



International Partnership
for Hydrogen and Fuel Cells
in the Economy

Japan Update

38th IPHE Steering Committee Meeting
29 – 30 November 2022
San José, Costa Rica

Announcements / New Initiatives *Japan*

- **Launched “Study Group on the Formulation of a Hydrogen Safety Strategy”**
 - **With growing needs of hydrogen, we established the new “Study group on the formulation of a Hydrogen Safety Strategy” in August 2022.**
 - **The objective is to improve the overall strategy for hydrogen safety issues from the following perspectives;**
 - **The regulation to acquire the necessary permission to a seamless utilization of the hydrogen supply**
 - **Determining the classification in respond to the physical characteristics of hydrogen, technological progress, and risks.**
 - **Guarantee safety to ensure the safety of consumers and local residents**

https://www.meti.go.jp/shingikai/safety_security/suiso_hoan/index.html(Japanese version only).

- **Launched “Mobility Hydrogen Public-Private Conference”**

- We established the Mobility Hydrogen Public-Private Conference for the public and private sectors (and the suppliers and demanders) in September 2022.
- The objective is having the Cross-industry discussion toward expanding the use of hydrogen in mobility to develop a shared future vision and discuss together what policies will be necessary.

(Issues to be discussed)

- Identifying priority categories (e.g. buses and small and large trucks) in the mobility sector
- Scale to introduce the vehicles and infrastructure on by 2030, and road maps for doing so
- Optimal distribution of hydrogen stations based on uses (last mile, trunk lines, etc.)
- Cost targets for the vehicles, hydrogen stations (introduction and operation), and the hydrogen itself
- Various measures in light of the above (budget, systems, etc.)

https://www.meti.go.jp/english/press/2022/0906_003.html

Announcements / New Initiatives *Japan*

- **Suntory and Yamanashi Prefecture to produce green hydrogen by installing Japan’s largest 16MW Power-to-Gas System at Suntory’s Hakushu facilities by 2025”**
 - Suntory Holdings and Yamanashi Prefecture has signed a basic agreement to collaborate on decarbonizing *Suntory Hakushu Distillery* and *Suntory Minami Alps Hakushu Water Plant* located in Yamanashi Prefecture.
 - Install the country’s largest 16MW “Yamanashi Model Power-to-Gas (P2G) System”, which is supported by Japanese government’s a Green Innovation Fund program under the at the company’s Hakushu facilities by 2025.



<https://www.suntory.com/news/article/14225E.html>

Announcements / New Initiatives *Japan*

• 5th Hydrogen Energy Ministerial Meeting

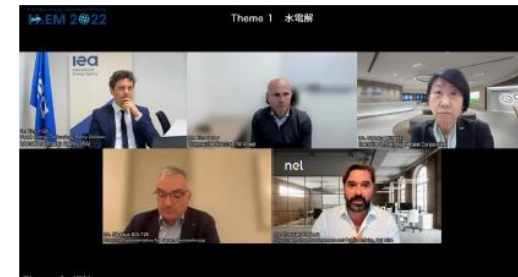
- Released the chair's summary for acceleration
- Enlargement of the Tokyo Statement and the Global Action Agenda, including additional goals on the amount of renewable and low-carbon hydrogen to be produced by 2030 of at least 90Mt H₂.



Ministerial Meeting Session



Ministerial Speech Session



Industrial Session: Water Electrolysis



Industrial Session: Hydrogen Industrial Applications (Steel, Heat and Chemicals)



Industrial Session: Methodology for determining the GHG emissions associated with the production of hydrogen

https://www.meti.go.jp/english/press/2022/1007_001.html

38th IPHE Steering Committee
November 2022



Examples of Lessons Learned and Impact *Japan*

Program initiative, policy, regulation or mandate	Lessons Learned/Outcomes
Green Innovation Fund	<ul style="list-style-type: none"> • JPY 300 billion (\$2.7 billion) project to establish large-scale hydrogen supply chain and JPY 70 billion (\$530million) project to produce hydrogen using renewables in Japan and to reduce cost of electrolyzers have started and are ongoing
The Sixth Strategic Energy Plan	<ul style="list-style-type: none"> • In power generation sector expected to large amount of hydrogen demand, aiming at introduction/expansion of 30%-hydrogen co-firing in gas-fired power generation or hydrogen-fired power generation and 20%-ammonia co- firing in coal-fired power generation, demonstration of co-firing/single fuel firing will be promoted and the environment for appropriate assessment of non-fossil value will be prepared. In addition, 1% hydrogen/ammonia will be positioned in power generation mix in FY2030 EXPO
Act on the Promotion of Use of Non-fossil Energy Sources and Effective Use of Fossil Energy Materials by Energy Suppliers	<ul style="list-style-type: none"> • Promotes the use of decarbonized fuels by including hydrogen and ammonia as non-fossil energy sources • Promotes the use of thermal power with CCS

Japan – Profile November 2022

Status of Deployments

- Fuel Cell Vehicles: 7,457 as of Sep. 2022
- FC Bus: 120 as of Oct. 2022
- Forklifts: 397 as of Oct. 2022
- 70MPa HRS: 165 operational as of Oct. 2022

Leading Government Initiatives

- The Sixth Strategic Energy Plan was approved by the Cabinet on October 22, 2021

Goals or Focus Areas

- Cost (\$/kg)
\$3/kg by 2030
less than \$2/kg by 2050
- Hydrogen demand
up to 3 Mts by 2030
around 20 Mts by 2050

Deployment Goals

These are as of 2030:

- Fuel Cell Vehicles 800,000
- H₂ Refueling Stations 1,000
- Fuel Cell Buses 1,200

Funding

JPY 300 billion (\$2.7 billion) project to establish large-scale hydrogen supply chain
JPY 70 billion (\$530million) project to produce hydrogen using renewables in Japan and to reduce cost of electrolyzers



Thank you



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