



January 2023

Japan Energy Newsletter

**Japan Electric Power
Information Center, U.S.A.**

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1 The Japanese Government Released its Green Transformation (GX) Basic Policy for the Next 10 Years¹²

On December 22, 2022, the Green Transformation (GX) Implementation Council, chaired by Prime Minister (PM) Fumio Kishida, released the basic policy for realizing GX in Japan. According to the policy, the Japanese government will issue a GX Economic Transition Bond and provide an upfront investment of 151 billion USD to stimulate GX investment by the public and private sectors, exceeding 1.13 trillion USD over the next ten years.

The GX basic policy aims to 1) reform Japan's nuclear policy to promote the construction of new nuclear reactors, 2) develop a system to introduce renewable energy on a large scale, and 3) introduce a carbon pricing mechanism. After 30 days for the submission of public comments, the GX basic policy will be approved by the Cabinet in late January 2023, and the relevant bills will be submitted to the ordinary session of the Diet.³

1.1 Background of the Policy Development

In July 2022, PM Kishida launched the GX Executive Committee to develop and implement policies to ensure a stable energy supply and transform the industrial structure from a fossil fuel-centered society to a clean energy society. Including the December meeting, the GX Executive Committee has met five times since its launch.

The GX Executive Committee is chaired by PM Kishida. The committee includes the Minister of Economy, Trade and Industry (responsible for promoting the GX implementation), the Chief Cabinet Secretary (Vice Chair of the GX Executive Committee), the Ministers of Foreign Affairs, Finance and the Environment, and various experts.⁴

Based on results from past meetings, the GX Executive Committee released its basic policy, which lays out a 10-year GX realization roadmap to reduce Japan's greenhouse gas emissions by 46% by 2030 (relative to 2013) and achieve carbon neutrality by 2050.⁵ The basic policy also addresses the need to reform many aspects of Japan's energy policies, including the transformation of the energy supply and demand structure, as well as social and industrial structural reforms that will help to ensure a stable and inexpensive energy supply, leading to a better living environment.

The basic policy underscored the importance of GX for stabilizing Japan's energy supply, which has been severely impacted by the ongoing instability caused by the

¹ https://www.kantei.go.jp/jp/101_kishida/actions/202212/22gx.html

² https://www.cas.go.jp/jp/seisaku/gx_jikkou_kaigi/index.html

³ <https://public-comment.e-gov.go.jp/servlet/Public?CLASSNAME=PCMMSTDETAIL&id=595222084&Mode=0>

⁴ https://www.cas.go.jp/jp/seisaku/gx_jikkou_kaigi/dai1/siryou1.pdf

⁵ <https://public-comment.e-gov.go.jp/servlet/PcmFileDownload?seqNo=0000245694>

Russia-Ukraine war. Japan is concerned that the unstable global energy supply threatens to bring about its worst energy crisis since the oil crisis of 1973.

1.2 General Overview of the GX Basic Policy

The major measures proposed in the GX basic policy include a reform of the national nuclear power policy, the mass introduction of renewable energy, the introduction of carbon pricing mechanisms, and the issuance of GX Economic Transition Bonds.

- Nuclear Power Policy Reform

Nuclear power is a stable energy source compared to intermittent renewable energy sources. Given the current energy crisis, the GX basic policy has positioned nuclear energy as a clean baseload power source that will help the nation to achieve both a stable supply and its goals for carbon neutrality.

The 6th Strategic Energy Plan, which the Cabinet approved in October 2021, set a goal to increase nuclear power's share of the power mix to between 20 to 22% by FY2030.⁶ Therefore, Japan has decided to restart nuclear power plants while ensuring nuclear safety. Since the Great East Japan Earthquake in 2011, Japan's policy has been not to construct, expand, or rebuild nuclear power plants, so the reactivation of the nuclear power plants represents a shift in policy. The basic plan has also set new goals for Japan to develop and construct next-generation innovative reactors incorporating new safety mechanisms.

- Mass Introduction of Renewable Energy

In the medium- to long-term, Japan plans to introduce renewable energy on a large scale and to mitigate the power fluctuations from renewable energy sources. Over the next ten years, Japan will work to accelerate its grid development on a scale that will be more than eight times that of the past ten years. The country will develop undersea DC power transmission lines to connect Hokkaido and Honshu, with a target completion date of FY2030. Japan will also accelerate the introduction of stationary battery storage systems to mitigate the fluctuation of renewable energy and promote private-public investments in renewable energy toward 2030.

