

Pathways to Japan's Green Transformation (GX)



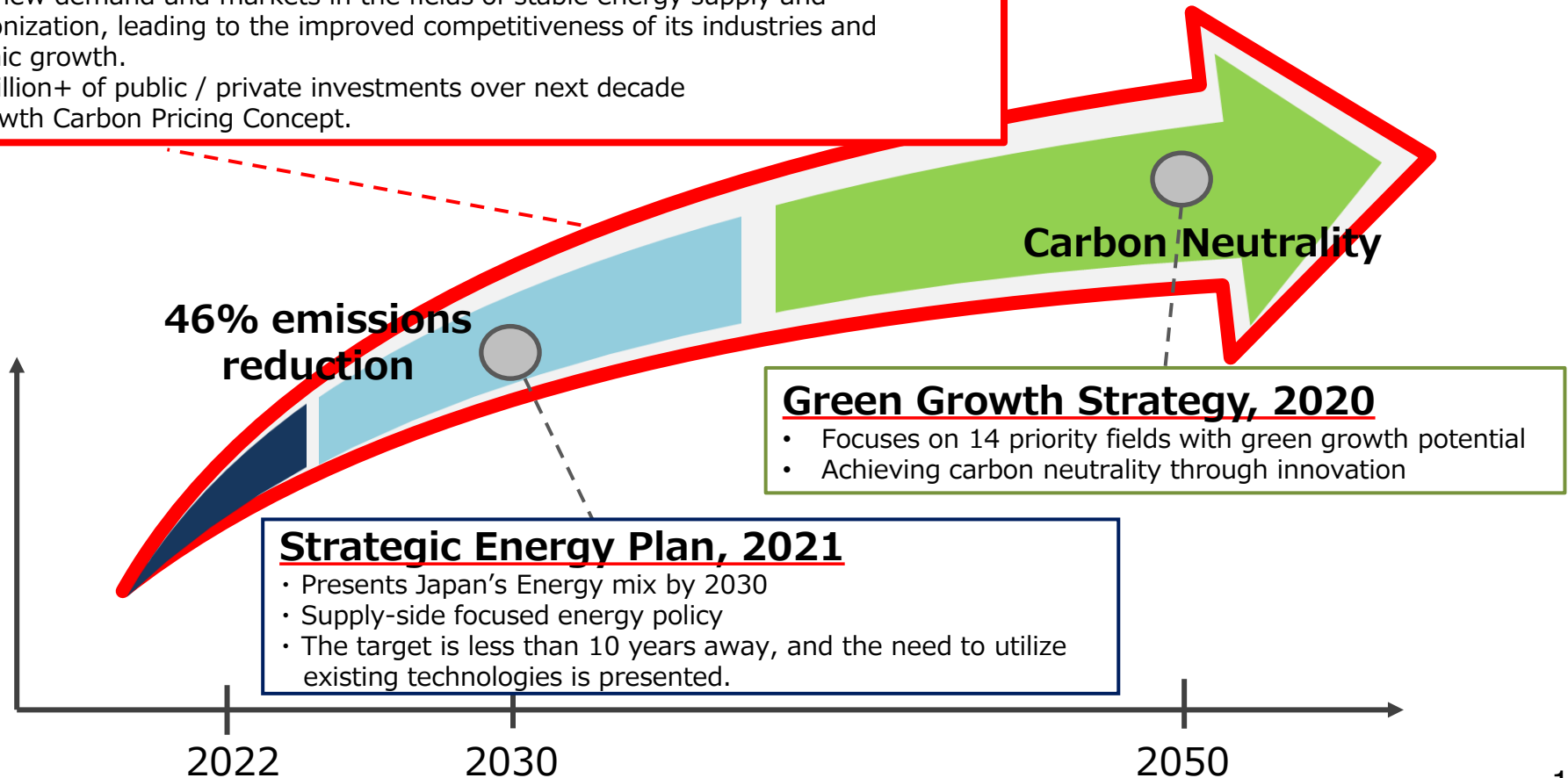
Ministry of Economy, Trade and Industry, JAPAN

