

JAPANESE INDUSTRY AND POLICY NEWS

February, 2022

Legislation and Policy News

- Trade insurance covers losses due to COVID-19

Survey and Business Data

- The death toll in 2021 was 1.45 million, the highest number since World War II, and the lowest number of births
- October-December GDP, real annual increase of 5.4%, positive growth for the first time in 2 quarters
- Analysis by a British think tank "Ammonia co-firing and CCS are not solutions to decarbonization" for Japan

Company & Organization News

- Developed the world's first solid-state LiDAR for autonomous driving without any moving parts
- JERA, procure fuel ammonia through international competitive bidding, 500,000 tons per year
- Itochu supplies NESTE's alternative aviation fuel exclusively in Japan at Haneda and Narita
- Sumitomo Forestry develops wooden environment-friendly office in the UK, "Net Zero" for 60 years
- The world's first chemical tanker to transport and deliver the hydrogen carrier "MCH"
- Succeeded in the world's longest unmanned operation demonstration experiment using a large car ferry
- MOL, Mitsubishi Shipbuilding and Kansai Electric Power decarbonize ships with ammonia



Other topics

- China revised the list of the cross-border EC import product, added 29 customs items
- JOGMEC participates in Australian CCS business to build an international lignite hydrogen value chain
- Full-scale start of effective use of drifting plastic in Tsushima City
- Hyundai Motor re-enters Japan for the first time in 12 years, EV sales expansion with car share

Legislation and Policy News

Trade insurance covers losses due to COVID-19

On February 18, the Japanese government passed a bill to amend the Trade Insurance Law to review the trade insurance that covers the additional burden caused by the overseas business of companies so that it can deal with the COVID-19 infection. When the overseas business is forced to be suspended due to COVID-19 infection or a natural disaster, the additional expenses incurred by the company will be added to the insurance payment target. A bill to amend the Trade Insurance Law will be submitted to the Diet, with the aim of enacting it by the end of 2022.

Under current law, insurance payments are limited to cases of loss caused by war, revolution, or civil war. The amendment will allow infrastructure exporters to compensate for additional burdens such as employee evacuation costs if local construction work cannot be continued due to infectious diseases such as COVID-19 or natural disasters.

In some cases, the lockdown caused by the spread of COVID-19 infection made it difficult to procure locally and secure human resources, which caused a huge burden on companies. The government will review the situation so that it can compensate for infectious diseases and natural disasters, and create an environment where Japanese companies can stably develop the business overseas.

In addition, even if a Japanese company reinvests through an overseas subsidiary and there is a loss in a third-country company, the damage will be covered by insurance. Under the current law, insurance money can only be paid for losses incurred by direct investment destinations. An increasing number of companies are building supply chains over a wide area, making it possible to reduce the risk of disruption in parts supply.

The business of Nippon Export and Investment Insurance (NEXI), which is wholly owned by the government responsible for managing trade insurance in Japan, will also be reviewed to enable investment in overseas financial institutions to support the establishment of joint ventures with local companies.

METI website (in Japanese):

<https://www.meti.go.jp/press/2021/02/20220218004/20220218004.html>

Survey and Business Data

The death toll in 2021 was 1.45 million, the highest number since World War II, and the lowest number of births

On February 25, the Ministry of Health, Labor and Welfare released preliminary figures for vital statistics. The death toll in 2021 was 1,452,289, an increase of 67,745 over the previous year. The death toll has increased for the first time in two years, the highest number since the World War II. On the other hand, the number of births was 842,897, the lowest since the start of statistics in 1899.

The number of deaths continues to increase as the population ages, but in 2020 when the global pandemic of the COVID-19 began, it decreased for the first time in 11 years due to caution against the COVID-19 and infection control measures. In 2021, the increase was the largest in the last 10 years from the reaction of the previous year. The cause of death, which has been announced in the cumulative total from January to September 2021, has increased the most from the same period of the previous year due to senility, an increase of 15,035. The death toll of the COVID-19 has also increased by 14,563. According to the breaking news this time, the "natural decrease", which is the number of deaths minus the number of births, was 609,392, the largest decrease ever.

Although the number of births continued to decline, it remained in the 800,000 range. It has been pointed out that the number of pregnancy notifications submitted by pregnant women to municipalities in 2020 will be lower than in the previous year, and the number of births in 2021 may fall below 800,000.

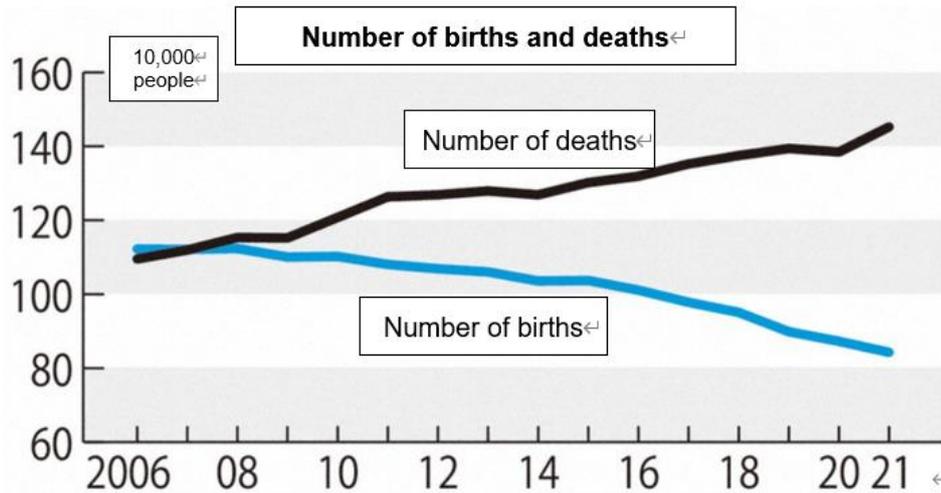
The number of marriages was 514,242, a decrease of 23,341 from the previous year, the lowest since World War II. The number of divorces was 187,854, a decrease of 8,787 from the previous year.

