

## JAPANESE INDUSTRY AND POLICY NEWS

October 2017

### LEGISLATION AND POLICY NEWS

#### **"Tokyo Initiative 2017" for Connected Industries Announced**

In March 2017, the Ministry of Economy, Trade and Industry (METI) proposed the policy concept of "Connected Industries" as a goal for Japanese industries to create new added value through connecting things, people, technologies, organizations and other societal elements.

At the conference on October 2, METI Minister Hiroshige Seko released "Connected Industries' Tokyo Initiative 2017," as a futuristic view of Japanese industries. Under this initiative, Japan will strive to identify priority fields and intensively invest policy resources in those specific fields, as well as promoting cross-sectoral policies.

As for priority fields, five sectors are identified, i.e. Automated Driving and Mobility Service, Biotechnologies and Materials, Manufacturing and Robotics, Plant/Infrastructure Safety Management, and Smart Life. As a part of the cross-sectoral policies, it is specifically mentioned that cooperation with the EU and Asian countries will be enhanced for the further expansion of the initiatives.

[http://www.meti.go.jp/english/press/2017/1002\\_004.html](http://www.meti.go.jp/english/press/2017/1002_004.html)

[http://www.meti.go.jp/english/press/2017/pdf/1002\\_004a.pdf](http://www.meti.go.jp/english/press/2017/pdf/1002_004a.pdf)

#### **Winners of the IoT Lab Selection Announced**

On October 5, the Ministry of Economy, Trade and Industry (METI) and the IoT Acceleration Lab held the IoT Lab Selection event, and selected outstanding IoT-based projects as winners and recognized them for the Grand Prix and Semi Grand Prix as follows.

Grand Prix Winner - O: Inc.

Title of project: World's First Service Involving Approaches to Making Circadian Clock Visualizations and Improving Quality of Sleep as well as Productivity

Semi Grand Prix Winner - Oton Glass Inc.

Title of project: Oton Glass: Assisted Reading Smart Glasses

[http://www.meti.go.jp/english/press/2017/1011\\_001.html](http://www.meti.go.jp/english/press/2017/1011_001.html)

<http://o-inc.jp/en/>

<https://otonglass.jp/>

### **Priority Area for Introducing Nursing Care Robot Revised**

On 12 October, the Ministry of Economy, Trade and Industry (METI) and the Ministry of Health, Labour and Welfare (MHLW) revised a list titled “Priority Areas to Which Robot Technology is to be Introduced in Nursing Care” (first formulated in November 2012; revised in February 2014), aiming to realize self-reliance support by making use of robot technology.

“The Investments for the Future Strategy 2017,” a national policy approved by the Cabinet on June 9, 2017, set a goal involving the development of nursing care robots for maintaining and improving robot-users’ quality of living through self-reliance support and other measures and for reducing burdens on caregivers. The policy also stipulates another goal that Japan should review priority areas in which nursing care robots should be developed, compile future directions along which it will strategically develop new robots, and reflect the results in new robot-development efforts to be supported from FY2018.

Through this revision, METI and MHLW newly designated one priority area and five items, coming to 13 items in six priority areas in total.

Six priority areas are as follows.

- 1) Lifting aids
- 2) Mobility aids
- 3) Toilets
- 4) Monitoring and communication systems
- 5) Bathing
- 6) Nursing-care services

[http://www.meti.go.jp/english/press/2017/1012\\_002.html](http://www.meti.go.jp/english/press/2017/1012_002.html)

### **New Standard for Robots for Lumbar Support Established**

In October, the Ministry of Economy, Trade and Industry (METI) newly established 26 standards and revised 21 standards in Japanese Industrial Standards (JIS). In particular, METI believes that the following establishments and revision to the standards are important.

- (1) Establishment of a new JIS for physical assistant robots for lumbar support  
As Japan is facing an aging society, utilization of robots in the field of

lifestyle support services has been strongly expected. To meet the increased demand for such robots, METI has newly established JIS B8456-1, a new domestic standard for physical assistant robots for lumbar support to reduce heavy work burdens on caregivers, which is in application on “Standards Development Program to Create New Market”

<Examples of hip-supporting-type wearable devices using robot technology to provide power assistance to caregivers>



Prof. Sankai, University of Tsukuba / CYBERDYNE Inc.



Innophys Co., Ltd.



