EU-Japan Centre for Industrial Cooperation
一般財団法人 日欧産業協力センター

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Legislation and Policy News

Three ministries announce their approach towards financed emissions
On October 2, the Financial Services Agency, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment compiled and published an approach to solving issues related to financed emissions to promote transition finance in the public and private sectors. International financial alliances such as GFANZ, which major financial institutions support, have set ambitious targets to reduce their own emissions to net zero, including the emissions of their investees and loans (financed emissions). As a result, some financial institutions may refrain from investing in hard-to-abate industries.

In this publication, they first summarized the role that financial institutions are expected to play in achieving carbon neutrality and the characteristics of financed emissions. And in order to appropriately evaluate and promote funding for innovation toward decarbonization and the transition of hard-to-abate industries, they have organized and presented the indicators by classifying them into two types of disclosure methods.

METI website:
https://www.meti.go.jp/press/2023/10/20231002002/20231002002-2rr.pdf

METI held Tokyo Green Transformation (GX) Roundtable
On October 3, the Ministry of Economy, Trade and Industry (METI) held the Tokyo Green Transformation (GX) Roundtable to share Japan's public and private initiatives, in conjunction with Tokyo GX Week, which brings together experts in green transformation related fields from around the world to Japan. Prime Minister Kishida and METI Minister of Nishimura participated.

METI Minister Nishimura promised for the further acceleration of the introduction of renewable energy, the strong promotion of non-fossilization of power sources such as the use of nuclear power with the main premise of

ensuring safety, and the implementation of “growth-oriented carbon pricing" under the GX Promotion Act. He also stated that Japan would contribute to achieving global carbon neutrality by realizing public and private investment of over JP¥ 150 trillion over the next 10 years.

Prime Minister Kishida explained the idea of "new capitalism," using social issues such as global warming as the engine of growth, and achieving growth through public and private investment. He said that the government would formulate the sector-specific investment strategies by the end of this year, and contribute to the world through these initiatives.

METI website:
https://www.meti.go.jp/english/press/2023/1004_001.html

METI, JOGMEC and PETRONAS have concluded MOC on CCS businesses
On October 6, the Ministry of Economy, Trade and Industry (METI), Japan Energy and Metals and Minerals Corporation (JOGMEC) and Malaysian national oil company (PETRONAS) announced that they have signed a memorandum of cooperation (MOC) on cross-border transport and storage of carbon dioxide to realize a bilateral CCS project between Japan and Malaysia that will contribute to reducing greenhouse gas emissions.

Malaysia, which has a variety of resources, has long been an important partner for Japan, and many energy projects involving Japanese companies have progressed. Among these, Malaysia is rich in suitable land for underground storage of carbon dioxide (CO2), so a project is being considered to transport and store CO2 emitted by Japanese industries to the country.

In order to transport CO2 cross-border to Malaysia, it is necessary for the two countries to discuss the rules and how to calculate the amount of CO2 reduction. Therefore, METI, JOGMEC and PETRONAS signed an MOC at the 3rd Asian CCUS Network Forum (held in Hiroshima in this September) in order to promote discussions on cross-border CO2 transport and storage between the two countries.

METI website:

https://www.meti.go.jp/english/press/2023/1006_002.html

Japanese and Australian governments confirm stable LNG supply and promotion of decarbonization investment

October 8, Minister of Economy, Trade and Industry (METI) Nishimura, who visited Australia, met with Minister of Trade and Tourism Farrell, Minister of Climate Change and Energy Bowen, and Minister of Resources King in Melbourne. During these talks, they agreed to ensure a stable supply of resources such as LNG and coal and a reliable investment environment, continue cooperation to strengthen supply chains for important minerals, and expand the scope of cooperation to contribute to the decarbonization of the Asian region by the innovation of hydrogen, ammonia, CCUS, etc. After the dialogue, a joint statement was issued.

Regarding the Trans-Pacific Partnership (TPP), the governments also confirmed that they will closely monitor whether countries and regions applying for new membership are taking measures that violate the purpose of the agreement, such as economic coercion. China, Taiwan, Ukraine, and others have applied to join the TPP. Furthermore, Minister Nishimura and Minister Farrell witnessed the signing of a Memorandum of Understanding between the Japan External Trade Organization (JETRO) and the Australian Trade and Investment Promotion Agency. The two organizations agreed to strengthen support for startups expanding into the Indo-Pacific region, including island countries.

METI website (in Japanese):
https://www.meti.go.jp/press/2023/10/20231008001/20231008001.html

Ministry of the Environment certifies 122 biodiversity conservation areas

On October 6, the Ministry of the Environment announced that it will start a system in 2023 to certify areas where biodiversity is being conserved through private initiatives as "sites in harmony with nature" and 122 locations (35 prefectures) have been certified.