The preliminary figures of vital statistics include the number of foreigners living

in Japan and Japanese expatriates, and the final figures announced in September every year are only for Japanese living in Japan.

MHLW website (in Japanese):

<https://www.mhlw.go.jp/toukei/saikin/hw/jinkou/geppo/s2021/dl/202112.pdf>



Data source: MHLW

October-December GDP, real annual increase of 5.4%, positive growth for the first time in 2 quarters

The preliminary gross domestic product (GDP) for the October-December period of 2021 announced by the Cabinet Office on February 15 is a real seasonally adjusted value excluding the effects of price fluctuations, up 1.3% from the previous quarter and 5.4% on an annualized basis. It was the first positive in two quarters. With the cancellation of the state of emergency for measures against the COVID-19, personal consumption and capital investment recovered, pushing up the whole. It increased by 1.7% for the full year of 2021, the first positive growth in three years.

The October-December period is the time when the infection of the COVID-19 has subsided and the state of emergency issued to Tokyo and other areas has been lifted until the end of September. Looking at the factors that increased by 1.3% from the previous quarter, domestic demand increased by 1.1 points and external demand increased by 0.2 points.

Private consumption, which accounts for more than half of GDP, increased by 2.7% from the previous quarter, marking the first positive increase in two quarters. With the cancellation of the state of emergency, the number of people has returned, and there are no restrictions on the shortened business hours of restaurants or the provision of alcoholic beverages. Consumption of services such as eating out and lodging recovered by 3.5%. Durable goods such as automobiles increased by 9.7%, and semi-durable goods such as clothing also increased by 6.0%.

Capital investment, another pillar of domestic demand, rose 0.4%, the first increase in two quarters. In the previous term, it was negative due to the delay in business negotiations between companies under the declaration of emergency and the delay in parts supply due to the spread of infection in Southeast Asia, but it picked up in the October-December quarter. Housing investment was down 0.9%.

As for external demand, exports increased by 1.0% and turned positive for the first time in two quarters. The decrease in automobile production due to the shortage of semiconductors that occurred in the previous term was eased, and the number of automobiles increased. Exports of semiconductor manufacturing equipment have also increased. Imports decreased by 0.3% due to a decrease in vaccines.

Looking at the factors behind the year-on-year increase for the full year of 2021, which is the second year of the COVID-19, domestic demand increased by 0.7 points and external demand increased by 1.0 points. Private consumption increased by 1.4% and exports increased by 11.6%, both of which turned from negative to positive in the previous year, pushing up the whole.

Since the beginning of 2022, the infection of the mutant "Omicron type" has spread rapidly. Since January, the government has applied priority measures such as prevention of spread to multiple local governments, and it is expected that the domestic economy will slow down again.

Cabinet office website:



https://www.esri.cao.go.jp/jp/sna/data/data_list/sokuhou/gaiyou/pdf/main_1e.pdf

GDP 2021 of Japan (in real terms)

項目	年・期	(2015暦年連鎖価格：単位：%)					(Chained (2015) yen : %)		
		2020	2021					2021	
		10~12	1~3	4~6	7~9	10~12	10~12		
国内総生産 (GDP)		1.8	-0.5	0.6	-0.7	1.3	***	5.4	Gross Domestic Product
国内需要		1.1	-0.4	0.7	-0.8	1.1	***	4.6	Domestic Demand
		(1.1)	(-0.4)	(0.7)	(-0.8)	***	(1.1)	***	
民間需要		1.1	-0.3	1.0	-1.2	1.9	(1.3)	7.6	Private Demand
民間最終消費支出		1.6	-0.8	0.7	-0.9	2.7	(1.4)	11.2	Private Consumption
家計最終消費支出		1.5	-0.8	0.7	-1.0	2.8	(1.4)	11.5	Consumption of Households
除く持ち家の帰属家賃		1.8	-1.0	0.9	-1.2	3.3	(1.4)	13.9	Excluding Imputed Rent
民間住宅		-0.1	0.9	1.0	-1.6	-0.9	(-0.0)	-3.7	Private Residential Investment
民間企業設備		1.2	0.4	2.0	-2.4	0.4	(0.1)	1.6	Private Non-Res. Investment
民間在庫変動		(-0.2)	(0.1)	(0.0)	(0.1)	***	(-0.1)	***	Change in Private Inventories
公的需要		0.9	-0.8	-0.1	0.2	-0.9	(-0.2)	-3.4	Public Demand
政府最終消費支出		0.8	-0.6	0.7	1.1	-0.3	(-0.1)	-1.3	Government Consumption
公的固定資本形成		2.0	-1.6	-3.3	-3.0	-3.3	(-0.2)	-12.4	Public Investment
公的在庫変動		(-0.0)	(0.0)	(0.0)	(-0.0)	***	(0.0)	***	Change in Public Inventories
(再掲)総固定資本形成 ※3		1.2	-0.0	0.6	-2.4	-0.6	(-0.1)	-2.3	(Regrouped) Gross Fixed Capital Formation ※3
財貨・サービスの純輸出 ※4		(0.8)	(-0.1)	(-0.1)	(0.1)	***	(0.2)	***	Net Exports of Goods & Services ※4
財貨・サービスの輸出		10.7	2.2	3.1	-0.3	1.0	(0.2)	3.9	Exports of Goods & Services
(控除)財貨・サービスの輸入		5.5	3.0	3.8	-0.9	-0.3	(0.0)	-1.1	(Less) Imports of Goods & Services

