EU-Japan Centre for Industrial Cooperation Policy Seminar

Challenges of Hydrogen Strategies of EU and Japan and Strengthen its EU-Japan Partnership

Tuesday 7 July 2026, 16:00–17:30 Tokyo (9:00–10:30 Brussels) (Zoom webinar)

<Summary>

Opening remarks by Manuel Hubert, EU-side Managing Director, EU-Japan Centre for Industrial Cooperation:

Hydrogen is emerging as a key pillar of energy security and industrial competitiveness, particularly for decarbonizing sectors that are difficult to electrify, such as steel, chemicals, and long-distance transport. Japan, the first country to adopt a national hydrogen strategy, continues to lead through policies that support hydrogen mobility, long-term supply, and international supply chains. A distinctive aspect of Japan's approach is its parallel promotion of ammonia as a complementary low-carbon fuel.

In Europe, the EU Hydrogen Strategy and REPowerEU Plan have introduced binding targets, certification frameworks, financial support through the European Hydrogen Bank, and infrastructure development to accelerate hydrogen deployment. The seminar brings together policymakers, researchers, and industry representatives from Japan and the EU to exchange experiences and strengthen cooperation. It also highlights findings from the Minerva Report, which examines hydrogen value chains, identifies gaps and synergies, and offers policy recommendations. Industry associations will discuss regulatory alignment, implementation challenges, and the growing competitive pressures facing the hydrogen sector.

Presentations:

Daisuke Hirota, Director of Hydrogen and Ammonia Division, Agency for Natural Resources and Energy

Japan's hydrogen and ammonia policies have traditionally focused on promoting decarbonization (GX). In recent years, however, against the backdrop of international developments such as the Russia-Ukraine war, greater emphasis has been placed on their role as important energy sources supporting energy security. In Europe, efforts are underway to reduce dependence on Russian natural gas and expand the use of renewable energy and hydrogen within the region. India, too, is advancing policies aimed at increasing self-sufficiency in hydrogen, ammonia, and fertilizer feedstocks by leveraging its abundant renewable energy resources. In Japan, since the 2017 Basic Hydrogen Strategy, the government has promoted the social implementation of hydrogen and ammonia and the development of international supply chains, centered on the Green Innovation Fund and the Hydrogen Society Promotion Act. Today, under the "Hydrogen Arteries Initiative," Japan is strengthening its policies by positioning hydrogen both as a "crisis-management investment" that supports energy security and as a "growth investment" aimed at overseas markets.

Specific measures include prioritizing the deployment of commercial fuel cell vehicles (FCVs) and concentrating support in six priority regions to build demand by subsidizing the development of hydrogen refueling stations, vehicle deployment, and operating costs. Japan has also introduced a price-

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gap support scheme based on Contracts for Difference (CfD). Domestically, it is supporting hydrogen-use projects in industrial sectors such as steelmaking, beverages, and semiconductors, while also advancing large-scale international projects, including a blue ammonia project in Louisiana, United States, and a green ammonia production and import project in India. In addition, Japan is promoting the development of shared storage tanks and pipelines at petroleum industrial complexes, as well as the establishment of a liquefied hydrogen supply chain with Europe. Japan thus positions hydrogen not only as a means of decarbonization, but also as a foundation for energy security and industrial competitiveness, with the aim of achieving full-scale social implementation around 2030.

Carlos Álvarez Aguilera, Policy Officer, Policy and International Relations at DG Energy (Energy Platform Task Force), European Commission:

The European Union currently consumes around 7 million tonnes of hydrogen annually, with more than 90% produced from fossil fuels, mainly natural gas. Hydrogen is already an important part of the European economy, particularly in petrochemical and fertiliser industries. Major consuming countries include Germany, the Netherlands, Poland, Spain, Italy and France. Looking ahead, the EU aims to significantly increase the use of renewable and low-carbon hydrogen as part of its 2040 and 2050 climate goals. Hydrogen will be especially important in hard-to-electrify sectors, such as steel, chemicals, heavy transport, shipping and aviation. The EU's approach is to improve energy efficiency first, use renewable electricity where possible, and use hydrogen where electrification is not practical.

Since launching its Hydrogen Strategy in 2020, the EU has introduced policies covering investment, demand creation, infrastructure, research, international cooperation and certification. To ensure hydrogen is genuinely renewable, the EU applies rules based on additionality, temporal correlation and geographic correlation. These requirements help ensure that hydrogen production uses new and appropriately matched renewable electricity. The EU is also developing a European hydrogen backbone, including pipelines, storage facilities, import terminals and electrolysers. Significant funding is being provided to support this infrastructure. The European Hydrogen Bank is another key initiative.

Finally, international cooperation with Japan is an important part of the EU's hydrogen strategy. Both sides are working together on energy security, competitiveness and sustainability. The EU is now reviewing its hydrogen strategy and certification rules to support further market development beyond 2030.