Japan's Green Transformation aims emission reduction & growth

- GoJ announced the Basic Policy for the Realization of GX in February 2023. Relevant bills passed the Diet session in May.
- Green Transformation (GX) delivers both **emission reduction** and **economic growth**. Successful GX initiatives enhance competitiveness of companies and nations

Basic Policy for the Realization of GX, 2023

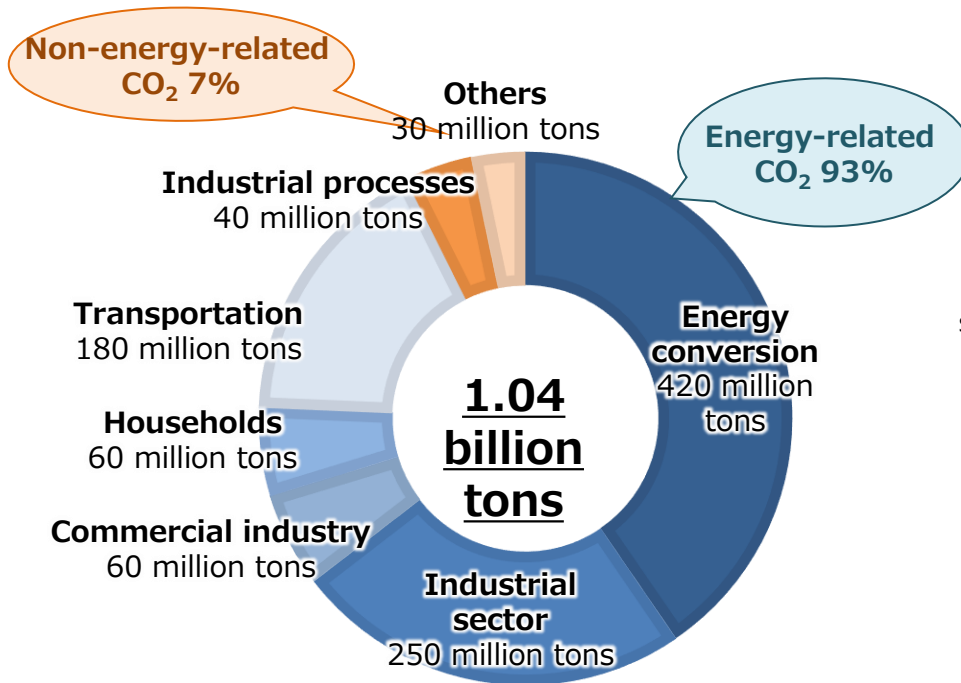
- Create new demand and markets in the fields of stable energy supply and decarbonization, leading to the improved competitiveness of its industries and economic growth.
- ¥150 trillion+ of public / private investments over next decade
- Pro Growth Carbon Pricing Concept.



Non electricity matters

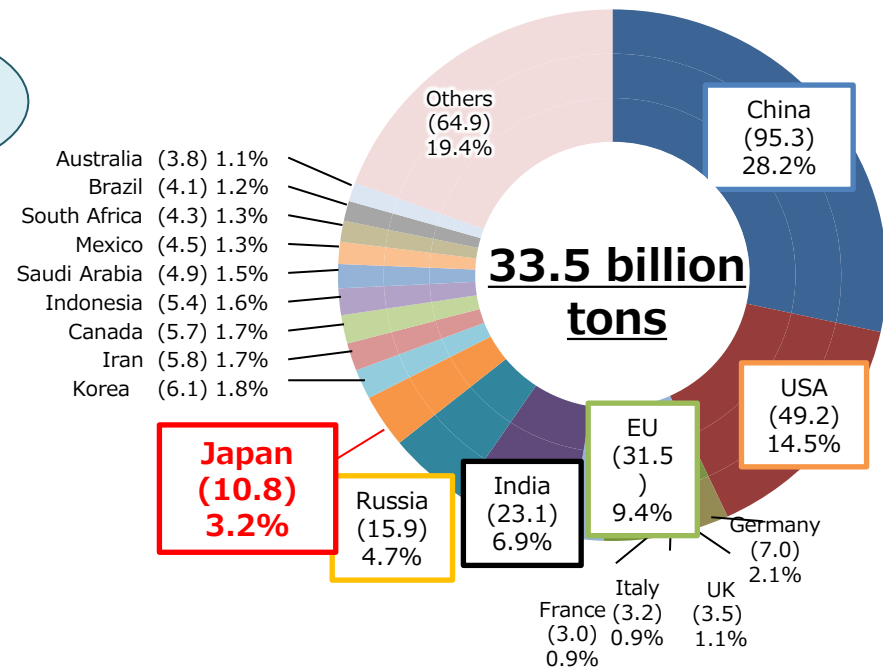
- In Japan, CO₂ emissions from power sector accounts for 40%. Emission reduction from Industrial and other sectors are crucial towards carbon neutral.
- Japan will contribute to global emission reduction by providing solution for ourselves and beyond.

