METI
Ministry of Economy, Trade and Industry

Japan's Policies on Hydrogen

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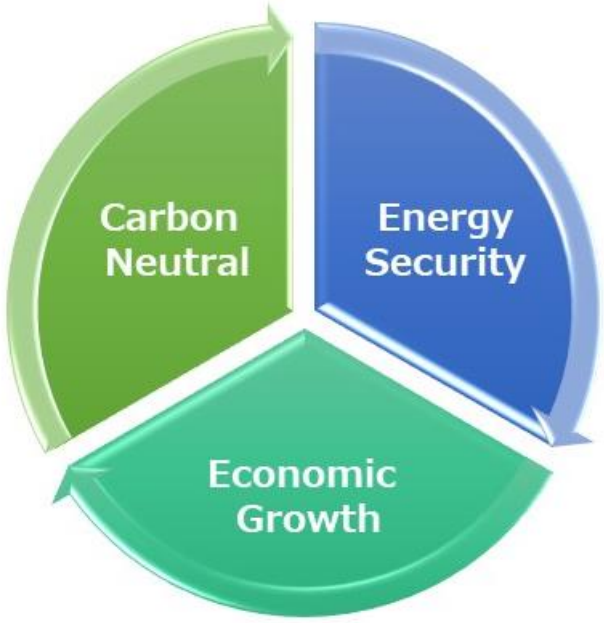
Green Transformation's Three Principles

Triple breakthrough

Japan aims to simultaneously achieve
- ➢ Energy Security
- ➢ Economic Growth
- ➢ GHG Emissions Reduction

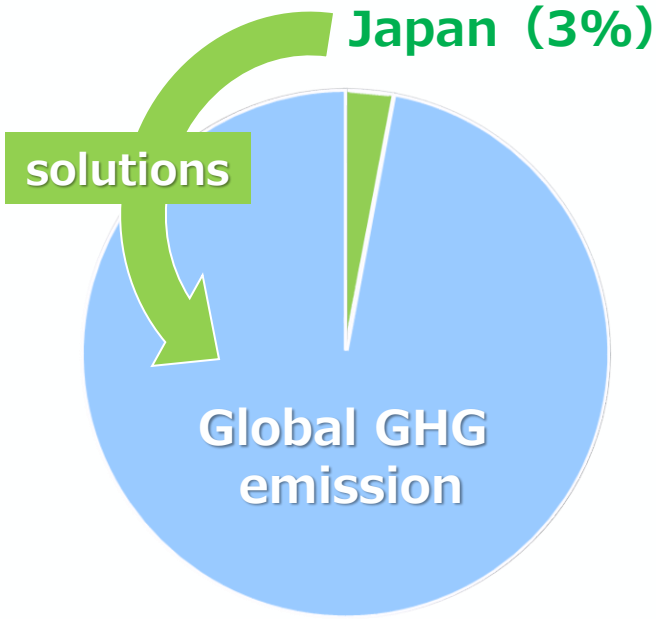


One goal, various pathways

Toward our common goal of achieving net zero, we will make practical energy transitions through various pathways depending on the circumstances of each country.

Solution to the world

Japan will decarbonize itself, but also contribute to global decarbonization by providing solutions outside Japan.



Japan's Hydrogen Policies

- Japan was the first country to formulate a **national hydrogen strategy**, in 2017, which was then revised in 2023
- Declared "**2050 carbon neutrality**" goal in 2020.
- Hydrogen/ammonia positioned as one of the priority areas in the **Green Growth Strategy** in 2020.
- Establishment of the **Green Innovation Fund** of approximately ¥2 trillion* in 2021.
  * ¥2 trillion = €12billion (167 ¥ /€)
- Hydrogen/ammonia as key elements of the strategy under the **Green Transformation Promotion Act** in 2023.
- Enacted the **Hydrogen Society Promotion Act** in 2024 (enforced on October 23).

