METI
Ministry of Economy, Trade and Industry

Japan's Recent Policy Developments on Hydrogen and Ammonia

February 2026

Ministry of Economy, Trade and Industry

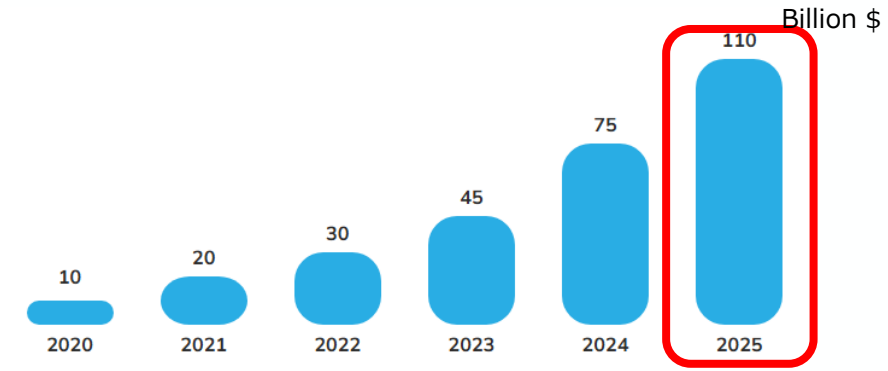
Japan

Japan's Perspective on Global Hydrogen Trends

- Growth speed of hydrogen/ammonia market slower than expected
- Businesses shifting away from hydrogen/ammonia
- Delays in policy frameworks (ex. IMO)

But…

- Steady growth
- Businesses aiming to start commercial operation earlier than 2030
- Governments continuing to provide long term support



Hydrogen Council & McKinsey Project & Investment Tracker, as of December 2020, May 2021, May 2022, October 2023, May 2024 and July 2025

Image: from KHI video

The 7th Strategic Energy Plan (February, 2025)

7. Next Generation Energy Security/Supply System

- **Hydrogen and its derivatives (including ammonia, e-methane, and e-fuels)** are **expected to be utilized in a wide range of fields** and are key energy sources for achieving carbon neutrality. Some countries are beginning to provide support not only for technological development, but also for the acquisition of natural resources and suitable sites for hydrogen production and capital investment. In this context, Japan will also **hone its competitiveness through technological development** and encourage **companies to make proactive capital investments** with an eye to the expansion of the global market. Japan will also **promote the introduction of biofuels**.
- In addition, for public implementation, based on the **Hydrogen Society Promotion Act enacted in May 2024**, we will strongly underpin **the establishment of supply chains** through **support focusing on the price gap** and other measures, and for the further large-scale supply and use of low-carbon hydrogen and its derivatives both in Japan and overseas, we will implement **regulatory and support policies in an integrated manner** to **reduce costs and expand use**.

Development of Hydrogen Supply Chain

- Japanese industrial sector have technical strength such as **water electrolysis and membrane** in “Production”, **large-scale vessels and tanks** in “Transportation”, **mobility and power generation** in ”Utilization”.
- Supporting **mass-production** through the GX Supply Chain Budget and **promoting domestic cutting edge technologies to develop resilient supply chains** through support focusing on the price gap.

Production

Transportation (store)

