

JAPANESE INDUSTRY AND POLICY NEWS

April 2018

LEGISLATION AND POLICY NEWS

METI Compiles Future Policy for Automobile Industry

Based on the discussions by the Study Group for Ideal Approaches to Model Utilization in the Automobile Industry, the Ministry of Economy, Trade and Industry (METI) compiled a future policy, titled “Enrichment of SURIAWASE 2.0” and published it on April 4. According to the METI, this policy aims to enrich the existing SURIAWASE 2.0 concept, Japan’s future approach along which Japanese automobile manufacturers will enhance harmonization (*suriawase* in Japanese) of their own development processes by taking advantage of a model-based development (MBD) process that uses virtual simulations instead of physical machines.

In November 2015, METI established a Study Group for Ideal Approaches to Model Utilization in the Automobile Industry to further enhance the international competitiveness of the automobile industry. As outcomes of its discussions in FY2017, the study group compiled and publicized guidelines and a collection of standard simulation models concerning vehicle performance, about which participating companies* (manufacturers in the fields of automobiles and auto parts) expressed their commitment to future utilization of an MBD process, and a concept titled “SURIAWASE 2.0” describing future related strategies.

In FY2017, they agreed that from FY2018 they will establish a system to enhance the existing guidelines and models and conclude an agreement concerning an ideal approach to self-sustaining industries. The government of Japan will aim to make development efforts more sophisticated by taking advantage of the simulations, and to this end, it will support industries in a multidimensional manner through collaboration with industry and academia sectors (e.g., efforts for human resource development and providing assistance for companies in the automobile parts manufacturing industry).

In addition, it was agreed that the government and the participating companies in the study group should establish a framework by 2020 in which the private sector will lead the management, maintenance and expansion of the guidelines and the standard simulation models. The two sides should recognize recent mega trends surrounding the automobile industry, such as autonomous driving technologies,

and based on this, they should advance discussions concerning new potential models for harmonization, such as efforts for control models for autonomous driving technologies.

*Participating companies: Aisin AW Co., Ltd., Denso Corporation, Honda Motor Co., Ltd., Jatco Ltd., Toyota Motor Corporation, Nissan Motor Co., Ltd., Panasonic Corporation, Hitachi Automotive Systems, Ltd., Mazda Motor Corporation, and Mitsubishi Electric Corporation (secretariat: Deloitte Tohmatsu Consulting LLC and Azapa Co. Ltd.)

http://www.meti.go.jp/english/press/2018/0404_001.html

METI Study Group Released a Report on the Introduction of Digital Technologies into Lifestyle Products

In November 2017, the Ministry of Economy, Trade and Industry (METI) established a Study Group for Higher Quality of Life through Utilization of IoT and Other Digital Tools Introduced into Lifestyle Products. Since then, the study group has held discussions and compiled the results into a report on April 20. Concerning approaches to utilization of digital tools introduced into lifestyle products, the study group focused on developing such utilization from the perspectives of business-to-consumer (B-to-C) or business-to-business-to-consumer (B-to-B-to-C). They ascertained current situations of the “fashion tech” and “smart textile” sectors in particular.

The study group identified challenges common to use of IoT and other technologies in lifestyle products as follows.

(1) Improvement of the environment for utilization of data

METI formulated the Contract Guidelines on Data Utilization Rights, which summarizes the principles for defining the rights concerning data created in relation to contract-based transactions. The guidelines are expected to be used to promote data utilization.

In the EU, the General Data Protection Regulation (GDPR) is scheduled to be put into force in May 2018. Under these circumstances, it is possible that a business model based on the approach of merely accumulating personal data will become impractical. Therefore, it is essential for companies to develop a business model taking into consideration secondary utilization of data. For example, they should consider how to utilize acquired data and how to differentiate themselves from other companies.

A bill on special measures to improve productivity and a bill to partially revise the Unfair Competition Prevention Act, etc. provide for measures to support data-

sharing business operators and measures to protect against illegal data acquisition.

(2) Support for start-up companies

If start-up companies expand business through cooperation with large enterprises on an equal footing and repeatedly implement the proof of concept process, industrial rejuvenation is expected to proceed through the development of new business operators. Therefore, it is important to develop an environment that supports such activity.

