum Center for the Fourth Industrial Revolution Japan jointly host the G7 Digital and Technology Ministerial Meeting official event, the public-private event "Digital Transformation Summit" on April 28.

Prior to the G7 Digital and Technology Ministerial Meeting, in addition to government officials, industry representatives, experts, and other multi-stakeholders gather and discuss at this summit on the premise of digital transformation (DX) and cyber-physical systems towards social change such as "Governance Issues and Responses in Promoting DX" and "DX for Realizing Green Transformation (GX) and Improving Well-being".

METI website (in Japanese):
https://www.meti.go.jp/press/2022/02/20230220001/20230216001.html

Centre for the Fourth Industrial Revolution website:
https://initiatives.weforum.org/c4ir/home

Government summarizes issues on financed emissions in promoting transition finance

On February 21, the Ministry of Economy, Trade and Industry, the Financial Services Agency, and the Ministry of the Environment announced that they had launched the "Sub-Working on Financed Emissions to Promote Transition Finance in the Public and Private Sectors" together with 10 global private

financial institutions and compiled an issue proposal paper. International financial alliances such as GFANZ, which major financial institutions support, have an ambitious goal of net zero emissions by financial institutions themselves, including financed emissions.

However, there is the issue that some financial institutions may refrain from investing in or lending to high-emission industries due to concerns about the possibility of a temporary increase in financed emissions. For this reason, the relevant ministries and agencies took the lead in organizing the importance of transition finance and issues related to financed emissions. METI intends to contribute to international rule-making by examining and discussing how to specifically calculate and disclose financed emissions in the future.

METI website (in Japanese):
https://www.meti.go.jp/press/2022/02/20230221002/20230221002.html

METI invests in overseas geothermal power generation

The Ministry of Economy, Trade and Industry (METI) will start investing in overseas geothermal power generation projects from FY2023. In Japan, most of the suitable land is within national and quasi-national parks, and development is not progressing. It will try to accumulate technology and know-how through international cooperation.

Funds will be provided to exploratory drilling companies participating in overseas exploration projects through the Japan Energy and Metals National Corporation (JOGMEC), an independent administrative agency. Potential candidates include Indonesia and New Zealand, where INPEX is considering expansion of existing geothermal power plants and new geological surveys.

Geothermal is a type of renewable energy. Unlike solar power and wind power, it can stably generate power without being affected by the weather. According to METI, Japan's related resources amount to 23 million kilowatts, equivalent to 23 nuclear power plants, the third largest in the world after the United States and Indonesia. However, at present, it is not fully utilized, and its power generation capacity is only 600,000 kilowatts, ranking 10th in the world. It accounts for only 0.3% of the total power generation in the country.

In the future, there are technical and regulatory issues to promote domestic spread. Regarding regulations, in 2021, the Ministry of the Environment deleted a notice stating that geothermal development in some areas of national and quasi-national parks would not be permitted in principle.

METI website (in Japanese)
https://www.meti.go.jp/main/yosangaisan/fy2023/pr/en/enecho_taka_02.pdf

International standard originating in Japan issued for control system to avoid car driving collision

In order to avoid collisions in emergency situations, vehicles equipped with a system that automatically steers or assists the driver in steering (collision avoidance lateral control system) are beginning to be introduced to the market. on this system, an international standard from Japan was issued. This control system, together with the collision mitigation braking system that has already been introduced, is also a very important technology that will serve as a foundation for the advancement of autonomous driving.

This standard was proposed by the Society of Automotive Engineers of Japan, a public interest incorporated association, with the aim of disseminating highly safe collision avoidance lateral control systems based on internationally unified functional requirements and performance evaluation methods. After discussing at ISO (International Organization for Standardization) / TC204 (ITS intelligent transportation system) / WG14 (driving control) where Japan serves as the international chair and it was published as an international standard on February 23, 2023.

The collision avoidance lateral direction control system is designed to 1) automatically avoid steering wheel operation in situations where there is a risk of collision, 2) when the driver becomes aware of the danger of a collision with an alarm and operates the steering wheel, the system then steers the vehicle. The international standard ISO 23375 issued this time can be supported by either system.