Table from Cabinet office website

Analysis by a British think tank "Ammonia co-firing and CCS are not solutions to decarbonization" for Japan

On February 14, the UK's emerging think tank "Transition Zero," established in 2020, released a report (in Japanese and English) on Japan's coal-fired power generation policy. The effects of reducing carbon dioxide emissions by ammonia co-firing, coal-based integrated coal gasification combined cycle (IGCC), and carbon capture and storage (CCS) technologies promoted in Japan are small and costly compared to renewable energy. It concludes that it is not an appropriate solution for decarbonization.

The report notes that these technologies will increase Japan's energy cost burden and jeopardize the achievement of decarbonization and security priorities and the Net Zero target. It then recommends shifting the strategy to investing in offshore wind, which "has considerable potential economic power."

Currently, as part of achieving the Net Zero target, Japanese policy makers and

electric power companies are widely promoting ammonia co-firing, coal-based IGCC, and CCS as important emission reduction measures. The technology reports that on average carbon intensity is more than five times higher (excluding CCS) than the International Energy Agency's (IEA) 2030 Net Zero Emissions Scenario (NZE).

In addition, there is almost no effect of reducing emissions by co-firing ammonia, which is an exorbitant cost for the electric power sector. Ammonia co-firing has been regarded as the most important emission reduction technology for the Japanese electric power industry, but in the analysis of the think tank, gray ammonia, which is the cheapest raw material that uses natural gas as a supply material, is now four times that of fuel coal cost.

With green ammonia produced using renewable energy (the cost is 15 times higher than coal), the cost difference is even wider. Due to the lack of cheap gas as a source of supply, domestically produced ammonia will be extremely expensive, forcing Japanese power companies to rely on cheap imports from overseas.

According to the report, at a co-firing rate of 20%, which is technically feasible at this time, the emission factor of ammonia co-firing will be almost double as of the combined cycle power plant (CCGT). (Replacement or reduction measures must be taken by 2035 to meet the IEA's NZE).

At a co-firing rate of 50%, which is higher than that, the amount of emissions per unit power generation is close to the amount of gas power generation. So it concludes that it is not an appropriate solution. CCS has the lowest emission factor of any clean coal technology, but given Japan's limited storage capacity, CCS is not a sustainable solution for maintaining coal in energy mixes. Capacity may run out in 10 years.

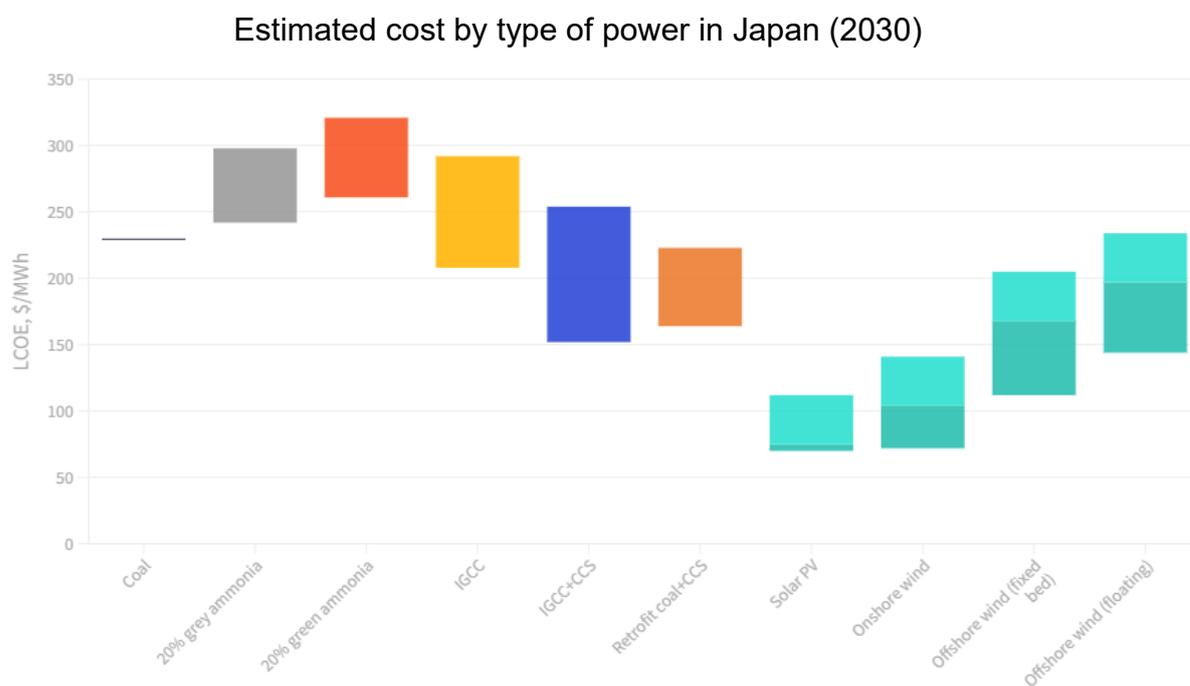
On the other hand, coal-based integrated coal gasification combined cycle (IGCC) has little benefit and is cited as an example of a "failed experiment" in the report. In past projects, costs often doubled as expected, and not only is the technology expensive, but the technology alone has little emission reduction effect and should be used in conjunction with CCS. Although several attempts

have been made so far, the IGCC plant that has introduced with CCS has not yet been in operation.