At the 15th Conference of the Parties to the Convention on Biological Diversity (CBD-COP15), the Kunming-Montreal Biodiversity Framework, a new global goal for 2030, was adopted. Based on this global goal, Japan has set a goal (30

by 30 goal) to effectively conserve at least 30% of land and sea as healthy ecosystems by 2030. The recent designation of sites in harmony with nature is in response to this trend, and the total area of the 122 designated sites is approximately 77,000 hectares, which is larger than the 23 wards of Tokyo.

Those selected for this certification include Asahi Group Japan's Asahi Forest Konomurayama (Hiroshima Prefecture) and Seven-Eleven Memorial Foundation's Hannan Seven Sea Forest (Osaka Prefecture). In addition, the Ministry of the Environment plans to register areas that do not overlap with protected areas in an international database as OECM (Other Effective area-based Conservation Measures).

MOE website:
https://policies.env.go.jp/nature/biodiversity/30by30alliance/documents/3030emap.pdf

MOE website (in Japanese):
https://www.env.go.jp/press/press_02179.html

METI assists JP¥ 30.6 billion for batteries for electric aircraft

On October 10, the Ministry of Economy, Trade and Industry (METI) announced a proposal to support the development of equipment for electric aircraft. JP ￥30.6 billion will be subsidized for the development of hydrogen fuel cells and fuel-efficient engine equipment. The plan is to allocate JP¥ 17.3 billion to the development of hydrogen fuel cell systems and JP¥ 13.3 billion to areas such as engine control systems with high fuel efficiency. The METI will publicly recruit business operators by the end of this year. Companies such as IHI and Kawasaki Heavy Industries have strengths. This was decided at the Industrial Structure Council held on the same day. Demonstration tests are expected to be conducted by 2030.

The METI has already decided to provide approximately JP¥ 21 billion in support for equipment development for hydrogen aircraft that generate propulsion by burning hydrogen in engines. The airline industry has set a goal of reducing emissions from international flights to virtually zero by 2050. Europe's Airbus and other companies are aiming to commercialize electric

aircraft as early as 2035. METI is working on next-generation machines, aiming to promote Japan's hydrogen fuel cells and other products, and working to standardize the developed equipment internationally.

METI website:
https://www.meti.go.jp/shingikai/sankoshin/green_innovation/industrial_restructuring/pdf/020_06_00.pdf

Japan, UK, Korea and the World Bank form a new framework for renewable energy supply networks

Five countries, including Japan, the UK and South Korea, have launched a new framework to help emerging countries strengthen their supply chains in the renewable energy sector. A fund will be established at the World Bank, and each country will contribute funds. They will support emerging countries to handle everything from mining resources for electric vehicles (EVs) and solar panels to commercialization in its own country. The new framework is called the Partnership for Resilient and Inclusive Supply-chain Enhancement (RISE). Participating countries such as Japan and the World Bank held a launch event in Marrakech, Morocco on October 11.

In addition to Japan, Britain, and South Korea, Canada and Italy announced their participation. Japan contributed $25 million, bringing the total to more than $40 million. The target countries for assistance are assumed to be emerging and developing countries in the so-called “Global South," such as Asia, Africa, and Central and South America. Chile and India attended the event as representatives of candidate countries eligible for assistance. The Japanese government and the World Bank call for the wide participation of relevant countries with the stance of an ``open framework." The new framework was agreed upon by the G7 at a meeting of finance ministers and central bank governors in May.

From the perspective of economic security, this partnership eliminates the bias in production systems to specific countries and stably procure important supplies. They will provide technological and financial support so that emerging countries, which have until now focused on resource extraction, can take on highly profitable processes such as processing, refining, and assembly. The

reason behind this is the country's dependence on China for the processing of minerals such as rare earths and lithium used in EVs. It has been pointed out that there is a risk of supply disruption in the event of export restrictions or natural disasters. Reliance on China is also increasing in the market for renewable energy products such as solar panels and EVs.

MOF website:
https://www.mof.go.jp/english/policy/international_policy/mdbs/wb/20231011.html

METI and NEDO hold the 10th Innovation for Cool Earth Forum (ICEF) Annual General Meeting

On October 4 and 5, the Ministry of Economy, Trade and Industry (METI) and the New Energy and Industrial Technology Development Organization (NEDO) held a hybrid annual meeting of the 10th Innovation for Cool Earth Forum (ICEF). With the main theme of "Innovation for Just, Secure and Sustainable Global Green Transformation (GX)," discussions were held on the innovations necessary for the world to move toward carbon neutrality despite the various challenges it faces. Approximately 1,700 people from 79 countries and regions registered to participate.

ICEF is an international platform established in 2014 through the initiative of Japan, and is an international platform that brings together ministers from around the world, experts and leaders leading in various fields to solve climate change issues through innovation in the energy and environmental fields. The aim is to encourage discussion and cooperation between academia, industry and government stakeholders.