The New Energy and Industrial Technology Development Organization (NEDO) and the Small and Medium Enterprise Agency, among other organizations, provide support to start-up companies' activities such as demonstration of new technologies.

http://www.meti.go.jp/english/press/2018/0420_006.html

http://www.meti.go.jp/english/press/2018/pdf/0420_006a.pdf

SURVEY AND BUSINESS DATA

Operating Profits and Net Income of Japanese Overseas Affiliates Reached a Record-high Level

The Ministry of Economy, Trade and Industry (METI) annually conducts a “Basic Survey on Overseas Business Activities”, focusing business activities of overseas affiliates of Japanese companies. The FY2016 trends in business of Japanese overseas affiliates which the METI published on April 5 are as follows.

(1) The ratio of overseas affiliates in China to the total such affiliate overseas has been decreasing.

The total number of overseas affiliates as of the end of FY2016 was 24,959 of which 10,919 were in the manufacturing industry and 14,040 were in non-manufacturing industry. Looking at the ratios of overseas affiliates in Asia (66.2% of all such affiliates are running business) to all such affiliates, those in China showed a decrease of 30.2%, while those in ASEAN-4 economies and other Asian regions (for e.g., Viet Nam), showed an increase of 18.1% and 6.7%, respectively.

(2) The number of employees in overseas affiliates grew.

The number of employees in overseas affiliates as of the end of FY2016 was 5.59 million, showing an increase by 0.3% from the previous year, and those of such

affiliates that have responded in both 2016 and 2017 also showed an increase of 2.0% from the previous year.

By industry, 4.33 million were in the manufacturing industry, showing a decrease of 2.1% from the previous year, while 1.26 million were in non-manufacturing industries, showing an increase by 9.3% from the previous year. By region, an increase was seen from the previous year in North America at 0.73 million, up by 6.8%, and in Europe at 0.55 million, up by 0.5%, while a decrease was seen in Asia at 3.94 million, down by 1.4%, in particular, in China at 1.57 million, down by 3.0%, and ASEAN-4 economies at 1.41 million, down by 2.2% from the previous year.

(3) The total sales of overseas affiliates decreased.

The total sales of overseas affiliates were 257.6 trillion yen, down by 6.0% from the previous year, and those of such affiliates that have responded in both 2016 and 2017 also decreased by 6.0% from the previous year.

(4) The ratios of overseas production in the manufacturing industry declined.

The ratios of overseas production in the manufacturing industry (based on all domestic companies) were 23.8%, down by 1.5 percentage points from the previous year, showing a decrease for the first time in five years.

(5) Operating profits and net income of overseas affiliates reached a record-high level.

Operating profits of overseas affiliates were 12.2 trillion yen, up by 26.9% from the previous year, and those of such affiliates that have responded in both 2016 and 2017 also increased by 14.6% from the previous year, both of which reached a record-high level.

http://www.meti.go.jp/english/press/2018/0405_001.html

2018 White Papers on SMEs and Small Enterprises in Japan Released

The Small and Medium Enterprise Agency (SMEA) of the Ministry of Economy, Trade and Industry (METI) released reports titled “Trends among Small and Medium Enterprises (SMEs) in FY2017” and “SME Policies in FY2018” (“2018 White Paper on Small and Medium Enterprises in Japan”), as well as “Trends among Small Enterprises in FY2017” and “Small Enterprise Policies in FY2018” (“2018 White Paper on Small Enterprises in Japan”), which were approved by the Cabinet on April 20, 2018.

The 2018 White Papers explain a large number of case examples of leading SMEs and small enterprises committed to productivity improvement along with

survey results, showing 113 case examples.

Key Points of the 2018 White Paper on Small and Medium Enterprises in Japan are as follows.

Part I of the report describes the recent trends in SME activities and shows that operating profits of SMEs reached a record high level and that economic confidence is following a trend of improvement.

Part II of the report presents analyses of the current situations of labor shortages, and based on this, it analyzes SMEs' efforts for improving productivity. Specifically, it explains their efforts for revision of operating processes, ingenuity in making use of human resources, utilization of IT, business investment, and M&A-based business reorganization and mergers. The report stresses the importance of ingenuity in making use of human resources to guarantee smooth operations, and to this end, it features the introduction of cross-trained or concurrently-appointed workers, new approaches that non-industrial fields have been adopting in recent years.

