EU-Japan Centre for Industrial Cooperation
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JAPANESE INDUSTRY AND POLICY NEWS
November-December 2020

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Legislation and Policy News

The ratio of renewable energy over 50%, Government decides green growth strategy

On December 25, the government compiled a process chart to reduce global warming gas emissions to virtually zero by 2050. Assuming that electricity demand will increase by 30 to 50% due to the electrification of automobiles, etc., the ratio of renewable energy is expected to be tripled to 50 to 60%. With a decarbonization investment for growth, it is expected to have an economic effect of JP¥ 190 trillion in 2050. Total mobilization of policies including regulatory reform and technological innovation are indispensable for realization.

The process chart defines 14 priority areas such as offshore wind power and hydrogen, and summarizes issues and countermeasures. It also set goals for the household sector. The average emission of new homes and buildings will be zero by 2030. Vehicles will turn all new into electric vehicles in the mid-2030s. As a whole, the industry, transportation, and living sectors will move away from fossil fuels and become electrified. Therefore, the electric power sector as an energy source, will stop relying on coal-fired power and significantly increase the ratio of renewable energy.

Offshore wind power, which is currently rarely used in Japan, aims to introduce up to 45 million KW by 2040. It is equivalent to 45 nuclear power plants and will surpass Germany which is an advanced country for renewable energy. The wind turbine has a large number of parts and a wide base. But, at present, there is no manufacturing base for wind turbines in Japan. It has also set a goal of raising the domestic procurement rate to 60% in 2040 by the industrial development.

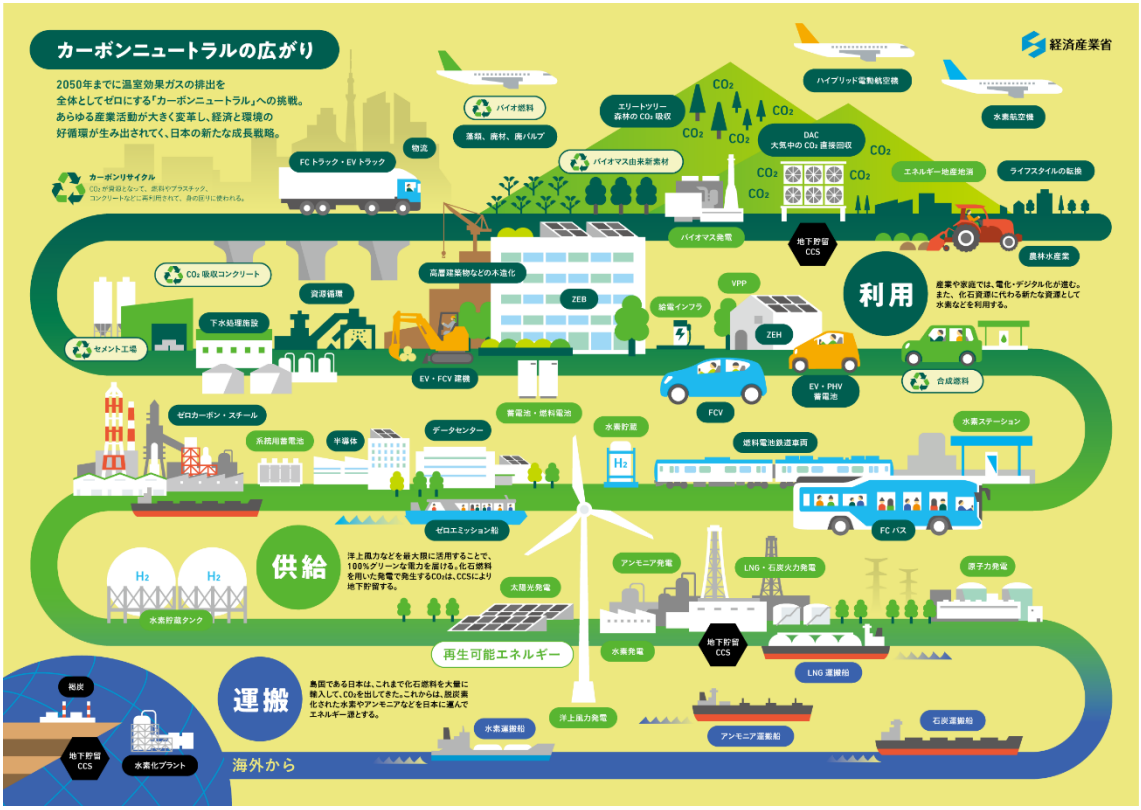
Hydrogen, which does not emit carbon dioxide (CO2) when burned, is targeted for consumption of about 20 million tons in 2050. It is expected to cover about 20% of the capacity of power generation. The point is the cost, which is several times that of natural gas, can be kept below the same level by expanding demand. Ammonia, which is the fuel for the transition to hydrogen, aims to be supplied at a price level lower than that of natural gas in 2030.