The forum saw global leaders in energy and environment-related fields take the stage in 15 sessions. Among them were Dr. Noguchi Soichi, astronaut; Prof. Steven Chu, former U.S. Secretary of Energy; Mr. Jean-Eric Paquet, Ambassador of the European Union to Japan; Prof. Andrew Fire; Sir Paul Nurse; Dr. Marcia McNutt, President of the National Academy of Sciences of the United States; and Prof. Phoebe Koundouri, President of EAERE. In each plenary and technology session, people from the younger generations (young innovators) participated in the discussions.

The secretariat has also released a draft roadmap (AI and climate change mitigation) that recommends paths and methods for major innovative technologies that will contribute in the short and long term to achieving carbon neutrality. The roadmap will reflect public comments and will be officially announced at COP28 (28th Conference of the Parties to the United Nations Framework Convention on Climate Change) to be held in the United Arab Emirates in December 2023.

METI website:
https://www.meti.go.jp/english/press/2023/1006_004.html

"Japan-U.S.-EU Industrial Control System Cybersecurity Week for the Indo-Pacific Region" was held

The Ministry of Economy, Trade and Industry (METI) and the Information-technology Promotion Agency (IPA) Industrial Cyber Security Center (ICSCoE) held an in-person event on cybersecurity for control systems in Tokyo for the first time in four years in corroboration with the US and EU governments from October 9 to 13.

Efforts by one company or one country are not sufficient for cybersecurity measures and measures need to be taken throughout the entire supply chain. For this reason, Japan, which shares a supply chain with the Indo-Pacific region, launched this event in collaboration with the US in 2018 to improve cybersecurity capabilities across the region and strengthen cooperation with other countries. Recognizing its value, the EU has officially participated as a host since 2021. It is expected that this event would help foster a common understanding of cybersecurity for industrial control systems, and the strengthening of ties between the Indo-Pacific region and Japan, the US, and the EU.

METI website:
https://www.meti.go.jp/english/press/2023/1016_001.html

METI raises EV charger installation to 300,000 by 2030

The Ministry of Economy, Trade and Industry (METI) announced on October 18 that it aims to double the number of chargers from the previous 150,000 to 300,000 by 2030 in order to accelerate the development of charging infrastructure toward building an EV society. Furthermore, towards 2030, the average output of quick charging will be doubled from the current approximately 40 kW to 80 kW, and the total output of the entire charger will be increased 10 times from the current approximately 390,000 kW to approximately 4,000,000 kW.

This policy was being considered by the “Study Group on the Promotion of Charging Infrastructure Development”, an advisory body to the METI. And the METI conducted public comments from August to September this year and formulated these guidelines. The main points are as follows.

– Setting a goal comparable to the world: doubling the charger installation target
– High output: 90kW or more, and even 150kW will be installed on expressways. Aim for 50kW or more on roads other than expressways.
– Efficient charger installation: Prioritize cost-effective projects
– Response to regulations and systems: Implement pay-per-use billing starting in FY2025 to realize a more sustainable pricing system for both users and operators.

The METI aims to create a highly convenient and sustainable charging infrastructure society by comprehensively considering the three principles of "improving user convenience," "increasing the independence and sophistication of charging businesses," and "reducing the burden on society as a whole."

METI website (in Japanese):
https://www.meti.go.jp/press/2023/10/20231018003/20231018003.html

Japan and Denmark cooperate on floating offshore wind power generation
On October 24, Minister of Economy, Trade and Industry Nishimura met with Prime Minister Frederiksen of the Kingdom of Denmark and exchanged views on the development of economic relations between Japan and Denmark. Also, at the event, the two countries held a ceremony to exchange a memorandum of

understanding on hydrogen and ammonia cooperation, and a basic agreement on cooperation in floating offshore wind power generation. In particular, with regard to wind power generation, Denmark, which has the world's top manufacturers and operating companies, and Japan's technology, which has floating know-how, are expected to make strides in the global market.

Denmark is home to Vestas, the world's leading wind power producer, and Orsted, the world's leading wind power producer. In Japan, companies such as Japan Marine United, Mitsui Marine Development, and Hitachi Zosen have expertise in floating structures. Denmark seems to be partnering with Japan because it believes that Japan has the shipbuilding technology essential for floating ships and that it is a market that can be expected to be introduced on a large scale.

Floating systems are essential for the spread of renewable energy in Japan. Regarding offshore wind power, the government is aiming to select an operator for power generation facilities for 10 million kilowatts in 2030 and 30 to 45 million kilowatts by 2040. Floating systems are expected to become the mainstream for offshore wind power generation by 2040. Floating systems require a combination of not only wind turbine technology but also shipbuilding technology to float equipment on the sea. At present, mass production technology has not yet been established anywhere in the world.