Japan's CO₂ emissions (2020)



(Source)
Created from Greenhouse Gas Inventory Office
"Japanese greenhouse gas emission data"

Global energy-related CO₂ emissions (2020)

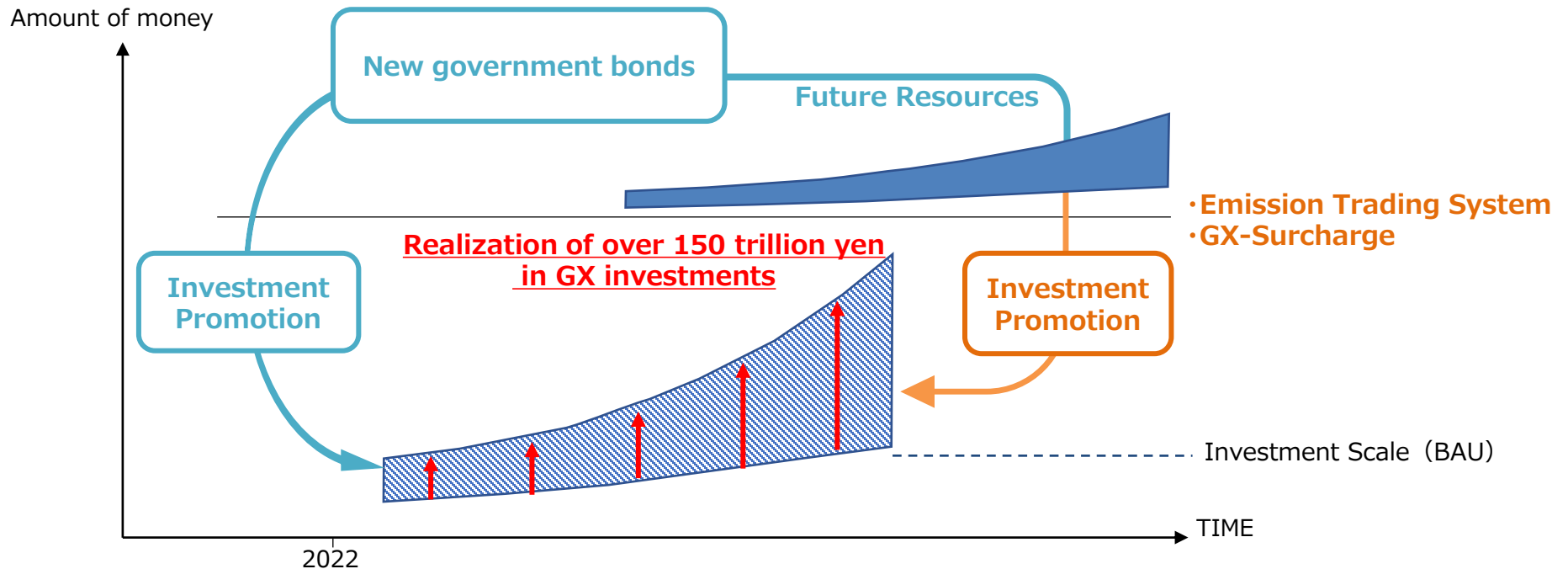


(Source) IEA, CO₂ Emissions from Fuel Combustion Highlights 2020

Pro-Growth Carbon Pricing Concept

To promote the GX investment as described above, a "Pro-Growth Carbon Pricing Concept" will be embodied and implemented as soon as possible.

