International Partnership for Hydrogen and Fuel Cells in the Economy

Japan Update

44th IPHE Steering Committee Meeting

24 – 25 November 2025

Riyadh, Kingdom of Saudi Arabia

Japan's Hydrogen Policy Trends

- **Japan was the first country to formulate a national hydrogen strategy, in 2017, which was then revised in 2023.**
- **Establishment of the Green Innovation Fund of approximately ¥2 trillion (€ 11.7 billion) in 2021.**
- **Enacted and enforced the Hydrogen Society Promotion Act in 2024.**

Milestones

2017
- Basic Hydrogen Strategy

2020
- 2050 CN Declaration
- Green Growth Strategy

2021
- Green Innovation Fund
- Revised Strategic Energy Plan

2023
- GX Promotion Act
- Revision of Basic Hydrogen Strategy

2024
- Hydrogen Society Promotion Act

Targets

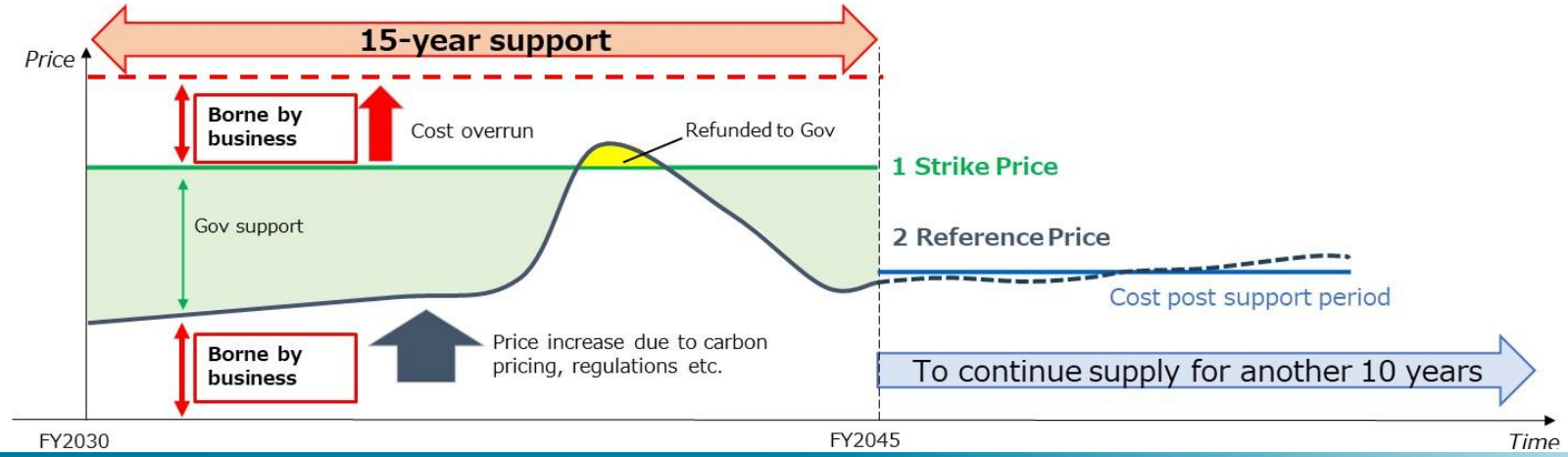
- **Supply & Demand volume:**

Current（Approx. **2Mt**） → 2030（Approx. **3Mt**） → 2040 (Approx. **12Mt**) → 2050（Approx. **20Mt**）

CFD Support Measure
- Focusing on the Price Gap

- The government plans to provide a 15-year support to **suppliers** who aim to develop a **commercial-scale supply chain** of **low-carbon hydrogen and its derivatives※** which meets Japan's primary energy policy and GX policy. (i.e. S+3E: Safety + Energy Security, Economic Efficiency, Environment)

※ammonia, e-methane and e-fuel



Key requirements

- **Supply to users including in hard-to-abate sectors**, such as steel and chemical industries.
- **Start supply by FY2030 and must continue for another 10 years** following the support period.