The report points out that renewables such as solar and onshore wind will be a more cost-competitive way for Japan to reach its Net Zero goal (this trend will continue with carbon pricing). By 2030, solar and offshore wind plus battery storage will outpace all clean coal and coal-fired without CCS measures, and investment in offshore wind will have "significant potential economic power."

TransitionZero website:

<https://www.transitionzero.org/reports/advanced-coal-in-japan>



From TransitionZero website

Company & Organization News

Developed the world's first solid-state LiDAR for autonomous driving without any moving parts

With the support of NEDO, SteraVision has been working on "development of long-distance, wide viewing angle, high resolution, in-vehicle LiDAR" for the

realization of an autonomous driving system from December 2019. And this time, It has have developed a solid-state LiDAR with improved mass productivity by eliminating all moving parts of the scanner (MultiPol®). It is the first time in the world. NEDO announced it February 21.

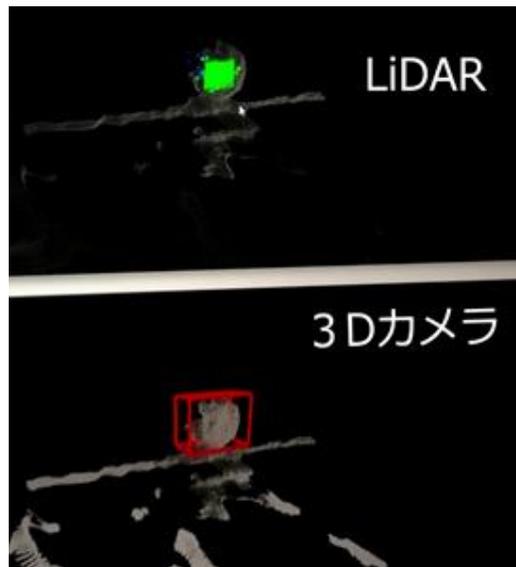
The developed solid-state LiDAR makes it possible to scan the direction of the light beam by adding a digital signal, solving the reliability problem pointed out by the conventional method of moving the light beam with a motor or the like. Furthermore, by combining a scanner (MultiPol®) and FMCW, an optical coherent technology, it is possible to see the so-called “fog tip” such as distant places, dense fog, and smoke that cannot be seen with the naked eye, and at the same time detect the speed.

In addition, by using this LiDAR and linking it with the recognition technology for autonomous vehicles (Perception AI) that is fused with the camera, it will focus on scanning the "fog tip" that is difficult to detect with the camera alone, and "where you want to see". It has realized a visual system with a function similar to that of the human eye, which allows you to see as much as you need.

In the future, the company plans to promote energy saving associated with predictive driving with the aim of applying it to many fields such as Level 4 and Level 5 autonomous driving, factory automation (FA), robotics systems, and security.

NEDO website (in Japanese):

https://www.nedo.go.jp/news/press/AA5_101518.html



By fusing the object detection by LiDAR (upper figure) with the 3D camera image (lower figure), recognized by perception AI (red frame in the figure below) from NEDO website

JERA, procure fuel ammonia through international competitive bidding, 500,000 tons per year

JERA announced on February 18 that it will hold an international competitive bidding for the procurement of fuel ammonia. On the same day, a request for proposal describing the bidding conditions was sent to about 30 companies.

The buyer is JERA, the supply period is a long-term contract from 2027 to the 2040s, the quantity is up to 500,000 tons / year, and the delivery condition is FOB (Free on Board) by the buyer at the port. In addition, as a general rule, CO₂ is not generated during the production of ammonia, or it is recovered and stored / JERA has an opportunity to participate in the production project. JERA will evaluate the proposals, select multiple companies by around May, and proceed with specific discussions.

JERA is working on a demonstration project for the use of fuel ammonia at the Hekinan Thermal Power Station in order to reduce CO₂ emissions from thermal power generation. In the latter half of the 2020s, it aims to convert 20% of its fuel to ammonia at Unit 4. In response to the steady progress of the demonstration project, it was decided to consider the procurement source of

fuel ammonia at the same time.

By 2024, it will develop a new burner capable of co-firing 50% or more of ammonia, and consider the specifications of equipment such as boilers. Based on the results, it will be decided whether or not the burner can be installed at the Hekinan Thermal Power Station. When implementing it, it plans to start co-firing with 50% or more of ammonia on the actual machine by 2028.

JERA is one of the world's largest thermal power generation companies invested by the Tokyo Electric Power Group and Chubu Electric Power and has set out to take on the challenge of virtually zero CO2 emissions from domestic and overseas businesses in 2050 as of October 2021.

