International Partnership for Hydrogen and Fuel Cells in the Economy

Japan Update

43rd IPHE Steering Committee Meeting

10-11 June 2025

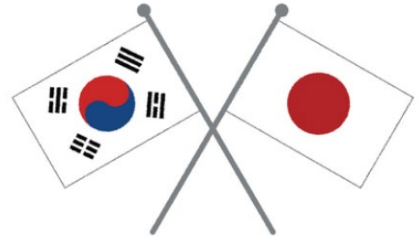
Santiago, Chile

Announcements / New Initiatives *Japan*

Policies/Initiatives

March:

- **2nd Japan-Korea Hydrogen and Its Derivatives such as Ammonia Cooperation Dialogue Held**
  - On March 27, 2025, the second Japan-Korea Hydrogen Cooperation Dialogue was held in Tokyo.
  - The governments and relevant organizations of the two countries reported on previous discussions and cooperation in the four working groups established in the cooperation framework (supply chain, carbon intensity and certification, codes and standards, and safety) and discussed future cooperation.



- **The application window for Japan's CfD-type Hydrogen and Its Derivatives Support Scheme has Closed at the end of March**
  - The Japanese government plans to provide a 15-year support to suppliers aiming to develop a commercial-scale supply chain of low-carbon hydrogen and its derivatives which meets Japan's primary energy and Green Transformation policies.
  - The application period for this support ended in March 2025. We received 27 project applications, with the total amount far surpassing the $20 billion budget.

Announcements / New Initiatives *Japan*

April

- **Expo 2025 Osaka Kansai Opens with New Hydrogen Technologies**
  - The Expo 2025 Osaka Kansai runs from April 13 to October 13, 2025.
  - Visitors will have the opportunity to experience a hydrogen society through exhibits and events, such as a ride on Japan's first commercial hydrogen fuel cell ship, electricity supply by hydrogen power generation, and other hydrogen-related technologies.

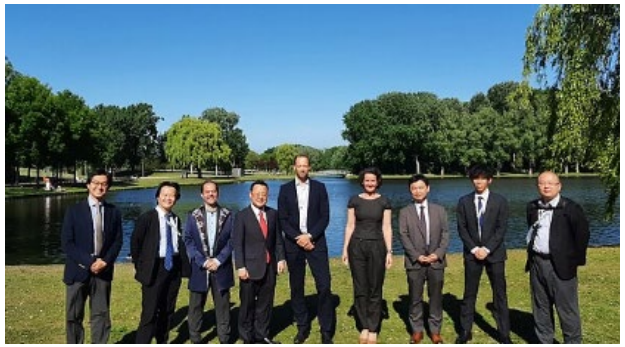
May

- **Five "Priority Regions" have been Selected to Provide Intensive Financial Support for FC Commercial Vehicles**
  - To promote the social implementation of FC commercial vehicles, local governments are expected to lead discussions among FCV users, manufacturers and hydrogen refueling station (HRS) operators, and to develop integrated plans for the introduction of FC commercial vehicles and HRS.
  - The Japanese government selected the five "Priority Regions" and will provide them with intensive financial support for the introduction of FC commercial vehicles (Fukushima, Tokyo and Kanagawa, Aichi, Hyogo, and Fukuoka prefectures).

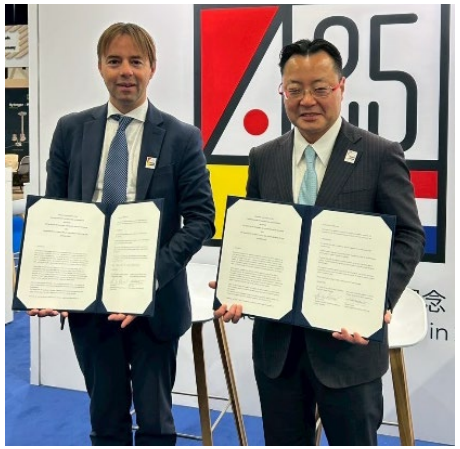
Announcements / New Initiatives *Japan*

May

- **6th Meeting of Hydrogen Working Group, Japanese-German Energy Partnership Held**
  - The 6th meeting of the Hydrogen Working Group under the Japanese-German Energy Partnership was held on May 20, 2025, at the venue of the WHS in Rotterdam.
  - The Ministry of Economy, Trade and Industry (METI) and the Federal Ministry for Economic Affairs and Energy (BMWE) exchanged information on updates to energy and hydrogen policies in each country and discussed the planning of next steps towards upcoming events such as the Hydrogen Energy Ministerial Meeting and COP30.



- **Update of MOC with the Netherlands**
  - On May 21, 2025, Japan and the Netherlands have updated the 2019 Hydrogen Memorandum of Cooperation (MOC) to strengthen their cooperation on demand creation and development of infrastructure for hydrogen.
  - Under the updated MOC, the two countries will promote various forms of collaboration among governments, industrial players, and research institutes in the fields of hydrogen and ammonia.