ATOUN Inc.

(2) Establishment of a new JIS for hypochlorous acid water producing apparatus

Devices for manufacturing hypochlorous acid water electrolyze an aqueous solution containing chloride ions to manufacture hypochlorous acid water containing hypochlorous acid in low concentrations (hypochlorous acid water producing apparatus). METI has newly established JIS B8701 for the

apparatus in application on “Standards Development Program to Create New Market”.

(3) Revision of the JIS for the safety specifications involving self-ballasted LED-lamps for general lighting services

Aiming to further improve the safety of self-ballasted LED-lamps for general lighting services use in line with the recent trends in international standardization efforts, METI has revised the existing JIS (JIS C 8156) to add new requirements and other rules for safety and awareness raising of such lamps involving the strength of fitting of the body of a lamp into a socket and the use conditions of such lamps (approaches to handling lamp dimmers and wet locations).

[http://www.meti.go.jp/english/press/2017/1020\\_001.html](http://www.meti.go.jp/english/press/2017/1020_001.html)

### **Winners of Resource Recirculation Technologies Selected**

The Ministry of Economy, Trade and Industry (METI) announced on 13 October the winners of the FY 2017 Awards for Resources Recirculation Technologies and Systems. METI is a supporter of this program.

This awards program was launched in 1975, with the aim of extensively calling for and recognizing outstanding projects and efforts by companies and other industrial groups with excellent technologies that contribute to waste reduction, reuse and recycling, thereby encouraging and fostering such efforts and creating new business. The program is organized by the Japan Environmental Management Association for Industry (JEMAI) with the support of METI.

The winners and the winning projects are as follows.

METI Minister’s Award (one project) - Establishment of a Resource Recycling System by Alloy Iron Melting Furnaces of Yawata Works, Nippon Steel & Sumitomo Metal Corporation (Kitakyushu City, Fukuoka Prefecture)

Award of the Director-General of the Industrial Science and Technology Policy and Environment Bureau (four projects) -

- (1) Reuse of Waste Fluorine Resources of Ube Plant, Central Glass Co., Ltd. (Ube City, Yamaguchi Prefecture)
- (2) Commercialization of Wood Plastic Recycled Composites (WPRC) and Recycled-Type Wooden Building Materials of Ecowood Co. Ltd. (Kitakyushu City, Fukuoka Prefecture)

- (3) Project for Recycling and Reusing Blades for Double-Shaft Shear-Type Crushers Making Use of Robots of Kinki Industrial Co., Ltd. (Miki City, Hyogo Prefecture)
- (4) Re-manufacturing of Automatic Transmissions of JATCO Ltd. (Fuji City, Shizuoka Prefecture)

[http://www.meti.go.jp/english/press/2017/1013\\_002.html](http://www.meti.go.jp/english/press/2017/1013_002.html)

### **METI and U.S. DOE Cooperate in the CCUS**

On October 17, the Ministry of Economy, Trade and Industry (METI) and the Department of Energy (DOE) of the United States signed a Memorandum of Cooperation (MOC) Concerning the Field of Carbon Capture, Utilization and Storage (CCUS).

METI has been engaging in research and development efforts as well as demonstration tests for technologies for collecting and storing carbon dioxide. As part of these efforts, in 2015, Japan and the U.S. signed an MOC to advance Japan-US joint R&D, and since then, METI has been advancing a variety of projects, including data analysis with the University of Texas at the demonstration site in Tomakomai, Hokkaido Prefecture, and a monitoring demonstration test with the Lawrence Berkeley National Laboratory, the U.S., using optical fibers.

This time METI and DOE revised the MOC aiming to advance the formulation of new Japan-US projects involving CCUS, including enhanced oil recovery (EOR).

Key points of the new MOC are as follows:

- (1) Both sides will expand the MOC to a new Japan-US comprehensive cooperation framework in the field of CCUS to include efforts for promoting project formulation, in addition to joint research efforts.
- (2) Specifically, both sides will respectively choose project coordinators, establish public-private dialogues bringing together businesses as well, and conduct follow-up efforts for project formulation in Japan and the U.S.
- (3) Both sides will advance cooperation for project formulation in the field of CCUS in other countries, including emerging markets in Asian countries.