The report analyzes M&A by SMEs which are currently on an increasing trend against the backdrop of business succession and other issues, and explains that M&A is also a good opportunity for SME buyers to improve their productivity by taking advantage of synergistic effects brought out by partner enterprises.

http://www.meti.go.jp/english/press/2018/0420_005.html

Factory Location Trends in 2017 Analyzed

The Ministry of Economy, Trade and Industry (METI) published on March 28, the Survey of Factory Location Trends, focusing on businesses in the manufacturing, gas supply, heating supply and electricity supply sectors that acquired 1,000 m² or more of land in 2017 for the purpose of constructing factories.

The number of new factory locations acquired by the manufacturing sector and other sectors* in Japan between January and December 2017 was 1,009 (up by 1.7% from the previous year), covering a total area of 1,228ha (up by 9.4%), showing the second largest record in terms of both the number and the area since the economic downturn incurred after the collapse of Lehman Brothers (after 2009).

* In this survey, the manufacturing sector and other sectors include manufacturing industries such as the food industry along with the gas supply and heating supply industries, but exclude the electricity supply sector in order to eliminate the influence of the number of new factory locations for photovoltaic power generation facilities.

Transition of Factory Locations

Locations (number)						
	2012	2013	2014	2015	2016	2017
First half	434	353	498	464	456	600
Second half	504	478	510	581	536	409
Annual total	938	831	1008	1045	992	1009

Total areas (ha)						
	2012	2013	2014	2015	2016	2017
First half	606	426	596	521	559	662
Second half	497	651	585	601	563	566
Annual total	1102	1077	1181	1122	1122	1228

Looking at the trends of new factory locations by sector in the manufacturing industry, four sectors, i.e. the food, metal products, production machinery and transportation machinery sectors-accounted for over 50% in both the number and total area. By region, the top 5 popular prefectures as new factory locations were Shizuoka (95 locations), Gunma (63), Hyogo (63), Ibaraki (50) and Aichi (46).

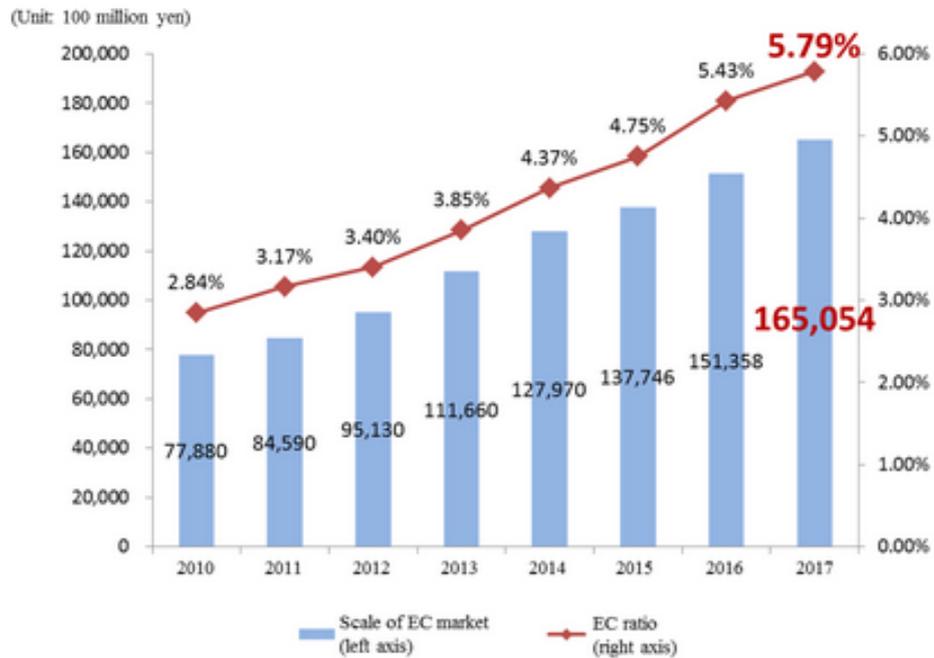
http://www.meti.go.jp/english/press/2018/0328_004.html

METI Analyzes Internet Buying Boom

The Ministry of Economy, Trade and Industry (METI) conducted the FY2017 Survey of Infrastructure Development Status for Data-driven Society in Japan (E-Commerce Market Survey) to analyze the current state of the Japanese e-commerce (EC) market and the market trends in cross-border EC among three countries – Japan, the U.S., and China – and published the results on April 25. According to the METI survey, the scale of the domestic B-to-C EC market expanded to 16.5 trillion yen (up by 9.1% from the previous year) in 2017. The scale of the domestic B-to-B EC market expanded in the same year to 317.2 trillion yen (up by 9.0%).