METI website (in Japanese):
https://www.meti.go.jp/press/2023/10/20231024001/20231024001.html

Company & Organization News

Osaka Gas and Taiwanese state-owned company begin joint study on decarbonization such as "e-methane"

On September 28, Osaka Gas announced that it signed an agreement with Taiwan's state-run oil and gas operator, Taiwan CPC Corporation, to begin a joint study on carbon neutrality, including the introduction of e-methane in Taiwan. In this study, as part of efforts to achieve carbon neutrality at Taiwanese CPC, the two companies will jointly conduct studies on introducing and utilizing

e-methane in the country, as well as studies on new energy fields such as hydrogen, ammonia, and biogas.

E-methane, which is one form of hydrogen utilization, has almost the same composition as city gas and can be used with existing LNG liquefaction and transportation equipment, city gas infrastructure, and customers' combustion equipment, so it can be used while suppressing social costs. It is possible to contribute to a smooth transition to carbon neutral city gas. In order to popularize e-methane as a new energy that will make city gas carbon neutral, the Osaka Group will not only develop and demonstrate technology in Japan, but also develop and demonstrate e-methane in North America, South America, Australia, the Middle East, Southeast Asia, etc.

Osaka Gas website:
https://www.osakagas.co.jp/en/whatsnew/__icsFiles/afieldfile/2023/09/27/230927_1.pdf

Mitsui to jointly promote renewable diesel and SAF manufacturing business with Portugal Galp

Mitsui & Co., Ltd. and Galp SGPS, S.A., Portugal's largest energy company, have agreed on September 25to jointly promote the production of Hydrotreated-Vegetable Oil and Sustainable Aviation Fuel. They plan to establish a joint venture company as soon as they receive approval from the relevant authorities. The investment ratio will be 75% by Galp and 25% by Mitsui & Co.

HVO, which is produced from used cooking oil and animal and vegetable oils, can be introduced as a biofuel to replace diesel for internal combustion engine vehicles such as buses and trucks, and SAF can be introduced as a biofuel to replace jet fuel for aircraft. Demand for both fuels is expected to grow in the future as next-generation, earth-friendly fuels with low greenhouse gas emissions, especially in Europe, where policies to introduce biofuels are strongly promoted.

Galp is Portugal's only oil refiner, having operated the Sines Refinery since 1978. In recent years, Galp has strengthened investment in the energy transition field and is moving forward with fuel conversion initiatives. This project

will construct new equipment at the Sinesh Refinery that can produce HVO and SAF by switching operation modes. Commercial production of HVO will begin in 2026, and they are also considering co-production of SAF, whose demand is expected to increase in the medium term.

Mitsui website:
https://www.mitsui.com/jp/en/release/2023/1247489_13943.html

INPEX jointly produces ammonia in the United States with four parties
INPEX announced on October 3 that it will produce ammonia in the United States in collaboration with three companies, including Air Liquide, a major French industrial gas company. Production will begin by 2027 at the Port of Houston in southern Texas, and it will be exported to Asia as fuel for thermal power generation. The byproduct carbon dioxide (CO2) is captured and stored underground. Hydrogen is extracted from natural gas and synthesized with nitrogen to create ammonia. Production capacity is expected to exceed 1.1 million tons per year. The company will also consider increasing production in the future. Natural gas will be procured from other companies through pipelines. They will consider sales targets and financing options, and make a final investment decision in 2025.

The four companies have already completed feasibility studies for this project this year, and have selected the Port of Houston, Texas as a candidate site for the project. The Port of Houston is the world's second-largest petrochemical industry hub, and the proposed construction site is located near the pipeline network that supplies raw gas and water, and has easy access to utility facilities.

INPEX website:
https://www.inpex.co.jp/english/news/assets/pdf/20231003.pdf

Kawasaki Heavy Industries recovers CO2 at coal-fired power plant
Kawasaki Heavy Industries and the Research Institute of Innovative Technology for the Earth (RITE, Kyoto Prefecture) announced on October 3 that they will begin a demonstration operation to separate and capture carbon dioxide (CO2) from exhaust gas at a power plant. Using a newly developed material that

absorbs CO2, it will be powered by a coal-fired power plant for the first time in Japan. A CO2 separation and capture test facility has been constructed at the Kansai Electric Power Company's Maizuru Power Station. Demonstration tests are scheduled for the end of 2023. Kawasaki Heavy Industries will be in charge of the design and construction, and CO2 will be separated and captured using solid absorbent materials developed and manufactured by RITE.

This time, they applied technology to remove CO2 in closed spaces such as submarines. It uses amines, which are substances that absorb CO2. Compared to conventional technology, methods that use solid absorbents have the advantage of reducing the energy used for CO2 separation and capture. The company believes it can be applied to cement, oil refining, and chemical plants. There are also plans to commercialize large-scale CO2 capture and storage (CCS) at coal-fired power plants around 2030.

