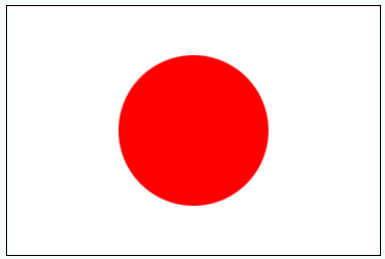

Experiences and Practices on Domestic Efforts on NDCs Implementation in Japan

20 June 2025

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Ministry of the Environment
JAPAN

Planning Process of Japan's New NDC

- ✓ Japan aims to achieve Net-Zero, Energy Security and Economic Growth simultaneously.
- ✓ Three parallel consideration trucks: (1) NDC and its Action Plan, (2) Energy Mix and Energy Policy, (3) Green Transformation (GX) Strategy were taken in a coordinated manner.

Joint meetings of Central Environmental Council and Industrial Structural Council (MOE and METI)

- ➢ Reviewing Plan for Global Warming Countermeasures (Action Plan)
- ➢ Recommendation on the new NDC

work closely

Advisory Committee for Natural Resources and Energy (METI)

- ➢ Reviewing Strategic Energy Plan including Energy Mix

GX Implementation Council (Cabinet Secretariat)

- ➢ Reviewing GX 2040 Vision

- Participation of various stakeholders (e.g. industry, academics, local governments, labor unions, NGOs, future generations, relevant ministries and agencies)
- Intensive discussions in a transparent manner
- Consideration of GST outcomes and alignment with global 1.5°C goal

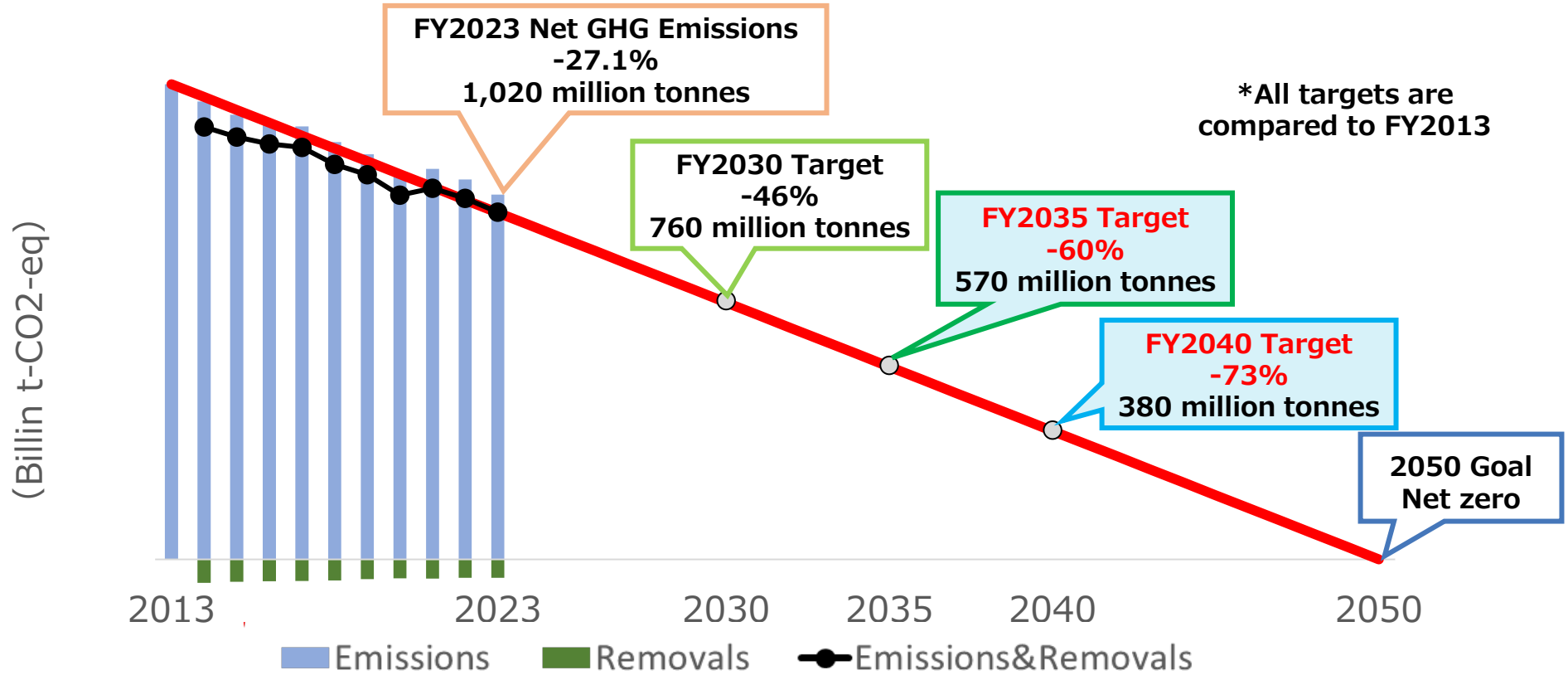
Draft NDC and its Action Plan → Global Warming Prevention Headquarter → Public Comments → NDC and its Action Plan → Global Warming Prevention Headquarter → NDC Submission → UNFCCC

