

GX (Green Transformation) Basic Policy and Roadmap

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Policy Overview

Please also see "Japan's \$1Tn GX (Green Transformation) Policy" report published in November 2023, which compares GX policy and IPCC guidelines.

To achieve the 2050 carbon neutrality goal, the Japanese government has introduced the Green Transformation (GX) policy, which aims to transition from fossil fuels to a clean energy-based society while promoting economic growth. The GX policy is a set of policies, including a 10-year roadmap outlining the allocation of 150 trillion yen of public-private investment for various sectors and technologies.

Part of the government's investment will be issued in the form of government bonds called GX Economic Transition Bonds, financed with a carbon levy and the emissions trading system introduced in the future. The government calls this the "growth-oriented carbon pricing concept" and has made it a major pillar of its GX policy.

Background

In May 2022, Prime Minister Kishida announced that over 150 trillion yen of public-private GX investment would be made over 10 years. Subsequently, after discussions at the GX Executive Committee and other meetings, the Cabinet approved the "[Basic Policy for the Realization of GX - Roadmap for the Next 10 Years \(GX Basic Policy\)](#)" in February 2023.

The GX Basic Policy aims to achieve Japan's 2030 and 2050 climate change goals and economic growth through technology, investment and policy. Unlike most Japanese environmental and climate change policies, which are led by the Ministry of the Environment, the GX policy is primarily led by the Cabinet Secretariat and the Ministry of Economy, Trade, and Industry (METI).

GX Economic Transition Bonds

The Financial Services Agency (FSA), METI, and the Ministry of the Environment jointly held a "[Transition Finance Environment Improvement Study Group](#)" and released the "[Basic Guidelines for Basic Guidelines for Climate Transition Finance](#)" in May 2021.

Subsequently, roadmaps were formulated to promote transition finance in major sectors such as steel, power, and automotives.

The [GX Promotion Act](#) (Law Concerning the Promotion of Smooth Transition to a Decarbonized Growth-Oriented Economic Structure), enacted in May 2023, has resulted in the issuance of GX Economic Transition Bonds (Decarbonized Growth-Oriented Economic Structure Transition Bonds) as the world's first sovereign transition bonds.

The aim is to achieve over 150 trillion yen of GX public-private investment over 10 years from 2023, and the GX Economic Transition Bonds of about 20 trillion yen were issued as pump-priming to spur investment.

A portion of the GX Economic Transition Bonds will be issued individually as "Climate Transition Interest Bonds". Prior to the individual issuance, the Cabinet Secretariat, the FSA, the Ministry of Finance, METI, and the Ministry of the Environment formulated the Climate Transition Bond Framework in November 2023. In addition, DNV of Norway and Japan Credit Rating Agency (JCR) have issued second party opinions (SPO) on the framework.

The first round of Climate Transition Interest Bonds was auctioned on February 14, 2024 for 10-year bonds and on February 27 for 5-year bonds for a total of 1.6 trillion yen. There are [plans](#) to issue more after October 2024, and the use of the proceeds will be determined at the time of each issue. The framework may be revised depending on the response to the issuance and sociopolitical conditions.

Carbon Pricing

The Japanese government aims to raise 20 trillion yen through "GX Economic Transition Bonds". Growth-oriented carbon pricing that combines emissions trading (GX-ETS) and a "carbon levy" will be used to finance the bonds. Emissions trading has already been introduced in FY2023, but it is a voluntary system led by [GX League](#) participating companies; a phased auction is scheduled to start in FY2033, but it is limited to the power sector.

A carbon levy will be phased in from FY2028. For more information, please refer to the "Carbon Pricing" page [here](#).

Thermal Power / Fossil Fuel

While the GX Basic Policy mentions "fading out inefficient coal-fired thermal power generation," it also includes promotion of hydrogen/ammonia co-firing and direct combustion, as well as investment in upstream LNG development in cooperation with Asian countries. According to the Japanese government's roadmap for [fuel ammonia](#), the anticipated introduction of ammonia direct combustion is in the 2040s. In other words, ammonia co-firing with coal will leave coal in the power generation sector until ammonia direct combustion is achieved in mid-century. Given that there is no mention of fading out of fossil fuels, including coal, their use is expected to continue under the current policy.. For more information on Japan's overall thermal power and fossil fuel policy, please refer to the "Power Sector Transition" page.

Renewable Energy

Around 31 trillion yen will be provided to next generation renewable energy according to the draft investment plan of the GX Transition Bond . It is partially in line with the recommendations of the IPCC and others in that it provides support for offshore wind and solar power. However, the target for the share of renewable energy in the FY2030 energy mix is 36~38%, which is below the 53.6% average share of renewable energy in global electricity generation in the IPCC modeled pathway to the 1.5°C target with limited or no overshoot. For more information on Japan's overall renewable energy policy, please refer to the "Renewable Energy" page.

Iron and Steel

The GX policy promotes investment and development in electric furnaces and hydrogen reduction steelmaking, which appears to be in line with IPCC recommendations for decarbonizing the steel sector. However, the transition to non-fossil energy sources in steel production is described only in broad terms, and specific energy sources, technologies, and timelines for the transition are unclear. It also does not take a clear position on the decarbonization of

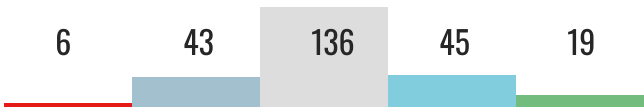
hydrogen production methods used in the steel sector. For more information on Japan's overall steel sector policy, please refer to the "Steel Sector" page.

Automotive Sector

The GX policy sets a goal of "100% electric vehicles in new passenger car sales in 2035," but this definition of electric vehicles includes hybrid vehicles. While the IPCC acknowledges that hybrids "can reduce emissions by up to 30% compared to ICEVs (internal combustion engine vehicles), depending on the fuel" the IPCC concludes that "mitigation opportunities are limited". Furthermore, the IPCC also states that "electric vehicles using low-emission electricity offer the greatest decarbonization potential for land transport on a life-cycle basis". For more information on Japan's overall automotive sector policies, please see our Automotive Sector page [here](#).

Date of Last Update: August 13th, 2024

Evidence Profile



- Key
- OPPOSING
 - NOT SUPPORTING
 - MIXED/UNCLEAR
 - SUPPORTING
 - STRONGLY SUPPORTING