Kawasaki Heavy Industries website:
https://www.khi.co.jp/pressrelease/news_231003-2.pdf

Toray develops new recycling technology for PPS resin

Toray announced on October 3 that it has developed a recycling technology for glass fiber reinforced PPS (Poly Phenylene Sulfide) resin. This technology can maintain the same strength as virgin material even after recycling. The company has developed pellets for material recycling by utilizing its proprietary compounding technology and blending special reinforcing fibers with PPS resin.

Conventionally, PPS resin recycling has had the problem of short glass fibers that break, resulting in a significant decrease in mechanical strength. The new technology maintains the same quality as virgin materials even when recycled materials are used. Furthermore, even when using more than 50% recycled materials, it has confirmed that the mechanical strength is equivalent to that of 100% virgin materials. If 50% recycled materials are used, CO2 emissions are expected to be reduced by more than 40%. By improving the recycling rate of PPS resin, this technology will contribute to reducing CO2 emissions and is expected to be widely used in horizontal recycling and other applications.

Toray website:

https://cs2.toray.co.jp/news/eu/eu_newsrrs01.nsf/0/768A15E041927FD349258A3E002F7351?open

NIES and the University of Tokyo develop a model to estimate the impact of the circular economy over 30 years

The National Institute for Environmental Studies (NIES) and the University of Tokyo announced on October 2 that they have developed a consumer behavior simulation model to pre-evaluate circular economy initiatives. This model can reflect consumer behavior that does not necessarily follow economic rationality, but is strongly influenced by social influences such as word of mouth, and has diverse preferences.

This model is the world's first to apply the "agent-based simulation" method to circular economy measures. By case study using the developed simulation model, the research team estimated the future "environmental impact" such as greenhouse gas emissions and "circularity" such as the amount of waste generated over a 30-year period due to the introduction of the measures, and it was successful.

By using this model, they can evaluate circular economy initiatives at an early stage before they become widespread in the real world. It also makes possible to design products and services that are carbon-free, circular, and widely accepted by consumers, and create policies to support.

National Institute for Environmental Studies website (in Japanese):
https://www.nies.go.jp/whatsnew/2023/20231002/20231002.html

Nippon Sheet Glass launches low carbon glass in Europe that reduces CO2 emissions by 50%

Nippon Sheet Glass will sell architectural glass in Europe that emits 50% less carbon dioxide (CO2) than conventional products. In addition to using alternative fuels, it has increased the use of recycled products. It is responding to the movement to reduce emissions throughout the life cycle, from architectural design to disposal. The company will manufacture and sell new products at its UK glass manufacturing facility. In addition to alternative fuels,

renewable electricity is also used to reduce CO2 emissions during manufacturing.

In the construction industry, there is a need to reduce CO2 emissions throughout the life cycle of buildings, from material production and construction to collection. Although the new product is more expensive, the company believes there will be demand from customers who want to reduce emissions during the manufacturing stage of materials. At this time, there are no plans to sell new products in Japan. This is because CO2 is emitted during transportation from glass manufacturing facilities in the UK. The company sells the product if Japan's glass manufacturing equipment continues to switch fuels.

NSG website:
https://www.nsg.com/en/media/ir-updates/announcements-2023/low-carbon-glass#

Memorandum of understanding between UK and Marubeni on clean energy

On October 11, the UK government and Marubeni signed a memorandum of understanding regarding clean energy such as offshore wind power generation. Marubeni and its partners will invest around £10 billion (approximately JP￥1.83 trillion) in clean energy in the UK over the next 10 years. A consortium of British companies and others has already won the development rights for one of the world's largest floating offshore wind farms planned by the British Scottish government.

In September, the UK and Japan established the UK-Japan Strategic Economic and Trade Policy Dialogue, a framework for ministerial dialogue to discuss economic security. In July, the UK's participation in the Trans-Pacific Partnership (TPP) was formally approved by member countries. The UK has cited clean energy, digital, and defense as areas in which it aims to strengthen cooperation with Japan.

Marubeni website:
https://www.marubeni.com/en/news/2023/release/00100.html

Toyota and Idemitsu collaborate on mass production of all-solid-state batteries

Toyota Motor Corporation and Idemitsu Kosan announced on October 12 that they will collaborate to mass produce next-generation "all-solid-state batteries" for electric vehicles (EVs). The two companies aim to begin operation of demonstration equipment in 2027 to introduce vehicles equipped with all-solid-state batteries, and to establish mass production technology from 2030 onwards. The speed of development will be accelerated through collaboration with Idemitsu, which has knowledge of material manufacturing technology.

This time, the two companies are collaborating on a sulfide-based solid electrolyte, which has the advantage of being soft and easy to bond with other materials, making it easy to mass-produce. Toyota and Idemitsu have been conducting joint research on solid electrolytes since 2013. Toyota plans to launch an EV equipped with solid-state batteries in 2027 to 2028. The vehicle currently under development is capable of charging in less than 10 minutes and having a cruising range of approximately 1,200 kilometers.