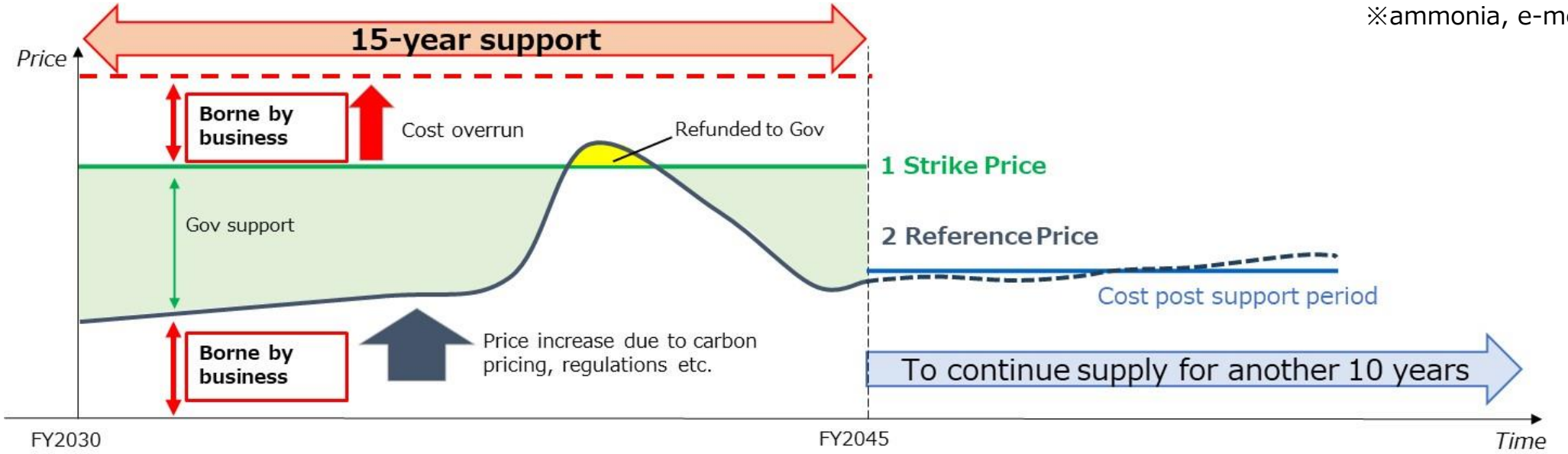
Utilization

Core Technologies	・Water electrolysis ・Membrane	・Transportation（LH2, ammonia, etc.）	・Fuel cell system/vehicle/truck ・Power generation
Key Players	<Water electrolysis> **Asahi Kasei, Toyota, Toshiba ESS, Kanadevia, Toray** ThyssenKrupp (Germany) Siemens Energy (Germany)	<Liquefied hydrogen carrier> **Kawasaki Heavy Industries** HD KSOE (South Korea) GTT (France)	<Fuel cell> **Toyota, Honda** Daimler (Germany) Hyundai (South Korea) <Power generation> **Mitsubishi Heavy Industries, IHI** Siemens Energy
Strengths (Japan)	Safe and stable operation of water electrolysis and innovative material development	Conducted the world’s first demonstration of large-scale hydrogen transportation by liquefied hydrogen carrier	Leads technological development of fuel cells and is top class in number of patents

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**

Progress of the Support Measure

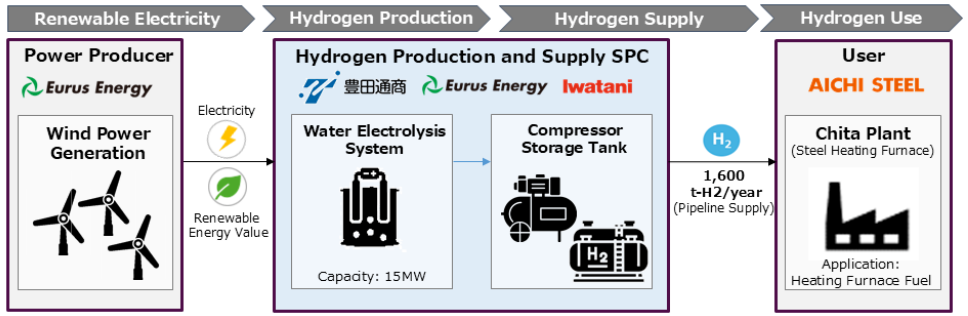
- **27 applications** were received **by the deadline of March 31, 2025**. The total amount of all applications was **well over the budgeted size of ¥ 3 trillion** (≒ Approx. $ 20 billion).
- While proceeding with **the formal examination** of whether the necessary information is covered, etc., and listening 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**.