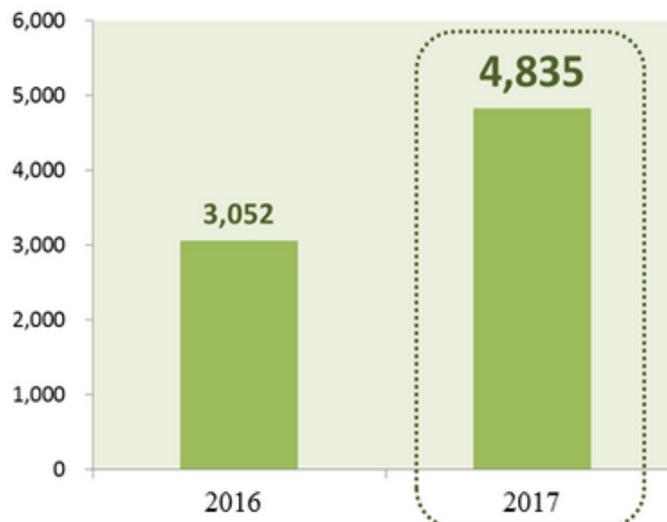
The EC ratio* was 5.79% (up by 0.36 percentage points from the previous year) for B-to-C EC, while it was 29.6% (up by 1.3 percentage points) for B-to-B EC. The survey results show continuous progress in the computerization of commercial transactions.

Changes in scale of B-to-C EC market in Japan



In the 2017 survey, the scale of the internet auction market in 2017 was estimated to be 1,120.0 billion yen (up by 3.2%), the C-to-C scale of which was estimated to be 356.9 billion yen (up by 3.2%).

Estimated market scale of flea market applications (Unit: 100 million yen)



The scale of the EC market via flea market applications was estimated to be 483.5 billion yen (up by 58.4%), showing a sharp increase. This revealed that a giant market has emerged in Japan just five years since the entry of flea market applications into the market in 2012.

In 2017, the market scale of cross-border EC among Japan, the U.S. and China, increased in all countries. In particular, the amount purchased through cross-border EC by Chinese consumers from Japanese business operators was 1,297.8 billion yen (up by 25.2%), and that from U.S. business operators was 1,457.8 billion yen (up by 28.2%), showing an outstanding expansion of the amount purchased through cross-border EC by Chinese consumers.

Market scale of cross-border EC among Japan, the U.S. and China

(Unit: Billion yen)

Country (consumer)	Amount purchased from Japan	Amount purchased from U.S.	Amount purchased from China	Total
Japan (year-on-year)		232.7 +7.2%	24.3 +7.3%	257.0 +7.3%
U.S. (year-on-year)	712.8 +15.8%		494.2 +16.0%	1,207.0 +15.9%
China (year-on-year)	1,297.8 +25.2%	1,457.8 +28.2%		2,755.6 +26.8%
Total (year-on-year)	2,010.6 +21.7%	1,690.5 +24.8%	518.6 +15.6%	4,219.6 +22.1%

http://www.meti.go.jp/english/press/2018/0425_002.html

COMPANY NEWS

Hitachi Zosen Inova to Build and Operate a Special Plant in Sweden to Turn Organic Waste into Vehicle Fuel

Hitachi Zosen Inova announced on April 12 that it would build Scandinavia's second Kompogas® facility in Jönköping, Sweden. It will use a dry fermentation

process to convert around 40,000 metric tons of organic waste a year into fuel for buses and cars, and high-grade fertilizers. The new installation will replace an existing wet fermentation facility, assuring the future of organic waste treatment, renewable fuel production, and jobs in the region.

The Swedish municipality of Jönköping has approved the sale of the existing wet fermentation facility (JEBIO1) to the Swiss company Hitachi Zosen Inova (HZI) and its local partner and enabler JES & Partners AB.

<http://www.hz-inova.com/cms/wp-content/uploads/2018/04/New-AD-Plant-for-J%C3%B6nk%C3%B6ping.pdf>

Shell and Toyota Move forward with Hydrogen Facility for Freight at Port of Long Beach

According to a press release of Toyota Motor dated April 20, Equilon Enterprises LLC, doing business as Shell Oil Products US ("Shell"), and Toyota have been provisionally awarded \$8 million by the California Energy Commission (CEC) to develop the first hydrogen-truck refueling station at the Port of Long Beach, California.