- Introduction of Carbon Pricing

A GX Economic Transition Promotion Organization will be newly established to introduce a hybrid carbon pricing system. This organization will manage and coordinate two different systems, the GX League and the carbon tax scheme. The GX League, a carbon trading system, will begin its pilot phase in 2023 and is scheduled to begin full-scale operations in 2026. Japan will also introduce a carbon tax on emitters to make the burden of CO2 emissions equitable.

- Issuance of GX Economic Transition Bonds

It is estimated that more than 1.13 trillion USD of public and private investments funding GX will be required over the next decade. Therefore, the government will issue

⁶ <https://www.meti.go.jp/press/2021/10/20211022005/20211022005.html>

a GX Economic Transition Bond and contribute 151 billion USD to the market to stimulate green investments. The GX Economic Transition Bonds will be funded by revenue collected through the carbon pricing system.

2 The European Union and Japan Signed a Memorandum of Cooperation on Hydrogen⁷

On December 2, 2022, Minister of Economy, Trade and Industry Yasutoshi Nishimura signed a Memorandum of Cooperation (MoC) on hydrogen with European Commissioner for Energy Kadri Simson. The MoC commits Japan and the European Union (EU) to exchange information on hydrogen-related policies, regulations, and incentives; to cooperate on the international hydrogen trade; and to collaborate to develop a hydrogen society.⁸

The MoC is the follow-up to last year's agreement to build a cooperative relationship in the field of hydrogen. On May 27, 2021, during the 27th Japan-EU Summit Meeting, former Prime Minister Yoshihide Suga met with Mr. Charles Michel, President of the European Council, and Dr. Ursula von der Leyen, President of the European Commission, to create the Japan-EU Green Alliance.

To achieve climate neutrality by 2050 and accelerate the transition to clean energy, Japan and the EU will promote cooperation in various fields, such as energy transition, energy innovation, and supporting decarbonization transition efforts in developing countries. Japan and the EU also agreed to accelerate their efforts to implement environmental measures and to take the lead within the international community in this field.⁹ ¹⁰ The Japanese government and the European Commission are already working closely on accelerating the development and adoption of clean hydrogen based on their past bilateral collaboration.

The MoC's purpose is to support cooperation between Japan and the EU on developing sustainable and affordable clean hydrogen through facilitating hydrogen trade, transportation, storage, and distribution. Japan and the EU will also develop a framework for developing cooperation programs to promote a transparent hydrogen market according to the Sustainable Development Goals (SDGs).

The MoC commits stakeholders from the EU and Japan to work together on the following measures to advance the development of clean hydrogen, including green hydrogen derived from electrolysis using renewable electricity and low-emission hydrogen.

- Facilitate the exchange of information on policies, regulations, incentives, and subsidies to promote clean hydrogen deployment and to develop the necessary infrastructure in various sectors;
- Collaborate to enhance the competitiveness of hydrogen with other renewable energy sources;
- Cooperate to promote the role of clean hydrogen in the power sector and expand its use in industrial and transportation sectors, where it is especially challenging to reduce carbon emissions.

⁷ <https://www.meti.go.jp/press/2022/12/20221202004/20221202004.html>

⁸ <https://www.meti.go.jp/press/2022/12/20221202004/20221202004-1.pdf>

⁹ https://www.mofa.go.jp/mofaj/erp/ep/page6_000563.html

¹⁰ <https://www.consilium.europa.eu/media/49932/eu-japan-green-alliance-may-2021.pdf>

- Work together to build an international supply chain;
- Share best practices and lessons learned in clean hydrogen research and demonstration projects conducted by the EU or Japan;
- Share information and best practices on hydrogen safety, and develop international standards for hydrogen-related equipment to ensure the safety, sustainability, and affordability pricing of hydrogen production, transport, distribution, storage, and infrastructure operations;
- Facilitate the development and adoption of domestic and international regulations and standards for methods to determine the levels of greenhouse gas emissions in hydrogen production and transportation, including cooperation in the International Hydrogen and Fuel Cells Partnership;
- Enhance the safe and rules-based international hydrogen trade based on standards and related certifications to recognize and certify 'renewable hydrogen' or 'low-carbon hydrogen';
- Cooperate on projects and initiatives, such as multilateral cooperation initiatives, to accelerate global efforts to introduce clean hydrogen; and
- Promote skills improvement and education exchanges through different channels, including re-education and vocational education and training, to secure the talent and skills that are necessary for the economic development of clean hydrogen in Japan and the EU.

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