Adopted on 27 December 2024

Finally determined on 18 February 2025

Japan's New GHG Emission Reduction Targets (NDC)

- Japan will pursue efforts to steadily reduce its GHG emissions on a **linear pathway from FY2030 target towards the achievement of net zero by 2050.**
- As for the new NDC, Japan sets ambitious targets to reduce its GHG emissions **by 60% in FY2035 and by 73% in FY2040**, from its FY2013 levels, **aligned with the global 1.5°C goal.**
- These targets will **increase** medium and long-term predictability and **accelerate Green Transformation (GX) investments, towards simultaneous achievement of net zero and economic growth.**



Recent Trend of GHG Emissions & Removals and its Targets in Japan

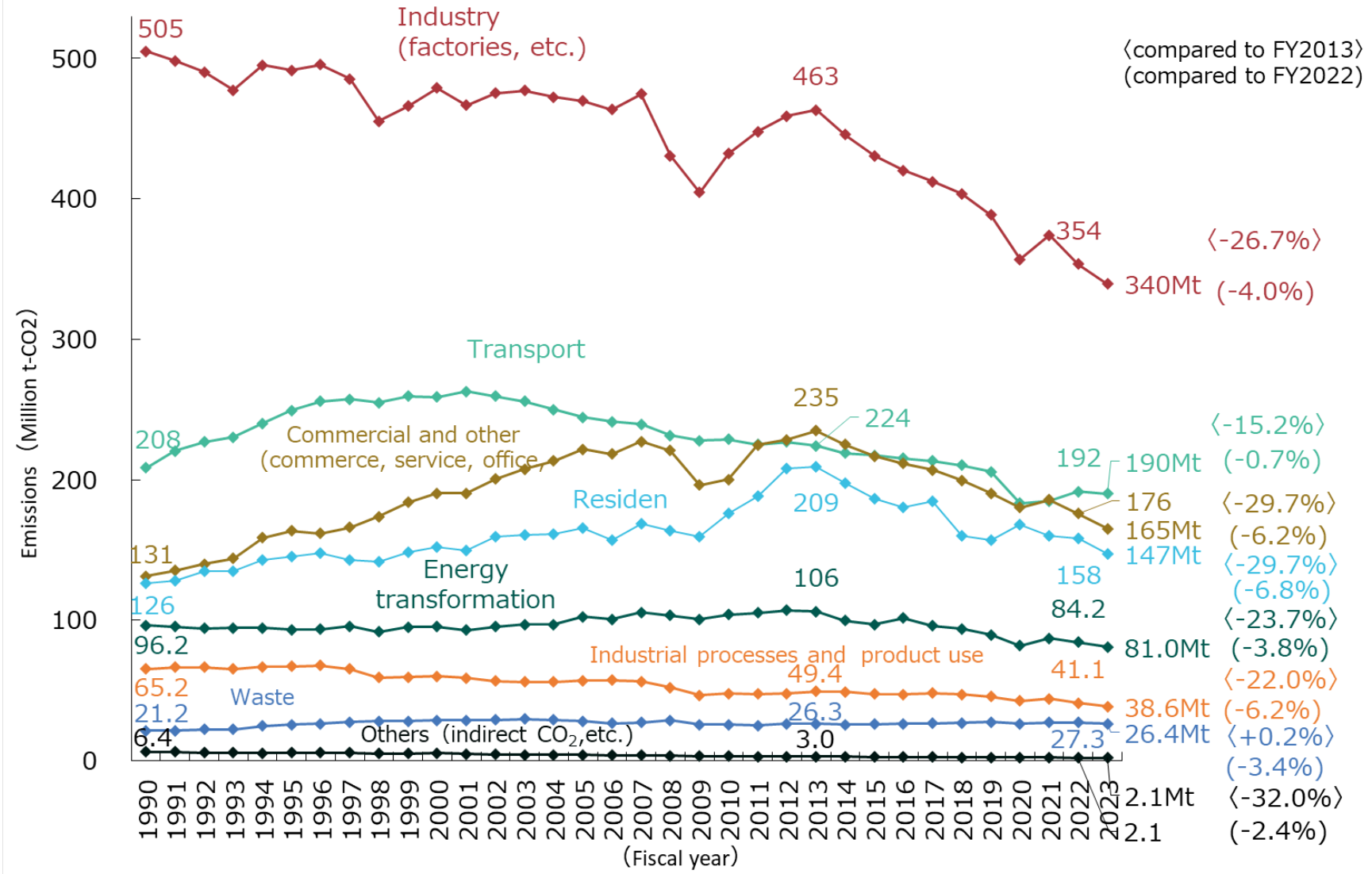
Targets by each GHG and Sector

Unit: 1Mt-CO_2eq

	Fiscal 2013 Results	FY2030 (relative to FY2013)	FY2040 (relative to FY2013)
Greenhouse Gas Emissions and Removals	1,407	760 (-46%[*1])	380 (-73%)
Energy-related CO_2	1,235	677 (-45%)	Approx. 360-370 (-70~71%)
Industry	463	289 (-38%)	Approx. 180-200 (-57~61%)
Commercial and others	235	115 (-51%)	Approx. 40-50 (-79~83%)
Residential	209	71 (-66%)	Approx. 40-60 (-71~81%)
Transport	224	146 (-35%)	Approx. 40-80 (-64~82%)
Energy Conversion	106	56 (-47%)	Approx. 10-20 (-81~91%)
Non-energy-related CO_2	82.2	70.0 (-15%)	Approx. 59 (-29%)
Methane (CH_4)	32.7	29.1 (-11%)	Approx. 25 (-25%)
Nitrogen to monoxide	19.9	16.5 (-17%)	Approx. 14 (-31%)
HFCs, PFCs, SF_6, NF_3	37.2	20.9 (-44%)	Approx. 11 (-72%)
GHG Removals	-	-47.7 (-)	-Approx. 84(-)
Joint Crediting Mechanism (JCM)	-	Japan aims to contribute to international emission reductions and removals at the level of a cumulative total of approximately 100 Mt CO2 by FY 2030 through public-private collaborations. Japan will appropriately count the acquired credits to achieve its NDC.	Japan aims to contribute to international emission reductions and removals at the level of a cumulative total of approximately 200 Mt CO2 by FY 2040 through public-private collaborations. Japan will appropriately count the acquired credits to achieve its NDC.