Milestones

2017
・Basic Hydrogen Strategy

2020
・2050 CN Declaration
・Green Growth Strategy

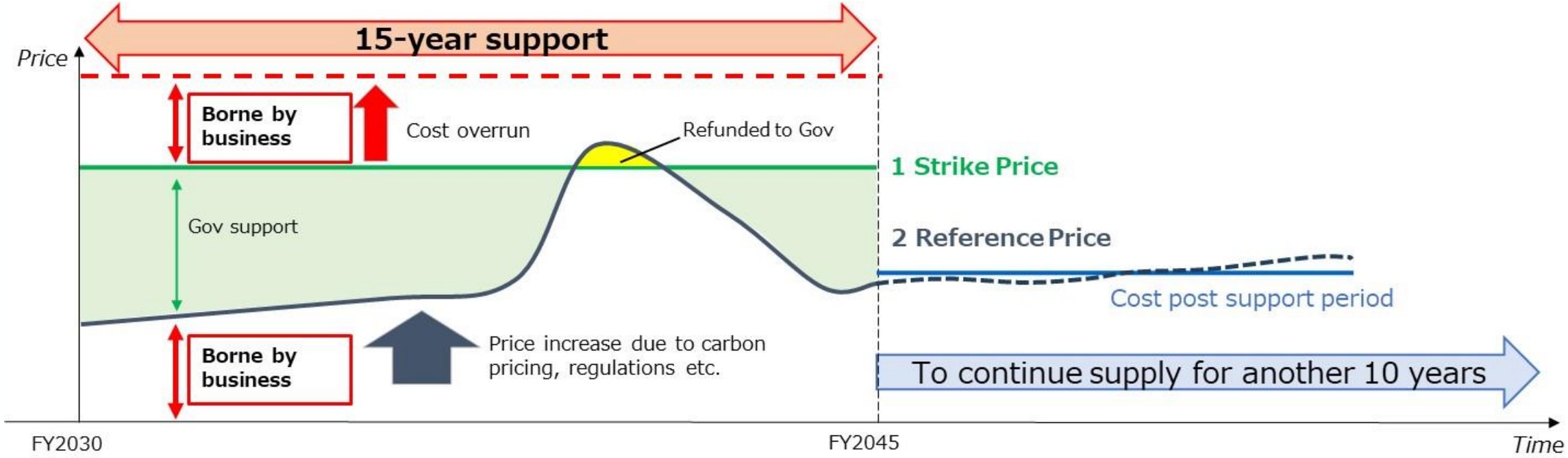
2021
・Green Innovation Fund
・Revised Strategic Energy Plan

2023
・GX Promotion Act
・Revision of Basic Hydrogen Strategy

2024
・Hydrogen Society Promotion Act

Support 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)