The funding, which is contingent upon the approval of the project at an upcoming CEC meeting, forms part of the CEC's Alternative and Renewable Fuel and Vehicle Technology Program, which helps develop hydrogen and electric infrastructure at ports, warehousing and distribution centers in California. If approved, Shell will build, own and operate a hydrogen station at the Toyota Logistics Services location at the Port of Long Beach, fueling Toyota's Project Portal heavy-duty fuel cell proof of concept truck and public fleets.

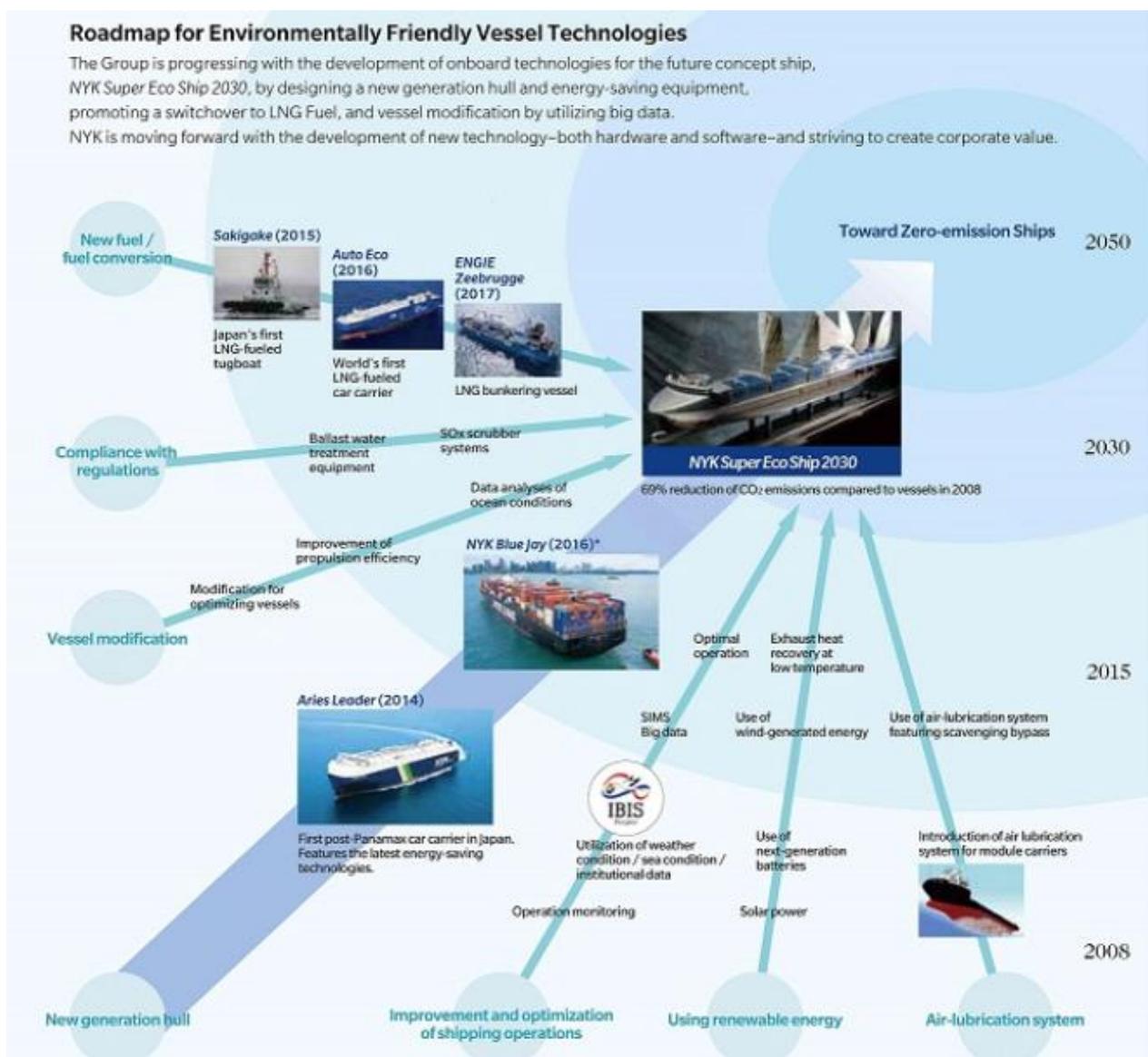
Shell will source its hydrogen from Toyota's adjacent Tri-Gen facility, which produces hydrogen from 100% renewable biogas. Shell and Toyota expect the facility to encourage the use of zero-emission hydrogen fuel cell electric trucks in and around Long Beach, one of the world's largest freight hubs.