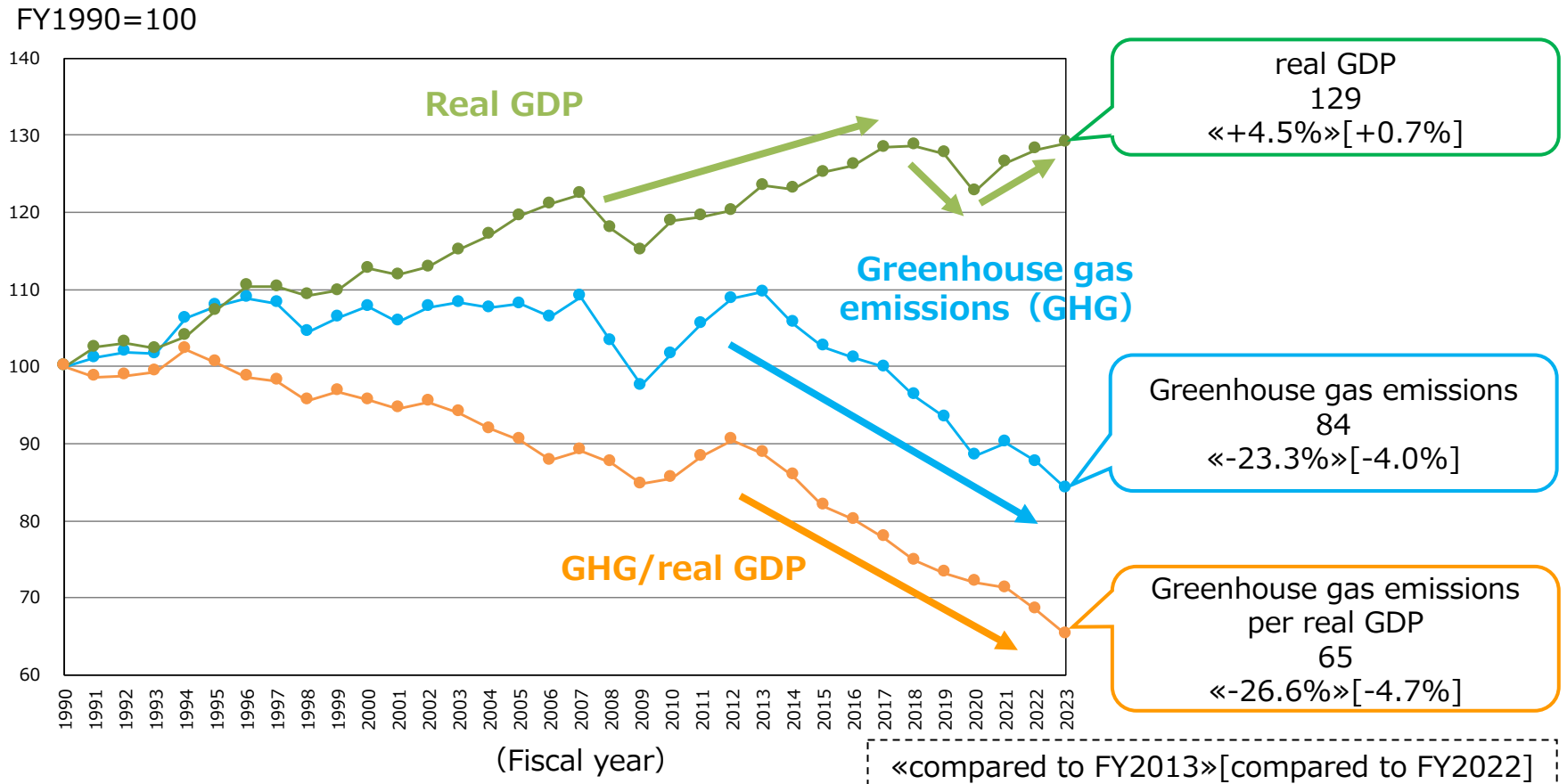
*1 Furthermore, we will continue to take on the challenge of reaching the 50% mark.

Changes in Energy-related CO2 Emissions by Sector



Trends of GHG Emissions by real GDP

■ **GHG emissions by real GDP has been decreasing for 11 consecutive years** compared to FY2013.



Source: Ministry of the Environment of Japan

Key Policies and Measures under the Action Plan

- To achieve Japan's new NDC, the following policies and measures will be implemented under the **Action Plan: the Plan for Global Warming Countermeasures**, in coordination with **the Strategic Energy Plan and the GX2040 Vision**.
- These policies and measures will be advanced or revised through follow-up activities.