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

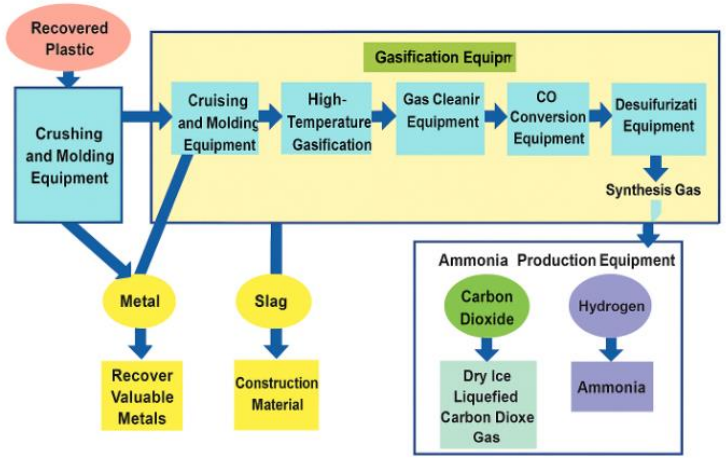
- **Contributing to improving energy self-sufficiency**: hydrogen production using renewable energy from remote locations via power grid
- **100% of the hydrogen supplied to industries difficult to decarbonize with few alternative technologies**
- **Water electrolysis system by Toyota Motor・Chiyoda Corporation** 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**

Awarded Business Plan（JERA: Blue Ammonia ）

■Basic Information

Place	Hekinan, Aichi Prefecture etc.
Supplier	**JERA**
User	**JERA, Toyota Industries Corporation, AGC, NGK INSULATORS, LTD, and AISIN Fukui Corporation**
Low-carbon hydrogen and its derivatives	Ammonia
Amount of supply	Approximately 500,00t-NH_3/year

■ Overview of the project

- JERA **plans to supply low-carbon ammonia produced in Louisiana, USA, to Japan**.
- The produced ammonia will be used mainly for **ammonia co-firing at JERA's Hekinan Thermal Power Station**, with a portion utilized as **fuel for industrial furnaces** at Toyota Industries, AGC, NGK Insulator and Aisin Fukui.

■Key points

- **Japan's first large-scale low-carbon ammonia supply chain project**. **Japanese entities play a leading role** and collectively hold a **60% stake** (JERA 35% + Mitsui & Co. 25%) in this project developed by **CF Industries, the world's largest ammonia producer**.
- This contributes to **the decarbonization of Japan's thermal power generation** through **20% ammonia co-firing** at the Hekinan Thermal Power Station, Japan's largest coal-fired power plant.
- Accelerating the realization of a hydrogen and ammonia-based society in Japan, including the Chubu region, by **supplying low-carbon ammonia to other industries such as manufacturing and shipping**.

Awarded Business Plan（Mitsui & Co : Blue Ammonia）

■Basic Information

Place	Tomakomai, Hokkaido etc.
Supplier	**Mitsui & Co.**
User	**Hokkaido Electric Power, Mitsubishi UBE Cement Corporation, and Tosoh Corporation**
Low-carbon hydrogen and its derivatives	Ammonia
Amount of supply	Approximately 280,000t-NH_3/year

■ Overview of the project

- Mitsui & Co. **plans to supply low-carbon ammonia produced in Louisiana, USA, to Japan.**
- The produced ammonia will be used mainly for **ammonia co-firing** at Hokkaido Electric Power's Tomato-Atsuma Thermal Power Station, with a portion utilized as fuel for industrial furnaces at Mitsubishi UBE Cement and as raw material for Tosoh Corporation.

