

Introduction to Emission Trading Systems in Various Countries

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Japan promulgated the Act on Promotion of a Smooth Transition to a Decarbonized Growth-Oriented Economic Structure (GX Promotion Act) that contains the establishment of an emission trading system (ETS) on May 19, 2023. The Basic Policy for the Realization of GX passed by the Cabinet in February ahead of the promulgation indicates the start of voluntary ETS (GX ETS) in FY2023, initiate to full implementation of GX ETS from FY2026, and implementation of a specified business charge (emission allowance auction) for power generation operators based on the GX Promotion Act from FY2033.

The GX ETS design reflects the interim report of the Study Group on Ideal Economic Approaches for Achieving Worldwide Carbon Neutrality prepared in August 2021 and subsequent dialogue with industry organizations and companies in the GX League. Companies that plan to participate need to set voluntary target levels by the end of September 2023.

And, before the full implementation of GX-ETS from FY2026, the GX Promotion Act stipulates the preparation of a detailed system design within two years of promulgation, and discussions that factor in voluntary GX ETS progress and results should steadily advance.

While discussions in Japan often cite the European Union Emission Trading System (EU ETS) as an example, the World Bank's annual report on carbon pricing (State and Trends of Carbon Pricing 2023) indicates that 36 countries and regions were implementing ETS as of April 2023, and each of these systems has its own characteristics. Cap, allocation, minimum and maximum price setting, and other aspects of these programs are not necessarily the same as the EU ETS.

Comparative analysis of these various countries and regions, ETS is likely to offer valuable suggestions for the detailed system design of GX ETS. However, this must be done from a comprehensive perspective. For example, the price level of ETS with different system designs incorporates impacts from many factors, such as allowance auction ratio, availability of carbon offset credits, minimum and maximum price setting, energy supply-demand conditions, socioeconomic structures, and related energy efficiency and renewable energy policies of individual countries and regions as background of the ETS. This is why it is necessary to conduct a comprehensive review that covers not only the pricing level but also the background of system design when comparing systems. Rooted in this awareness, the subject series hence reviews and analyzes the country and regional ETS of the EU, China, Korea, US (RGCI, California), NZ, India, Australia, and Canada comprehensively and using common measures

as much as possible, and finally compares systems.

While the subject series utilizes results from reviews of the carbon pricing programs of various countries conducted in FY2022 by the IEEJ as a consignment project from METI, the suggestions for GX ETS using these results are the independent opinions of individual researchers and do not represent METI opinions.

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