JERA website:

https://www.jera.co.jp/english/information/20220218_853

Main conditions

Buyer	JERA
Supply period	Long-term contract from FY 2027 into the 2040s
Quantity	Up to 500,000 tons per year
Delivery mode	FOB
Other	<ul style="list-style-type: none"> • As a rule, CO₂ is either not generated during ammonia production or is captured and stored. • JERA has the opportunity to participate in production projects

From JERA website

Itochu supplies NESTE's alternative aviation fuel exclusively in Japan at Haneda and Narita

On February 16, ITOCHU and NESTE (Finland) Group, one of the world's largest renewable fuel manufacturers, announced that they signed an exclusive sales agreement for Japan with sustainable petroleum alternative aviation fuel (SAF) manufactured by NESTE. They start supplying SAF based on the contract at Haneda and Narita International Airport. They aim to contribute to the realization of decarbonization in the aviation industry by strategically securing SAFs that are expected to be in short supply worldwide and providing stable supply to domestic and overseas airlines operating in Japan.

In 2020, ITOCHU and NESTE will jointly procure commercial-scale SAF from NESTE and build a supply chain from import, quality control, and delivery to the airport. They have realized the supply of SAF on a commercial flight scale, which is the first in Japan. This contract expands the partnership between ITOCHU and NESTE.

In December 2021, the Japanese government compiled a process chart for decarbonization in the aviation field, and announced a numerical target of "replace 10% of aviation fuel consumption by Japanese airlines with SAF by 2030". In order to achieve that goal, it is necessary to accelerate the SAF production business in Japan and at the same time make the best use of SAF that has already been proven in Europe and the United States.

NESTE manufactures SAF and renewable diesel made from waste cooking oil and animal oil, which have no food competition. It also manufactures "biomass naphtha," which is a raw material for plastics and other raw materials, using vegetable oil waste and residual oil as raw materials.

ITOCHU website:

<https://www.itochu.co.jp/en/news/press/2022/220216.html>



Thorsten Lange, Executive Vice President of Renewable Aviation at Neste and
Mr. Tatsuya Tanaka, Managing Director of ITOCHU Petroleum (Singapore)
from NESTE website

Sumitomo Forestry develops wooden environment-friendly office in the UK, "Net Zero" for 60 years

Sumitomo Forestry announced on February 14 that it will establish a joint venture with British real estate developer Bywater Properties to participate in a six-story wooden environment-friendly office development project in London. It is expected to be carbon negative when the building is completed, and even if the carbon emissions when using the building are added, it will realize net zero carbon for about 60 years. The total project cost is about £48 million (about JP¥ 7,488 million) aiming for completion in 2024.

This business reduces carbon emissions (embodied carbon) during building construction (processes such as procurement, manufacturing, construction, and demolition of raw materials for building materials) by about 80% compared to general reinforced concrete construction in the UK. At the same time, the amount of carbon fixation in the wood is offset. As a result, it is an advanced initiative that will be a trial calculation of carbon negative at the time of completion.

Furthermore, by making the building energy-saving and energy-creating specifications and combining it with the use of renewable energy, it is expected that net zero carbon will be realized for about 60 years even if carbon emissions (operational carbon) when using the building are added. Specifically, they are planning to improve energy-saving performance by using outer walls with high heat-shielding performance and blinds to prevent solar radiation, in-house power generation by rooftop solar power generation equipment, and reuse of power generated when the elevator decelerates.

The carbon calculation complies with the UK Building Environmental Performance Evaluation Standard (BS EN15978 /. UK national standard defined based on the European unified standard). Wood from the building's lifetime carbon emissions, provided that the design is such that the wood can be reused even after the building is dismantled, and that the wood used is procured from sustainable forests (FSC certified materials, PEFC certified materials, etc.). It is possible to deduct the amount of carbon fixed.

This idea also applies to carbon emissions in the Royal Institution of Charters

(RICS) and the Royal Institution of Chartered Surveyors (UKGBC), an international association of appraisers in the field of land, real estate and buildings established in the United Kingdom. It is permitted on condition that the amount of carbon fixation is displayed individually.

The company is working on the development of medium- and large-scale overseas wooden structures aiming at the realization of net zero carbon toward the realization of a carbon-free society. In October 2021, it announced its participation in a 15-story wooden office development project in Melbourne, Australia, and this project is the second one. This is the first time that the company has entered Europe in the housing and real estate business.

Bywater properties website:

<https://paradise11.co.uk/>



Project image in London from Sumitomo Forestry website

The world's first chemical tanker to transport and deliver the hydrogen carrier "MCH"

On February 8, Chiyoda Corporation announced it was the first in the world to transport and deliver hydrogen in the form of methylcyclohexane (MCH) by a chemical tanker as the Next Generation Hydrogen Energy Chain Technology Research Union, in which the company participates as a member company.

The union will be responsible for producing and supplying MCH from toluene and hydrogen in Brunei Darussalam in a demonstration project promoted by ENEOS. This time, it arranged an existing chemical tanker (DWT: 10,000 ton class mixed

loading), and on February 4, used the existing receiving equipment of the ENEOS refinery and delivered.

The MCH was manufactured in Brunei and transported to Singapore's port of transit, where it was stored in an existing outdoor storage tank for several months before being loaded into a chemical tanker at the port. The MCH received at the refinery will be put into an oil refinery that has a dehydrogenation function, and the impact on the operation of the equipment will be confirmed and the usable amount of MCH will be examined. The union will continue to increase the production of MCH in Brunei and supply MCH to ENEOS by chemical tanker.