METI website (in Japanese):
https://www.meti.go.jp/press/2022/03/20230301002/20230301002.html

Tokyo Metropolitan Government decides on 5 startup support companies in the green field

On February 28, the Tokyo Metropolitan Government announced that it has selected five companies that will be eligible for the "Green Startup Support" project, which intensively supports startups in green fields, etc., which are expected to grow rapidly in the future, and boosts their growth. In the future, the selected companies will be supported by various members such as venture capitalists, institutional investors, and senior startups, with a view to expanding domestically and internationally.

The company names and business outlines of the five companies selected this time are as follows.

- Aeterlink: Development, manufacture and sale of microwave wireless power transfer (WPT: Wireless Power Transfer) equipment
- SENSYN ROBOTICS: Providing business solutions utilizing industrial drones, cameras, smart devices, etc.
- Tsubame BHB: R&D, sales, etc. of on-site ammonia supply system
- PJP Eye: Development of batteries using plant-derived carbon, etc.
- Helical Fusion: Design of nuclear fusion reactors, development and provision of elemental technologies, etc.

Aiming to make Tokyo the world's number one start-up city where new industries are born one after another, the Tokyo Metropolitan Government has established the "Startup Ecosystem Tokyo Consortium" in 2020 consisting of companies, economic organizations, universities, research institutes, venture capital, local governments, etc.

Tokyo Met. government website (in Japanese):
https://www.metro.tokyo.lg.jp/tosei/hodohappyo/press/2023/02/28/03.html

Survey and Business Data

Tokyo foreign exchange market trading share hits record low of 4.4%, Bank of Japan

On February 21, the Bank of Japan released a report on trading trends in the Tokyo foreign exchange market. As of April 2022, Tokyo's trading share of the global foreign exchange market was 4.4%, the lowest since the survey began in 1986.

Although the JP yen's depreciation and the dollar's appreciation progressed rapidly, and trading volume reached a record high, the presence of the Tokyo market in foreign exchange trading has not increased. As of 2010, it ranked third with 6.2%, following the UK (36.7%) and the US (17.9%). It was overtaken by Singapore in 2013 and Hong Kong in 2016, and remained in fifth place until 2022. In the Tokyo market, 40% of transactions are in the JP yen, which is the country's currency.

The JP yen's share of global forex trading has fallen to 8.3% from 11.6% 30 years ago, leading to a slump in Tokyo's market share. Even in JP yen trading, the share of the Tokyo market has declined, and trading in Singapore has increased. Singapore and Hong Kong have small transactions in their own currencies.

It is increasing its presence as a foreign exchange market by increasing transactions in emerging country currencies, mainly the renminbi. Financial institutions and investment-related businesses are concentrated in these countries, enabling efficient transactions.

Bank of Japan website (in Japanese):
https://www.boj.or.jp/research/wps_rev/rev_2023/rev23j03.htm

Number of births in 2022 falls below 800,000 for the first time

The Ministry of Health, Labor and Welfare announced on February 28 that the number of births in 2022 (preliminary figure) was 799,728, down 5.1% from the previous year. This is the first time since 1899, when comparable figures are available, that the number has fallen below 800,000. It is 11 years earlier than national estimates.

The number of births hit a record low for the seventh year in a row. The number of births in 2022 is 100,000 fewer than the 899,000 in 2019. Compared to 2.696

million in 1949, when the number of births was the highest, the number in 2022 was less than 30%. The main reason for the rapid decline in births is the decline in marriages due to the pandemic. The number of marriages, which exceeded 600,000 in 2019, fell to 537,000 in 2020, 514,000 in 2021, and remained at 519,823 in 2022. In Japan, the number of marriages tends to be directly linked to the number of subsequent births, and the impact was strong. The economic turmoil under the COVID has also become a factor in hesitation to get pregnant and give birth.