<https://newsroom.toyota.co.jp/en/corporate/22240795.html>

NYK to Issue Green Bonds

NYK Line announced on April 17 that it would publicly offer Green Bonds (Unsecured Corporate Bonds No.40) within the Japanese domestic market in May, becoming the world's first company to issue labelled Green Bonds in global shipping business sector.

A green bond is one in which the proceeds are used solely for the purpose of funding environment-friendly projects. NYK's new medium-term management plan "Staying Ahead 2022 with Digitalization and Green" positions the company to integrate environmental, social, and governance (ESG) principles into management strategies to contribute to the sustainable development of society and enrichment of the company's corporate value.



NYK's Green Bonds have been given the approval as "a model case for the Green Bonds issuance in fiscal year 2018" by Ministry of the Environment, Government of Japan (MOEJ), for the first Japanese industrial corporation.

Summary of NYK Green Bonds is as follows.

Issuer	NYK
Maturity	5 years
Issue Amount	10 billion yen
Closing Date	May 2018 (current schedule)
Use of Proceeds	Investment toward mainly new but including existing (refinancing) projects indicated in NYK's "Roadmap for Environmentally Friendly Vessel Technologies,"* such as (1) LNG-fueled ships, (2) LNG bunkering vessels, (3) ballast water treatment equipment, and (4) SOx (sulfur oxides) scrubber systems, etc.. See below for more details on these projects.

http://www.nyk.com/english/news/2018/1190457_1687.html

ADDITIONAL TOPICS

NEDO Creates a New Department for Advanced Battery and Hydrogen Technology

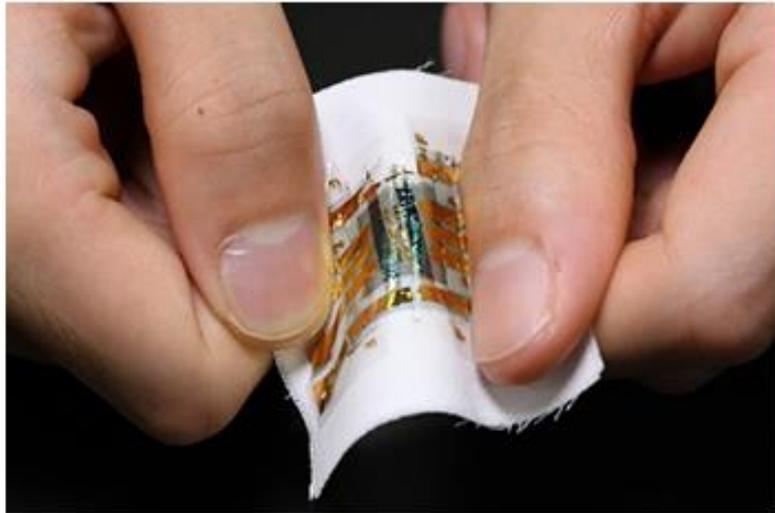
New Energy and Industrial Technology Development Organization (NEDO) announced on April 2 that it created a new department specialized in the development of next generation batteries and fuel cells. According to the NEDO, these technologies are regarded as "core technologies" for promoting low-carbon economy of Japan.

http://www.nedo.go.jp/english/introducing_organization.html

http://www.nedo.go.jp/news/press/AA5_100941.html (Japanese language only)

Thermally Stable, Efficient and Ultraflexible OPV Developed

According to a joint press release of RIKEN, Toray Industries and Japan Science and Technology Agency (JST) dated April 17, an international group of researchers from various organizations including RIKEN and Toray have developed an ultraflexible organic photovoltaic (OPV) that achieves sufficient thermal stability at 100 °C and a high power conversion efficiency of 10%. The ultraflexible and thermally stable OPV can be easily integrated into textiles through the commercially available hot-melt process without causing performance degradation, thereby presenting great potential as a ubiquitous and wearable power source in daily life.



http://www.riken.jp/pr/press/2018/20180417_1/ (Japanese language only)

<http://www.toray.co.jp/news/chemicals/detail.html?key=448C23233D1595D54925826E00198062> (Japanese language only)