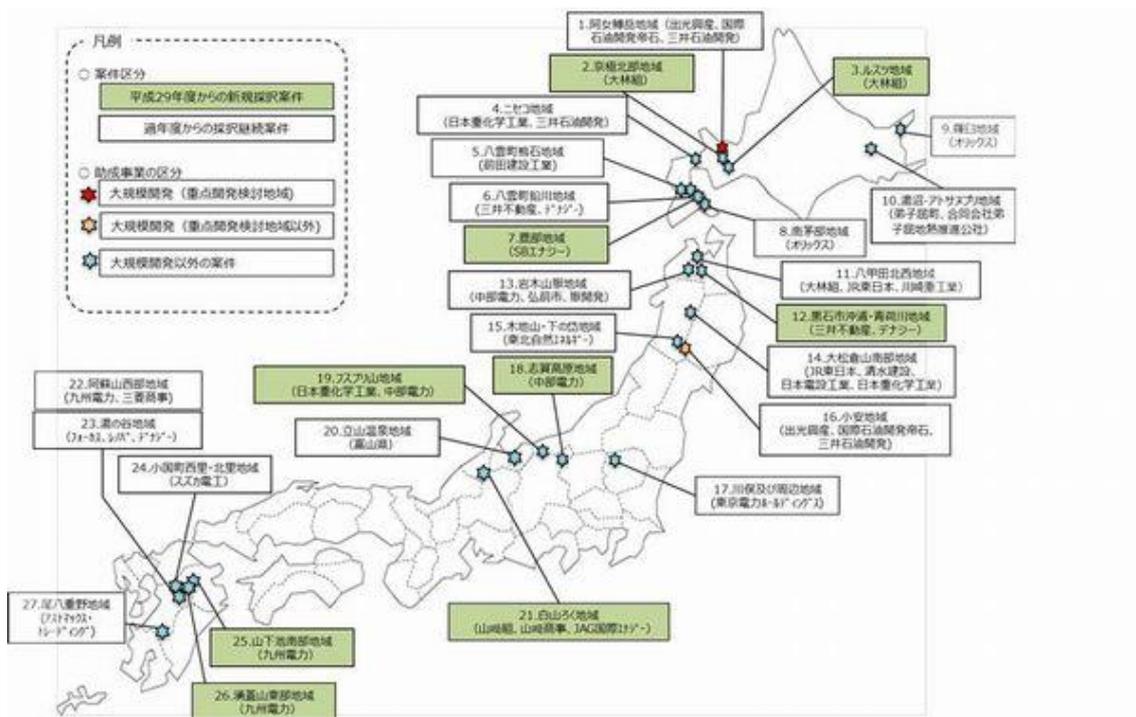
[http://www.meti.go.jp/english/press/2017/1018\\_001.html](http://www.meti.go.jp/english/press/2017/1018_001.html)

### **27 Areas Designated for Geothermal Potential Survey**

The Ministry of Economy, Trade and Industry (METI) announced on October 20 that a total of 27 projects became eligible for government subsidy for the survey on the potential of geothermal resources. Of the 27 survey projects, 9 are new

and 18 are continuous from the previous year. Subsidy is provided by the Japan Oil, Gas and Metals National Corporation (JOGMEC) as a part of its efforts to promote geothermal power generation.

All the eligible projects are indicated in the following map. Those indicated in shade are the newly adopted projects.



<http://www.meti.go.jp/press/2017/10/20171020006/20171020006.html>

(Japanese language only)

## SURVEY AND BUSINESS DATA

### Wage Increase Trend Prevails

According to the questionnaire survey that the Ministry of Economy, Trade and Industry (METI) released on 23 October, wage increase trend continues both in large companies and small and medium-sized enterprises (SMEs).

Last year wage increases were reported by 90.1% of large companies and 59.0% of SMEs. This year the ratio was stable for large companies at 89.7% and expanding for SMEs at 66.1%. Main reason for the wage hike of SMEs was

quoted as “Recruiting new personnel and/or keeping competent staff.”

<http://www.meti.go.jp/press/2017/10/20171023002/20171023002.html>

(Japanese language only)

### **METI Established Database of Civil Satellite Parts**

Ministry of Economy, Trade and Industry (METI) announced on 25 October that it established a database of civil use parts for micro/small satellites as a basis for sharing information among enterprises, universities and related institutions, leading to possible cooperation.