The biggest focus in the 14 fields is the vehicles. The goal of electrification includes micro vehicles, which may lose cost competitiveness. An automotive industry is a key industry in Japan, and structural transformation may take some time. Currently, vehicles are made up of about 30,000 to 50,000 parts, while EV parts are less than half. The number of direct and indirect employees in the automotive industry is said to be about 5 million, and the problem of electrification is particularly serious for small and medium-sized parts manufacturers who have relied on internal combustion engines.

There are some issues that could not be included in the process chart. Vehicles such as buses and trucks, which are difficult to electrify, the conclusion postponed until the summer of 2021. There are many other issues that need to be addressed, such as strengthening the power transmission infrastructure, which is a bottleneck for the spread of renewable energy.

METI website: https://www.meti.go.jp/press/2020/12/20201225012/20201225012.html
(in Japanese)

Image of the carbon neutral society from METI website



Up to JP¥ 800,000 subsidy, EV with “100% renewable energy procurement"

On December 22, the Ministry of Economy, Trade and Industry (METI) announced the outline of the subsidy to support of purchasing electric vehicles (EVs), plug-in hybrid vehicles (PHVs) and fuel cell vehicles (FCVs) with "charge / discharge equipment " and "external power supply with 100% renewable energy" as a set. It was included in the third supplementary budget for FY 2020.

This project is carried out in collaboration with the Ministry of the Environment (MOE). METI assists an individual (not applicable to corporations) who purchases "EV / PHV / FCV" with "charge / discharge equipment / external power supply". The maximum amount of subsidy is JP¥ 600,000 for EV, JP¥ 300,000 for PHV, and JP¥ 2.5 million for FCV. The equipment cost of the charging / discharging equipment is 1/2 subsidy (up to JP¥ 750,000), and the construction cost is a fixed amount subsidy with a maximum of JP¥ 400,000. The equipment cost of the external power supply is 1/3 subsidy (up to JP¥ 500,000).

MOE assists on the premise of "100% renewable energy procurement", individuals, private businesses (small and medium-sized enterprises), local public organizations, etc. who purchase "EV/ PHV / FCV". The maximum amount of subsidy is JP¥ 800,000 for EV, JP¥ 400,000 for PHV, and JP¥ 2.5 million for FCV. The equipment cost of charging / discharging equipment is 1/2 subsidy (up to JP¥ 750,000) (common to individuals and corporations), and the construction cost is a fixed amount subsidy, up to JP¥ 400,000 (individual) or up to JP¥ 950,000 (corporation, etc.). The equipment cost of the external power supply is 1/3 subsidy (up to JP¥ 500,000).

In addition, METI has been implementing the "clean energy vehicle introduction promotion subsidy" (when simply purchasing EVs, PHVs, FCVs) in FY 2020 and it continues the same subsidy for FY 2021. It was decided by the Cabinet on December 21.

METI Website: https://www.meti.go.jp/press/2020/12/20201222006/20201222006.html

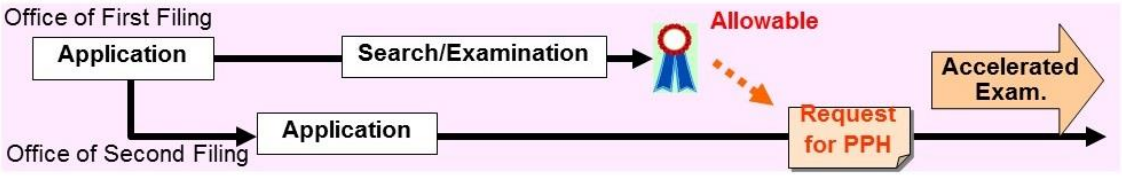
(in Japanese)

Image of power charging to EV from Nissan website

Japan to be France's first partner for patent prosecution highway program
On January 1, 2021, the Japan Patent Office (JPO) and the National Institute of Industrial Property (Institut national de la propriété industrielle; INPI) will commence the Patent Prosecution Highway (PPH) program. The JPO announced on November 27. The JPO is the first partner in the world with which France will operate the program. Using the PPH, applicants will be able to undergo an accelerated examination with a simplified procedure in France if their applications are determined to be patentable in Japan.

As the number of patent applications filed worldwide has been growing in line with economic globalization, the number of those filed by Japanese companies with overseas patent offices has also been increasing. To address this situation, the JPO has been promoting the PPH program*1 so as to enable applicants to acquire patent rights overseas promptly, secure quality protection of rights, and reduce examination workload.

*1 The PPH program enables an applicant whose application has been determined to be patentable by the Office of First Filing (OFF) to undergo an accelerated examination in the Office of Second Filing (OSF) with a simple procedure upon request of the applicant on the basis of bilateral office agreements.



Following the amendment to the Intellectual Property Code and the enhancement of the examination procedure in France based on the Action Plan for Business Growth and Transformation (Plan d'Action pour la Croissance et la Transformation des Entreprises; PACTE), the JPO and the INPI jointly stated the intent to launch the PPH pilot program on January 1, 2021. As the INPI has not operated a PPH program with any other patent office in the world, the JPO will be its first PPH partner.