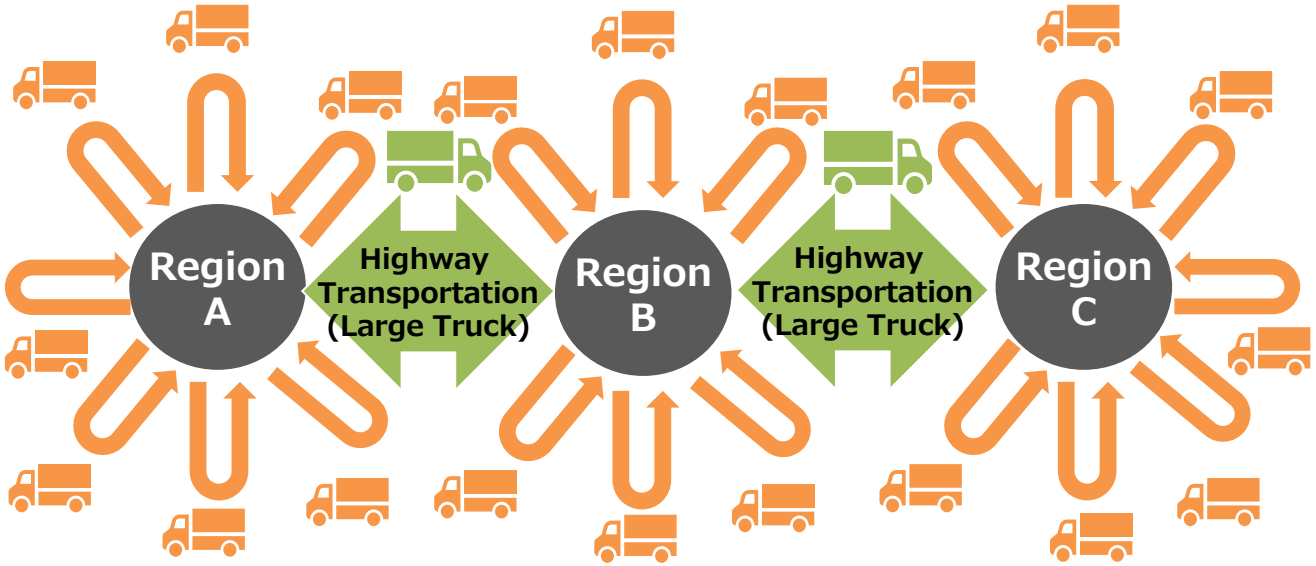
■Key points

- **Japan's first large-scale low-carbon ammonia supply chain project**. **Japanese entities play a leading role** and collectively hold a **60% stake** (JERA 35% + Mitsui & Co. 25%) in the project developed by **CF Industries, the world's largest ammonia producer**.
- This contributes to **the decarbonization of Japan's thermal power generation** through **20% ammonia co-firing** at the Tomato-Atsuma Thermal Power Station.
- Mitsui & Co., with extensive experience in manufacturing, transporting, and importing ammonia and energy products, will collaborate with **end-users across multiple sectors, including power generation, ceramics, and chemicals**, to achieve early societal implementation.

Efforts for Hydrogen Utilization in Mobility

- Towards social implementation of **FC commercial vehicles**, **local governments are expected to lead discussions among FCV users, FCV manufacturers and Hydrogen refueling station (HRS) operators**, and to develop integrated plans for the introduction of FC commercial vehicles and HRS.
- The Japanese government plans to select **priority regions** and to provide intensive financial support to these regions for introduction of FC commercial vehicles.
- After review by a committee of experts, **five regions including Tokyo were selected on May 19, 2025**.

Concept of priority regions



Local Transportation (Small Truck or Bus)

Key requirements for priority regions

High potential FCV demand

- ◆ Many commercial vehicles registered in the region
- ◆ Many commercial vehicles traveling through the region

and

Commitment by the local government

- ◆To set goals for introduction of FCV & HRS by 2030
- ◆To provide financial support for introduction of FCV & HRS

Hydrogen Energy Ministerial Meeting (HEM)

- HEM was first held in Tokyo in 2018 as **the world's first ministerial meeting on hydrogen**.
- Chaired by Japan with a number of key participants, HEM is an ideal forum to **discuss the most recent hydrogen policy developments** and **emerging issues** for **policy coordination**.
- The **7th HEM** was held in conjunction with **the Expo 2025 Osaka** alongside the Ministerial Meeting on Sustainable Fuels.
- Integrated with the International Conference on Fuel Ammonia for jointly promoting discussions to expand the global utilization of hydrogen and ammonia, the **7th HEM** delivered messages on the importance of **strengthening collaboration among demand-side countries**, as well as **maintaining and enhancing the global momentum for hydrogen supply and utilization**.

7th Hydrogen Energy Ministerial Meeting

- Date: **September 15, 2025** (Venue: Hilton Osaka)
- Participants: **30 countries and organizations**
- Outcomes: **Issuing of a chair's summary and the excursion to experience Japan's technology and the hydrogen society at the Expo**.

Chair's Summary

[Steady Progress Towards Realizing a Hydrogen Society]

- The production volume of low-carbon hydrogen projects that are either operational or at FID stage is projected to **reach 4.2 million tons per year** by 2030 (**five times the previous year**).
- **Over 500 projects have reached FID or are already operational**, with **more than $110 billion in committed investments**. In contrast, **only about 50 projects have been officially canceled** in the past 18 months.