Announcements / Hydrogen Energy Ministerial Meeting

- HEM was first held in Tokyo in 2018 as **the world's first ministerial meeting exclusively on hydrogen.**
- Chaired by Japan with a number of key participants, HEM has been an ideal forum to **discuss most recent hydrogen policy developments** and **emerging issues** for **policy coordination**.
- The **7th HEM** will be held in conjunction with **the Expo 2025 Osaka** alongside other events such as the High-Level Dialogue on Sustainable Fuels.

Date & Venue for 7th Hydrogen Energy Ministerial Meeting

- Date：**TBD** (in autumn of this year)
- Venue：Osaka
- Invited Countries/Organizations: Approximately 60 countries and organizations, including those with national hydrogen strategy and international organizations like the IEA.
- Outcomes：**A chair summary to be issued. experience Japan's technology and the hydrogen society at the Expo**.

Japan – Profile June 2025

Status of Deployments

- Fuel Cell Vehicles: 8,857
  as of Mar. 2025
- FC Bus: 180
  as of Feb 2025
- Forklifts: 446
  as of Feb. 2025
- 70MPa HRS: 159 operational
  as of Apr. 2025
- Stationary residential fuel cells (ENE-FARM): 549,575
  as of Mar. 2025

Leading Government Initiatives

- Japanese government enforced "Hydrogen Society Promotion Act" on 23rd October 2024.

Deployment Goals

Deployment target by 2030:

- Fuel Cell Vehicles: 800,000
- H_2 Refueling Stations: 1,000
- Fuel Cell Buses: 1,200
- Stationary residential fuel cells: 3 million

Goals or Focus Areas

- Cost (JPY/Nm3 – H2)
  JPY 30 /Nm3 by 2030
  JPY 20 /Nm3 by 2050
- Hydrogen supply & demand
  3 M tones by 2030
  12 M tones by 2040
  20 M tones by 2050

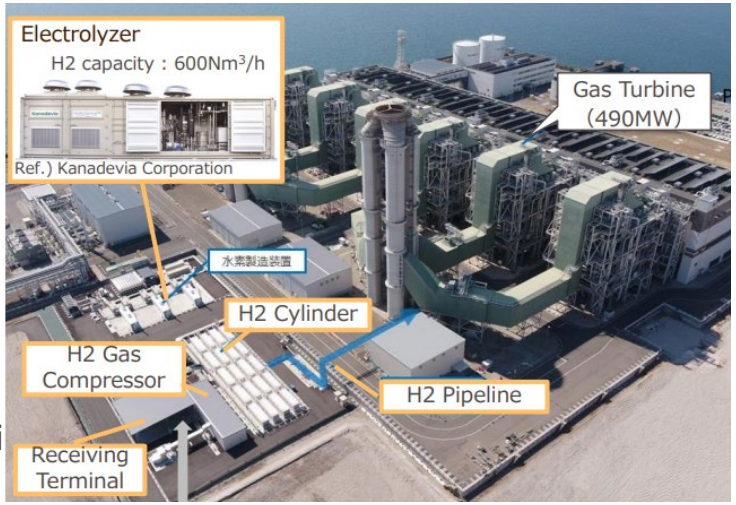
Funding

- CfD-type Hydrogen Support Scheme: ¥3 trillion yen over 15 years
- Green Innovation Fund (R&D for hydrogen-related technologies): ¥1.2 trillion yen over 10 years

Etc.

Announcements / Initiatives to create mass demand for hydrogen and ammonia

- **Demonstration of large-scale hydrogen co-firing power generation begins**
  - As part of NEDO's "Green Innovation Fund Project", Kansai Electric Power Co., Ltd. has begun a hydrogen co-combustion power generation demonstration project at Himeji No. 2 Power Plant in April 2025.
  - This is the first hydrogen co-combustion project in Japan with a co-combustion ratio of 30% using a large-scale commercial gas turbine.
  - Himeji No. 2 power plant has a total capacity of 2,919,000 kW (Units 1-6). Unit 5 of Himeji No. 2 Power Station '486,500 kW' is converted to a hydrogen co-firing demonstration plant.
  - No modification was made to the gas turbine itself, only the combustor was converted for hydrogen co-firing.
  - Part of the electricity generated in this demonstration project has been supplied to the Osaka-Kansai Expo. Hydrogen is produced by using water electrolysis equipment installed at power plants (Electrolyzer 1MW x 3)



- **World's first ammonia-fueled tugboat "Sakigake" completes its demonstration voyage**
  - As part of NEDO's "Green Innovation Fund Project", Nippon Yusen Co., Ltd. and IHI Power Systems Co., Ltd. conducted research and development with the cooperation of Nippon Kaiji Kyokai and the ammonia-fueled tugboat "Sakigake" has successfully completed its demonstration voyage. Ammonia is locally procured.
  - The tugboat is equipped with 2 four-stroke ammonia-fueled engines (approx. 1,600 kW output/unit).
  - Achieving the reduction level in greenhouse gas emissions of up to approximately 95%.

Thank you

International Partnership
for Hydrogen and Fuel Cells
in the Economy