Population movements affect the growth potential of the Japanese economy and the sustainability of social security. According to the latest estimates released in 2017 by the National Institute of Population and Social Security Research, the number of births would fall below 800,000 in 2033 under the medium-fertility scenario, which is the basic scenario. In fact, it was 11 years ahead of schedule.

Ministry of Health, Labor and Welfare website In Japanese):
https://www.mhlw.go.jp/toukei/saikin/hw/jinkou/geppo/s2022/dl/202212.pdf

Company & Organization News

Honda supplies renewable power to manned lunar exploration facility
Honda Motor Co., Ltd. announced on January 19 that it has signed a research and development agreement with the Japan Aerospace Exploration Agency (JAXA) on power supply to the lunar exploration vehicle living space and system. This is a "recycling-type renewable energy system" that continuously produces oxygen, hydrogen, and electricity from solar energy and water. The recycling-type renewable energy system that Honda is aiming for is a combination of the company's unique "high-pressure water electrolysis system" and "fuel cell system." During the day, the electricity generated by solar power is used to electrolyze water with a high-pressure water electrolysis system to produce oxygen and hydrogen, and at night, oxygen and hydrogen are used to generate electricity to power living spaces. In November 2020, the company signed a joint research agreement with JAXA on a recycling-type renewable energy system, and has been conducting research for utilization on the moon. In 2002, it became the first company in the world to start leasing fuel cell vehicles. The company is also developing and installing a smart hydrogen

station using a high-pressure water electrolysis system, and aims to realize the same system by utilizing these technologies.

Honda website:
https://global.honda/topics/2023/c_2023-01_19eng.html?from=newsroom_headline_area

Nippon Steel, Mitsubishi Corporation and ExxonMobil to evaluate and establish CCS value chains in the Asia Pacific Region

On January 25, Nippon Steel, Mitsubishi Corporation and ExxonMobil announced that they signed a memorandum of understanding on joint studies for conducting CCS (CO2 capture and storage) overseas in Australia and other countries in the Asia-Pacific region and for building a chain which will store CO2 emitted in Japan overseas. In the future, the three companies will investigate the recovery of CO2 emitted from Nippon Steel's domestic steelworks and evaluate the necessary equipment development. ExxonMobil studies on CO2 storage overseas in the Asia-Pacific region, including Australia, Malaysia, and Indonesia. Mitsubishi Corporation will conduct the previous survey and evaluation for overseas CO2 transportation and CCS value chain construction. Nippon Steel regards CCS as one of the important technologies to achieve carbon neutrality and in addition to this project, the company has actively started collaborating with other companies.

NIPPON STEEL CORPORATION website:
https://www.nipponsteel.com/en/news/20230126_100.html

Toyota tops global sales for 3 consecutive years, 10.48 million units in 2022

Toyota announced on January 30 that global new car sales for the entire group in 2022 were 10.48 million units (10.49 million units in 2021), a slight decrease from the previous year. Germany's Volkswagen (VW) was suppressed, and it took the top spot for the third consecutive year. Although it fell below the previous year for the first time in two years, Southeast Asia, which has recovered from the COVID disaster, pushed up the whole. In Southeast Asia, many countries such as Indonesia, Thailand, and the Philippines recorded double-digit increases, and even China, which had a lockdown in Shanghai,

saw only a slight decrease. However, production has stalled due to semiconductor shortages, casting a shadow over sales in North America and Japan. Global sales of electric vehicles such as hybrid vehicles (HV) and electric vehicles (EV) increased by 4% to 2.72 million units, and EV alone increased by 70% to 24,466 units, both of which were record highs. However, VW group sold 570,000 EVs in 2022, a 26% increase, and the gap between the two is so big.