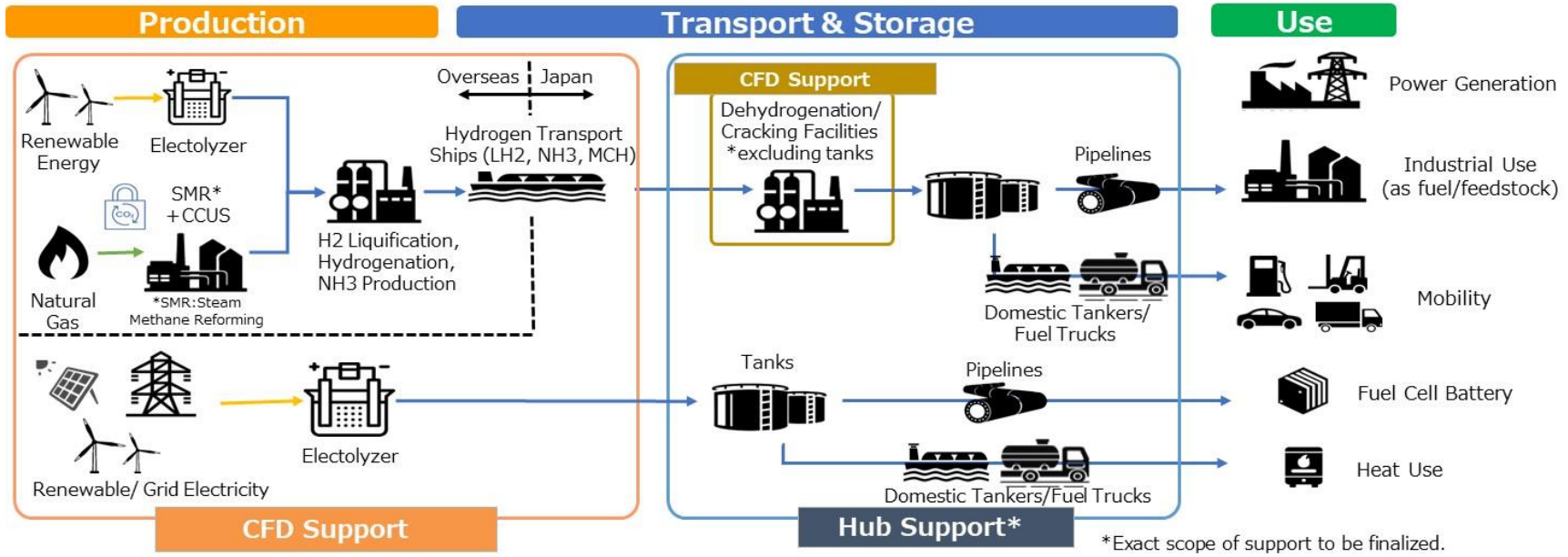
* In the approval process, business plans are to be reviewed holistically from Japan's energy and GX policy perspectives

Application Acceptance Period

- **Start: November 22,2024 Deadline: March 31, 2025**

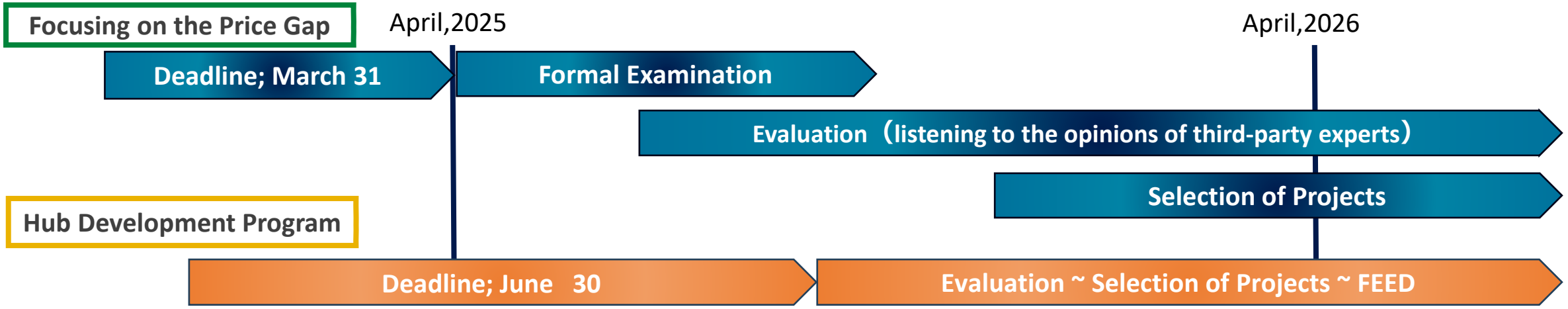
Hub Development Program

- **The Hub Development Program** supports the **establishment of infrastructure which leads to large-scale expansion of the use of low-carbon hydrogen and its derivatives** and widely benefits a variety of companies, with an aim to stimulate demand creation and the efficient buildout of hydrogen supply chains.
- The Program will subsidize a portion of the CAPEX for developing "**facilities necessary to transport low-carbon hydrogen from the receiving terminal to the point of actual use by consumers** and **used by multiple companies** (e.g. shared pipelines and tanks)"
- The application was closed at the end of June 2025.