- ① **Government support for bold upfront investment** by issuing **new government bonds** (20 trillion yen over the next 10 years)
- ② **Introduction of carbon pricing to give incentives for GX investment**
 - (1) Full-scale operation of **emissions trading system** in high emission industries [**from FY2026**].
+ Allowance auctioning to be phased in gradually to **power generation companies** [**from FY2033**]
 - (2) Introduction of a **GX-Surcharge** on fossil fuel supply [**from FY2028**]
- ③ Strengthen financial support through public-private partnership



Work on the hard to abate sector

- To realize carbon neutrality, efforts as listed below (①~④) are needed in the power and industry sectors.

- ① Increasing energy efficiency
- ② Decarbonization of electricity



**Commercialized
Technology Available**

- ③ **Decarbonization of heat (fuel)**

Hydrogen, Ammonia, SAF, Synthetic Fuels, etc. are still under development

- ④ **Decarbonization of manufacturing processes and materials**

Hydrogen reduction ironmaking, naphtha are still under development.

Electrifying heat processes are candidates for technology development.



HARD TO ABATE

**Technology still being
developed toward
commercialization**

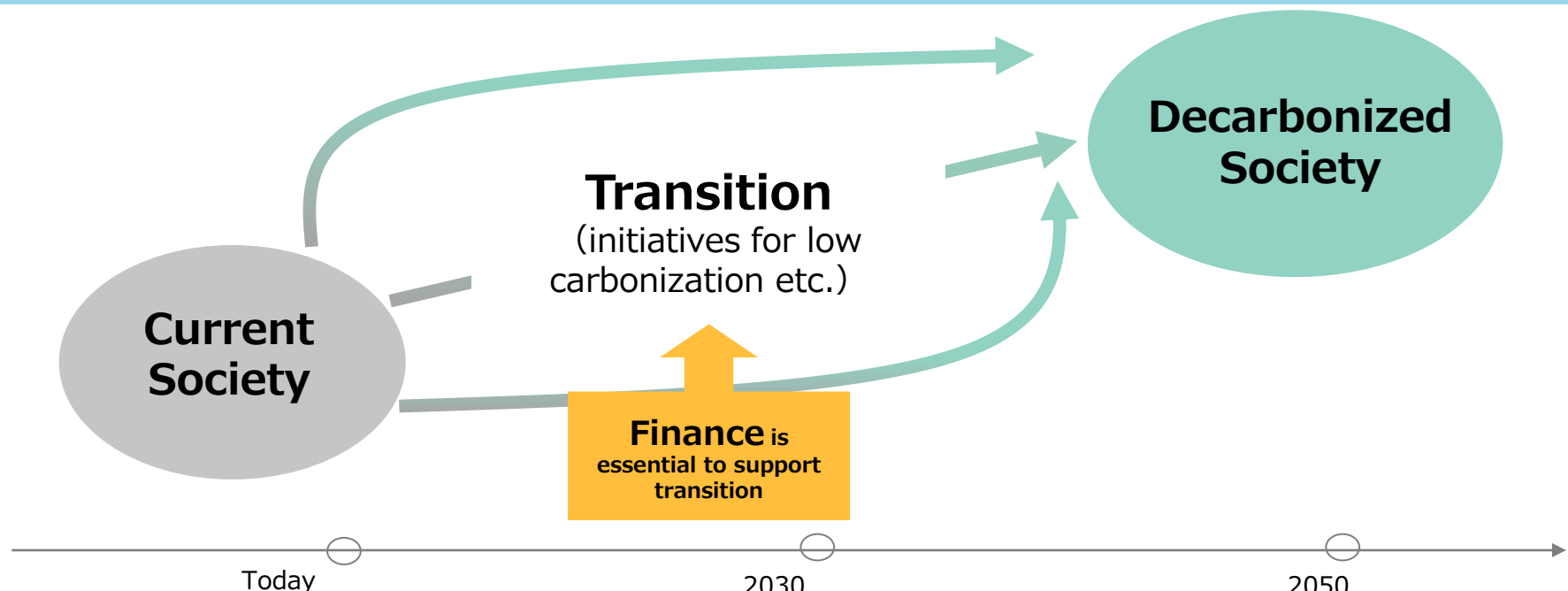
Transition Finance



The Importance of Transition Finance

Transition finance refers to financial services supporting the whole-of-economy transition, in the context of the SDGs, towards lower and net-zero emissions and climate resilience, in a way aligned with the goals of the Paris Agreement.