Toyota plans to increase global sales of EVs to 1.5 million units in 2026 and 3.5 million units in 2030. However, even after all-solid-state batteries are put into practical use, they are expected to be limited to only a few high-end models for the time being, and the company is also progressing with the development of inexpensive lithium iron phosphate (LFP) batteries. The company plans to prepare a large lineup of batteries to capture a wide range of demand.

Toyota website:
https://global.toyota/en/newsroom/corporate/39865919.html

Primetals Techno provides FS support for rebuilding Ukrainian steel

Primetals Technologies (Hiroshima Prefecture) announced on October 12 that it will support a feasibility study (FS) scheduled to be completed in 2024 as part of its support for rebuilding the steel industry in Ukraine. In the future, it will focus on the entire green value chain, from raw material supply to agglomeration, pig iron production, and steel production. The reconstruction project aims to establish an environmentally friendly steel value chain in the country. Investment targets include clean power generation, hydrogen production, green

pig iron and iron making equipment, iron ore beneficiation and pelletizing (a processing method that grinds poor ore and fine ore into powder and hardens them with a binder into spheres), and related infrastructure projects. Establishing the value chain is expected to require an investment of approximately $ 20 billion to $ 40 billion.

In addition to the company, major companies from various countries are participating, and once the project is completed, Ukraine will become a global base for green pig iron and steel manufacturing, supplying raw materials and steel products with low carbon emissions to the entire world. The company is a Mitsubishi Heavy Industries group company headquartered in London, UK. Technologies and products include electrical machinery, automation, digitalization, and comprehensive environmental solutions. It provides a complete set of services and covers all areas of steel, from raw materials to finished products.

Primetals Technologies website:
https://www.primetals.com/press-media/news/primetals-technologies-to-support-the-recovery-of-the-ukrainian-steel-industry-with-green-production-solutions?setLang=1&cHash=4558261501e8eb846a46751abbcb473d

THE JAPAN WOOL TEXTILE introduces automatic foreign matter removal equipment from used clothes, increasing production capacity by 10 times
THE JAPAN WOOL TEXTILE (Osaka Prefecture), a comprehensive wool manufacturer, announced on October 13 that it will install new equipment at Fujiko, a group company, that can automatically remove foreign objects such as buttons and zippers from used clothing. Full-scale operation is scheduled for February to March 2025, and the production volume of recycled fibers is expected to be 300 tons/month, which is 10 times the current production capacity. Fujiko has been recycling used clothing into raw materials at its Ichinoseki factory (Iwate Prefecture), but the removal of buttons and zippers had to be done manually. As a result, processing capacity is limited, which is also a factor in high costs.

Approximately 40% of Japan's used clothing is discarded in the Kanto region, but the company aims to use its Ishioka factory as a base for recycling and

recycling used clothing, contributing to the maintenance and strengthening of the textile resource recycling system in Japan. .According to a survey by the Ministry of the Environment in fiscal 2022, of the 798,000 tons of new domestic supply of clothing, 731,000 tons were discarded after use, and 470,000 tons, or 64.5%, were disposed.

THE JAPAN WOOL TEXTILE website (in Japanese):
https://www.nikke.co.jp/admin/wp-content/uploads/2023/10/65248587c9da58759867f2bd1094319f.pdf

AESC to procure battery materials for 1 million EVs per year from Umicore

AESC, a major automotive battery company, announced on October 17 that it will procure cathode materials used in batteries for electric vehicles (EVs) produced in the United States from Umicore, a major Belgian materials company. Starting in 2026, the company will procure approximately 1 million EVs annually. The company will establish a supply network in North America to guarantee battery supply and meet the demands of automakers aiming to increase EV production.

The cathode material contains rare metals and is the most important component of batteries, determining capacity and output. Umicore will supply up to 50 gigawatt-hours (giga is 1 billion) of watt-hours per year from its factory in Cheonan, central South Korea, and its plant in eastern Ontario, Canada. AESC will procure cathode materials and assemble batteries at its three U.S. locations, including those under construction, and supply them to companies such as BMW of Germany.
AESC has in mind the US Inflation Control Act (IRA). The law, which includes measures to promote the spread of EVs, allows buyers to receive a tax deduction of up to $7,500. To be eligible for the deduction, 40% of the important minerals used in car batteries must be sourced from the United States or countries with which the US has free trade agreements (FTAs), and 50% of battery components must be manufactured in North America.

AESC website:
https://www.aesc-group.com/en/news.html

Honda and GM to launch driverless taxis in Japan in 2026

On October 19, Honda announced that it will start an unmanned taxi service in Japan with General Motors (GM). The two companies and GM's subsidiary, which handles self-driving services, will launch a joint venture in the first half of 2024, with plans to expand mainly in Tokyo from 2026. Compatible with Level 4, which fully automates driving under certain conditions, it will be the first vehicle in Japan to be put into practical use on public roads in central Tokyo. The new company will be established in Japan by Honda, GM, GM's self-driving technology development company, and GM Cruise Holdings, with Honda taking a majority stake.