[Keyword: Demand Creation]

- Efforts to build an **international hydrogen supply chain**.
- **Nurturing demand** with more countries becoming **consumers of hydrogen**.
- To achieve this, **concrete actions from each country** are necessary, including **integrated policy of support and regulatory development**.

Collaboration with the Expo
- Excursion for Ministerial Meeting Participants

To showcase Japan's initiatives toward the social implementation of sustainable fuels, hydrogen, and ammonia in collaboration with the Expo 2025 Osaka, Kansai, an excursion was carried out for participants of the ministerial meetings. The program included:

A) Ride on **Japan's first e-fuel powered Expo Shuttle Bus**

B) Cruise on ***Mahoroba*, Japan's first hydrogen fuel cell-powered commercial passenger ship**

C) Glance of **Suiso Frontier, world's first liquefied hydrogen carrier**

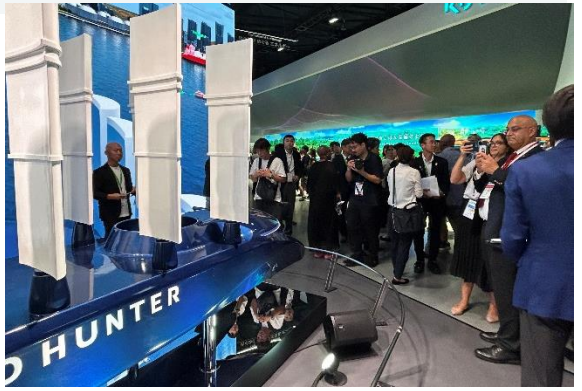
D) Visit to **the Future City Pavilion**, featuring next-generation technologies such as **the hydrogen-powered off-road personal mobility vehicle "Corleo"** and **"Wind Hunter," a next-generation green hydrogen production/supply vessel which use power generated from the propulsion of sailing**

E) Visit to the **Gas Pavilion Obake Wonderland**, promoting **Japan's vision for achieving carbon neutrality by 2050, including the utilization of e-methane**

Liquefied Hydrogen Carrier "Suiso Frontier" presented by Kawasaki Heavy Industries, Ltd.

Hydrogen Fuel Cell Ship "Mahoroba" presented by Iwatani Corporation

Hydrogen-Powered Off-Road Personal Mobility Vehicle "Corleo" presented by Kawasaki Heavy Industries, Ltd.



Next-Generation Green Hydrogen Production/Supply Vessel "Wind Hunter" presented by Mitsui O.S.K. Lines, Ltd.

Hydrogen cooking

- **World's first hydrogen stoves** by H2&DX Social Research Institute Co., Ltd.

- Characteristic:
✓ **Moisture**
✓ **No scorch**
✓ **Crispy exterior** and a **plump and juicy interior**
✓ **Shortened cooking time**

- **At HEM on Sep. 15, 2025, "Piyo", a local chicken from Tottori**, Prime Minister Ishiba's hometown, was used to compare chicken cooked using hydrogen to those cooked on a conventional gas stove.

Serving a food comparison with a hydrogen stove at HEM 2025

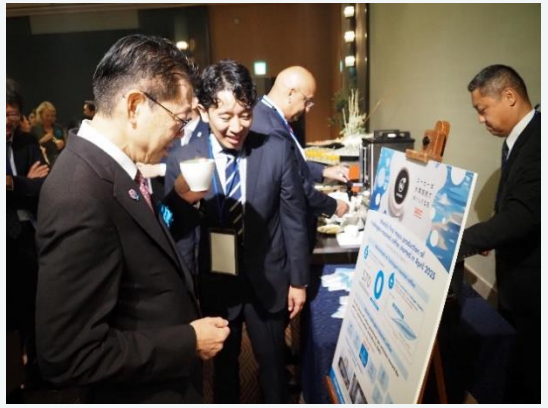
Hydrogen roasted coffee

- UCC Ueshima Coffee Co., Ltd. **commenced the world's first mass production of hydrogen-roasted coffee** with its large hydrogen roaster in April 2025.

- Advantage of hydrogen roasting:
✓ **Wider range of temperature adjustment** during roasting than conventional heat sources.

- UCC uses **green hydrogen** produced at **Yamanashi Prefecture.**

- **At HEM on September 15, 2025, hydrogen roasted coffee was provided** to the participants.



Serving hydrogen roasted coffee at HEM 2025