By achieving this milestone, Chiyoda Corporation has demonstrated that MCH's greatest features are safe long-term storage and mass transportation of hydrogen, and at the same time, new capital investment doesn't need by utilizing existing equipment in the hydrogen supply chain.

Chiyoda Corporation website:

https://www.chiyodacorp.com/media/20220208_E_R1.pdf

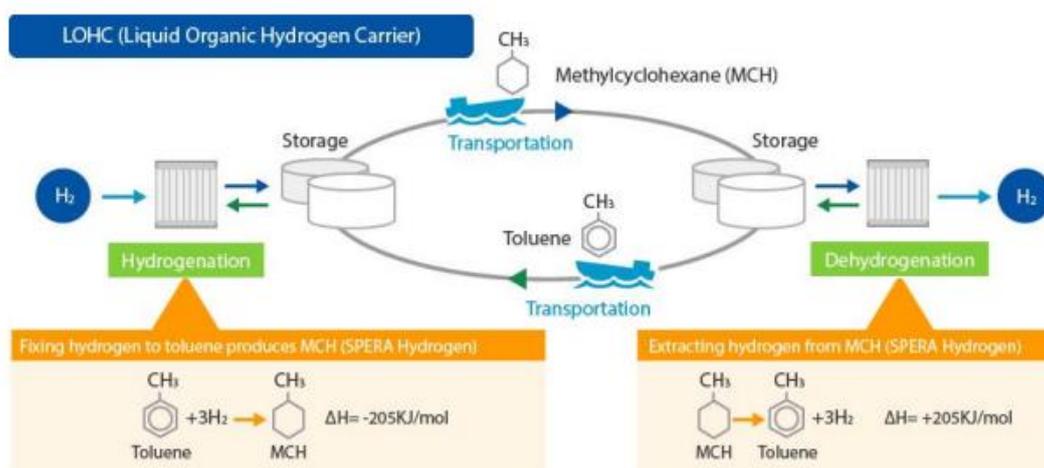


Image from Chiyoda Corporation website



Succeeded in the world's longest unmanned operation demonstration experiment using a large car ferry

MOL announced on February 7 that MOL's two companies and consortium companies succeeded in an unmanned operation demonstration experiment using a large commercial domestic car ferry from Tomakomai Port in Hokkaido to Oarai Port in Ibaraki Prefecture from February 6 to 7.

This demonstration experiment was conducted on the actual commercial voyage route of the large domestic car ferry "Sunflower Shiretoko", and it is the longest unmanned operation in the world, about 750 km, and straddles day and night, 18 hours. It was confirmed that the development elements "automatic takeoff and landing technology", "automatic avoidance system" and "target visual recognition image processing / distance measurement technology" function normally even in such a long voyage.

Since the project started in 2020, this consortium has been engaged in verification experiments of various elemental technologies toward the realization of unmanned vessels. They also succeeded in the demonstration experiment on January 24 to 25, 2022 with the domestic container ship.

The configuration system used for unmanned operation in these two tests has the same specifications, and following the success of this demonstration, it is suggested that unmanned operation technology can be introduced to all ships by installing the necessary equipment.

At the moment, there are issues such as improving sensing technology and making the avoidance route closer to the crew's feeling, but MOL explains that by combining the knowledge gained through activities for the realization of unmanned vessels and AI technology, it's possible to solve these issues and it will strengthen safe operation and reduce the labor burden on seafarers.

MOL website:

<https://www.mol.co.jp/en/pr/2022/22017.html>



The *Sunflower Shiretoko*, the large coastal car ferry used for the trial of autonomous sailing from MOL website

MOL, Mitsubishi Shipbuilding and Kansai Electric Power decarbonize ships with ammonia

MOL and Mitsubishi Shipbuilding announced on February 3 that they have completed a ship-type concept study that will become the mainstream in the future for the "floating ammonia storage and regasification facility (ammonia

FSRU)" that accepts and stores ammonia at sea.

On the same day, MOL, Mitsubishi Shipbuilding, and Kansai Electric Power agreed to jointly study the introduction of ammonia FSRU to expand the use of ammonia as decarbonized energy, and signed a memorandum of understanding. In the future, the three companies will proceed with the evaluation of ammonia potential and the basic design of peripheral equipment for the introduction of ammonia FSRU around the world.

Ammonia FSRU (Ammonia Floating Storage and Regasification Unit) receives and stores ammonia transported as a liquid from the production area by a carrier directly at sea, warms the ammonia according to demand, regasifies it, and sends it to the onshore pipeline. As to the offshore floating equipment, compared to the case of constructing a storage tank or regasification equipment on land, there is generally an advantage that the construction period is short and the cost is low.

FSRU has traditionally been used as a floating facility that accepts liquefied LNG at sea and stores, stores, and regasifies it. By applying this technology to ammonia and utilizing ammonia FSRU as an alternative to onshore equipment, it is expected to contribute to the early and stable supply of fuel ammonia.

Currently, ammonia is mainly used as a fertilizer raw material and the amount of sea transportation is limited, but future demand is expected to increase as a next-generation clean energy that does not emit CO₂. In the global decarbonization trend, the movement to strategically utilize ammonia is increasing mainly in Asia.