Energy Transition

- Maximize the use of decarbonization power sources such as renewable energy and nuclear power
- Utilize LNG-fired power as a transition energy, promote decarbonization of thermal power plants using hydrogen, ammonia, CCUS, etc., and facilitate efforts to fade out inefficient coal-fired power plants
- Utilize CCUS, hydrogen in hard-to-abate sectors

Industry, Business, Transportation, etc.

- Support transition to innovative equipments in factories and introduction to energy efficient facilities in SMEs
- Improve energy efficiency of semiconductor products, develop and utilize cutting-edge technologies such as photoelectric conversion, and improve energy efficiency of data centers, with expected increase in electricity demand
- Reduce CO2 emissions throughout product lifecycle, from manufacturing to disposal, in the automotive sector, advance decarbonization in logistics systems, and use next-generation fuels in aviation and marine transportation sectors

Local Communities and Lifestyle

- Accelerate local decarbonization and revitalization and create more than 100 "decarbonization leading areas" by FY2030
- Shift to decarbonized lifestyles, including energy-efficient housing and food loss reduction
- Support installation of high insulation windows, energy efficient water heaters, electric commercial vehicles, and perovskite solar cells, and its demand generation by introducing such products to national and municipal government buildings
- Advance decarbonization of the entire value chain, including development of Scope 3 GHG emissions accounting methods

Cross-cutting Issues

- Establish and implement "pro-growth carbon pricing"
- Promote transition to a Circular Economy, advance measures under the Act concerning Sophistication of Recycling Businesses, facilitate deployment of waste treatment facilities with CCU and facilitate solar panel recycling
- Advance efforts on forest management, blue carbon and other carbon removal activities
- Contribute to global emissions reduction utilizing Japan's decarbonization technologies and expand cooperation under the Joint Crediting Mechanism (JCM) and City-to-City collaboration including under the Asia Zero Emissions Community (AZEC)

GX Policy and Pro-growth Carbon Pricing

150 Trillon Yen (≒USD1T) public/private investment over decade is needed for GX.

1. **Upfront investment support**

   Japan Climate Transition Bonds (New Type of JGB)

20 Trillion Yen (≒USD133 bil.)
Investment promotion from Japan Climate Transition Bond over 10 years

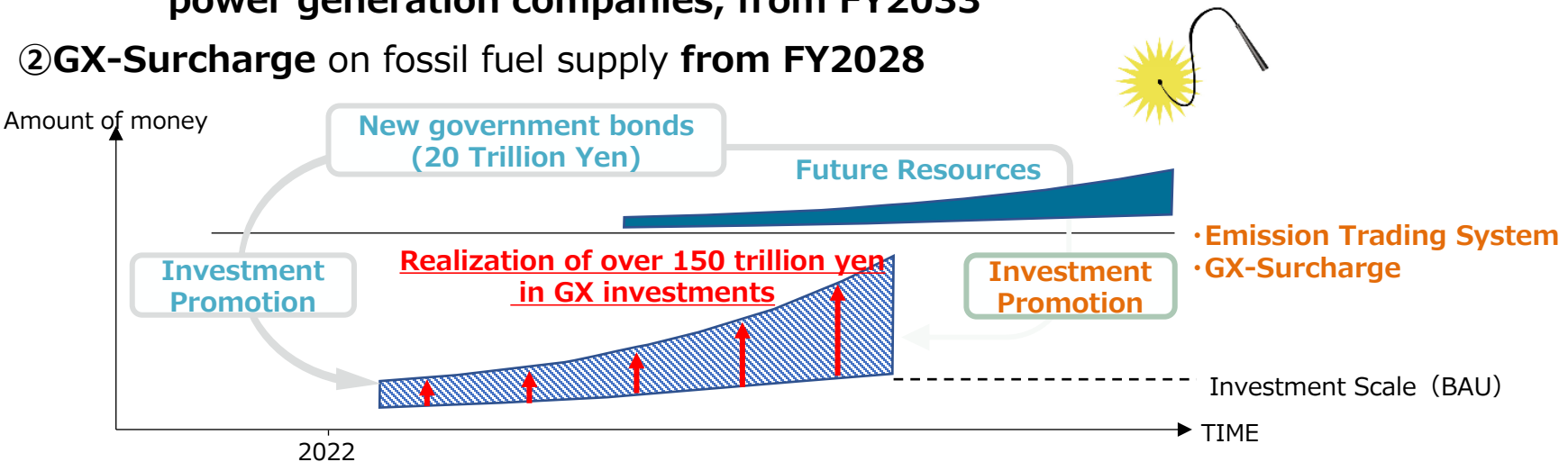
150 Trillion Yen (≒USD1 trillion)
Public Private investment for decarbonization

