



International Partnership
for Hydrogen and Fuel Cells
in the Economy

Japan Update

36th IPHE Steering Committee Meeting
16 – 17 November 2021
Virtual Meeting

GI Fund Project



① Establishing Global Hydrogen Supply Chain

- Japanese government will support large demonstration projects at the aim of commercializing global supply chain with several carriers and hydrogen power generation no later than 2030 (**~300 Billion Yen**).
- The goal of this project is to establish a strong technological base to attain the hydrogen supply cost target (**¥30/Nm³ by 2030, less than ¥20/Nm³ in 2050**)



② Scaling up Electrolysers

- To further reduce the cost of electrolysers, Japanese government will support demonstration projects for 1) scaling up electrolysers, 2) implementing superior components and 3) system optimization with several demands(**~70 Billion Yen**)
- The goal of this project is to establish a strong technological base to attain the cost of electrolyser (**up to 1/6 of the current system cost**)

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
Hydrogen Energy Ministerial Meeting	<ul style="list-style-type: none"> • 30 representatives from countries, region and organizations, 3200 registrations • We shared policy directions and IEA launched the Global Hydrogen Review
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



Japan – Profile November 2021

Status of Deployments

- Fuel Cell Vehicles: 6,511 as of Sep. 2021
- FC Bus: 106 as of Oct. 2021
- Forklifts: 326 as of Oct. 2021
- 70MPa HRS: 155 operational as of Oct. 2021

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 |
| • H ₂ 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
 *currently in a process of selecting project implementers.

Thank you



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