

The EU-Japan Centre for Industrial Cooperation webinar

**Direction that Japan's carbon pricing should aim for —  
referring to examples from the EU and California**

Thursday, September 26 16:00-17:30 Tokyo (9:00-10:30 Brussels)

**Audrey Yamamoto**, *President & CEO, U.S.-Japan Council*, made the opening remarks:

I would like to express my gratitude to the two co-hosting organizations, IEEJ and EUJC. I also appreciate the opportunity to sponsor an event focused on climate change and sustainability. USJC was established 15 years ago with the goal of strengthening U.S.-Japan relations. We engage in discussions on bilateral issues through leadership initiatives, both in-person and virtual programs, and events. The topic of today's discussion, carbon pricing, is highly timely. Addressing global climate change aligns with the statement issued by the leaders of both countries in April. I would like to express my appreciation to all of you who are participating today, and I look forward to insightful discussions.

**Toshiyuki Sakamoto**, *Board Member, Director, in charge of Climate Change & Energy Efficiency Unit, The Institute of Energy Economics, Japan*, made the opening remarks:

I am very pleased to co-host this timely webinar together with the two organizations. Discussions are progressing toward the implementation of the emissions trading system starting in FY2026, and a working group has been established within the Cabinet Office. IEEJ has been conducting extensive research on carbon pricing, and this year, under a commission from the Ministry of Economy, Trade and Industry, we are carrying out a detailed survey of systems in various countries. When designing Japan's system, it is crucial to learn from international precedents. Today presents a valuable opportunity to hear about the experiences of Europe and the U.S., and to discuss Japan's system design. I look forward to having a meaningful webinar with all of you.

**Takahiro Tajiri**, *Deputy Director-General for Green Transformation Policy, Ministry of Economy, Trade and Industry*, made the presentation:

In the global movement towards decarbonization, the efforts aimed at reducing emissions while achieving economic growth are referred to as Green Transformation, or GX. Countries are competing to implement policies that will realize GX, and in order to focus resources, the Ministry of Economy, Trade and Industry (METI) underwent an organizational restructuring in July. Today, I would like to introduce METI's GX initiatives, particularly its efforts on the Emissions Trading System (ETS).

The Japanese government plans to issue ¥20 trillion in economic bonds, the Japan Climate Transition Bond, over the next 10 years. With this as a catalyst, the goal is to increase investments from both the public and private sectors to \$1 trillion over the next decade. Meanwhile, starting in FY2026, the ETS will be fully implemented, and in FY2028, the GX surcharge will be gradually introduced. The funds collected through these measures will be used to redeem the economic bonds.

A trial ETS has been launched in FY2023 as part of the GX League, with the aim of full implementation in FY2026. Based on the progress of this experimental and voluntary program, and informed by expert discussions, we aim to finalize the details of the system. Ultimately, these initiatives will be consolidated

into a proposal for amending the GX Promotion Act, which is scheduled to be submitted to the regular session of the Diet next year.

Currently, expert panels are discussing topics such as setting goals for participating companies, measures to prevent carbon leakage, rules for achieving those goals, and policies to promote credit trading, including the establishment of upper and lower limits. Today, I look forward to hearing from others and using your insights to help shape the design of the system.

***Maja-Alexandra Dittel***, *Member of the Task Force for International Carbon Pricing and Markets Diplomacy, DG Climate Action, European Commission, delivered the presentation:*

I would like to share the lessons learned from the EU-ETS over the past 20 years. First, this system is a cost-effective method for reducing greenhouse gas emissions. The EU-ETS, which started in 2005, has reduced greenhouse gas emissions by 47% by 2023. Furthermore, from 1990 to 2023, the EU reduced its greenhouse gas emissions by 32%, while its GDP grew by 67%. It is important to note that this system not only plays a role in reducing emissions but also improves revenue generation.

However, the ETS alone is insufficient, and complementary policies, such as ambitious goal-setting and the introduction of regulations, are necessary. One of the key lessons learned from the early stages is the importance of obtaining accurate and transparent data. This is essential for setting appropriate cap levels, as well as for compliance and emissions allowance allocation.