Mitsubishi Shipbuilding of the Mitsubishi Heavy Industries Group is aiming to realize the world's first ammonia FSRU in the future by making use of the deep knowledge about ammonia handling technology cultivated in the construction of transport vessels so far. MOL has set a medium- to long-term goal of "achieving net zero emissions for the entire group by 2050," and is working on the development of ammonia fuel vessels, ammonia fuel supply vessels, and ammonia transportation business.

MOL website:

<https://www.mol.co.jp/en/pr/2022/22015.html>



Ammonia transport vessel on the left and ammonia FSRU on the right
From MOL website

Other topics

China revised the list of the cross-border EC import product, added 29 customs items

According to the report by the Japan External Trade Organization (JETRO) on February 22, Chinese government announced on February 21 that the revised list of the 2019 edition for the cross-border EC retail incentives will be eligible. That revised list (link below) will be applied from March 1. According to the announcement, this revision is based on the addition of the 29 customs items due to strong consumption demand in recent years, such as ski equipment, household dishwashers, and tomato juice. Also, it was adjusted the HS code for some products based on recent changes in customs rules. The existing cross-border EC retail import product list (2019 edition) has been in force since January 1, 2020, and No. of the lists is 1,413 customs items. The total number of customs items on the revised list will be increased by 63 to 1,476.

In addition to above mentioned products, 29 customs items include powdered mustard, human hair and synthetic fiber wigs, radios with watches, non-metal straps, video game controllers and golf clubs.

Regarding the revision of the list, the Institute of World Economics and Politics of the Chinese Academy of Social Sciences pointed out that it added products

to respond to the recent changes in consumer demand. In addition, the China Service Trade Association stated that the product categories will be enhanced for major cross-border e-commerce companies, and that there will be more space for small and medium-sized companies to enter the import business (Beijing Daily, February 21).

At a regular press conference on February 17, a spokesman for the Ministry of Commerce explained that China's cross-border EC trade value in 2021 increased by 15% from the previous year to CNY 1.98 trillion (about JP¥ 35.64 trillion, CNY 1= about JP¥ 18) and it has increased nearly 10 times in the past 5 years. In addition, as future efforts, it plans to facilitate the return and exchange of cross-border EC import / export products, formulate cross-border EC IP protection guidelines, and strengthen corporate development and brand building.

Revised list of cross-border EC in China (in Chinese)

<http://gss.mof.gov.cn/gzdt/zhengcefabu/202202/P020220221322524635155.pdf>

JOGMEC participates in Australian CCS business to build an international lignite hydrogen value chain

Japan Oil, Gas and Metals Mineral Resources Organization (JOGMEC) announced on January 21 that it will participate in the CCS (Carbon Capture and Storage) project "Carbon Net" planned in Victoria, Australia. It will contribute to the FEED (basic design) of the CCS project implemented by the Victorian Government and promote the commercialization of the project.

"Carbon Net" is a business to inject and store CO₂ in the pelican layer of the "Gippsland Basin" off the southeastern coast of Australia and in the Bass Strait. Stores 5 million tons of CO₂ annually for 25 years. CarbonNet's FEED is a project to capture and store CO₂ emitted during hydrogen production in the ground by utilizing the data accumulated by the state government for the commercialization of CCS. As a CCS business, it will be aiming for large-scale commercialization even from a global perspective.

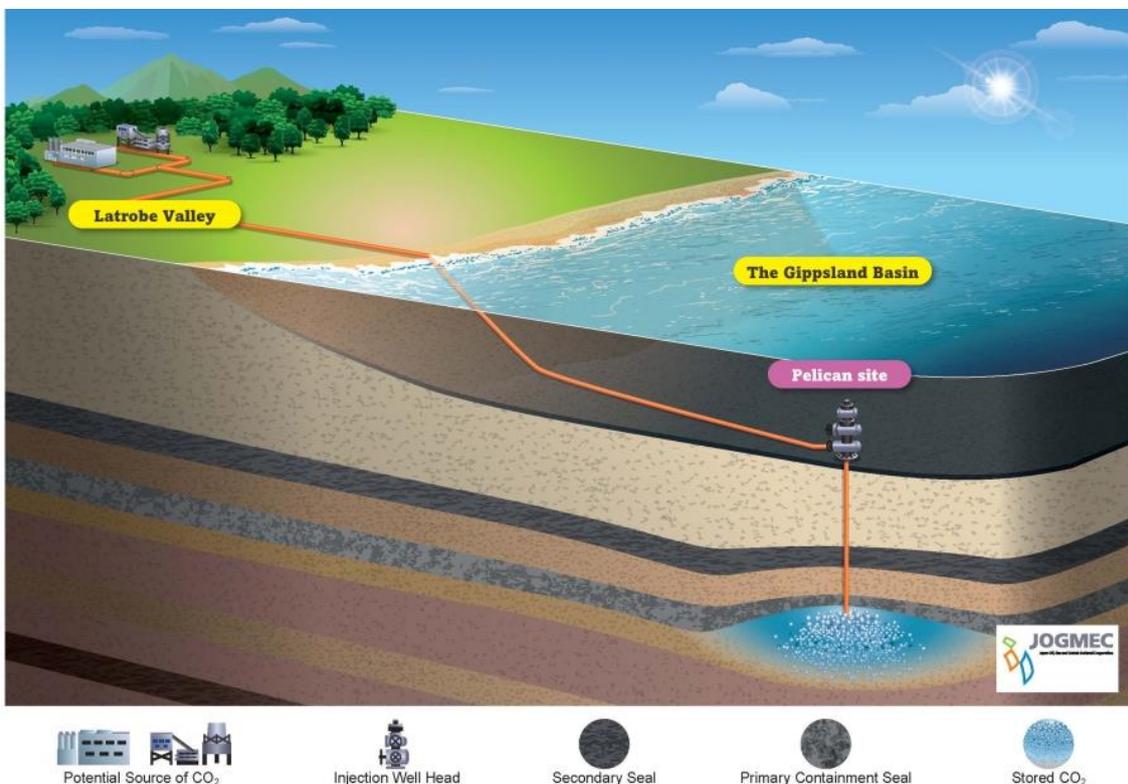
On January 20, JOGMEC signed a contract for participation with the state government. Participation in the CCS business will be carried out as part of the hydrogen production business using lignite, which has been jointly promoted by