TOYOTA website:
https://global.toyota/en/company/profile/production-sales-figures/202212.html
VW group website:
https://www.volkswagen-newsroom.com/en/press-releases/transformation-progressing-volkswagen-group-delivers-26-percent-more-all-electric-vehicles-in-2022-15412

Panasonic Automotive achieves net zero CO2 emissions at 14 sites worldwide

Panasonic Automotive Systems announced on January 27 that it has achieved virtually zero CO2 emissions at its 14 global sites, 6 in Japan and 8 overseas, by promoting the introduction of energy-saving and renewable energy. The Panasonic Group regards the reduction of CO2 emissions by the company and society and working toward solving global warming as the most important issue for the Group, and has set its own goal "Panasonic GREEN IMPACT" and is working to solve it.

On the other hand, in the automobile industry, especially in Europe, laws and regulations to reduce CO2 emissions have been strengthened, and the customers, car manufacturers, are also requesting their business partners to reduce CO2 emissions and switch to renewable energy. This trend is expected to accelerate around the world, and there is a growing possibility that zero CO2 emissions will become a condition for doing business with automakers. In response to these demands, Panasonic Automotive has achieved zero CO2 emissions at all of its global sites. This initiative is the first operating company to achieve the goal of zero CO2 emissions by the Panasonic Group in 2030. Going forward, it will continue to honestly promote energy conservation centered on the site, aiming to reduce total energy consumption by 3% year-on-

year every year. It also plans to reduce its external reliance on renewable energy to 50% by 2030.

Panasonic group website:
https://news.panasonic.com/global/press/en230127-2

China's BYD starts EV sales in the Japanese market, price is JP¥ 4.4 million

On January 31, BYD Auto Japan, the Japanese subsidiary of BYD, a major Chinese EV company, released the middle-sized e-SUV “BYD ATTO 3”. The battery capacity is 58.56 kWh and the cruising range (WLTC value in-house research) is 485 km. The price is JP¥ 4.4 million (including consumption tax). From the same day, 20 stores nationwide began opening preparation rooms where business negotiations and test drives can be held. From February onwards, 12 more store opening preparation rooms will be opened in sequence. The ATTO 3, the first model released in Japan, was on sale in China in February 2022. Since then, it has been released in the Asia-Pacific region such as Australia and Thailand, and the cumulative global sales volume by the end of 2022 is 202,058 units. Furthermore, in Europe, sales in nine countries including Germany and France have also been decided. However, although Chinese-made commercial fleet vehicles have been sold in Japan, there has been no sales record of passenger cars for individuals, and attention is focused on whether Japanese consumers will accept them.

BYD Japan website:
https://byd.co.jp/news/2023_0131_105.html

Honda sells fuel cell systems externally, 60,000 units a year by 2030

Honda announced on February 2 that it will begin external sales of next-generation fuel cell system modules in the mid-2020s. The company will start with annual sales of 2,000 units, and by expanding in stages, aims to sell 60,000 units annually in 2030, and several hundred thousand units annually in the latter half of the 2030s. First, four core domains for fuel cell system utilization were set: fuel cell vehicles (FCEV), commercial vehicles, stationary power sources, and construction machinery. It will also actively engage in collaboration with other companies. In addition to promoting the electrification of

products, the company will actively work to expand the use of hydrogen as an energy carrier and expand its hydrogen business. The company will launch FCEVs equipped with a next-generation fuel cell system jointly developed with General Motors (GM) in North America and Japan in 2024. In addition to the joint development with GM, the company aims to cut the cost in half and double the durability by around 2030, when fuel cells are expected to become widespread. In addition, the company will proceed with research and development with a view to utilizing hydrogen technology such as fuel cell technology and high-pressure water electrolysis technology in the space domain in the future. It has concluded a research and development agreement with the Japan Aerospace Exploration Agency (JAXA) on a "circulating renewable energy system" to supply power to the lunar exploration vehicle's living space and system.