The PPH will enable applicants whose applications have been determined to be patentable by the JPO to undergo an accelerated examination at the INPI with a simple procedure upon request of the applicants. With a number of Japanese companies investing in France, the launch of the PPH pilot program is expected to facilitate the business expansion of Japanese companies in France.

As a result of the agreement with the INPI, the JPO has entered into PPH programs with 45 countries and regions, having the largest number of PPH partners in the world. The JPO will continue to serve as the “hub office” in the PPH via which applicants who have acquired rights in Japan can also acquire rights in other countries and regions at an early stage.

METI website: https://www.meti.go.jp/english/press/2020/1127_002.html

15 RCEP countries sign agreement, about 30% of world population in huge free trade zone

RCEP = Regional Comprehensive Economic Partnership in East Asia was formally agreed at the summit of 15 countries including Japan, China, South Korea, and ASEAN countries on November 15, and the agreement was signed. In the Asia-Pacific region, a huge free trade zone will be created, which accounts for about 30% of the world's population and GDP.

Prime Minister Suga said, "Japan has consistently taken the initiative to expand

the free and fair economic zone and maintain and strengthen the multilateral free trade system. It will not only improve the market access, but also improve the rules for intellectual property and electronic commerce, promote local trade and investment, and promote the efficiency of the supply chain. "

About non participation in India this time, "We determined to continue to play a leading role in our future return to the agreement," he said. Regarding India, the declaration was put together by the minister in charge that 15 RCEP countries will accept participation after the agreement comes into effect and will start negotiations promptly upon request.

This agreement will create a huge free trade zone in the Asia-Pacific region, which accounts for about 30% of the world's population and GDP, exceeding the TPP = Trans-Pacific Partnership Agreement. For Japan, this will be the first EPA between China which is the largest trading partner and South Korea which is the third trading partner of Japan. And it makes the ratio increase from the current 50% to about 80% of countries / regions which tariff elimination or reduction is applied.

METI website: https://www.meti.go.jp/english/press/2020/1115_001.html

On line summit meeting of RCEP 15 countries from METI website

Survey and Business Data

Global production of eight passenger vehicle manufacturers of Japan down 9% in November

According to the press release of each OEM on Dec.25, the global production in

November 2019, compiled by eight passenger vehicle companies, was 2.35 million units, down 9% from the same period of the previous year. Negative for 4 consecutive months. Seven companies, including Toyota, Nissan and Honda, fell below the previous year's results. Production bases in Asia, such as the Association of Southeast Asian Nations (ASEAN), were sluggish.

The total domestic production of the eight companies was down 9%. Negative for 4 consecutive months. The reactionary decline due to the consumption tax increase was difficult to read, and the November results were drawing attention. However, compared to October (down 11.9%), the negative range has narrowed. By manufacturer, Honda fell 39% and Nissan fell 18%. In addition to the decrease in sales due to the tax increase, Honda's problem of defective parts in micro car was a drag.

Overseas production decreased by 8% to 1.58 million units. It was negative for the second straight month. The stalls in Asian countries such as India and Indonesia are affected. Mitsubishi Motors was down 21% and Nissan was down 13%. US production decreased 14% to 270,000 units. The market for heavy-duty vehicles such as SUVs and pickup trucks is strong, but the sedan market continues to shrink.

Production, export & sales of 8 passenger vehicle manufactures of Japan (Nov.,2020)

	Domestic production	Overseas production	Export	Domestic sales
Toyota	275,440 -4.4	498,111 -2.4	173,062 6.4	127,686 -7.0
Nissan	65,092 -17.8	362,856 -13.4	47,089 10.8	37,992 -16.7
Honda	52,928 -38.7	358,019 -11.9	6,294 -68.1	44,441 -30.8
Suzuki	88,906 -0.3	176,329 -2.4	20,910 9.2	55,110 -7.2

Mitsubishi	53,880 -15.0	59,454 -20.8	33,375 -7.3	6,038 -27.1
Mazda	81,316 -14.6	52,091 -6.5	67,101 -18.7	12,901 -28.2
Daihatsu	86,180 -0.3	43,651 -10.2	0 0.0	55,282 1.1
Subaru	63,711 13.5	34,147 4.0	48,505 0.8	9,368 -22.8
Total	767,453 -9.1	1,584,655 -8.3	396,536 -3.5	348,836 -12.7

* Unit: No. of unit (Below unit : % to the previous year)
*Source: Each OEM

November's trade balance of Japan is in the black for 5 consecutive months, but exports are declining

According to the trade statistics released by the Ministry of Finance on December 16, Japan's exports November were JP¥ 6.1136 trillion, 4.2% lower than the same month last year. Exports to the United States turned to decline.

By region, exports to the United States fell by 2.5% due to a decrease in aircraft parts, etc., and began to decline for the first time in 3 months. In addition, exports to Asia decreased by 4.3% by a fall of mineral fuels such as heavy oil and light oil, and steel, etc. Exports to China increased by 3.8% due to an expand in non-ferrous metals such as copper, and vehicle, but the growth has slowed.