The company will start with a few dozen driverless taxis, with plans to expand to around 500. The 500 units represent 1.7% of the total number of corporate taxis in Tokyo. After that, they aim to gradually increase the number of machines and expand the service area. The vehicle will be a self-driving vehicle called “Cruise Origin,” jointly developed by Honda, GM, and others. It features a spacious interior as no space is required for the driver's seat. Level 4 public road driving was lifted in Japan in April. Honda also has an investment in GM Cruise. Test driving has already been carried out in the United States, and driving demonstrations using test vehicles are underway in Tochigi Prefecture.

Honda website:
https://global.honda/en/newsroom/news/2023/c231019aeng.html

Mitsubishi Heavy Industries begins CO2 liquefaction demonstration, aiming to popularize CCUS

Mitsubishi Heavy Industries, Mitsubishi Heavy Industries Engine & Turbocharger, and Mitsubishi Heavy Industries Refrigeration announced on October 16 that they have begun a joint demonstration test to liquefy CO2 recovered from gas engine equipment. The aim is to promote the spread of CCUS by reducing the volume through liquefaction and making transportation easier. In addition to conventional CO2 recovery from exhaust gas, they will accelerate efforts toward carbon neutrality through the introduction of liquefaction equipment and technology. Liquefied CO2 has a smaller volume than gas and is easier to transport, and it can contribute to the spread of CCUS.

In this demonstration test, CO2 is recovered from the gas engine equipment in the in-house power generation facility at MHIET's Sagamihara Factory using a compact CO2 capture device called “CO2MPAC” and is liquefied using a compact CO2 liquefaction device manufactured by Mitsubishi Heavy Industries Refrigeration. By leveraging the knowledge as a comprehensive research institute responsible for research and development in the Mitsubishi Heavy Industries Group, they will conduct verification aimed at early commercialization.

MITSUBISHI HEAVY INDUSTRIES website:
https://www.mhi.com/news/231016.html

Toyota adopts Tesla method as charging standard in North America
Toyota Motor Corporation announced on October 20 that it will adopt Tesla's fast charging standard "NACS" from 2025. NACS accounts for about 60% of quick chargers in the United States, and companies such as Nissan and Honda have decided to adopt it. There are concerns that vehicle data will be collected through chargers, but the reality is that it has no choice but to adopt Tesla's charging standards, which are becoming standard in the United States.

Toyota plans to produce an electric sports utility vehicle (SUV) with three rows of seats starting in 2025 in the U.S. state of Kentucky. Some Toyota and Lexus brand EVs that will be produced and sold from the same year will be compatible with NACS. Until now, North America has adopted a separate standard called Combo (CCS), and customers with already-sold EVs will be provided with NACS-compatible adapters.

The move to adopt a rival's charging standard comes as Tesla dominates the North American fast charger market. Tesla operates more than 12,000 "Supercharger" fast chargers in North America, with a market share as high as 60%. It features a "plug and charge" function that automatically performs authentication, charging, and billing just by plugging in the charging plug. Since the output is high, compatibility with NACS will lead to improved convenience for customers.

Toyota website:

https://pressroom.toyota.com/toyota-adopts-the-north-american-charging-standard-to-expand-customer-charging-options/

Kansai Electric Power and JFE Steel begin joint study and investigation of CCS project

Kansai Electric Power and JFE Steel announced on October 19 that they have signed a memorandum of understanding regarding joint consideration and investigation of costs and technical requirements for CCS projects. Based on the memorandum, the two companies will collect, liquefy, and store CO2 emitted by Kansai Electric Power's thermal power plants and JFE's steel plants, and then transport it by ship to storage sites such as depleted oil and gas fields and aquifers in Japan and overseas. They will jointly consider and investigate projects involving underground storage.

Through this initiative, they will sort out various issues related to the technology and cost required for CCS projects, evaluate the feasibility of the project, and accelerate consideration toward realizing a carbon-neutral society. The two companies will consider concretely technical requirements and costs related to CO2 capture, liquefaction, temporary storage, and loading at thermal power plants, as well as technical requirements related to CO2 transportation by ship and underground storage.

JFE Steel Corporation website (in Japanese):
https://www.jfe-steel.co.jp/release/2023/10/231019.html

Toyota unveils Lexus EV with a cruising range of 1,000 km, scheduled to be launched in 2026

On October 25, Toyota Motor Corporation unveiled the world's first prototype of the E), which is scheduled to be released in 2026. The EV prototype car from the luxury car brand Lexus has a cruising range of approximately 1,000 km, and is also equipped with its own in-vehicle operating system (OS), Aline. It was unveiled to the press ahead of the opening of the Japan Mobility Show on October 26.