Honda website:
https://global.honda/newsroom/news/2023/c230202eng.html?from=RSS&from=newsrelease_area

AGC reduces CO2 emissions by up to 75% during glass manufacturing, demonstration experiment with French company

AGC announced on February 6 that it will jointly develop glass manufacturing technology that reduces carbon dioxide (CO2) emissions with French glass giant Saint-Gobain. It is possible to reduce Scope 1 CO2 emissions, which indicate company emissions, by 50 to 75%. Glass has been manufactured using fossil fuels such as natural gas in a process that melts raw materials at a high temperature of about 1,600 degrees Celsius. However, about 80% of the air that reacts with natural gas contains nitrogen, which is not directly involved in combustion, and the combustion heat of oxygen cannot be used efficiently. Therefore, a new method of burning 100% oxygen and natural gas is adopted, and about half of the necessary temperature is heated by electricity, improving efficiency. The demonstration facility will be newly constructed by completely renovating the glass manufacturing facility at AGC's existing plant in the Czech Republic. At this stage, the scale of production is not disclosed, but the plan is to conduct small-scale trial production of patterned "figure glass." In the future, the company is considering large-scale production of architectural glass, and

intends to sell it as a product that reduces the environmental impact by reducing CO2 emissions during manufacturing.

AGC website:
https://www.agc.com/en/news/detail/1203721_2814.html

NEC and Nagasaki University manage newborn vaccines in developing countries using biometric authentication

NEC, Nagasaki University, and the Kenya Central Medical Research Institute announced on February 7 that they have developed a system for managing newborn vaccination records for developing countries. By matching the newborn's fingerprint with the mother's voice, it solves the problem of difficulty in authenticating the newborn's fingerprint. Demonstration tests are underway in Kenya from the fall of 2022, aiming for full-scale introduction within 2023. The use of biometric authentication reduces the burden on hospital staff and parents who verify identities. On the day of birth, a total of four fingerprints from the thumb and forefinger of the newborn's left and right hands are photographed, and the parent's voice information is linked. With voice recognition, authentication can be performed in as little time as the guardian and the name of the child, and there is little effort required for information registration and authentication at the time of vaccination. Immediately after birth, it is difficult to photograph a newborn's fingerprints precisely. Therefore, they adopted a method of matching fingerprint swirls for a total of four fingers, the left and right thumbs and forefingers. Accuracy is improved by combining and collating four pieces of information. NEC's biometric authentication is in strong demand in emerging countries where information management mechanisms are not sufficiently developed. In Vietnam, fingerprint authentication and face authentication systems have been adopted for ID cards used by all citizens over the age of 14. Accumulating a track record in emerging countries, they will promote technological development and rule-making for privacy protection.

NEC website:
https://www.nec.com/en/press/202302/global_20230207_01.html

Nippon Paper Industries builds a production system for LiB materials in Europe

Nippon Paper Industries announced on February 6 that it has established a manufacturing and sales subsidiary in Budapest, Hungary, to strengthen its supply system for CMC (carboxymethyl cellulose), one of the negative electrode materials for automotive lithium-ion batteries (LiB). The new plant is scheduled to go into operation in December 2024, with sales of approximately EUR 50 million and the creation of approximately 60 jobs. CMC is an anionic water-soluble polymer obtained from high-purity refined pulp of natural cellulose. It has high viscosity, absorbency, and water retention properties, and has been widely used for a long time in daily necessities such as food and toothpaste, and in industrial applications such as paper manufacturing. In 2021, the company strengthened the production system of CMC for LiBs at the Gotsu Plant (Shimane Prefecture), but this time, it will also promote the production system in Hungary. The company will build a system to supply CMC for LiBs from two bases, one in Gotsu factory and another in Hungary.

Nippon Paper Industries website:
https://www.nipponpapergroup.com/english/news/year/2023/news230206005401.html

Green x Digital Consortium successfully demonstrates CO2 data linkage between different solutions

The Green x Digital Consortium, organized by the Japan Electronics and Information Technology Industries Association (JEITA), announced on February 15 that it has successfully conducted a demonstration test of CO2 emissions data linkage between different solutions to visualize CO2 emissions in the supply chain. This is the first in Japan, and represents a major step forward toward the realization of supply chain CO2 emissions visualization. This time, as "Phase 1," from September 2022 to January 2023, 15 solution providers participated. Specifically, the data format presented in the Pathfinder Network of the WBCSD Partnership for Carbon Transparency (PACT), a leading international framework and API (connection method) were used with an eye toward global data collaboration. It was verified data linkage between multiple solutions in a virtual supply chain and confirmed that data linkage is possible even when each company in the supply chain utilizes a different solution. This will allow user companies to have a wider range of choices when introducing solutions, and will also eliminate the need for companies that provide solutions

to coordinate with other companies individually. The consortium aims to complete "Phase 2" by the end of June 2023, which will include verification of CO2 calculation practices.