Regarding the cap, the EU has set a target to reduce emissions by 55% by 2030 compared to 1990 levels, and the cap will be adjusted gradually in absolute terms. Flexibility is also crucial for addressing surpluses and shortages and ensuring market functionality. For example, within the EU, surplus emission allowances from a steel plant in Poland can be sold to a cement factory in Portugal. Allowing the banking of allowances also contributes to this flexibility. The Market Stability Reserve mechanism is also an important tool.

Another critical point is fairness. To prevent carbon leakage, the Carbon Border Adjustment Mechanism (CBAM) will be introduced. The EU uses the revenue from the EU-ETS to support the Green Transition, and several funds have been established for this purpose.

***Andrei Marcu***, *Executive Director, European Roundtable on Climate Change and Sustainable Transition, made the presentation:*

Regarding carbon pricing, as seen in the chart for 2022–2024, there is a certain level of stability. Initially, the expected price until 2030 was forecasted to be between €70 and €100 per ton. In 2023, the price surpassed the forecast, exceeding €100, but there was a subsequent rebound, and in recent months, it has been trading around €65.

The three key aspects expected from the EU-ETS are: achieving environmental outcomes, delivering socio-economic results to meet objectives, and having a well-functioning market. Regarding environmental outcomes, each sector is delivering results against its cap. Additionally, through measures like the auctioning of electricity, certain sectors have significantly reduced their emissions.

In terms of market functionality, compared to previous years, the system is generally functioning appropriately. As for price forecasts, it is considered reliable to expect the price to be between €100 and €120 by 2030. These forecasted figures provide guidance for industry actions, which is something we also desire.

The EU-ETS is a very good tool for the EU. It has depth in the market, with many participants. A problem, however, is the instability of regulations. It is also vulnerable to political interventions, which is another

challenge. The impact of carbon leakage is not sufficiently understood. The CBAM is, in principle, a good program, but there are also issues.

The EU-ETS can sometimes be politically difficult to implement due to its social impact. Additionally, this tool should not be used as a cash cow. It is true that decarbonization in the electricity sector has progressed with subsidies. The question then becomes, who should manage the funds?

As a supporter of the system, I hope that the ETS will fully fulfil its role and establish a price that drives decarbonization going forward.

**Danny Cullenward**, *Senior Fellow, Kleinman Center for Energy Policy, University of Pennsylvania, Senior Fellow, Institute for Responsible Carbon Removal, American University, shared the presentation:*

California's ETS began in 2013 and expanded in 2015. It covers 75% of emissions, with a threshold of 25,000 tons per year, based on verified emissions. From a data and compliance perspective, it can be considered a very successful program so far.

However, there are some issues. The cap was set higher than the emissions, resulting in a significant amount of allowances being banked. Additionally, the supply and demand balance was not tightly set, leading to oversupply and causing market prices to fall to the lowest levels. In 2021, a hard ceiling was introduced, and since then, the price has fluctuated, with increased attention from investors. In recent years, the price has been around \$40 per ton, but due to legal uncertainties, prices have started to decrease.

As with the EU, the revenue generated is extremely important. In California's case, total revenues to date have reached \$30 billion.

I would like to highlight two key challenges. The first challenge is how to address uncertainty. California's laws impose restrictions on new taxes, and constitutional amendments require the support of two-thirds of the legislature. The second challenge is price volatility. The EU manages this volatility through the Market Stability Reserve and price interventions.

Finally, I would like to share some insights. It is crucial to ensure legal and policy certainty. It is also important to manage price volatility to gain political support. Additionally, rather than relying on carbon offsets, it is better to make market design interventions and invest in target sectors using funds generated through auctions.

**Hiroyuki Tezuka**, *Fellow, JFE Steel Corporation, made the presentation:*

First, I would like to explain the current situation of carbon pricing (CP) in Japan. The carbon pricing system in Japan, including the Global Warming Tax (carbon tax), energy-related taxes, and the FIT surcharge, amounts to over ¥6,000 per ton of CO<sub>2</sub> for society as a whole. In the future, additional charges are being considered, such as the GX surcharge after 2028 and the introduction of the GX-ETS in 2026.