Japan and Australia.

CO2 treatment is indispensable for the production of "blue hydrogen" made from fossil fuels. This time, the corporation will participate in the CCS project in response to the request of the state government. As a result, Japan and Australia will jointly realize the world's first international blue hydrogen value chain derived from lignite.

JOGMEC website:

https://www.jogmec.go.jp/english/news/release/news_01_00002.html



Conceptual diagram of the CCS (CarbonNet) project

CO2 will be transported by pipeline from onshore to the injection site in the sea, where CO2 will be injected at a rate of 5 million tons per year.

Full-scale start of effective use of drifting plastic in Tsushima City

Tsushima City, Nagasaki Prefecture is said to be one of the areas where marine plastics flow most in Japan because the coastline extends 915 km and is

located at the entrance where the Tsushima Current flows into the Sea of Japan.

Elcom, an environmental equipment manufacturer in Sapporo, Hokkaido, announced on February 8 that it has delivered a fuel system exclusively for hard plastics to Tsushima City. As a result, the city has become able to use the entire amount of stranded plastic, which accounts for about half of the stranded waste, as resources and energy on the island.

In February 2021, Tsushima City started fueling styrofoam drifting waste floats (with Elcom equipment). With the introduction of a new rigid plastic fuel system, it has become possible to recycle hard buoys and fishing gear that drift along the coast of the city.

The "e-PEP system" provided by the company is said to be the fuel for the resin boiler "Evol" of the system by simply crushing hard plastic to about 1 cm. The resin crusher "Kudakk" delivered this time is designed so that large hard buoys and pallets can be processed at once, and all loading and unloading are semi-automated lines for conveyor transportation.

Drifting plastic waste contains a lot of deposits such as sand and shells. Therefore, after crushing, impurities are removed through a quake, and only plastic fuel can be separated and stored. The processing capacity is said to be able to process 16 crushed chips per cubic m FIBC containing a hard buoy per hour.

In the future, the city plans to introduce the resin boiler "Evol", which is responsible for energizing the e-PEP system, with a budget from 2022 onward, and to complete the effective use of stranded plastic that has been fueled at hot bath facilities on the island.

According to a survey by an environmental conservation group in the city, the amount of debris collected in 2020 is about 135 cubic meters. Of these, about 61 cubic meters excluding natural objects such as driftwood are plastic, which amounts to about 716 tons in terms of weight. If the stranded plastic spills into



the sea again, it becomes microplastic and has a serious impact on the ecosystem in the nearby sea.

ELCOM website (in Japanese):

<https://www.elcom-jp.com/2022-0208>



Marine plastics washed ashore in Tsushima City from Elcom website



Converting hard drifting plastic into fuel chips from Elcom website

Hyundai Motor re-enters Japan for the first time in 12 years, EV sales expansion with car share

Hyundai Motor of the South Korea announced on February 8 that it will start selling electric vehicles (EVs) and fuel cell vehicles (FCVs) in Japan. It will re-land with a new sales model that will be experienced by car sharing and purchased online. In Japan, which is the third largest automobile market in the world after China and the United States, they will enhance the brand power and

lead to the expansion of global sales of electric vehicles. The company withdrew from passenger car sales in Japan in December 2009, and re-enters the market for the first time in about 12 years. They will not sell engine cars, but focus on the development of electric cars.

This time, two models of multipurpose sports vehicle (SUV) EV "Ioniq 5" and FCV "Nesso" will be released in the Japanese market. The price is JP¥ 4.79 million to JP¥ 5.89 million for Ioniq 5 and JP¥ 7.76 million for Nesso. If you are eligible for the subsidy, you can purchase Ioniq 5 from the low JP¥ 4 million range. Orders will start in May, and delivery is expected in July.

They do not have a dealer network and challenge to develop customers with a new sales method, but collaborated with DNA's car-sharing service "Anyca". They offer a test drive and an experience for the purchase.

All contract procedures for purchase are carried out online. A directly managed base will be opened in Yokohama this summer for consumers who wish to have face-to-face purchase consultations. The base will be in charge of services such as product display, maintenance, and car delivery, and plans to expand to major cities from 2023 onwards. The number of EVs sold in Japan is about 20,000 in 2021, which is less than 1% of new car sales and can be said to be a potential growth market.

PR Times website (In Japanese):

<https://prtimes.jp/main/html/rd/p/000000001.000095868.html>



Hyundai EV IONIQ 5 from its website