Progress of the Support Measure

- **27 applications** were received **by the deadline of March 31, 2025**. The total amount of all applications was **well over the budgeted size of ¥ 3 trillion** (≒ Approx. $ 20 billion).
- While proceeding with **the formal examination** of whether the necessary information is covered, etc., and listening to the **opinions of third-party experts**, we will proceed with the examination and **dig deeper while deciding which projects should be examined on a priority basis in light of the evaluation criteria**.
- The government will **select projects on a rolling basis** from summer to the latter half of this fiscal year, **starting with those that have met the requirements**.
- **On September 30, 2025**, the government **selected 2 domestic projects**.

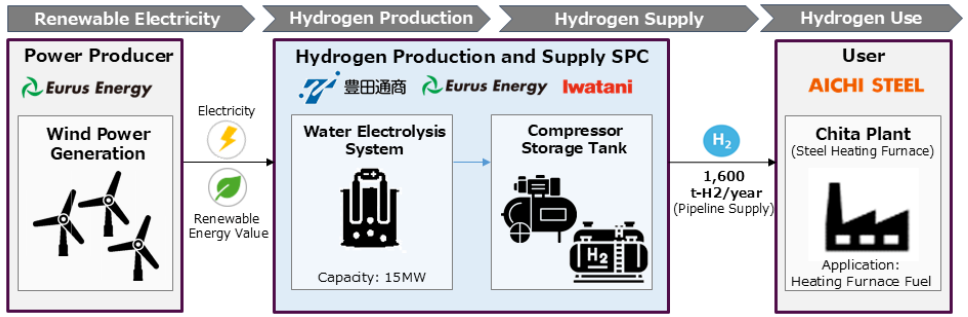


Awarded Business Plan （Toyota Tsusho：Green Hydrogen Project）

■ Basic Information

Place	Tokai, Aichi Prefecture
Supplier	**Hydrogen Production and Supply SPC （Toyota Tsusho, Eurus Energy, Iwatani）**
User	**Aichi Steel**
Low-carbon hydrogen and its derivatives	Hydrogen
Amount of supply	Approximately 1,600 t /year

＜Process＞



Reference：Press release by Toyota Tsusho

■ Overview of the project

- **Electricity generated at an onshore wind power plant** will be procured by the manufacturing SPC funded by Toyota Tsusho and other partners.
  The electricity will be used for water electrolysis at Aichi Steel's Chita plant to produce hydrogen.
- The produced hydrogen will be used in some of the **heating furnaces for steel and iron materials**.

■ Key points

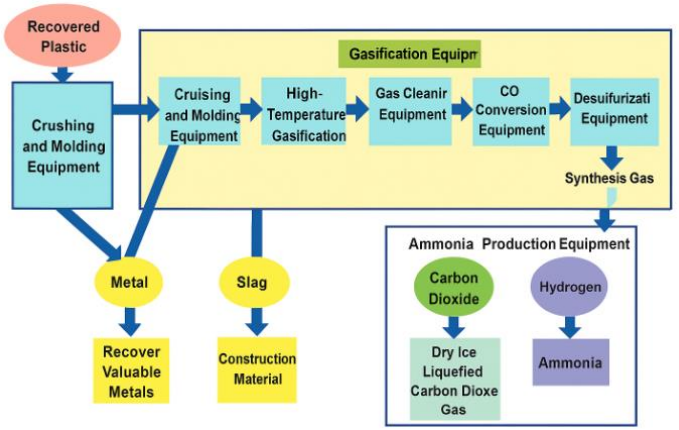
- **Contributing to improving energy self-sufficiency**: hydrogen production using renewable energy from remote locations via power grid
- **100% of the hydrogen supplied to industries difficult to decarbonize with few alternative technologies**
- **Water electrolysis system by Toyota Motor・Chiyoda Corporation** planned to be adopted
- **Aichi Steel** plans to add the value of hydrogen and produce **the electric furnace industry's first green steel.**

Awarded Business Plan （Resonac：Hydrogen・Ammonia Project）

■ Basic Information

Place	Kawasaki, Kanagawa Prefecture
Supplier	**Resonac**
User	**Resonac, Nippon Shokubai**
Low-carbon hydrogen and its derivatives	Hydrogen・Ammonia
Amount of supply	Approximately 20,000t-NH_3/year