JEITA website:
https://www.jeita.or.jp/english/press/2023/0215.pdf

Marubeni to sell low-carbon aluminum products that use renewable energy

Marubeni Corporation announced on February 16 that it will sell low-carbon aluminum products produced using renewable energy to a major Japanese transportation company. The aluminum will be produced using hydroelectric power at a New Zealand smelter owned by Rio Tinto, a major British-Australian resource company.

In 2022, Marubeni and Rio Tinto formed a business alliance to sell aluminum products that visualize the production and supply history of raw materials and greenhouse gas emissions. This is the first time for the company to sell low-carbon aluminum manufactured under this partnership. Purchasing companies can understand the amount of greenhouse gas emissions and can prove that they are considering ESG (environment, society, corporate governance).

Marubeni will also sell carbon-neutral aluminum ingots, which emit zero CO2 emissions, by utilizing "carbon credits" that trade the amount of reduced carbon dioxide (CO2) emissions.

Marubeni website:
https://www.marubeni.com/en/news/2023/release/00022.html

Sony to release a camera that is easy for the visually impaired to shoot in March

Sony announced on February 21 that it will release a camera on March 24 that has functions that make it easy for people with visual impairments who cannot see well even with glasses to take pictures. Combined with QD laser technology, it is equipped with a mechanism that projects the image captured by the camera directly onto the retina so that even people with poor eyesight can recognize it as a clear image.

It combines the semiconductor laser technology of QD Laser and Sony's compact digital camera "Cyber-shot". By reflecting a laser beam of RGB (red, green, and blue), the three elements of color, with a small mirror and projecting it directly onto the retina of the eye, the image captured by the camera can be focused even for people with weak retina functions. make it recognizable in a way that matches

Visually impaired people with "low vision" are assumed to use it. Generally refers to people with visual acuity of less than 0.3 even when wearing glasses or contact lenses. In Japan, it is sometimes called "amblyopia". According to Sony, there are about 250 million people with low vision in the world, including about 1.45 million in Japan.

This product is only sold after actually experiencing it at a Sony retail store. In principle, one unit will be sold per person with a limited quantity. The price is JP¥ 109,800. In the future, the company plans to sell it in the United States as well.

Sony group website (in Japanese):
https://www.sony.co.jp/corporate/information/news/202302/23-007/

Toyobo's FO membrane adopted for the world's first "pressure power generation plant"

On February 20, Toyobo announced that its hollow-fiber FO membrane (FO membrane) was adopted for the world's first commercial-scale osmotic power generation plant by Danish venture company SaltPower. The plant will be installed at Nobian's (Netherlands) salt plant in Mariager. Operation is scheduled to start in April 2023.

Osmotic power generation is a mechanism that generates electricity using the osmotic pressure difference between two types of solutions. The plant to be installed this time utilizes the difference in salinity between fresh water and high-concentration salt water pumped up from underground rock salt layers for salt production. FO membranes have the property of allowing water molecules to pass through, but not allowing molecules larger than a certain size, such as

salt, and ions to pass through. When high-concentration salt water and fresh water are brought into contact with each other across the FO membrane, water moves to the salt water side due to the osmotic pressure difference and the flow rate increases. This increase in flow is used to turn a turbine to generate 100kw of power.

Osmotic power generation operates stably regardless of the weather or day or night, and it is possible to generate power at the same cost as solar power or wind power. It is attracting attention as a next-generation renewable energy power generation system.