The Lexus prototype car is a sedan type car that uses conventional lithium-ion batteries with higher energy density and can travel 1,000 km on a single 20-

minute charge. It is equipped with a new EV-specific platform (chassis) and uses the "Gigacast" technology, which is integrally molded with aluminum casting. It is also designed to be equipped with all-solid-state batteries, which are expected to be put into practical use as early as 2027. In addition to Lexus vehicles, prototype EV vehicles such as Toyota brand SUV and sports vehicle types were also unveiled for the first time.

Toyota website:
https://global.toyota/en/newsroom/lexus/39888392.html

INPEX and Osaka Gas launch one of the world's largest methanation projects

On October 24, INPEX and Osaka Gas announced that the construction of test facilities for the world's largest methanation-based CO2 emission reduction and effective utilization technology development project has almost been completed, and the main construction of the plant has begun. Trial runs and start of operation are scheduled for some time in 2025.

The test facility will use CO2 recovered within the INPEX plant to produce synthetic methane, which will be supplied to customers using INPEX's city gas pipeline. Since 2017, INPEX has been developing basic CO2 methanation technology with a synthetic methane production capacity of 8Nm3-CO2/h. In this initiative, it will be in charge of overall project coordination, commercialization considerations, equipment construction, and will be in charge of operating the plant once it is completed.

Osaka Gas will provide its engineering capabilities, including catalyst technology that enables energy-saving production of synthetic methane and design know-how for scale-up, to design test equipment and optimize processes. The test facility is expected to produce 400Nm3-CO2/h, which is equivalent to the power needed by 10,000 households, making it one of the largest in the world.

INPEX website:
https://www.inpex.co.jp/english/news/assets/pdf/20231024.pdf

Mitsubishi Motors announces withdrawal from China

Mitsubishi Motors announced on October 24 that it will withdraw from automobile production in China. With the rapid shift to electric vehicles (EVs), the market share of local cars has increased, and Japanese cars are no longer able to survive on their strengths of quality and fuel efficiency alone. Due to the withdrawal, a loss of JP¥ 24.3 billion will be recorded in the fiscal year ending March 2024. This has been factored into the full-year earnings forecast, and there are no revisions to the forecast.

GAC Group invested 50% in GAC Mitsubishi, Mitsubishi Motors owns 30%, and Mitsubishi Corporation invested rest 20%. The joint venture will continue, but Mitsubishi Motors and Mitsubishi Corporation will withdraw their investments. The company plans to continue servicing the cars it currently sells in China. Japanese cars have continued to be inferior in China since the beginning of 2023. This is due to the rapid spread of EVs in China and the increasing brand power of local companies. According to the China Automobile Manufacturers Association, EV sales in 2022 were 5.36 million units, an 80% increase from 2021, and EVs accounted for 20% of new car sales.

In the 2000s, major Japanese automobile companies set up joint ventures with Chinese companies, expanded into local production of passenger cars one after another, and increased production scale. Therefore, if the struggles faced by automakers spread to parts and materials, there is a risk of destabilizing the automobile supply chain.

MITSUBISHI MOTORS CORPORATION website:
https://www.mitsubishi-motors.com/content/dam/com/ir_en/pdf/irtop/2023/20231024-01.pdf

Other topics

2.18 million foreigners visited Japan in September, approaching the pre-COVID-19

The Japan National Tourism Organization (JNTO) and Japan Tourism Agency (JTA) announced on October 18 that the number of foreign visitors to Japan in September was 2,184,300 (estimated). It was down 3.9% compared to the

same month in 2019, and has recovered to a level approaching the performance before the outbreak of the COVID-19. In addition, the amount of money spent domestically by foreigners who visited Japan in the three months up to September this year was approximately JP¥ 1.39 trillion, the highest amount on record for three months, exceeding the amount before the coronavirus outbreak. have become.

This is thought to be due to the rapid recovery in the number of foreigners visiting Japan and the recent depreciation of the yen, with the average consumption per person being JP¥ 211,000. By country and region, the consumption amount increased by 2.18 times compared to the same period in 2019 is the Philippines, 2.09 times is South Korea, and 2 times is Singapore. On the other hand, although the ban on group travel in China was lifted in August this year, the number is 40% lower than the same period in 2019, and the slow recovery is noticeable. The consumption amount by foreigners from January to September this year was approximately JP¥ 3.6 trillion, and the focus will be on whether this will exceed the government's annual target of JP¥ 5 trillion.

Japan National Tourism Organization website (in Japanese):
https://www.jnto.go.jp/news/20231018_1500_monthly.pdf

Japan Tourism Agency website (in Japanese):
https://www.mlit.go.jp/kankocho/siryou/toukei/content/001634982.pdf