Exports to the EU decreased by 2.6% overall due to a decrease in vehicles, even an increase in construction machinery and organic compounds. As to imports, organic compounds increased, but vehicles and pharmaceuticals decreased, and the overall value decreased by 17.3%.

Japan's exports have been picking up after hitting a bottom in May, and in October they recovered to almost the same level as the previous year, but it is believed that the rate of decrease has expanded because the COVID-19 infection is spreading worldwide again.

On the other hand, the total value of imports last month was JP¥ 5.7469 trillion, 11.1% lower than the same month last year, and the trade balance after deducting imports from exports was a surplus of JP¥ 366.8 billion for the fifth consecutive month.

MOF website: https://www.customs.go.jp/toukei/shinbun/trade-st_e/2020/2020115e.pdf

- Exports & Imports with EU (Nov. 2020)

	Value (Billions of JP¥)	% to Nov. 2019	Reference
Exports	561.0	-2.6	Decreased 16 months continuously
Imports	629.9	-17.3	Decreased 11 months continuously
Balance	-68.9	-62.9	In red 17 months continuously

- Movement of principal goods with EU (Nov. 2020)

Export goods	% to Nov. 2019	Import goods	% to Nov. 2019
Construction machines	80.2	Organic chemistry	27.0
Organic chemistry	23.8	Vehicles	-40.3
Vehicles	-17.5	Pharmaceuticals	-21.6
Motors	-22.1	Petroleum products	-95.4
Mineral fuel	-90.1	-	-

Data source: MOF

Government forecasts real economic growth rate for 2021 to increase by 4.0%

On December 8, the Cabinet Office announced the revised value of GDP = gross domestic product from July to September, and the actual annual growth rate was 2.9%. It has been revised upward from the breaking news of 21.4%, which was the largest growth rate in reaction to the three months before the historic plunge.

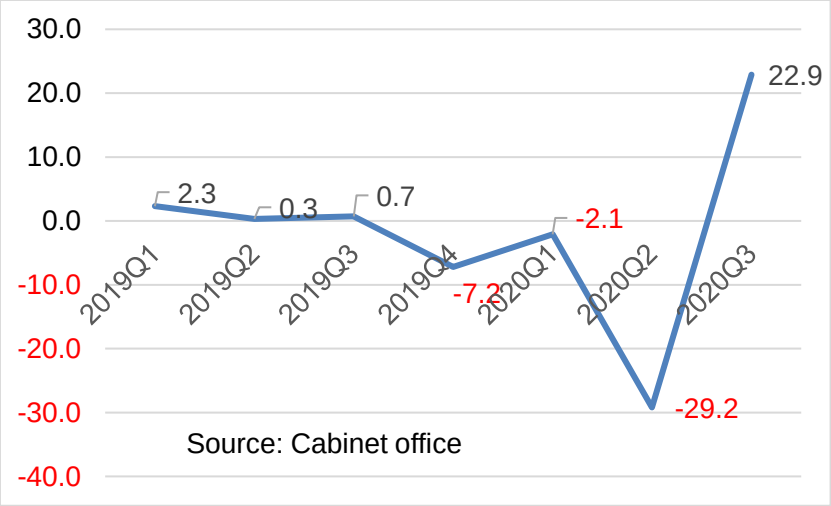
This is because many items have been revised upward as a result of reflecting the latest statistics. Corporate "capital investment" increased from minus 3.4%

to minus 2.4% at the preliminary figures compared to the previous three months, and "personal consumption", which accounts for more than half of GDP, increased from 4.7% to 5.1%. In addition, "housing investment" has been revised upward from minus 7.9% to minus 5.8%. On the other hand, the growth rate of real GDP from April to June was revised downward to minus 29.2% on an annual basis.

Meanwhile, the government has revised its economic outlook released on December 18 to increase the real growth rate in FY 2021 by 4.0% from the previous year, up from 3.4% in July. This is the largest increase since 1995, which is comparable, because it incorporates the effects of the comprehensive economic measures announced on Dec. 8. It is higher than the forecast of private economists in the 3% range, and also it is expected that the economic level in the October-December period of 2019 which is before the spread of the new coronavirus. However, the actual forecast for FY2020 was down 5.2% from the previous forecast, minus 4.5%. Due to the cooling of domestic and foreign economies, the largest decline since 1995 is expected.

Cabinet office website:
https://www5.cao.go.jp/keizai1/mitoshi/2020/r021218mitoshi-e.pdf
https://www.esri.cao.go.jp/en/sna/data/sokuhou/files/2020/qe203_2/gdemenuea.html

Real GDP annual growth rate (by quarter) of Japan



Company & Organization News

Agreement reached on joint feasibility study of the ammonia value chain between Eastern Siberia and Japan

Itochu Corporation announced on Dec. 24 that it has agreed with Irkutsk Oil Company, Japan Oil, Gas and Metals National Corporation (JOGMEC) and Toyo Engineering Corporation to conduct a joint feasibility study of the ammonia value chain between Eastern Siberia and Japan.