Toyobo website:
https://www.toyobo-global.com/news/2023/release_535.html

EBARA develops world's first liquid hydrogen booster pump for hydrogen power generation

Ebara Corporation announced on February 24 that it has successfully developed the world's first liquid hydrogen booster pump for hydrogen power generation based on its strengths in high-pressure centrifugal pumps and cryogenic technology. A high-capacity, high-pressure pump for power generation that can handle liquid hydrogen at -253°C is technically difficult and currently does not exist on the market. The product is scheduled to enter the market in 2023.

When liquid hydrogen transported by sea from overseas is used for hydrogen power generation, it is stored in domestic storage tanks, then discharged from the tanks and supplied to hydrogen gas turbines. A booster pump is required at that process. In October 2022, the company used the same pump prototype to conduct a real liquid test with liquid hydrogen at the JAXA Noshiro rocket test site (Akita pref.), and obtained good test results that contributed to the design of a large flow booster pump.

Ebara corporation website:
https://www.ebara.co.jp/en/corporate/newsroom/release/company/detail/1208853_10220.html

Nissan accelerates electrification strategy launching 19 EV models by 2030

Nissan Motor announced on February 27 that it will accelerate its vehicle electrification strategy. The number of electrified vehicle models to be launched by 2030, as set forth in the long-term vision "Nissan Ambition 2030," will be increased from 23 models, including 15 EV models to 27 models, including 19 EV models. As a result, the global model mix of electrified vehicles in FY2030 is expected to increase from the previous forecast of 50% to more than 55%.

In addition, the sales ratio of electrified vehicles in major markets in FY2026 is expected to increase from 75% to 98% in Europe and from 55% to 58% in Japan compared to November 2021. On the other hand, in China, it will decrease from 40% to 35%, and in the United States, EV alone will remain above 40% by FY2030. As a result, the global electrified vehicle sales ratio in 2026 will increase from the previous forecast of 40% to more than 44%. A dedicated EV for the Chinese market is scheduled to be launched in 2024. In Europe, it will continue to implement our solid electrification plan and promote a stronger cooperative relationship with the alliance.

In February, Nissan announced that it will strengthen cooperation with the Renault Group of France and Mitsubishi Motors to accelerate the introduction of EVs in South America, Europe and India. As part of this effort, the Renault group will launch its first software-defined model in 2026 and supply it to Nissan in the European market. The alliance of the three companies will also promote collaboration in existing technology fields such as all-solid-state batteries, software-defined vehicles, ADAS and autonomous driving.

Nissan motor website:
https://global.nissannews.com/en/releases/release-9892068d60092fbe00826bd9202ae967-nissan-further-accelerates-electrification-strategy

Rapidus invests JP¥ 5 trillion in semiconductor factory in Chitose, Hokkaido

Rapidus, which aims to produce state-of-the-art semiconductors domestically, announced on February 28 that it will build its first factory in Chitose City,

Hokkaido. In the late 2020s, the company will begin mass production of semiconductors called "2 nano," which are used in supercomputers and other devices. The decisive factor in choosing Hokkaido, while several local governments are working to attract it, is its abundance of water resources, geographical advantage and renewable energy.

As the domestic production of state-of-the-art semiconductors, which are expected to be the "brain" of supercomputers and artificial intelligence (AI), several local governments are competing to attract the base of Rapidus. The amount of investment necessary for the company from research and development to mass production is expected to be around JP¥ 5 trillion.

Hokkaido, which can secure a large area of land, is also considered promising for renewable energy. However, unlike Kumamoto Prefecture (in Kyushu), which has historically concentrated semiconductor-related companies and succeeded in attracting Taiwan Semiconductor Manufacturing Company (TSMC), the world's largest semiconductor contract manufacturing company, the supply of manufacturing equipment and material industries is different. The supply chain is now in the stage of preparation.

Rupidus website (in Japanese):
https://www.rapidus.inc/news_topics/news-info/rapidus-selects-chitose-city-in-hokkaido-for-its-new-state-of-the-art-semiconductor-plant-2/