Regarding the EU-ETS, specifically for the steel industry, it can be said that the free allocation of allowances has consistently exceeded actual emissions, resulting in an overall surplus of allowances. From 2026 onwards, the EU-ETS will gradually reduce free allocations, and full-scale carbon pricing will begin after 2030. In Japan, the key issue for the planned GX-ETS is setting the cap. Since there are currently no technologies to significantly reduce emissions across the entire steel sector, there is a risk that the steel industry may need to purchase emission allowances to comply with short-term emission targets, while also investing in technological development.

While the steel industry will need to invest considerable management resources in research and development and large-scale capital investments for technological upgrades, there are concerns about whether purchasing emission allowances is truly beneficial for Japan as a whole. Another concern is

whether the steel industry can claim to have reduced emissions by purchasing allowances when the price is very low.

Japan's steel industry has a high export ratio and is in a strong export surplus, facing intense competition in ASEAN markets. Therefore, it is crucial for Japan's carbon pricing policies to include measures that help maintain international competitiveness.

To summarize the key points: I would like to see the GX-ETS system designed in a way that ensures the maintenance of domestic production systems, tailored to the specific conditions of each sector. Additionally, for industries like steel, where marginal abatement costs are high, it is important to create mechanisms that allow for the passing of environmental premiums onto product prices. This would involve the creation of a GX product market or similar mechanisms.

***Atsuko Watanabe***, Senior Manager, Accenture Strategy & Consulting, Sustainability, Accenture Japan Ltd., shared the presentation:

I would like to present the current situation, challenges, and the ideal future of carbon pricing (CP) in Japan from the perspective of electricity consumers. The government plans to introduce explicit CP through the GX Promotion Act, although these new mechanisms will be implemented within the scope of the current burden of implicit CPs, such as the renewable energy surcharge and the petroleum and coal tax. The cap on explicit CP is expected to reach approximately ¥1.7 trillion by 2040, with this cap likely to increase significantly after 2035, when the reduction in the renewable energy surcharge is expected to accelerate. The renewable energy surcharge is a system that broadly distributes the cost of introducing renewable energy to the public. However, electricity consumers using offsite PPAs (Power Purchase Agreements) are purchasing electricity at higher prices reflecting the cost of renewable energy introduction, while also bearing the renewable energy surcharge. This dual burden undermines the incentive for purchasing renewable energy.

Regarding the attribution of CO<sub>2</sub> emissions from electricity use, if we assume that CO<sub>2</sub> emissions contribute to climate change and cause damage to the economy, society, and the natural environment, in Japan, where carbon pricing is not yet effectively implemented, using electricity generated from fossil fuels with high emission coefficients results in avoiding the corresponding social cost.

Finally, from the perspective of electricity consumers, I would like to propose three recommendations: the early introduction of explicit CP, a review of the renewable energy surcharge system, and the promotion of private-sector offsite PPAs. By achieving a fair distribution of emission costs at an early stage, we believe that it will drive private-sector-led renewable energy adoption and contribute to Japan's decarbonization.

Q&A session covered the following questions:

(Question to Ms. Dittel) The European Commission has proposed ambitious targets for 2030 and 2040, and there are also ambitious goals within the current EU-ETS. Do you believe that these goals can be achieved under the current system? Is there potential to expand the system or further reduce emissions?

(Question to Ms. Dittel) The EU is recognized as being globally oriented, and about two years ago, Germany proposed the Climate Club. This involves incorporating global carbon pricing, and this idea has recently been mentioned by the WTO. If the EU-ETS has a global orientation, would it be possible to accept an international carbon credit system?

(Question to Dr. Cullenward) Regarding the situation in California, is the current price of \$30–\$40 per ton sufficient to make progress toward the net-zero target? Has carbon leakage occurred, or are there concerns about it?

(Question to Mr. Tajiri) I would like to ask for your comments on the requests to the Japanese government presented by Mr. Tezuka and Ms. Watanabe in their presentations.

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