The project aims to establish a commercially viable blue ammonia* value chain that will help realize a decarbonized society. Itochu and Toyo will be commissioned by JOGMEC to conduct a feasibility study of the production of blue ammonia in East Siberia and the value chain for transporting the ammonia to Japan.

As the liquefaction conditions for ammonia are almost the same as Liquefied Petroleum Gas (LPG), which is commonly distributed, it can be transported and stored using the same infrastructure. Ammonia has attracted an attention as a next-generation fuel for thermal power plants and marine engines because it does not emit carbon dioxide during combustion.

*Blue ammonia: Ammonia produced from conventional fossil fuel with CCS (Carbon Capture and Storage: capture carbon dioxide from the ammonia manufacturing process and store it at underground by injection) or CO2-EOR

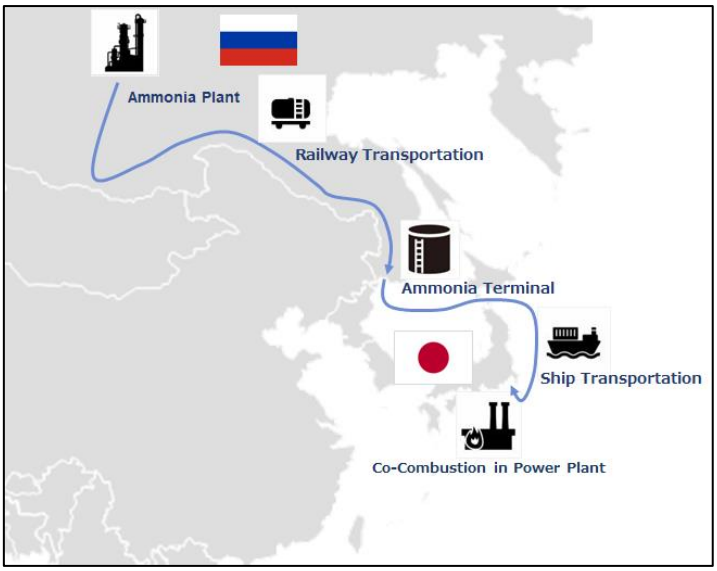
In the next step, there are plans to study an entire production and transportation system for blue ammonia that would involve mass producing ammonia using the natural gas produced by IOC as a raw material, and capturing and injecting carbon dioxide from the ammonia manufacturing process into oil fields in eastern Siberia by CO2 EOR(enhanced oil recovery by injecting carbon dioxide). Achieving this plan would result in a stable supply mass-produced blue ammonia to Japan, which is expected to be used as fuel for thermal power plants as well as other applications.

A coordination among Itochu, IOC, JOGMEC and Toyo to utilize the technologies and knowledge of the four companies will contribute to establish an ammonia value chain between Eastern Siberia and Japan, and promote

efforts to reduce the greenhouse gas emission by introducing blue ammonia as a fuel.

Itochu corporation website:
https://www.Itochu.co.jp/en/news/press/2020/201224_2.html

Flow Diagram of the Ammonia Value Chain between Eastern Siberia and Japan
(from Itochu website)



Denso and others develop fruit harvesting robot

Denso, the National Agriculture and Food Research Organization and Ritsumeikan University announced on Dec. 23 that they have developed a harvesting robot for apples, Japanese pears, and pears. The target is V-shaped fruit trees that are easy to harvest, and while towing with an autonomous vehicle, the ripeness is determined from the image and harvested. The annual working time of a person can save 50%. They will proceed with verification tests and aim for commercialization in two years.

It consists of a total of two arms equipped with two cameras and a fruit storage container system. In order to keep costs down, they devised ways to use existing parts and standardize parts. Utilizing deep learning technology, when the fruit is recognized by the camera, it automatically stops and harvests. After recognizing the fruit, the robot determines of the ripeness the Japanese pear by

the color of the bottom and harvests only the ripe fruit. The accuracy of recognition and maturity judgment is 95% or more.

The yield is 300 per hour, which is almost the same as humans. Fruits are automatically stored in the harvest box, and empty containers are automatically replaced to continue harvesting. At present, an observer is required, but the possibility of remote monitoring will be considered in the future.

Denso website: https://www.denso.com/jp/ja/news/newsroom/2020/20201223-01/

Image from Denso website

Chairman of Japan Automobile Manufacturers Association, Akio Toyoda requests the reform of the national energy policy

Akio Toyoda (President of Toyota Motor Corporation), chairman of the Japan Automobile Manufacturers Association, commented regarding the government's policy of aiming to reduce greenhouse gas emissions to zero as a whole by 2050 that "While we should do our best as an industry, we should also request the reform of the national energy policy." at an online round-table with the press on December 17. It was reported by major media on the same day.

Among them, chairman Toyoda said, "We will do our best to challenge the government's policy of aiming for carbon neutrality by 2050. It cannot be expected to be achieved without epoch-making technological innovation, and

we have to work on the entire supply chain including parts manufacturers”.