2. **Carbon Pricing**

   ①**Emissions trading system** in high emission industries operating **from FY2026**

   + Allowance auctioning to be phased in gradually to **power generation companies, from FY2033**

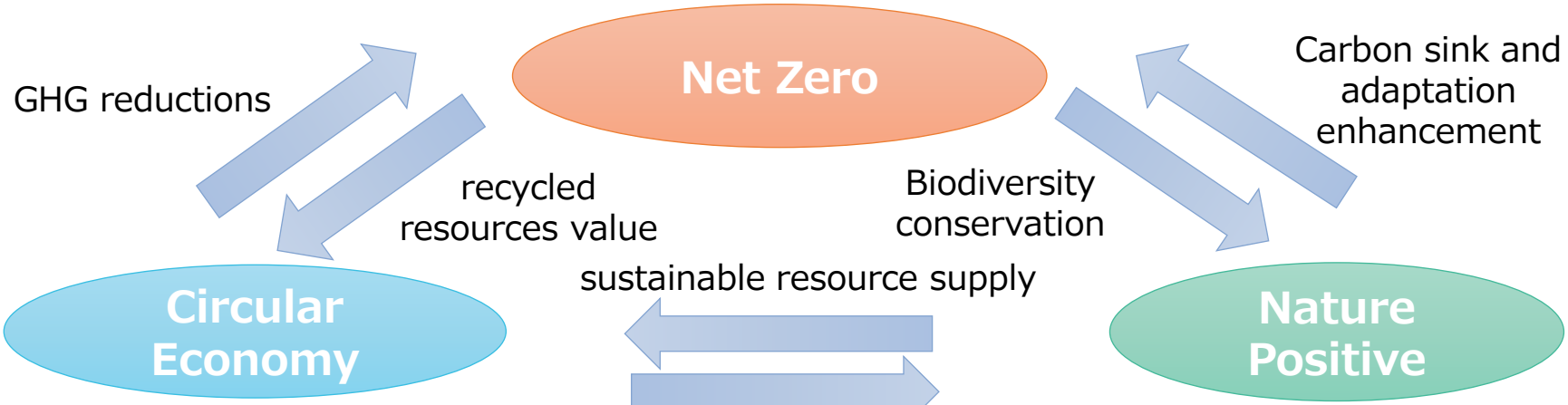
   ②**GX-Surcharge** on fossil fuel supply **from FY2028**



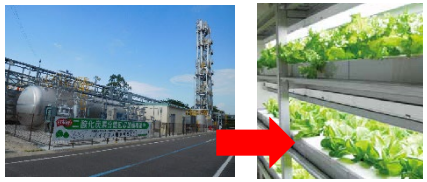
Source: Ministry of Economy, Trade and Industry of Japan

Synergy Approach for Mitigation Purposes

- **A synergy approach that contributes to net zero through circular economy and nature positive**, under the three COPs (UNFCCC, UNCBD, UNCCD), will promote mitigation in a cost-effective manner.
- Japan demonstrates real best practices in more than 100 **"Decarbonization Leading Areas"** in collaboration with local governments.



