Climate Change

Japan's initiative toward net-zero GHG emissions by 2050

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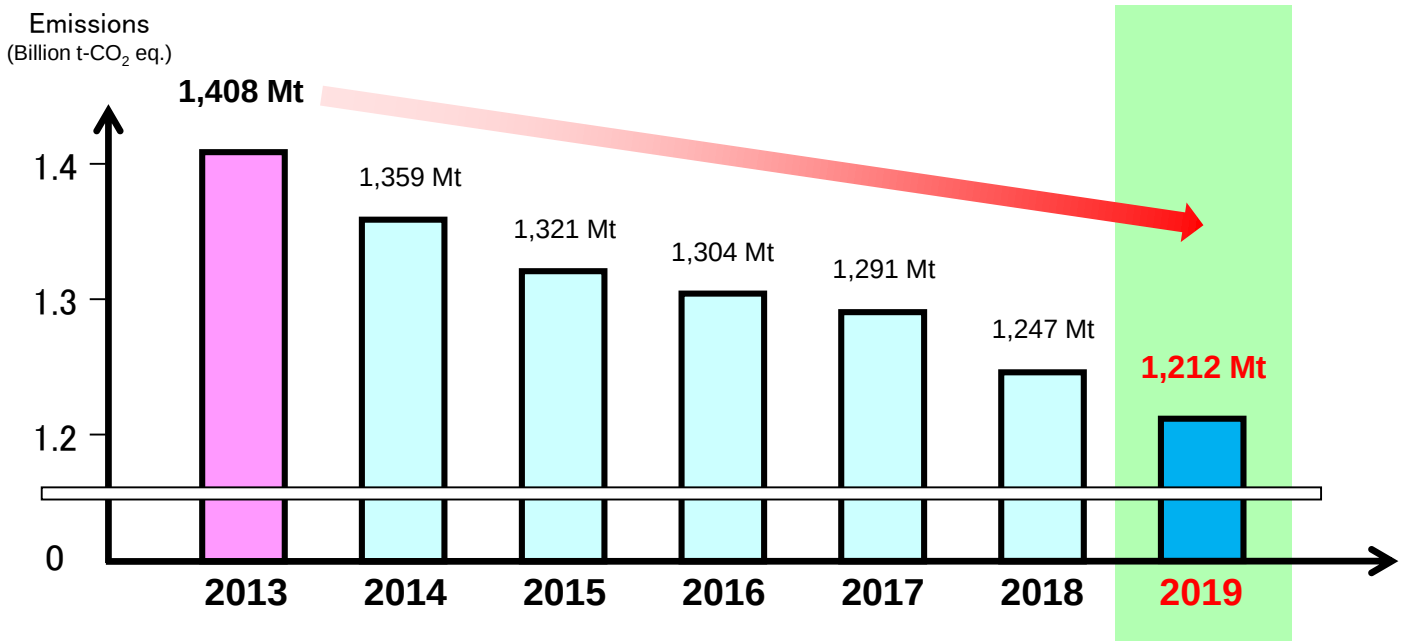
Japan's Initiative Toward Net-Zero GHG Emissions by 2050

Japan aims to realize a decarbonized society by 2050 (net-zero GHG emissions by 2050), and has been making efforts as explained below.