He also stressed " Regarding the response to the electrification of vehicles, Japan is a country where all electric vehicles are available, from hybrid vehicles to EV. But, most of the electricity is thermal power generation, and at present the more EVs, the more carbon dioxide. It is difficult to achieve carbon neutrality without reforming the national energy policy”.

Regarding micro vehicles, which account for one-third of new vehicle sales, chairman Toyoda said, "In rural areas, mini vehicles are a complete lifeline, and we must not forget the user's perspective. We can achieve this by mixing with hybrid vehicles and that’s the way Japan lives.

NHK News web: https://www3.nhk.or.jp/news/html/20201217/k10012769911000.html

From NHK News web

Toyota launches FCV's second generation "MIRAI"

On December 9, Toyota Motor released the second generation "Mirai", a fuel cell vehicle (FCV) that runs on hydrogen. This will be the first full model change since 2014, when the world's first commercial FCV was released. The price is JP¥ 7.1 million to JP¥ 8.05 million including tax. The fuel of "Mirai" is hydrogen, and it runs on electricity generated by a chemical reaction with oxygen in the air. It emits only water and air, not carbon dioxide (CO_2).

Compared to the first generation, the new model has greatly improved driving performance. The amount of hydrogen loaded has increased from 4.6 kg to 5.6 kg, and the cruising range has increased from 650 km to about 850 km, an

increase of about 30%. It is a distance that can be traveled from Tokyo to Hiroshima without replenishing hydrogen.

One of the sales points is that "the more you run, the cleaner the air". Dust and chemical substances contained in the air sucked in from the atmosphere are removed with two types of filters to make the air cleaner than before it was sucked in and discharged. It also has a function that allows you to check how much air is purified while driving on the in-vehicle monitor.

The biggest challenge for the new model is to increase sales. Cumulative sales of the first generation are about 11,000 units worldwide. Of these, about 3,700 units were in Japan, which was less than one-tenth of the government's target of "about 40,000 units by 2020." Currently, there are only about 140 hydrogen supply facilities in Japan.

In addition, one of the bottlenecks of popularization is the high price. The first generation was about JP¥ 7.41 million. There are five levels of price for the new model, depending on the equipment and interior, and the lowest price is JP¥ 7.1 million, which is about JP¥ 300,000 cheaper than the first model. However, the standard equipment is JP¥ 7.35 million, and the top class is JP¥ 8.05 million. The national purchase subsidy is about JP¥ 1.17 million per unit, but it is still not cheap.

In Japan, only Toyota and Honda still sell one FCV each, but even so, the spread of FCVs is indispensable for the government aiming for virtually zero greenhouse gas emissions by 2050.

Toyota website: https://global.toyota/en/newsroom/toyota/33558148.html

Image of “MIRAI” from Toyota website

Capsule of asteroid explorer "Hayabusa2" returns to Earth

On December 6, the Japan Aerospace Exploration Agency (JAXA) announced that the capsule that the asteroid explorer "Hayabusa2" brought back from a six-year space journey of 5.2 billion km has returned to Earth. The capsule was collected in the Woomera desert in southern Australia in the morning of the same day. Following the first Hayabusa, JAXA succeeded in returning samples to bring back substances from celestial bodies.

Hayabusa2 is the successor to the first Hayabusa, which brought back the fine particles of the asteroid "Itokawa" to Earth in 2010. Hayabusa2 landed on "Ryugu" twice in 2019 and collected sand from both the surface and the ground of the asteroid in capsules. It is the world's first feat to collect substances in the ground from celestial bodies farther than the Moon.

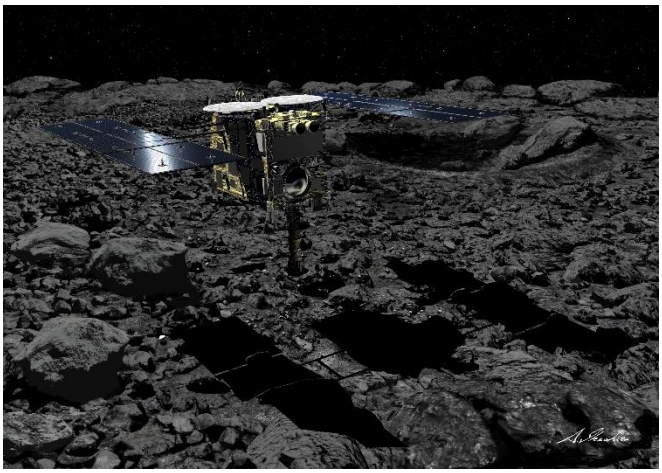
JAXA also announced on December 24 that it had opened the container inside the capsule that Hayabusa2 delivered to Earth and confirmed that it had successfully collected sand and pebbles during its second landing on an asteroid. The second landing was near an artificial crater on an asteroid, and it seems that it was the first time in the world to collect underground samples from celestial bodies other than the Moon.

Hayabusa2 shot a metal bullet at the asteroid "Ryugu" in April 2019 to create an artificial crater, and in July of the same year, landed near the crater for the second time. The container inside the capsule contained a large number of black particles, including pebbles about a centimeter in size. There was also an object like a silver man-made object, but it is possible that the aluminum foil that covered the device for collecting the sample was possible.