PV recycling facility



Waste to Energy facility, CO_2 collection for vegetable cultivation

Blue carbon sequestration in seagrass & seaweed

Management of water reserve forests

Best Practices of Synergy Approach in Japan

Net Zero x Data Center (Ishikari City)

- In the Ishikari Bay New Port area, **renewable energy is supplied to the data center** located there, which has high power consumption, supplied from solar, woody biomass, and offshore wind power generation facilities.
- Ishikari City has recognized **the high renewable energy potential** of the area as a local advantage and is aiming to further establish industrial facilities.
- Now, a council consisting of forestry cooperatives and businesses was established to promote **local production and consumption of renewable energy**, especially for woody biomass fuel for power generation.

Offshore wind power generation at Ishikari New Port

Kyocera Zero Emission Data Center

Net Zero x Forestry and Recycling Organic Waste (Maniwa City)

- Maniwa City established an additional **woody biomass power plant**, which ensures stable demand for a certain scale of wood and revitalizes the wood-related industry.
- In addition, a new **organic waste recycling facility** was built, which provides **biogas electricity** generated by methane fermentation, and **liquid fertilizer**, produced from the digested liquid, with local farmlands.
- By recycling organic waste, **40% of waste will be reduced**, and the cost of waste disposal and CO_2 emissions will also be reduced.

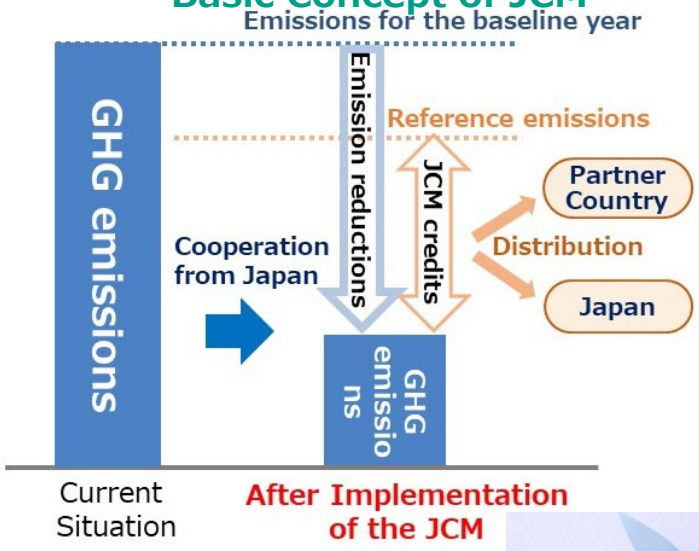
Woody biomass power plant

Organic waste recycling facility

Expanding Mitigation through International Cooperation

- **Article 6 of the Paris Agreement** expands mitigation globally through cooperation between countries.
- Japan accelerates mitigation projects in **JCM (Joint Crediting Mechanism)** partner countries.
- Additionally, Japan promotes the **measurement and reduction of GHG emissions in global supply-chains** by utilizing frameworks such as **AZEC (Asia Zero Emission Community)**.

Basic Concept of JCM



AZEC
Asia Zero Emission Community

Over 270 JCM projects with 30 partner countries

Capacity building in Article 6 and GHG measurements

A6IP | Paris Agreement Article 6 Implementation Partnership
Towards high integrity carbon markets

PaSTI
Partnership to Strengthen Transparency for co-Innovation

Follow-up Mechanism for NDC and its Action Plan

- ✓ To achieve net zero emissions by 2050, follow-up mechanism for NDC and its action plan are crucial.
- ✓ Japan has domestic institutional arrangement for NDC formulation and following-up, with line ministries and relevant stakeholders.

Political arrangement

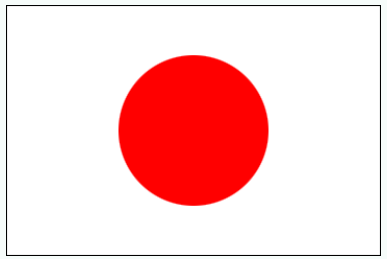
Global Warming Prevention Headquarter

Chair: Prime Minister
Vice Chair: Chief Cabinet secretary
Minister of the Environment
Minister of Economy, Trade and Industry
Member: All Ministers

Technical arrangement

Council for considering NDC and its Follow-up

Member: Academic institute, Private company,
Local government, other Stakeholders



Thank you for your attention !