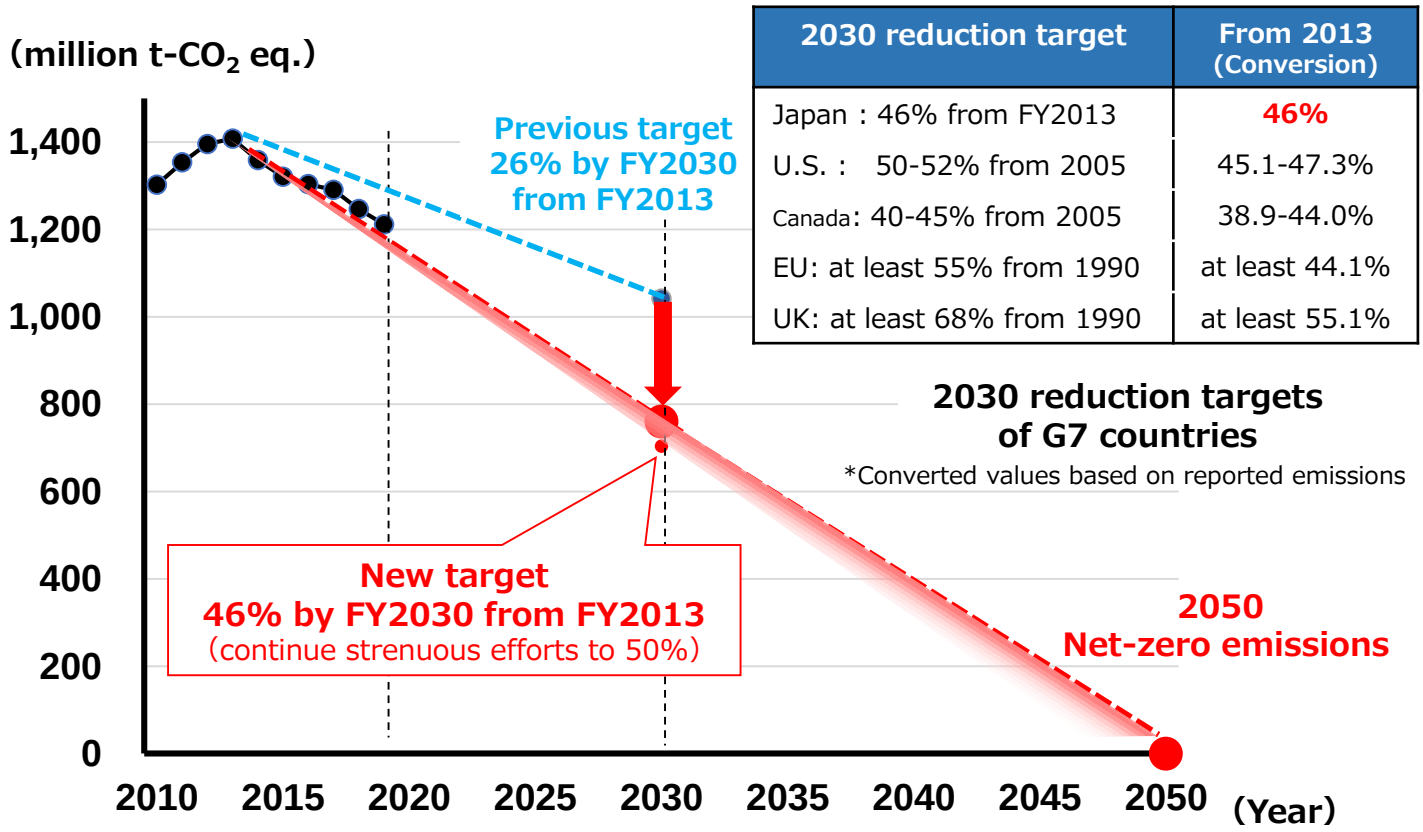
GHG Emissions in Japan

Japan has been reducing GHG emissions for six consecutive years since FY2014, falling to a record low since FY1990, when emission estimates began.



Japan's new 2030 emissions reduction target

Japan aims to reduce its GHG emissions by 46% in FY2030 from FY2013 levels, setting an ambitious target that is aligned with the long-term goal of achieving net-zero emissions by 2050. Furthermore, Japan will continue its strenuous efforts in its challenge to meet the lofty goal of cutting its emission by 50%.



2030 reduction target	From 2013 (Conversion)
Japan : 46% from FY2013	**46%**
U.S. : 50-52% from 2005	45.1-47.3%
Canada: 40-45% from 2005	38.9-44.0%
EU: at least 55% from 1990	at least 44.1%
UK: at least 68% from 1990	at least 55.1%

2030 reduction targets of G7 countries

*Converted values based on reported emissions

Japan's Bilateral and Multilateral Assistance on Climate Change

- Japan provided public and private climate finance annually, amounting to approximately JPY 1.3 trillion per year from 2016 to 2020.
- Prime Minister SUGA announced in June 2021 at the G7 Cornwall Summit that Japan will provide climate finance, both public and private, totaling JPY 6.5 trillion over the next 5 years, from 2021 to 2025, and that it will further enhance its assistance for adaptation.

Bilateral assistance

✓ Japan has been carrying out various projects/programmes in support of developing countries, thereby allowing these countries to make efforts to reduce their GHG emissions as well as helping vulnerable countries to mitigate the adverse impacts of climate change through a variety of sources, such as the Official Development Assistance (ODA) and other official financing (e.g. export credits and public bank loans).

Multilateral assistance

✓ Japan has supported mitigation and adaptation actions in developing countries through contributions to climate funds and international organizations, including the Green Climate Fund (GCF) and the United Nations Development Programme (UNDP).