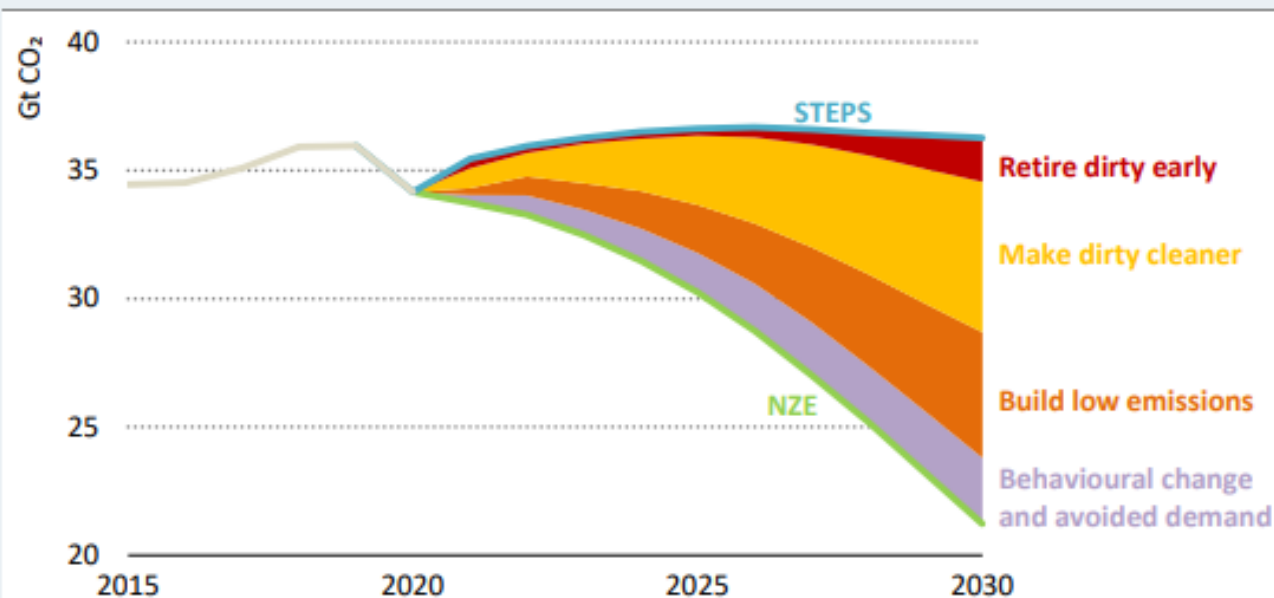
- Companies in many hard-to-abate sectors cannot immediately jump into the decarbonized society due to the outside factors including limitation of innovative technologies and geographical background of energy mix.
- To meet the Paris goals, it is salient to green all sectors and industries. Sectors that are currently GHG intensive but in its process of transitioning to net-zero emissions also require financing in their journey towards net-zero.
- Active engagement with all sectors and industries through transition finance is key in realizing this whole-of-economy transition.



Transitional technologies delivers significant reductions

- In the World Energy Outlook, 2021 IEA reported that the combination of *i) retiring from dirty early ii) **make dirty cleaner** iii) build low emissions iv) behavioral change and avoided demand* is essential for filling the gap of STEPS and Net Zero Emission trajectory.
- It is stated that the middle ground of actions that “make dirty cleaner” is crucial in determining the speed and scope of energy transitions, and delivers the largest share of emissions reductions.