It contains information on approximately 3,200 parts used successfully in satellite mission, covering such items as manufacturers' name, model number, usage, whether or not underwent environmental test and if it incurred problem or not.

In order to get access to the database, prior registration is obligatory.

<http://www.meti.go.jp/press/2017/10/20171025001/20171025001.html>

(Japanese language only)

## **COMPANY NEWS**

### **World's First Bamboo Biomass Power Station to be Constructed**

Fujisaki Electric Corporation and its affiliate, Gaia Power Co., Ltd. started construction of the world's first biomass power station using bamboos as fuel in Sanyo Onoda city in Yamaguchi prefecture. Recently controlling wild bamboos becomes challenging for certain local communities.

The new biomass power station which uses a combustion furnace developed jointly by German Lambion Energy Solutions is expected to become operational in January 2019. Expected power supply is 15.8 million KWH per year, which can fulfil the needs of 4,860 households.

[http://www.fujisakikk.co.jp/app2/wp-](http://www.fujisakikk.co.jp/app2/wp-content/uploads/2017/10/d5c485e71b209d929c4fe5b94cb3dd97.pdf)

[content/uploads/2017/10/d5c485e71b209d929c4fe5b94cb3dd97.pdf](http://www.fujisakikk.co.jp/app2/wp-content/uploads/2017/10/d5c485e71b209d929c4fe5b94cb3dd97.pdf) (Japanese language only)

<http://www.gaiapower.co.jp/bamboo/> (Japanese language only)

### **Nippon Life Finances Desalination Project in Australia**

Nippon Life Insurance Company announced on 19 October that it made a loan of 176 million Australian dollar (approximately 15.6 billion yen) to finance a

desalination plant management project for the city of Melbourne, Australia. This loan is the first project finance transaction in Australia for Nippon Life.

The project has been undertaken to serve as a drought control measure in a Public Private Partnership (PPP) project in Australia, which has experienced a number of severe droughts in its history.

As one of the largest desalination facilities in the world, the plant is capable of serving the annual water supply needs of a third of the total population of Melbourne which has approximately 4.6 million residents.

Furthermore, the environment-friendly and energy efficient plant is being operated with the renewable energy created by wind power plants in the State of Victoria.

According to Nippon Life, it signed the United Nations Principles for Responsible Investment (PRI) in March 2017. It announced in its mid-term management plan (FY2017-FY2020) to invest 1.5 trillion yen in various growing fields, including 200 billion yen in Environment, Social and Governance (ESG) bonds, etc.

#### < Aerial View of the Desalination Plant >



(Source: AquaSure Pty Ltd)

<http://www.nissay.co.jp/english/news/pdf/20171019.pdf>

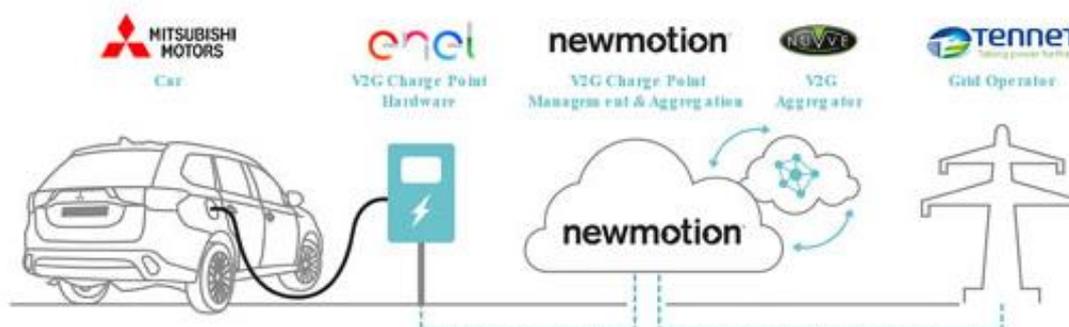
#### **Mitsubishi Motors Test First “Vehicle to Grid” Project in the Netherlands**

Mitsubishi Motors Corporation (MMC) announces on 19 October the implementation of a “Vehicle-to-Grid” (V2G) pilot project with the first charge

point already being utilized with Mitsubishi *Outlander PHEV*'s in-vehicle storage batteries. Using V2G-technology, peak demand on the electricity grid can be better balanced, by allowing electric vehicles to not just take power from the grid, but also return it to the network. MMC joins forces with NewMotion, one of Europe's largest providers of smart charging solutions for electric driving, grid operator TenneT in the Netherlands, and Nuvve a leader in V2G technology and grid service deployments.