Examples of assistance

Hydro-Electric Power Station in India

In India, Japan contributed to industrial development and the improvement in living standards in Meghalaya through optimal utilization of water resources by renovating the Umiam-Umtru Stage 3 Hydroelectric Power Station.

Contribution to the alleviation of traffic congestion and flood damage in the Philippines

Japan supported the formulation and implementation of flood control plans in the river basins that run through the Manila Metropolitan Area in light of the recent intensification of typhoons due to climate change.

Climate Solutions Technologies Initiative

✓ Japan has established a new program entitled the "Climate Solutions Technologies Initiative" to support Japanese companies' products that incorporate decarbonizing technologies in developing countries for addressing development agendas including through ODA mechanisms such as Grant Aid for Japanese NGO Projects.

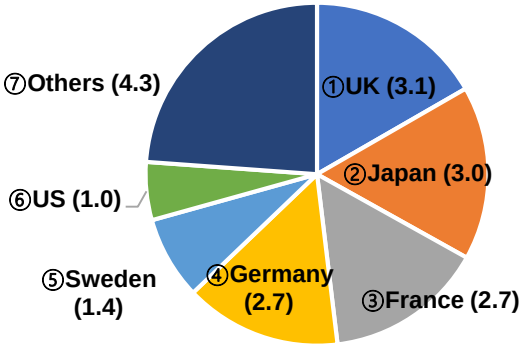
✓ Under the initiative, an External Review Committee invites Japanese companies to submit their products for review, which the Committee evaluates from the standpoint of climate change measures and price rationality.

✓ Once selected by the Committee, the products are included in the list of approved products that Japanese NGOs can utilize in their project proposals where appropriate.

Green Climate Fund (GCF)

Japan is making contributions of up to 3 billion US dollars to the GCF*. Japan is the second largest contributing country to the fund next to the UK. Japan also actively contributes to the management of the GCF as a Member and Alternate member of the Board. The GCF has approved 177 projects (8.9 billion USD) as of July 2021.

*The GCF is a climate fund established to help developing countries reduce GHG emissions (mitigation) and address the adverse effects of climate change (adaptation).



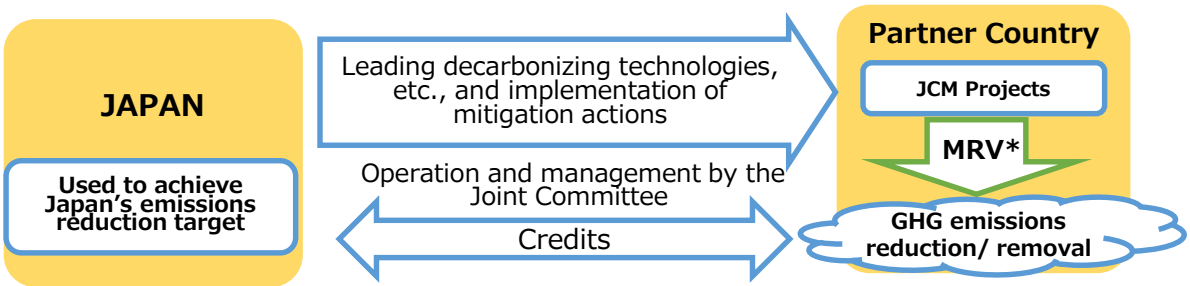
Total Pledges (20.3 USD billion, as of Mar 2021)

How is the GCF operated?

1. Targeted balance of assistance
   - Mitigation: Adaptation = 50:50*
     *grant equivalent basis
2. Recipients
   - All developing countries, with particular focus on highly vulnerable countries such as Small Island Developing Countries (SIDs), LDCs and African countries.
3. Implementation through "Accredited Entities (AEs)"
   - International, Regional and National organizations (public organizations)
   - Private Sector entities

Joint Crediting Mechanism (JCM)

Japan has been implementing the JCM with 17 partner countries since 2013, introducing leading decarbonizing technologies to them. More than 200 emission reductions projects have been implemented in partner countries with the support of the Government of Japan. The use of carbon market mechanisms, including the JCM, is articulated in Article 6 of the Paris Agreement.