Kenichiro Saitoh, Deputy Executive Director / General Manager, Project Department, Japan Hydrogen Association (JH2A):

JH2A (Japan Hydrogen Association) aims to accelerate the development of a sustainable hydrogen economy through three key priorities: creating hydrogen demand, reducing costs, and developing financing mechanisms. Established in April 2022, JH2A now has more than 500 member companies and organizations spanning energy, chemicals, materials, heavy industry, mobility, and infrastructure, as well as academia, industry associations, think tanks, and local governments.

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Japan has diverse hydrogen technologies, including CCUS-based hydrogen, renewable hydrogen produced through water electrolysis, liquid hydrogen, ammonia, and MCH. Hydrogen use is expected to expand across power generation, chemicals, steel, and mobility, supported by government policies such as the Hydrogen Society Promotion Act. Key challenges include improving cost competitiveness, creating stable demand, and establishing internationally harmonized standards and certification systems. JH2A has called for stronger support for hard-to-abate sectors, mechanisms to create and transfer environmental value through carbon pricing, and greater international standardization. It also promotes demand creation through initiatives such as the "1% Hydrogen Procurement Declaration."

JH2A is further involved in developing ISO standards, providing long-term risk capital through a private hydrogen fund, and strengthening international partnerships. Going forward, JH2A aims to expand hydrogen use from mobility to power generation and industry through the Hydrogen Backbone Initiative, contributing to the realization of a hydrogen society in Japan and the development of a sustainable global hydrogen economy.

Luca Marsili, Industrial Policy and Sustainability Officer, Hydrogen Europe:

Hydrogen Europe represents more than 600 members across the entire hydrogen value chain and more than 40 countries, with strong participation from Japanese companies, particularly in electrolyzers, fuel cells and mobility. European hydrogen mandates alone will not create sufficient demand. Existing policies could generate only 1.5–2.8 million tonnes of clean-hydrogen demand by 2030, compared with current European hydrogen consumption of around 6–8 million tonnes annually. Mandates therefore need national implementation, credible enforcement and additional demand-side support.

The European Commission's Industrial Accelerator aims to link clean-technology production with demand for low-carbon products. Its four key areas are creating lead markets for products such as green steel, cement and aluminium; introducing "Made in Europe" or local-content requirements; screening foreign investments to protect strategic industries; and accelerating permitting for industrial projects and clean-technology manufacturing. These policies are particularly relevant to Japan. Japanese companies may need to consider locating or sourcing parts of their value chains in Europe. However, Japan's strong trade relationship with the EU and its status as a trusted partner should support continued market access and participation in European funding and procurement programmes.

I would recommend stronger EU–Japan cooperation on reciprocal market access, common standards and certification, strategic supply chains and raw materials, and joint funding and deployment projects, including Hydrogen Bank-type mechanisms and projects in third countries.

Ander Martinez Alonso, PhD, Senior Researcher, EVERGi Research Group and Vrije Universiteit Brussel (VUB):

A comparative mapping of the European and Japanese hydrogen value chains are examined in the presentation, with particular emphasis on their respective technological capabilities, industrial structures, policy frameworks, and prospects for bilateral cooperation. The report, co-funded by the European Union and supported by the EU-Japan Centre for Industrial Cooperation and the Japan

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Hydrogen Association, seeks to identify areas of complementarity and strategic alignment between the two hydrogen ecosystems.

Given that both Europe and Japan face energy-security challenges and are anticipated to become net hydrogen importers, the study assesses regulatory frameworks, corporate capabilities, technologies, and supply-chain activities. Approximately 400 European and 200 Japanese companies were mapped across more than 1,500 activities encompassing hydrogen production; distribution, transmission and storage; end-use applications; services; and ecosystem development.

The analysis demonstrates distinct but complementary strengths. Europe exhibits comparatively strong capabilities in hydrogen production and ecosystem development, whereas Japan has greater specialization in end-use applications and distribution, transmission, and storage. Japan's sectoral presence is particularly significant when compared with individual European countries. The presentation identifies several strategic areas for cooperation, including hydrogen-import infrastructure, ports, hydrogen valleys, workforce development, certification, and collaborative research through Horizon Europe. However, regulatory divergence, skills shortages, differing ecosystem structures, and increasing competition from Chinese suppliers present significant challenges. Overall, deeper coordination among European and Japanese public institutions, industry, and academia is essential for developing a resilient and internationally integrated hydrogen economy.

Moderator Yasuo Tanabe, Japan-side Managing Director of EU-Japan Centre for Industrial Cooperation, asked the following questions in the Q&A session:

- (To Carlos and Hirota-san) The numerical targets of hydrogen volume or cost have been set out by EU and Japan respectively. Is each region on track to achieve these goals?
- (To Hirota-san) Regarding the price-gap support scheme, are the undisclosed strike prices for the selected projects broadly aligned with the 2030 and 2050 hydrogen cost targets? Also, has the ¥3 trillion budget been fully allocated, or is funding still available for projects in the pipeline, with potential for further increases?
- (To Luca and Saito-san) Could hydrogen technologies achieve cost reductions similar to those seen in solar panels and batteries, which key technologies would drive these reductions, and how should we approach the competitiveness of Chinese electrolyser manufacturers—should we rely on, exclude, or selectively utilise Chinese electrolyser technology?

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