In this demonstration, MMC will provide services for capacity reserve and balancing services by utilizing charging infrastructure of NewMotion and Mitsubishi *Outlander PHEV* parked at home or at work-place in the city of Amsterdam linked to Nuvve's Grid Integrated Vehicle platform (GIVE). There are said to be more than 25 thousands of Mitsubishi *Outlander PHEV*'s available in the Netherlands. MMC will verify the technology of V2G through this demonstration and aim to create new value and business opportunities utilizing electric cars / vehicle storage batteries.

#### <How Vehicle-to-Grid (V2G) charging works with all partners>



<http://www.mitsubishi-motors.com/en/newsrelease/2017/detail1082.html>

#### **Mitsui & Co. to Participate in the Mobility House for Commercialization of Energy Management Services with EVs**

Mitsui & Co., Ltd. announced on 26 October that, together with Daimler AG, it has made an investment in The Mobility House AG, a leading provider of EV charging solutions and operator of stationary energy storage systems built with EV batteries.

According to Mitsui, automotive manufacturers are making a clear shift towards

EVs, which are expected to spread throughout the market in the near future. Meanwhile, the electric power industry, especially in advanced economies, is faced with an increased burden on power grid systems because of the sharp rise of intermittent power sources, such as solar and wind. In order to promote the spread of EVs, there is a need for solutions that stabilize power grid systems, such as automatic adjustment of EV charge timing in accordance with the power supply-demand balance, and introduction of stationary battery storage systems. In response to these challenges, The Mobility House has been providing leading EV manufacturers including Daimler and their retail and business customers in Europe with a comprehensive smart charging solutions. Moreover, in a joint venture with Daimler, they have built energy storage systems with EV batteries in Germany that have a total output of 30 MW. The joint project provides frequency control services for transmission system operators (TSOs). In addition to innovative charging and energy storage solutions, The Mobility House portfolio also includes projects in the field of vehicle-to-grid ("V2G") technology.



The Mobility House manages energy storage systems consisting of EV battery packs  
[https://www.mitsui.com/jp/en/release/2017/1224845\\_10832.html](https://www.mitsui.com/jp/en/release/2017/1224845_10832.html)

## **Sekisui House Declares to Use 100% Renewable Energy**

Sekisui House, Ltd. announced on 20 October that it would join the RE100\* initiative with the goal of sourcing 100% of the electric power used in its business activities from renewable energy.

In 2008, Sekisui House declared its intent to eliminate the use of carbon-based energy by the year 2050, and it has been promoting the wider adoption of net-zero-energy house (ZEH) design. Sekisui now decided to speed up the shift to renewable energy for the electricity consumed in the course of their business activities. Sekisui's participation in the RE100 initiative is second after Ricoh as the Japanese company and the first in the Japanese construction industry.

\*RE100 ([www.RE100.org](http://www.RE100.org)) is a collaborative initiative uniting the world's influential businesses committed to 100% renewable power.

### **<Declarations of Sekisui House>**

◇100% of electricity consumed in our business activities to be derived from renewable energy sources by 2040.

◇As an interim goal, 50% to be sourced from renewable energy by 2030.

◇Following the phase-out of the feed-in tariff (FIT) system, create benefits for those customers who have installed photovoltaic power equipment.

<http://www.sekisuihouse.co.jp/english/topics/datal/icsFiles/afieldfile/2017/10/20/20171020e.pdf>

## **Yamada Denki to Sell Small EVs of FOMM**

Yamada Denki Co., Ltd., a big retailer of consumer electronics and FOMM Corporation, a manufacturer of small-sized electric vehicles (EVs) jointly announced on 31 October that they started capital and business tie-ups. FOMM stands for First One Mile Mobility.

With the investment from Yamada Denki, FOMM will be able to develop new EVs for the Japanese market. FOMM has already developed world's smallest 4-seater EVs which can float and move in water. FOMM established a manufacturing subsidiary in Thailand in 2016, aiming at starting sales of its EVs from the second half of 2018.

Yamada Denki regards EVs as the "New consumer electronics of the 21<sup>st</sup> century." Its involvement in the EV business will not limited to the sales but also various service activities including battery charging and car-sharing at their shops, and smart housing operations.