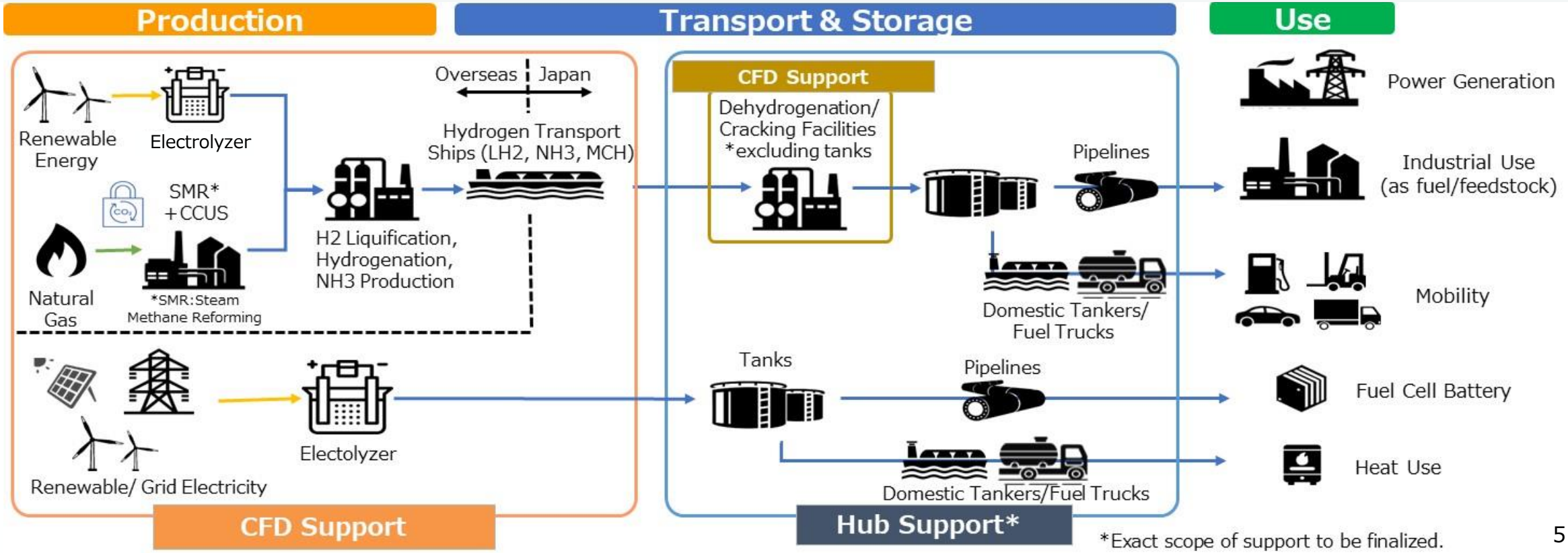
Key requirements

- **Supply to be provided in whole or in part in hard-to-abate sectors**, such as steel, chemical and transportation 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

Hydrogen Hub Development Program

- **The Hydrogen 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)"



Japan-EU Energy Ministerial Meeting and Hydrogen High-Level Business Forum

- At the Japan-EU Summit Meeting in July last year, the Leaders agreed to **launch a Japan-EU hydrogen cooperation framework to strengthen cooperation in the hydrogen sector**. This time, **a hydrogen business forum with participation of high-level officials from both public and private sectors was held**. In addition, **an opinion exchange meeting with the Prime Minister was held**.
- Japan and the EU discussed policy coordination among the public and private sectors and specific areas of cooperation, and **issued a joint statement**. In addition, **organizations and companies of the two regions signed MOUs on hydrogen cooperation and progress was made in building cooperative relationships at various levels**.

1. Outline of the business forum

- Date : June 3rd, 2024
- Venue : The Okura Tokyo
- Participation : Around 50 (in-person)

2. Major participants

- Ken Saito, Minister of Economy, Trade and Industry
- Kadri Simson, European Commissioner of Energy
- Koshiro Kudo, President & Representative of Asahi Kasei
- Hisahide Okuda, President of JERA
- Takeshi Uchiyamada, Executive Fellow of Toyota
- Tamotsu Saito, Chairman of NEDO
- Stephen Jackson, Vice-CEO of Hydrogen Europe
- Markus Exenberger, Executive Director of H2Global Foundation
- Andreas Lehmann, CSO of Hydrogenious
- Manfred Schukert, Vice President of Daimler
- Helle Kristoffersen, President of Asia of TotalEnergies
- Other high-level executives of Japan/EU government, companies, and organizations

(Up) Hydrogen High-Level Business Forum
(Right) Opinion exchange with the Prime Minister

3. Accomplishments

- Total of 5 MOUs among public and private sectors
- Issued a joint statement and shared the following:

➢ Strong common interest in supporting investment and introduction of hydrogen

➢ Establishment of a working group to build and strengthen resilient supply chains for clean energy including hydrogen, which is not dependent on a specific source

➢ Establishment of a joint work plan to continuously deepen cooperation in the field of hydrogen. (target areas: dialogue on support schemes, R&D, standardization/international rules, etc.)

Examples of Japan – EU cooperation in hydrogen supply chains

Production

Water Electrolysis

TORAY SIEMENS

・**Siemens**, a leading manufacturer of hydrogen production equipment, is currently developing and demonstrating a large-scale water electrolysis with **Toray**, who has high quality membrane manufacturing technology.

Transportation

Liquefied hydrogen carriers

Kawasaki

・Towards building hydrogen supply chains, **STASCO (Shell International Trading and Shipping Company Limited)**, a Shell Group company, **operated a liquefied hydrogen carrier built by Kawasaki Heavy Industries** in a pilot demonstration.

Utilization

Hydrogen power generation

Kawasaki RWE

・**Kawasaki Heavy Industries** has developed a **30MW class gas turbine for hydrogen mono-firing** and will install it in **RWE**'s power plant with the goal of starting demonstration in 2026.

Utilization

Trucks

DAIMLER

TOYOTA ISUZU FUSO

・**Toyota** and **Daimler** are collaborating in the field of FC trucks

President Sato (Toyota)

"Today, Daimler Trucks, Mitsubishi Fuso, Hino, and Toyota have agreed to collaborate to strengthen our commercial vehicle business. ・・**Towards carbon neutrality, it is essential to evolve commercial vehicles, which account for 40% of the world's automotive CO2 emissions, into environmentally friendly mobility**. ・・**We believe that initiatives in the hydrogen area are a major theme that the four companies will focus on and cooperate with, in order to realize a prosperous mobility society**."

(Toyota Times)

Thank you

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