JAXA will proceed with the creation of a catalog that records the shape and weight of what kind of particles could be collected, and will proceed with full-scale analysis of the components after June 2021.

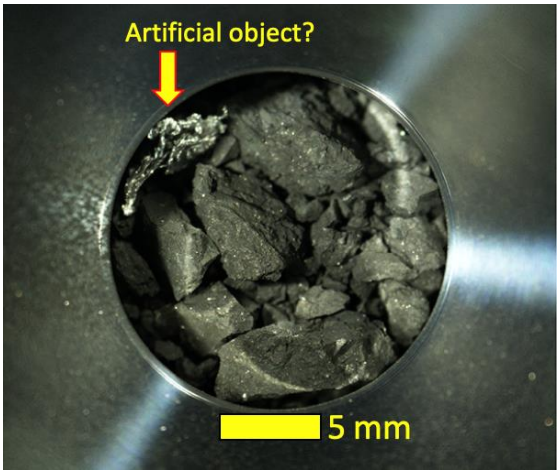
JAXA website: http://www.hayabusa2.jaxa.jp/en/topics/20201225_samples/

The illustration image of touchdown of “ Hayabusa2” to “Ryugu” from JAXA website
(© Mr. Akihiro Ikeshita)



The moment of touchdown of “ Hayabusa2” to “Ryugu” from JAXA website

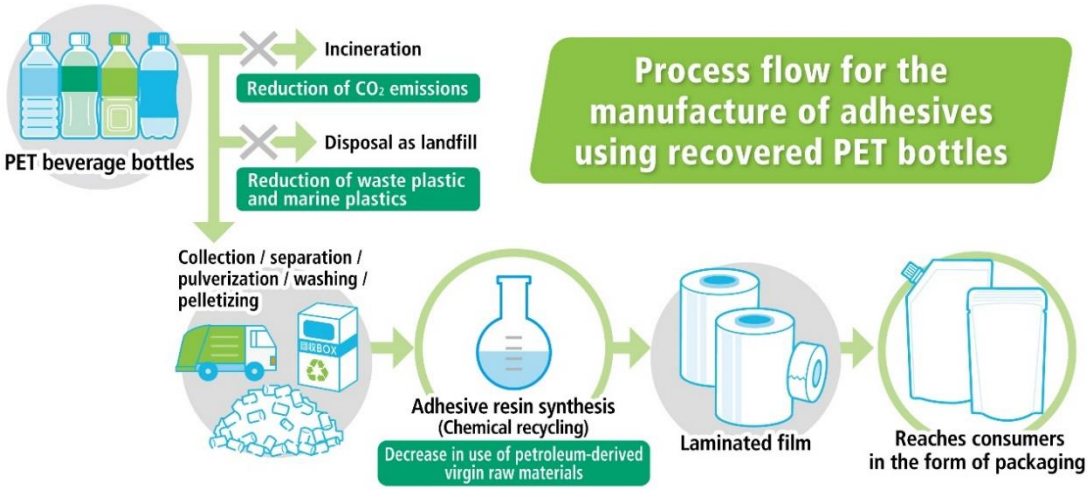
The samples collected by “ Hayabusa2” from JAXA website



DIC recycles used PET bottles into adhesive

DIC Corporation announced on Dec. 1 that it has developed the DICDRY LX-RP series of dry laminating adhesives for flexible packaging, which are made from recovered polyethylene terephthalate (PET) bottles. These environment-friendly offerings are manufactured using collected post-consumer PET bottles that have been chemically recycled into raw materials for adhesives. The Company aims to commence sales of this new series of adhesives, mainly for use with flexible packaging for personal care products, between July and September 2021.

In designing this unique series of solvent-based dry laminating adhesives, DIC leveraged its proprietary polymer synthesis technologies to facilitate the chemical recycling of recovered PET bottles into raw materials suitable for use in packaging adhesive. Additionally, by optimizing the resin's composition, the company has succeeded in realizing a product that is both solvent-soluble and which delivers excellent adhesive properties. Adhesives in the DICDRY LX-RP series boast a recycled PET content of 25% (solid content ratio) and, like conventional DICDRY LX adhesives, is also suitable for laminating lightweight packaging materials and refill pouches.



Looking ahead, DIC will focus on providing DICDRY LX-RP adhesives for use with flexible packaging for personal care products to customers in Japan and overseas, with the goal of achieving annual sales of approximately 1,000 tones by fiscal year 2023.

DIC website: https://www.dic-global.com/en/news/2020/products/20201222102407.html

Itochu announces development of garbage bag made from marine debris
Itochu Corporation announced on Nov. 26 that Itochu and Sanipak company of Japan, Ltd., which is a Itochu's subsidiary and Japan's largest garbage bag maker, developed the world's first garbage bag including raw materials made from marine debris.