Figure 1.13 ▶ Emissions reductions in the Net Zero Emissions by 2050 Scenario relative to the Stated Policies Scenario

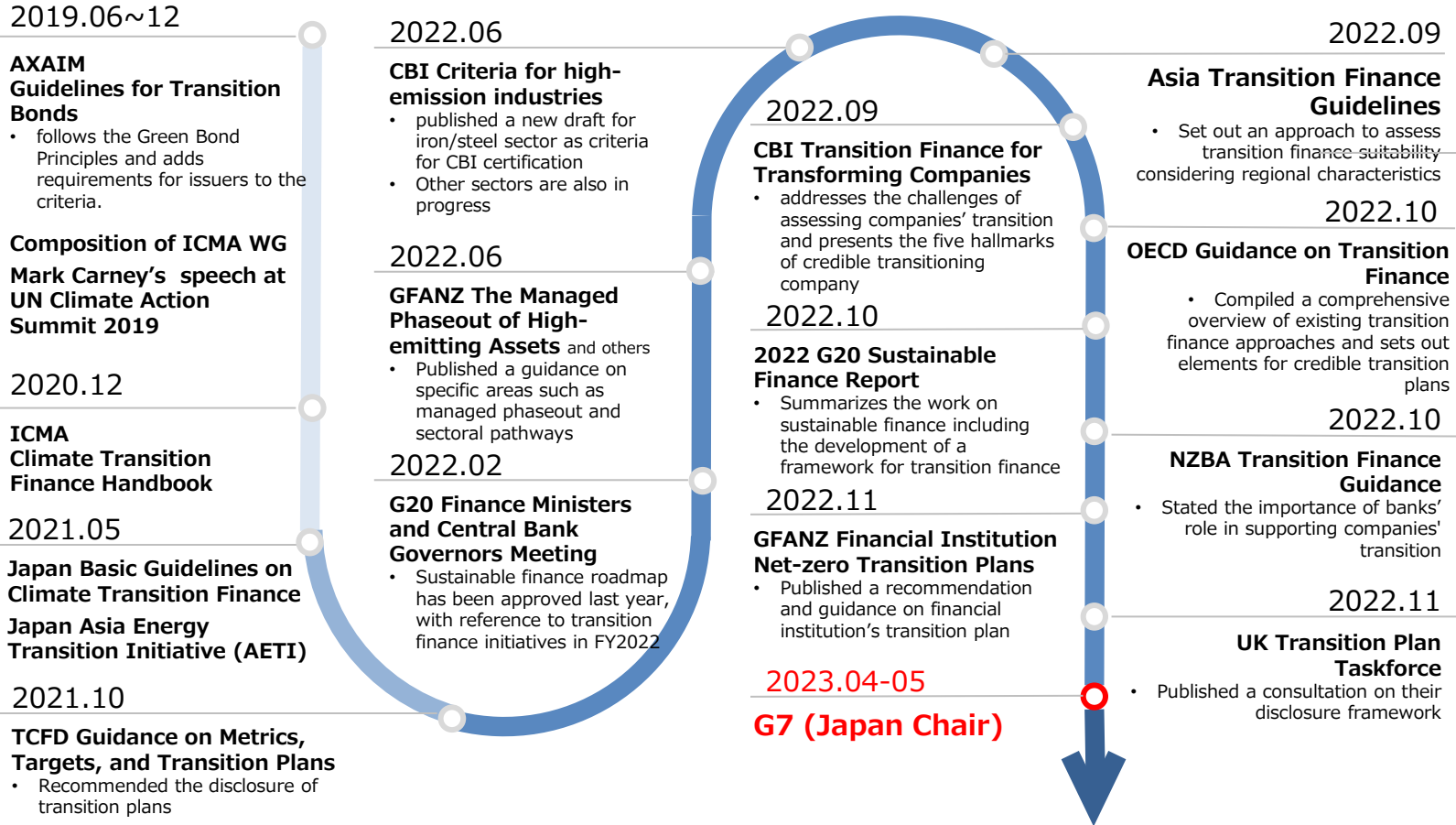


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Delivering net zero requires more than retiring dirty and building low emissions projects; there is a large middle ground that defines the speed and scope of change

International Initiatives on Transition Finance

- The importance of transition plan are being recognized as a crucial tool to achieve the Paris Agreement and related initiatives are seen worldwide.



2023 G7 Hiroshima Summit

- G7 Hiroshima Summit was held from 19th to 22nd May 2023.
- The importance of transition finance to advance the decarbonization of the whole economy was agreed among the leaders.
(also agreed among G7 Ministers' Meeting on Climate, Energy and Environment & Finance Ministers and Central Bank Governors' Meeting)



Leaders' Communiqué

⋮

We remain committed to supporting the implementation and monitoring of G20 Sustainable Finance Roadmap.