＜Process＞



Reference：Resonac HP

■ Overview of the project

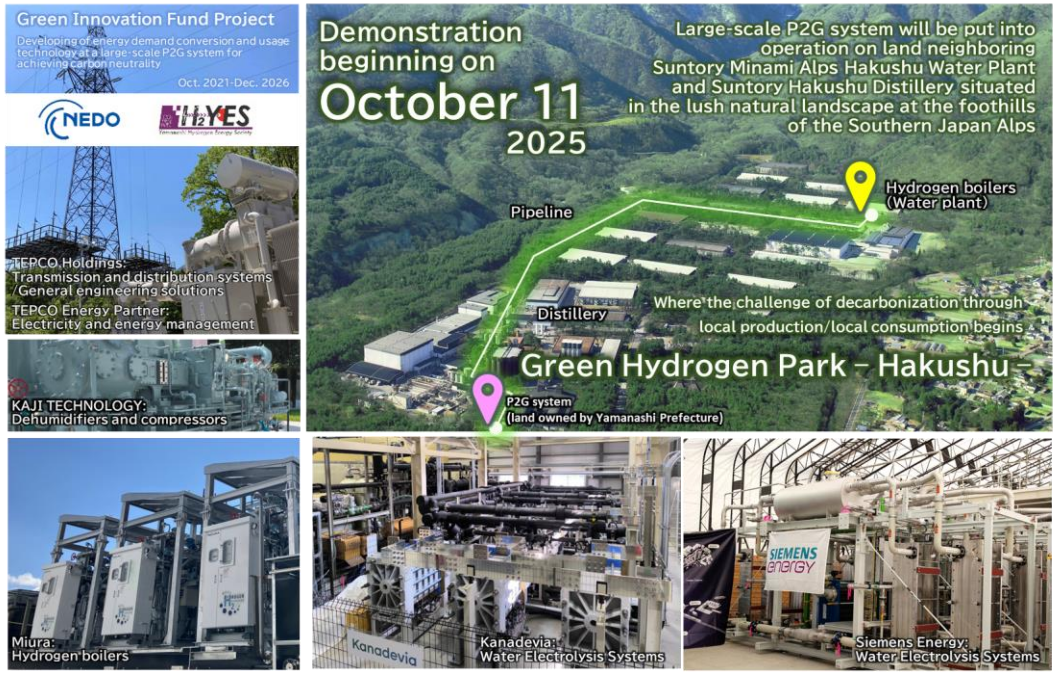
- Resonac plans to **gasify waste plastics and discarded clothing** to produce hydrogen, which will be used as **feedstock to produce low-carbon ammonia.**
- Resonac will also be the primary user, **producing and selling raw material for textiles (acrylonitrile)**, with the aim of promoting resource circulation.

■ Key points

- **Contributing to improving energy self-sufficiency**: utilization of urban resources (waste plastic)
- **100% of the hydrogen supplied to industries difficult to decarbonize with few alternative technologies**
- Using **waste plastic gasification technologies** developed by Ebara Corporation and UBE Corporation, the project seeks to operate **Japan's first plant powered entirely by waste plastic**

Announcements / Initiatives to launch large-scale demo for green hydrogen and blue ammonia

Launch of Green Hydrogen Park Hakushu



- Yamanashi Prefecture and 10 partner companies have begun producing green hydrogen at Japan's largest 16MW facility.
- The hydrogen will help decarbonize Suntory's local natural mineral water plant and distillery, aiming to cut 16,000 tons of CO_2 annually.
- The project will demonstrate a full renewable energy system by 2026 and encourage regional hydrogen usage.

Technology development for Blue Ammonia production

- INPEX is launching Japan's first full-cycle domestic project to produce and use blue hydrogen and ammonia—clean energy sources that emit no CO_2 during use.
- Currently the plant is under commissioning phase, and hydrogen and ammonia will be produced soon from natural gas sourced in Niigata Prefecture, with CO_2 by-products stored underground via CCUS. The blue hydrogen will power local electricity generation, and blue ammonia will be supplied to consumers in Niigata.

Japan – Profile November 2025

Status of Deployments

- Fuel Cell Vehicles: 9,035
  as of Sep. 2025
- FC Bus: 180
  as of Sep. 2025
- Forklifts: 446
  as of Sep. 2025
- 70MPa HRS: 156
  (Including HRS under construction)
  as of Sep. 2025
- Stationary residential fuel cells (ENE-FARM): 562,507
  as of Sep. 2025

Leading Government Initiatives

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

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

Deployment Goals by 2030

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

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

Thank you

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