It is estimated that some 20,000 m3 of marine debris per year are washed ashore on the coastline of the island of Tsushima, Nagasaki Prefecture, considered the island that has the largest volume of marine debris in Japan. Hundreds of millions of JP ¥ are spent every year to collect the debris, and it is impossible to collect all. It is a serious social issue. Some of the collected marine plastic waste is recycled into oil, but much of it is deposited in landfills. Tsushima city is working to facilitate the recycled use of marine plastic debris as a city of the future focused on the SDGs.

Itochu believes that marine debris is a significant social challenge and has been engaging in material recycling businesses recycling marine debris and turning it into products that are commercialized. In cooperation with Tsushima city, Sanipak Japan, leveraging the knowledge and technology it possesses as Japan's largest garbage bag maker, has developed the world's first garbage bag made in part with raw materials made from marine debris.

Itochu and Sanipak Japan plan to provide some of these new garbage bags free of charge to Tsushima city and other areas that need garbage cleaning activities on their coastlines, and will establish a recycling economy-oriented business model to resolve the problem of marine debris that society faces.

Itochu website: https://www.Itochu.co.jp/en/news/press/2020/201126.html

Marine debris washed ashore on the coastline of Tsushima
From Itochu website

Other Topics

Approximately 24% reduction in food loss at bakeries with the Japan Weather Association's retail demand forecasting service

On December 4, the Japan Weather Association announced the results of a demonstration experiment conducted from September 2020 after developing the Fukuoka City version of the retail product demand forecast service "Sells Forecast". Of the eight participating companies, at Bakery A, the disposal rate during the demonstration period from September to October 2020 has been reduced by 24.4% from the same period of the previous year.

At Bakery A, daily sales depend on the weather. Through this demonstration experiment, by referring to the sales index (demand forecast index), store visit index, and weather information in the "sweet bread" category, they can grasp the sales of the day in advance and prevent over-making of bread. An analysis of the factors that led to the reduction of waste in Bakery A revealed that the waste rate decreased as a result of appropriately adjusting the production volume during the "low demand period" especially by utilizing the "Sells Forecast".

In this demonstration, eight retailers based in Fukuoka City will adjust the order quantity by referring to the Fukuoka City version of "Sells Forecast". The demonstration period is from September 2020 to January 2021. The final report is scheduled to be made in March 2021. In this demonstration, along with a questionnaire survey of participating companies (supermarkets and bakeries), sales and waste data before and after the demonstration experiment are compared to examine how effective it is in reducing food loss caused by excessive purchasing and processing.

Since 2017, the Japan Weather Association has been implementing a product demand forecasting business mainly for manufacturers through a subsidized project of the Ministry of Economy, Trade and Industry (2014-2016). Under these circumstances, in response to requests from many retailers, they started offering "Sells Forecast" in April 2019. The service links product sales in a wide area with weather data and is used by many retailers.

Japan whether association website: https://www.jwa.or.jp/news/2020/12/11746/

(in Japanese)

From Japan whether association website

Grandson worried about "Grandpa drinking too much", developed a prevention system by programming

“I'm worried about my grandpa drinking too much alcohol” ...The grandson, who had such an urgent need, developed a system to prevent overdrinking by programming. The grandpa also realized the effect of the system packed with grandchildren's kindness. The grandson also won the national tournament of programming. Chukyo TV reported on November 30.

The grandson’s name is Mebuki Koyama, 12 years old, in Sekigahara Town, Gifu Prefecture. He started programming as a hobby two years ago, thinking about how to reduce my grandpa's alcohol, and made a mechanism. The name is "Grandpa's overdrinking prevention system 2".

Mebuki's grandfather, Isamu starts drinking at 6 pm every day. When Isamu presses a "certain button" on his PC ... "You drink ! The amount of alcohol is 14g. Since the healthy alcohol intake is 30g, this liquor has 47% alcohol”. And when alcohol intake exceeds the daily upper limit ... "Don't drink anymore. Please drink water instead. Please take water", the program will not let Grandpa

drink.

Another system is "Grandpa's overdrinking prevention system 1". "1" is a vending machine type system. It is a machine that solves calculation problems and judges that grandpa can't drink. If he answers 3 questions correctly, the beer is served. The two machines won each of the two national programming competitions in October. It's been only two years since he started programming. The evaluated point was Mebuki's "insight "which the family didn't even know.

"If you look at all of grandpa's actions, something will shake." Mebuki noticed that grandpa started shaking his chair when he got drunk. When the chair shake, Mebuki's voice is heard. That is a mechanism to notify of overdrinking. About the effect, grandpa Isamu said "When in the voice of my grandson, grandpa shouldn't drink! I should stop it".

Mebuki said "I'm not good at speaking, so I show the real thing in programming. I think I can come up with my own thoughts". What is the thought that Mebuki put into this work? "Grandpa, please live longer".

Chukyo TV website: https://www.ctv.co.jp/news/articles/45l99lhvcutm0s92.html
(in Japanese)

"Be careful not to drink too much" on PC
If exceed the daily limit (from Chukyo TV website)

Grandson and grandpa (from Chukyo TV website)