We highlight the need for corporates to implement their net-zero transition in line with the temperature goal of the Paris Agreement based on credible corporate climate transition plans.

We also highlight that transition finance, in line with keeping a limit of 1.5°C temperature rise within reach, avoiding carbon lock-ins and based on effective emissions reduction, has a significant role in advancing the decarbonization of the economy as a whole.

⋮



Japan's 4 step policy tools on Climate Transition Finance

G7 Leaders Summit (May 2023, Hiroshima)

- **Transition finance**, in line with keeping a limit of 1.5°C temperature rise within reach, avoiding carbon lock-ins and based on effective emissions reduction, **has a significant role in advancing the decarbonization of the economy as a whole.**

- Although green projects have attracted investment, transition to net zero requires more.
- To encourage private finance flow for transition, Japanese government take 4-step-policy.
- Companies are expected to show their credible transition strategy. They can account for their plan by referring to the technologies and pathway of the roadmap.

1. Basic Guidelines

- ✓ FSA, MOE and METI formulated the Guidelines to establish transition finance in line with the ICMA transition handbook.



2. Sector Roadmaps

- ✓ Roadmaps with technologies for transition is formulated for 8 sectors: **iron & steel, chemical, electricity, gas, oil, cement and paper & pulp, and automobiles.**
- ✓ The roadmaps can be referred by companies to formulate their strategies and pathways, and by financial entities to evaluate those of clients

3. Model Projects

- ✓ 21 model projects from shipping, steel, aviation, chemical, energy and heavy industry sectors.
- ✓ **The market of transition finance has reached 1 trillion yen cumulatively.**