*measurement, reporting and verification

Mongolia
Jan. 8, 2013
(Ulaanbaatar)

Bangladesh
Mar. 19, 2013
(Dhaka)

Ethiopia
May 27, 2013
(Addis Ababa)

Kenya
Jun. 12, 2013
(Nairobi)

Maldives
Jun. 29, 2013
(Okinawa)

Viet Nam
Jul. 2, 2013
(Hanoi)

Lao PDR
Aug. 7, 2013
(Vientiane)

Indonesia
Aug. 26, 2013
(Jakarta)

Costa Rica
Dec. 9, 2013
(Tokyo)

Palau
Jan. 13, 2014
(Ngerulmud)

Cambodia
Apr. 11, 2014
(Phnom Penh)

Mexico
Jul. 25, 2014
(Mexico City)

Saudi Arabia
May 13, 2015

Chile
May 26, 2015
(Santiago)

Myanmar
Sep. 16, 2015
(Nay Pyi Taw)

Thailand
Nov. 19, 2015
(Tokyo)

Philippines
Jan. 12, 2017
(Manila)

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Green Growth Strategy

In order to bring about a transformation of industrial structures, Japan formulated the Green Growth Strategy in December 2020 and updated it in June 2021.

[8 Policy Tools]

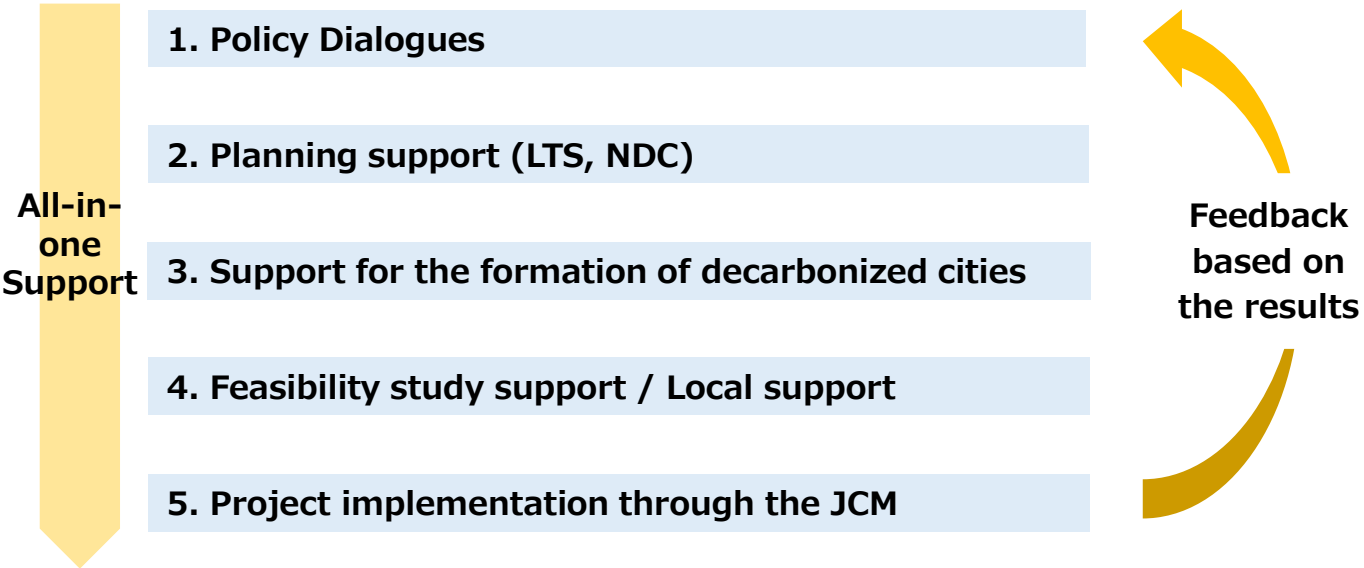
- Grant funding
  - Green Innovation Fund: 2 trillion yen (approximately 20 billion USD) over 10 years
  - Stimulate 15 trillion yen worth of private R&D and investment
- Tax incentives
- Guidance policy on Finance
- Regulatory Reforms and standardization
- International collaboration
- Promotion of university initiatives
- Expo 2025 Osaka, Kansai, Japan
- Youth Working Group

[14 Growth Sectors]

- Energy (next-generation renewable energy, hydrogen/fuel ammonia, next-generation heat energy, nuclear)
- Transport/Manufacturing (mobility/battery, semiconductor/ICT, maritime, logistics, food/agriculture/forestry/fisheries, aviation, carbon recycling/material)
- Home/Office (housing/building/next-generation power management, resource circulation, lifestyle-related industry)

All-in-One Support System for Decarbonization (JPRSI)

Japan established the Japan Platform for Redesign: Sustainable Infrastructure (JPRSI) to support developing countries to collaborate with the private sector and to realize all-in-one support for decarbonization.



Energy transition in Asia

In order to achieve global decarbonization, it is essential to accelerate the realistic transition to carbon neutrality while realizing economically sustainable growth for developing countries, especially in Asia.