## <Example of Small EVs of FOMM>



特許取得技術  
独自開発の特許技術により、  
水に浮き、水面を移動する。

▲タイ、タマサート大学での水上デモの様子

### FOMM 1.0 PhaseIV

サイズ：全長×全幅×全高  
2585×1295×1560 (mm)  
乗車定員：4名  
駆動：前輪駆動  
最大出力：10kW  
最大トルク：560Nm  
車両重量：445kg  
(走行用バッテリー除く)



2016年度グッドデザイン賞受賞



これまででない操作性  
アクセルを手元に置くことにより、これまででない操作性を実現。  
ブレーキとの踏み間違えを防ぐ。

<http://fomm.co.jp/wordpress/wp-content/uploads/2017/10/e5444847a867b67f42e5ec30d65cb27d.pdf>

(Japanese language only)

<http://www.yamada-denki.jp/topics/download.t.pdf/1332>

(Japanese language only)

## Singapore's GIC Makes Investment in Japanese Renewable Energy Company

GIC Private Limited (GIC), Singapore's sovereign wealth fund, and Japan Renewable Energy Corporation (JRE) announced on 20 October the entry of an affiliate of GIC, as a corporate partner in GS Renewable Holdings GK, the parent company of JRE. This is GIC's first investment in Japan's infrastructure and renewable energy sector.

JRE, founded in August 2012, develops, constructs and operates renewable energy power plants. These include solar, wind and biomass energy power plants located across Japan. JRE currently operates 34 power plants with a total capacity of approximately 210MW, with approximately 170MW of new plants under construction.

Kazuhiro Takeuchi, CEO of JRE, commented, "We see GIC's investment as

testament to the potential of Japanese renewable energy market and JRE's growth strategy. We will take this opportunity to accelerate expansion of our business and to become the industry leader."

<http://www.gic.com.sg/images/gic/Newsroom/GIC's%20investment%20in%20Japan%20Renewable%20Energy%20Corporation.pdf>

## **ADDITIONAL TOPICS**

### **Tokyo Will Introduce 4 Carbon Free Days during 2020 Olympics and Paralympics**

Tokyo metropolitan government announced on 23 October a plan to make the Japanese capital free of carbon dioxide (CO<sub>2</sub>) emissions during the opening and closing days of the 2020 Tokyo Olympics and Paralympics. Tokyo Government hopes to show the world its efforts to become a sustainable city through the project, in realizing the "Zero Emission Tokyo."

Tokyo intends to offset emissions during the four days with donated credits acquired through a cap-and-trade program for big companies that the metropolitan government introduced in April 2010.

In 2020, the Olympics will be held between 24 July and 9 August, and the Paralympics between 25 August and 6 September. Total CO<sub>2</sub> emissions in Tokyo during the four days are estimated at 720,000 tons. It is calculated that the big companies in the region have 10 million tons of CO<sub>2</sub> credit.

[http://www.metro.tokyo.jp/tosei/hodohappyo/press/2017/10/24/documents/12\\_01.pdf](http://www.metro.tokyo.jp/tosei/hodohappyo/press/2017/10/24/documents/12_01.pdf) (Japanese language only)

### **NEDO Launches Field Operational Tests of Automated Driving System**

New Energy and Industrial Technology Development Organization (NEDO) announced on 3 October that it had selected contractors to pursue six research and development projects, such as high resolution 3D digital maps (Dynamic Map) and human-machine interface (HMI) which are necessary in automated driving system. NEDO also launched a full-scale demonstration test of its automated driving system on the same day.

NEDO is designated as a managing entity of the "Cross-ministerial Strategic Innovation Promotion Program (SIP) Innovation of Automated Driving for Universal Services/Field Operational Tests." NEDO said that it would

continuously conduct full-scale demonstration tests on highways and public roads, with the aim of further accelerating the practical application of an advanced automated driving system by advancing its technological development and social reception.

#### <Routes for Demonstration Test on Highway in the Metropolitan Area>



[http://www.nedo.go.jp/english/news/AA5en\\_100293.html](http://www.nedo.go.jp/english/news/AA5en_100293.html)

[http://www.nedo.go.jp/news/press/AA5\\_100848.html](http://www.nedo.go.jp/news/press/AA5_100848.html) (Japanese language only)