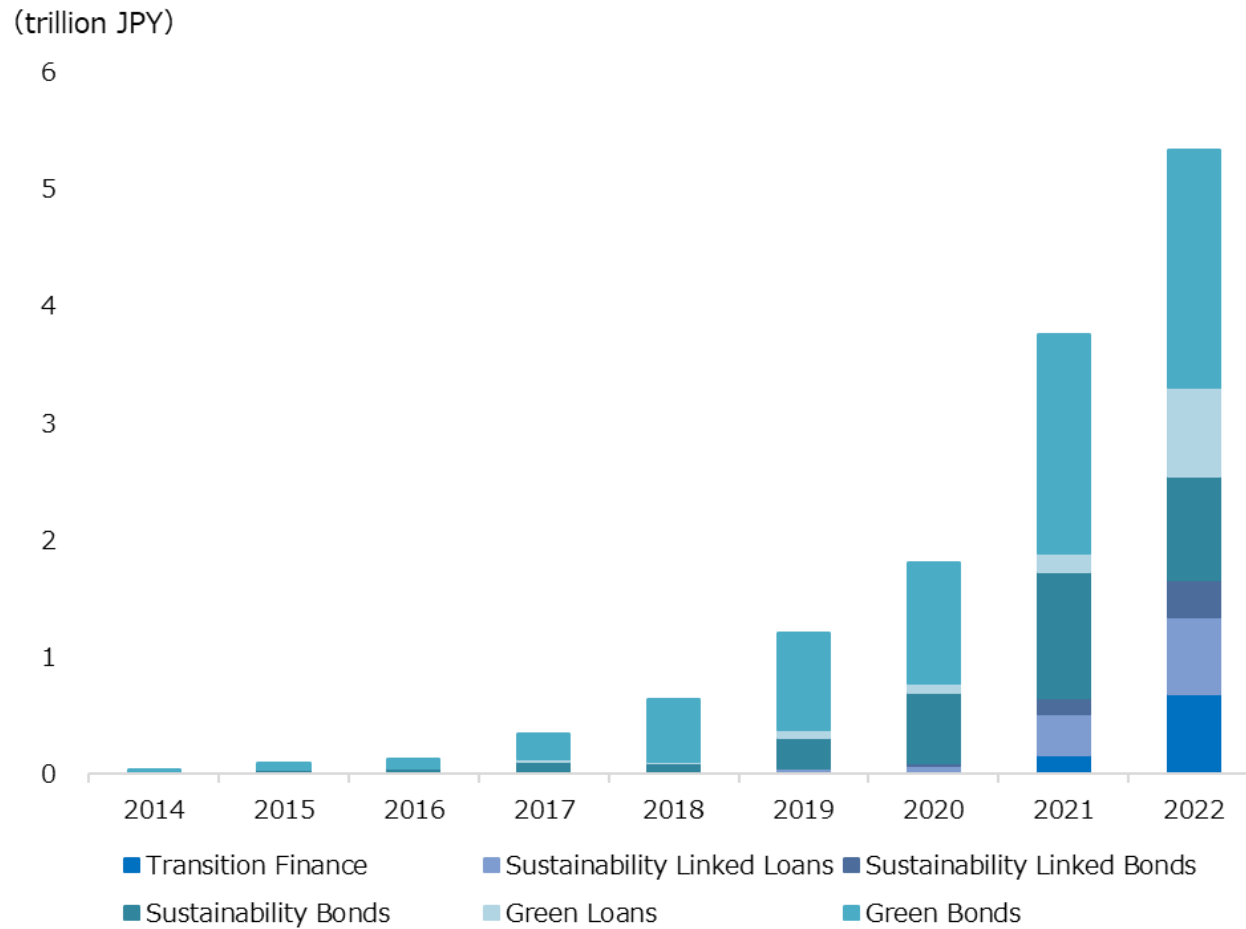
4. Follow-up Guidance

- ✓ **Guidance for financiers (especially bond issuers)** in following up after the issuance of transition finance was released in June 2023



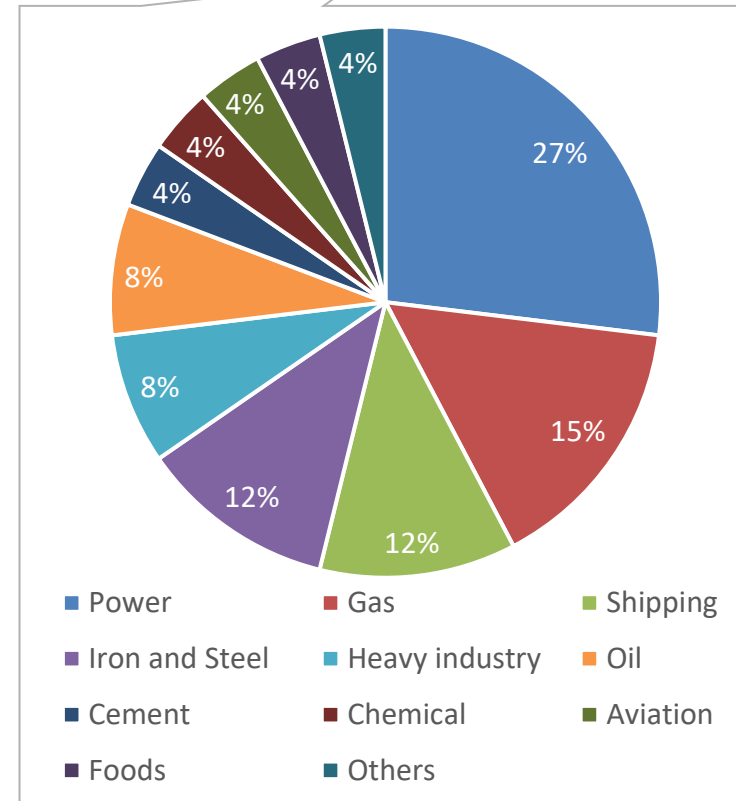
One trillion JPY transition-labeled bonds and loans issued in Japan

- The cumulative amount of transition-labeled bonds and loans has grown and surpassed 1 trillion JPY.



the cumulative amount of transition-labeled bond and loans In Japan (Jan.2021-Mar.2023)

Apprx. **1** trillion JPY



Source) MOE "Green Finance Portal" (<https://greenfinanceportal.env.go.jp/>), METI "Transition Finance HP" (https://www.meti.go.jp/policy/energy_environment/global_warming/transition_finance.html), Other public information.

Thank you