Japanese initiative:

1. **Support for formulating energy transition roadmaps**
2. **Presentation and promotion of the concept of Asia Transition Finance**
3. **US$10 billion financial support**
4. **Technology development and deployment, utilizing the achievement of Green Innovation fund**
5. **Human resource development and knowledge sharing**

Tokyo “Beyond-Zero” Week

METI held the "Tokyo Beyond Zero Week 2021," a series of international conferences on energy and the environment aimed at achieving carbon neutrality and the “Beyond Zero” initiative.

These conferences brought together a wide variety of stakeholders including government officials, representatives of international organizations and research institutes from around the world, and held wide-ranging discussions on individual challenges toward the realization of the “Beyond Zero” approach, as well as paths and methods for realizing these challenges in society, and disseminated to the world realistic and concrete paths and pictures for realizing a “virtuous cycle of economy and environment”.

With cross-sectoral discussions on green growth in Asia, Japan will share its technological expertise with other countries in priority fields such as hydrogen, ammonia, and carbon recycling, in which Japan is leading the world. We will contribute to achieving carbon neutrality throughout the world as a platform for leading international discussions and cooperation.

Renewable energy and Energy Efficiency

■ Capacity Building programs

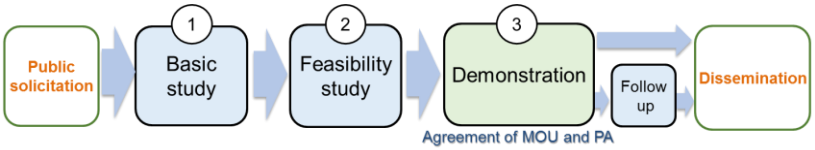
By providing training programs in Japan and dispatching experts to countries mainly in Asia and the Middle East, Japan supports institutional arrangements which enable policy makers to introduce cleaner technologies in those countries.

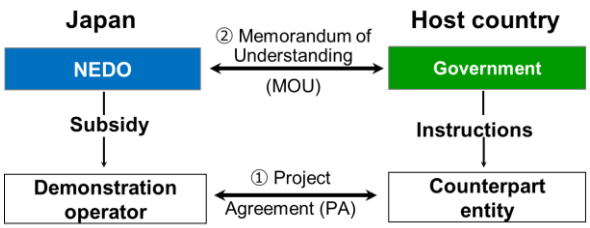
■ Business and Government’s Missions

The Japanese Business Alliance for Smart Energy Worldwide (JASE-W) has dispatched a group of enterprises and government officials to Asian countries to promote business matching through international public-private cooperation.

■ International Energy Demonstration Project

New Energy and Industrial Technology Development Organization (NEDO) provides financial support for the dissemination of Japan’s advanced technologies that can contribute to energy security, economic efficiency, the environment, and safety (3E+S) through the international demonstration program.





Concept of Decarbonization Leading Areas

In Decarbonization Leading Areas, we aim to achieve virtually zero CO_2 emissions by 2030 from electricity consumption by consumer sectors (households, office buildings, etc.)

A. Agricultural, forestry and fishery villages

Farming-type renewable energy generation; wood biomass, livestock excrement, etc.; geothermal power generation; smart agriculture, forestry and fisheries; forest maintenance

B. Remote islands

Renewable energy such as offshore wind, solar power; hydrogen utilization, electrification of marine vessels

C. Blocks in urban areas

(Individual houses, housing complexes, public facilities, educational facilities of universities, commercial establishments)

Use of rooftop solar power systems and renewable energy for residential housing, public facilities and parking lots

D. Inter-regional cooperation

Cooperation among neighboring cities, towns and villages (regional waste treatment, public transportation systems, etc.)

Cooperation between regions with rich renewable energy potential and urban areas with large energy consumption

Japan Partnership for Circular Economy

The "Japan Partnership for Circular Economy (J4CE)" was launched in 2021 as a public-private partnership between the Government and Keidanren (Japan Business Federation). Its goal is to foster understanding of the circular economy, promote initiatives, and increase Japan's presence in the international community.

Mission

- Promote further understanding of the circular economy among a wide range of stakeholders
- Strengthen public-private partnerships to increase the Japan's presence in the global circular economy.

Activities

Sharing

Japan's advanced initiatives and solutions domestically and internationally

- 131 cases available from https://j4ce.env.go.jp/en
- Booklet on 28 noteworthy cases

Accelerating activities for circular economy by sharing the latest trends and formulating network of stakeholders within and beyond sectors.

Setting up dialogues among the stakeholders to promote the circular economy